THE 48TH UNION WORLD CONFERENCE ON LUNG HEALTH
11-14 OCTOBER 2017
GUADALAJARA, MEXICO

ACCELERATING TOWARD ELIMINATION
EXPLORE. More than 500 sessions, 800 presenters, and nearly 6,900 abstracts and case reports in pulmonary, critical care, and sleep medicine are expected to be presented.

CONNECT. Global experts will connect you with the latest advances in science and health in ways that foster discussion among clinicians and researchers from over 100 countries.

LEARN. Symposia and interactive sessions, simulations and demonstrations, postgraduate courses and seminars, and the award-winning Exhibit Hall will keep you at medicine’s forefront.

RECERTIFY. The ATS again plans to offer American Board of Internal Medicine Maintenance of Certification Knowledge Points and American Board of Pediatric MOC credits.

CALL FOR SCIENTIFIC ABSTRACTS AND CASE REPORTS

Presenting at ATS 2018 is a can’t-miss opportunity to showcase your research in respiratory disease, critical care, and sleep medicine. If you’d like to be considered, the ATS is accepting submissions of the following:

- Scientific Abstracts, which can report on basic, translational, and clinical science research; epidemiologic, social, biobehavioral, and psychosocial investigations; or educational and quality improvement projects
- Case Reports, which must describe a single unique case.

Opens in August conference.thoracic.org

Answer the Call
Dear colleagues and partners,

Warm welcome to Guadalajara, Mexico and to the 48th Union World Conference on Lung Health. This year’s conference brings together researchers, global advocates, civil society, scientists, healthcare professionals and students working on all aspects of lung health, under the theme ‘Accelerating Toward Elimination’.

The conference will explore ways to accelerate toward elimination on multiple fronts. The scientific programme will show the progress we are making towards the end of tuberculosis and its co-morbidities; how we will realise a world free from deaths caused by tobacco use and how we can make every breath, everywhere, less polluted. We also take a close look at lung health in Latin America.

We are honoured that Dr José Narro Robles, Mexico’s Secretary of Health, will speak at the inaugural session, welcoming participants to the conference on behalf of H.E. Enrique Peña Nieto, President of Mexico. We also have the pleasure of welcoming the Governor of Jalisco and the Mayor of Guadalajara during the course of the week.

This year’s conference takes place a year before the first United Nations General Assembly High-Level Meeting (HLM) on TB and the UN Global Conference on Non-communicable diseases. The first plenary, The Road to the HLM, and the Ministerial Special Session immediately after, will be dedicated to looking at the implications of those meetings and the role of political leaders as champions of lung health. The second plenary session will take a critical look at the tobacco industry, and Saturday’s plenary will explore new solutions to address lung health over the life course.

We continue this year with three late breaker sessions: one on TB; one led by the HIV Section focused on TB/HIV and other co-infections; and the third with nine presentations by students pursuing careers in lung health.

We encourage you to visit Encuentro, a vibrant space, driven by communities involved in the fight for lung health. One highlight not to miss will be the city-wide 9K bike ride on Friday evening, when participants can join 300 local cyclists to raise awareness of air pollution issues in cities worldwide, the need for sustainable transport, and to assert the right of everyone to breathe clean air.

Following the recent earthquakes, our deepest sympathies go to the people of Mexico. For those wishing to provide support for earthquake relief, UNICEF representatives will be on site at the conference venue collecting donations that will go toward those affected by the earthquakes.

We welcome you to Guadalajara and hope that this conference leads to powerful discoveries, important new connections and innovative actions to accelerate progress on lung health globally.

Sincerely,

José Luis Castro
Executive Director

Stacie C Stender
Chair, Coordinating Committee of Scientific Activities
Apreciados colegas y socios,

Les damos una cordial bienvenida a Guadalajara, México, así como a la 48.ª Conferencia Mundial de La Unión sobre Salud Pulmonar. La conferencia de este año, cuyo tema es «Acelerando hacia la eliminación», reúne a investigadores, defensores globales, sociedad civil, científicos, profesionales de la salud y estudiantes que trabajan en cualquier ámbito de la salud pulmonar.

La conferencia explorará vías para acelerar la eliminación en múltiples frentes. El programa científico mostrará los avances que estamos haciendo hacia el fin de la tuberculosis y sus comorbididades; cómo conseguiremos un mundo en el que no haya muertes provocadas por el consumo de tabaco; y qué podemos hacer que cada vez respiremos, en cualquier sitio, un aire menos contaminado. También analizaremos en detalle la salud pulmonar en América Latina, y abordaremos la EPOC, la tuberculosis zoonótica y otras cuestiones regionales.

Nos honra que el Sr. José Narro Robles, Secretario de Salud de México, intervenga en la sesión inaugural y dé la bienvenida a los participantes de la conferencia en nombre del Excmo. Sr. Enrique Peña Nieto, Presidente de México. Nos complace también contar con la presencia del gobernador de Jalisco y del alcalde de Guadalajara durante el transcurso de la semana.

La conferencia de este año se celebra un año antes de la primera Reunión de Alto Nivel de la Asamblea General de las Naciones Unidas sobre Tuberculosis y la Conferencia Mundial de las Naciones Unidas sobre Enfermedades no Transmisibles. La primera sesión plenaria, «El camino hacia la Reunión de Alto Nivel», y la sesión Ministerial Especial, que se celebrará justo después, se centrarán especialmente en examinar las implicaciones de dichas reuniones y el papel de los líderes políticos como defensores de la salud pulmonar. La segunda sesión plenaria será una mirada crítica hacia la industria tabacalera, y la del sábado explorará soluciones nuevas para velar por la salud pulmonar durante el transcurso de la vida.

Continuamos este año con tres sesiones de última hora: una sobre tuberculosis, otra dirigida por la sección VIH que se centrará en TB/VIH y otras coinfecciones, y la tercera con nueve presentaciones de estudiantes que están desarrollando carreras en el área de la salud pulmonar.

Le animamos a visitar el Encuentro, un espacio dinámico fomentado por las comunidades involucradas en la lucha por la salud pulmonar. Un punto destacable que no podemos olvidar es el paseo en bicicleta de 9 km por toda la ciudad el viernes por la tarde, en la que los participantes pueden unirse a los 300 ciclistas locales con el objetivo de fomentar la concienciación sobre temas de contaminación ambiental en las ciudades de todo el mundo y la necesidad de un transporte sostenible, así como para reivindicar el derecho de todas las personas a respirar aire limpio.

Tras los recientes terremotos, los sentimientos más sinceros de La Unión están con el pueblo de México. Para aquellos que deseen hacer un donativo de ayuda a los damnificados, se les comunica que a la sede del congreso asistirán representantes de la UNICEF para recibir todos los donativos destinados a las personas afectadas.

Le damos la bienvenida a Guadalajara y esperamos que esta conferencia nos lleve a potentes descubrimientos, nuevas conexiones importantes y acciones innovadoras para acelerar el avance hacia la salud pulmonar global.

Atentamente,

José Luis Castro
Director Ejecutivo

Stacie C. Stender
Presidenta, Comité Coordinador de Actividades Científicas (CCSA)
Throughout this programme, the following abbreviations apply:

AMR  Antimicrobial resistance
ART  Antiretroviral therapy
CCSA The Coordinating Committee of Scientific Activities coordinates the development of the scientific programme of the Union World Conference and oversees approval of official statements and other policy-related decisions
CDC  Centers for Disease Control and Prevention, USA
COPD  Chronic obstructive pulmonary disease
DM  Diabetes mellitus
DM-TB  Diabetes mellitus - tuberculosis co-morbidity
DOTS  Directly Observed Treatment, Short-course
DR-TB  Drug resistant tuberculosis
GATS  General Agreement on Trade in Services
GDF  Global Drug Facility
GPP  Good Participatory Practice
HCW  Healthcare worker
HIV  Human Immunodeficiency Virus
HLM  High-Level Meeting
INH  Isoniazid
KNCV  Royal Netherlands Tuberculosis Association
LTBI  Latent TB infection
M. bovis  Mycobacterium bovis
M. tuberculosis  Mycobacterium tuberculosis
MDR-TB  Multidrug-resistant tuberculosis
MPower  The WHO’s series of evidence-based measures to reduce tobacco use
MSF  Médecins Sans Frontières (Doctors Without Borders)
NCD  Non-communicable disease
NGO  Non-governmental organisation
NTP  National TB Programme
PEPFAR  The U.S. President’s Emergency Plan for AIDS Relief
PK-PD  Pharmacokinetics/Pharmacodynamics
PZA  Pyrazinamide
RCT  Randomised controlled trial
RMP  Rifampicin
RR-TB  Rifampicin resistant tuberculosis
SDG  Sustainable Development Goal
TB  Tuberculosis
TB-HIV  Tuberculosis - HIV co-infection
USAID  United States Agency for International Development
WHO  World Health Organization
WHO FCTC  The WHO Framework Convention on Tobacco Control
XDR-TB  Extensively drug-resistant tuberculosis
ZTB  Zoonotic tuberculosis

This symbol indicates sessions that benefit from simultaneous translation into Spanish or English.
Este símbolo indica que la sesión dispondrá de interpretación simultánea al español o al inglés.
# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELCOME ADDRESS</td>
<td>3</td>
</tr>
<tr>
<td>WELCOME ADDRESS (SPANISH)</td>
<td>4</td>
</tr>
<tr>
<td>ABBREVIATIONS</td>
<td>5</td>
</tr>
<tr>
<td>SESIONES PARA HISPANOHABLANTES</td>
<td>8</td>
</tr>
<tr>
<td>About The Union</td>
<td>11</td>
</tr>
<tr>
<td>GENERAL INFORMATION</td>
<td>13</td>
</tr>
<tr>
<td>REGISTRATION</td>
<td>13</td>
</tr>
<tr>
<td>INFORMATION FOR PRESENTERS</td>
<td>14</td>
</tr>
<tr>
<td>INFORMATION FOR THE MEDIA</td>
<td>14</td>
</tr>
<tr>
<td>NAPS TB EDUCATIONAL MATERIAL DISPLAY</td>
<td>15</td>
</tr>
<tr>
<td>Conference app and social media</td>
<td>16</td>
</tr>
<tr>
<td>Introducing Encuentro</td>
<td>18</td>
</tr>
<tr>
<td>GENERAL INFORMATION (SPANISH)</td>
<td>20</td>
</tr>
<tr>
<td>REGISTRATION (SPANISH)</td>
<td>20</td>
</tr>
<tr>
<td>INFORMATION FOR PRESENTERS (SPANISH)</td>
<td>21</td>
</tr>
<tr>
<td>INFORMATION FOR THE MEDIA (SPANISH)</td>
<td>21</td>
</tr>
<tr>
<td>NAPS TB EDUCATIONAL MATERIAL DISPLAY (SPANISH)</td>
<td>22</td>
</tr>
<tr>
<td>Union conferences around the world</td>
<td>23</td>
</tr>
<tr>
<td>SCHEDULE AT A GLANCE</td>
<td>24</td>
</tr>
<tr>
<td>Award presentations</td>
<td>34</td>
</tr>
<tr>
<td>Award nominations</td>
<td>35</td>
</tr>
<tr>
<td>Map of conference venue</td>
<td>36</td>
</tr>
<tr>
<td>OFFICIAL PRE-CONFERENCES: AMERICAS TB CAUCUS AND THE WHO GLOBAL TB SYMPOSIUM</td>
<td>46</td>
</tr>
<tr>
<td>Satellite Sessions</td>
<td>49</td>
</tr>
<tr>
<td>Union administrative, region and section meetings</td>
<td>56</td>
</tr>
<tr>
<td>Side meetings</td>
<td>58</td>
</tr>
<tr>
<td>In Memoriam</td>
<td>58</td>
</tr>
<tr>
<td>WEDNESDAY 10 OCTOBER</td>
<td>60</td>
</tr>
<tr>
<td>Inaugural Session</td>
<td>62</td>
</tr>
<tr>
<td>Welcome Reception</td>
<td>63</td>
</tr>
<tr>
<td>Post-graduate courses</td>
<td>64</td>
</tr>
<tr>
<td>Workshops</td>
<td>68</td>
</tr>
<tr>
<td>Encuentro</td>
<td>78</td>
</tr>
<tr>
<td>THURSDAY 11 OCTOBER</td>
<td>82</td>
</tr>
<tr>
<td>Plenary session 01</td>
<td>85</td>
</tr>
<tr>
<td>Ministerial panel</td>
<td>86</td>
</tr>
<tr>
<td>Symposia</td>
<td>87</td>
</tr>
<tr>
<td>Oral abstract sessions</td>
<td>98</td>
</tr>
<tr>
<td>Short oral abstract sessions</td>
<td>101</td>
</tr>
<tr>
<td>Poster discussion sessions</td>
<td>107</td>
</tr>
<tr>
<td>Encuentro</td>
<td>116</td>
</tr>
</tbody>
</table>
### FRIDAY 12 OCTOBER

- Christmas Seals exhibit and Contest
- Plenary session 02
- Meet the expert sessions
- Symposia
- Oral abstract sessions
- Short oral abstract sessions
- Poster discussion sessions
- Encuentro

### SATURDAY 13 OCTOBER

- Plenary session 03
- Rapporteur session
- Closing Ceremony
- Meet the expert sessions
- Symposia
- Oral abstract sessions
- Short Oral Abstract Sessions
- Poster discussion sessions
- Encuentro

The Union Offices
The Union Board of Directors
History of the Union World Conference
Coordinating Committee of Scientific Activities
Scientific sections, sub-sections and working groups
Acknowledgements
Supporters
Reviewers
Reviewers Encuentro
Speakers, Chairs and Coordinators

The Union’s global impact
Introducing the 49th Union World Conference

### OFFICIAL LANGUAGES

The official language for this conference is English. Simultaneous interpretation (English/Spanish/English) will be available for the main sessions (the plenary sessions and selected other sessions marked with 🌐).
<table>
<thead>
<tr>
<th>Tema</th>
<th>Sala</th>
<th>Fecha y hora</th>
<th>Num. pág.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taller</td>
<td>Hall 6</td>
<td>Miércoles 11 de octubre 08:00-11:00</td>
<td>75</td>
</tr>
<tr>
<td>Sesión plenaria</td>
<td>PALCCO</td>
<td>Miércoles 11 de octubre 18:00-20:00</td>
<td>62</td>
</tr>
<tr>
<td>Sesiones satélite</td>
<td>Hall 6</td>
<td>Jueves 12 de octubre 07:30 – 08:45</td>
<td>49</td>
</tr>
<tr>
<td>Sesión plenaria</td>
<td>Sala plenaria</td>
<td>Jueves 12 de octubre 09:00-10:00</td>
<td>85</td>
</tr>
<tr>
<td>Sesión especial</td>
<td>Sala plenaria</td>
<td>Jueves 12 de octubre 10:30 – 12:00</td>
<td>86</td>
</tr>
<tr>
<td>Simposio</td>
<td>Hall 2</td>
<td>Jueves 12 de octubre 14:00 – 15:30</td>
<td>91</td>
</tr>
<tr>
<td>Simposio</td>
<td>Hall 2</td>
<td>Jueves 12 de octubre 10:30 – 12:00</td>
<td>89</td>
</tr>
<tr>
<td>Simposio</td>
<td>Hall 2</td>
<td>Jueves 12 de octubre 14:00 – 15:30</td>
<td>91</td>
</tr>
<tr>
<td>Simposio</td>
<td>Hall 6</td>
<td>Jueves 12 de octubre 14:00 – 15:30</td>
<td>92</td>
</tr>
<tr>
<td>Simposio</td>
<td>Sala plenaria</td>
<td>Jueves 12 de octubre 14:00 – 15:30</td>
<td>90</td>
</tr>
<tr>
<td>Simposio</td>
<td>Hall 7</td>
<td>Jueves 12 de octubre 14:00 – 15:30</td>
<td>92</td>
</tr>
<tr>
<td>Simposio</td>
<td>Hall 2</td>
<td>Jueves 12 de octubre 14:00 – 15:30</td>
<td>90</td>
</tr>
<tr>
<td>Simposio</td>
<td>Hall 2</td>
<td>Jueves 12 de octubre 14:00 – 15:30</td>
<td>105</td>
</tr>
<tr>
<td>Simposio</td>
<td>Hall 2</td>
<td>Jueves 12 de octubre 16:00 – 17:30</td>
<td>104</td>
</tr>
<tr>
<td>Sesiones satélite</td>
<td>Sala plenaria</td>
<td>Jueves 12 de octubre 18:00 – 19:30</td>
<td>52</td>
</tr>
<tr>
<td>Sesiones satélite</td>
<td>Hall 7</td>
<td>Jueves 12 de octubre 18:00 – 19:30</td>
<td>51</td>
</tr>
<tr>
<td>Sesión plenaria</td>
<td>Sala plenaria</td>
<td>Viernes 13 de octubre 9:00 – 10:00</td>
<td>125</td>
</tr>
<tr>
<td>Simposio</td>
<td>Hall 7</td>
<td>Viernes 13 de octubre 10:30 – 12:00</td>
<td>131</td>
</tr>
<tr>
<td>Simposio</td>
<td>Hall 6</td>
<td>Viernes 13 de octubre 10:30 – 12:00</td>
<td>129</td>
</tr>
<tr>
<td>Tema</td>
<td>Sala</td>
<td>Fecha y hora</td>
<td>Num. pág.</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>--------------</td>
<td>----------</td>
</tr>
<tr>
<td>Simposio</td>
<td>28. Tuberculosis en poblaciones especiales de America</td>
<td>Hall 9</td>
<td>Viernes 13 de octubre 10:30 - 12:00</td>
</tr>
<tr>
<td>Oral abstract session - late-breaker</td>
<td>10. Sesión de última hora sobre TB de La Unión/CDC</td>
<td>Sala plenaria</td>
<td>Viernes 13 de octubre 10:30 – 12.00</td>
</tr>
<tr>
<td>Sesión meet the expert</td>
<td>04. Xpert MTB/RIF es más sensible que el análisis microscópico directo y permite un diagnóstico rápido de la tuberculosis resistente a la rifampicina. A pesar de ello, múltiples RCT no han venido a mostrar beneficios en resultados relevantes con los pacientes. ¿Impone ello un cambio en la forma en que utilizamos CXP en entornos con recursos limitados?</td>
<td>Hall 6</td>
<td>Viernes 13 de octubre 12:15 - 13:15</td>
</tr>
<tr>
<td>Sesión de resúmenes breves orales</td>
<td>12. MDR-TB: predictores de resultados terapéuticos</td>
<td>Hall 6</td>
<td>Viernes 13 de octubre 14:00 - 15:30</td>
</tr>
<tr>
<td>Simposio</td>
<td>34. Empaquetado genérico, qué ocurre.: Avances y desafíos en las Américas</td>
<td>Sala plenaria</td>
<td>Viernes 13 de octubre 14:00 - 15:30</td>
</tr>
<tr>
<td>Oral abstract session - late-breaker</td>
<td>11. Sesión de última hora sobre VIH-TB y diabetes</td>
<td>Hall 7</td>
<td>Viernes 13 de octubre 14.00 – 15.30</td>
</tr>
<tr>
<td>Sesión de resúmenes orales</td>
<td>13. Experiencias plurinacionales en las interferencias de la industria tabaquera en el control del tabaco</td>
<td>Hall 6</td>
<td>Viernes 13 de octubre 16:00 - 17:30</td>
</tr>
<tr>
<td>Simposio</td>
<td>47. Erradicación de la tuberculosis en niños y adolescentes de América Latina: experiencias a nivel de país y mejora del acceso a los cuidados sanitarios</td>
<td>Sala plenaria</td>
<td>Viernes 13 de octubre 16:00 - 17:30</td>
</tr>
<tr>
<td>Oral abstract session - late-breaker</td>
<td>14. Sesión de última hora de estudiantes sobre salud pulmonar de La Unión</td>
<td>Hall 7</td>
<td>Viernes 13 de octubre 16.00 – 17.30</td>
</tr>
<tr>
<td>Sesión plenaria</td>
<td>03. Aceleración de la salud pulmonar en el transcurso de la vida</td>
<td>Sala plenaria</td>
<td>Sábado 14 de octubre 9:00 – 10:00</td>
</tr>
<tr>
<td>Simposio</td>
<td>51. La enfermedad pulmonar obstructiva crónica en México</td>
<td>Hall 7</td>
<td>Sábado 14 de octubre 10:30 – 12:00</td>
</tr>
<tr>
<td>Simposio</td>
<td>56. Epidemiología de la tuberculosis en las Américas</td>
<td>Hall 2</td>
<td>Sábado 14 de octubre 10.30 – 12.00</td>
</tr>
<tr>
<td>Sesión de resúmenes breves orales</td>
<td>14. Cuidados de la tuberculosis: ¿quién paga, cuánto y para qué fines?</td>
<td>Sala plenaria</td>
<td>Sábado 14 de octubre 10:30 - 12.00</td>
</tr>
<tr>
<td>Simposio</td>
<td>60. Preparación y respuesta ante una pandemia de influenza en México</td>
<td>Hall 7</td>
<td>Sábado 14 de octubre 14.00 – 15.30</td>
</tr>
<tr>
<td>Simposio</td>
<td>63. Situación epidemiológica y control de la tuberculosis infantil en América Latina</td>
<td>Hall 2</td>
<td>Sábado 14 de octubre 14.00 – 15.30</td>
</tr>
<tr>
<td>Sesión de resúmenes breves orales</td>
<td>15. Combate al tabaquismo y su integración dentro de las estrategias de control de la tuberculosis</td>
<td>Sala plenaria</td>
<td>Sábado 14 de octubre 14:00 - 15:30</td>
</tr>
<tr>
<td>Sesión plenaria</td>
<td>Sesión de ponentes</td>
<td>Sala plenaria</td>
<td>Sábado 14 de octubre 16.00 – 17.00</td>
</tr>
<tr>
<td>Sesión plenaria</td>
<td>Ceremonia de cierre</td>
<td>Sala plenaria</td>
<td>Sábado 14 de octubre 17.00 – 17.45</td>
</tr>
</tbody>
</table>
The Union is a global scientific organisation with the mission to improve health among people living in poverty. We do that by conducting scientific research, working with governments and other agencies to translate research into better health for people around the world, and delivering projects directly in the field. The Union is made up of a membership body of people around the world who help to advance our mission, and a scientific institute that implements public health projects within countries. For close to 100 years, we have been leaders in the fight against some of the world’s biggest killers, including tuberculosis, lung diseases and tobacco use.
The Union is a global scientific organisation with the mission to improve health among people living in poverty. We do that by conducting scientific research, working with governments and other agencies to translate research into better health for people around the world, and delivering projects directly in the field. The Union is made up of a membership body of people around the world who help to advance our mission, and a scientific institute that implements public health projects within countries. For close to 100 years, we have been leaders in the fight against some of the world’s biggest killers, including tuberculosis, lung diseases and tobacco use.

- STREAM Stage 2, the first large-scale, multi-country clinical trial to examine shortened regimens for multidrug-resistant TB (MDR-TB), has begun enrolment in Mongolia, Ethiopia, South Africa, Moldova and Georgia, with several additional sites planned for 2017 and 2018
- 26,000 patients are currently receiving antiretroviral therapy provided by The Union Office in Myanmar through the Integrated HIV Care programme
- Union research led to 147 published studies and opinion papers in peer-reviewed journals in 2016
- More than 2,000 patients have been screened for TB and diabetes in Uganda and Zimbabwe
- More than 82,000 patients have been diagnosed with TB in India thanks to the extensive network of volunteers and organisational partnerships working with The Union’s Project Axshya
- To date, The Union has worked with governments and civil society in 43 countries to help introduce and implement measures proven to reduce tobacco use
- More than 1,000 participants attended 58 courses on international management and development, operational research and clinical and operational management of TB, TB-HIV, MDR-TB and tobacco control in 2016

OUR IMPACT

In 2016, The Union’s 630 staff and consultants offered technical assistance, provided education and training and conducted research in 71 countries. In addition, Union members in 141 countries worked to fulfil our common vision of health solutions for the poor.

these principles have driven the union’s work since its founding nearly 100 years ago
The clinical, public health and political aspects of tobacco smoking

The Tobacco Epidemic

2nd, revised and extended edition

Editors
R. Loddenkemper, Berlin
M. Kreuter, Heidelberg

Tobacco use continues to be the leading preventable cause of death worldwide. This new book provides a comprehensive update of the clinical, public health and political aspects of tobacco smoking. The editors have invited the who’s who in the field to create a unique book that is both highly scientific and easy to read.

This book is a must-read for anyone who treats patients with smoking-related diseases and for those engaged in tobacco control. It will also be of interest to journalists and legislators.

See the full table of contents, read free sample chapters and place your order on the book website:

www.karger.com/prrer

The Tobacco Epidemic
2nd, revised and extended edition
(Progress in Respiratory Research, Vol. 42)

Editors: Loddenkemper, R. (Berlin), Kreuter, M. (Heidelberg)
X + 276 p., 85 fig., 31 in color, 29 tab., 2015

List price:
CHF 78.00 / EUR 73.00 / USD 92.00

Prices subject to change, VAT not included
EUR price for eurozone countries, USD price for USA and Latin America only
GENERAL INFORMATION

Abstract Book
The Abstract Book will be available to download from the conference website after the conference.

Refreshments
Cash catering offering a variety of hot and cold beverages and meal options is available in the exhibition hall and Encuentro from 11 until 14 October.

First aid
A medical service will be available during the conference. All medical problems should be reported to the conference centre stewards or conference volunteers. In case of emergency, the delegate will be transferred to the nearest hospital. Hospital expenses must be covered by delegates.

Free Wi-Fi
Delegates can benefit from free Wi-Fi access in the conference centre. Information on the login and password to access the free Wi-Fi will be posted on the back of your conference badge.

Webcasts and livestreaming
Webcasts of the plenary sessions, symposia and oral abstract presentations will be available on the conference app and website.

The inaugural, plenary, rapporteur and closing sessions will be livestreamed.

You will find daily photos and news about the conference at worldlunghealth.org and theunion.org.

Inaugural session and welcome reception
We are honoured that Dr José Narro Robles, Mexico’s Secretary of Health, will speak at the Inaugural Session, welcoming participants to the conference on behalf of H.E. Enrique Peña Nieto, President of Mexico.

The Union cordially invites all registered delegates, accompanying persons and exhibitors to the Inaugural Session on Wednesday, 11 October at 18:00. A Welcome Reception will follow from 20:00 to 21:30 at Palacio de la Cultura y la Comunicación (PALCCO). Thanks to the Office of Visitors and Conventions Bureau, buses will bring all participants from Expo Guadalajara to PALCCO and back again.

Certificate of attendance
A certificate of attendance will be given to delegates upon completion of the post-conference evaluation. Delegates wishing to include the title of the session they have attended or contributed to in their certificate of attendance should send their request to scientific@theunion.org after the conference.

Photography
Registered delegates give their permission for The Union’s official photographer and videographer, as well as attending media, to photograph them at the 48th Union World Conference on Lung Health for subsequent use in Union internal and external promotional material.

Press
Credentialed press representatives will be taking photographs and videotaping portions of the conference.

Other photography
Delegates are entitled to take photographs of the conference for their own personal, educational and/or advocacy purposes.

The Union will not be liable if delegates object to being photographed in these circumstances.

REGISTRATION

The registration area is located in the entrance of the Expo Guadalajara Convention Centre. Conference registration includes a delegate badge, lanyard and conference bag, participation in pre-conference events, all scientific sessions, access to the exhibition area and the poster exhibition, and an invitation to the Welcome Reception.

The Welcome Reception will be held on Wednesday, 11 October at the PALCCO centre. Shuttles will take guests from the conference centre to the reception and back again.

STUDENT NETWORKING FORUM
Young delegates are invited to the Student Networking Forum on Friday, 13 October from 17:45-18:45 at The Union Village.

This event follows on last year’s popular forum, which brought together young delegates and Union experts to socialise and network.

To find out more, please visit the Membership Stand in The Union Village.

Workshops/Post-graduate courses
Post-graduate courses and workshops take place on Wednesday, 11 October. Delegates are able to register for a post-graduate course onsite. The fee for each course is 50-100 euros depending on its duration.

Workshops are free of charge for delegates, but seating is limited. If you are not registered for the conference, workshops cost 50-100 euros depending on the duration.
INFORMATION FOR PRESENTERS

Symposia, oral abstract, workshop, and post-graduate course presentations must be uploaded by technical staff in the Speaker Centre.

Presenters must go to the Speaker Centre at least four hours before their session to upload and review their presentations. They should follow the guidelines sent by the conference secretariat. The Speaker Centre is located in Hall 1 – Events Ballroom.

The opening hours are:

Tuesday, 10 October: 15:00-19:00
Wednesday, 11 - Friday, 13 October: 07:00-19:00
Saturday, 14 October: 07:00-17:00

Posters

The poster help desk will be located in the Poster Area. Staff will be present daily during the official opening hours to provide assistance.

Set-up: Poster presenters may set up their poster as of 7:30 on Thursday 12 October. Authors are requested to display their posters from 12 to 14 October. This will give delegates the opportunity to visit the posters outside official session times.

Take-down: All posters must be removed between 14:00 and 16:00 on Saturday, 14 October.

Important Note: Posters should be set up on the assigned board in the poster area and not on any other board.

Conference embargo policy: information for presenters

All conference abstracts are released under a strict embargo policy. A detailed breakdown of the embargo variations for different types of abstracts is available below.

All delegates, presenters and media are asked to respect this policy.

Oral abstracts and short oral abstracts

Information about the oral abstracts may not be published or presented before the start of the session at the World Conference in which the abstract is being presented.

Poster discussion abstracts

Information about the poster discussion abstracts may not be published or presented before 12:45 on 12 October.

Embargo breaks for presenters

A committee will analyse potential cases of embargo break by presenters on a case-by-case basis and as an ultimate consequence it could lead to the abstract being withdrawn from the conference.

Authors may publish the fact that their abstract has been selected for the World Conference, but may not publish the results of the study before the lifting of the embargo (as detailed above).

Any questions can be directed to scientific@theunion.org.

INFORMATION FOR THE MEDIA

Press registration

All working journalists may request press credentials to attend the conference. Those who have not received credentials in advance should register onsite at the Press Desk in the registration area.

All journalists should go to the Press Desk in the registration area to pick up their conference bag and their press badge. Journalists are welcome to attend all sessions except closed meetings.

Press pack

The conference press pack may be downloaded from the online media centre at worldlunghealth.org.

Press Centre

Registered journalists are invited to use the Press Centre located in room Mueble 1. There they will find a quiet place to work, with internet access and resources such as a schedule of press-oriented events at the World Conference.
Press room hours:
Tuesday 10 October until Saturday, 14 October, 08:00-20:00.

Press Conferences
All press conferences will take place in room Moda 1 unless otherwise noted in the press pack.

Embargo policy for the media
All conference abstracts are released to delegates and media under a strict embargo policy.
A detailed breakdown of the embargo variations for different types of abstracts is shown below. All delegates, presenters and media are asked to respect this policy.

Embargo breaks
As well as having access to the materials detailed above, the media is also given prior access to the speakers’ slides. However, access is only granted to media onsite at the conference, and the same embargo rules apply – meaning the information in speaker slides cannot be referenced or published before the start of the presentation.

Breaking of the embargo policy by a reporter will lead to one or more of the following measures:
- Immediate suspension of the reporter’s media conference credentials
- Immediate barring of the reporter from the meeting premises
- Removal of the reporter’s name from The Union’s media distribution list for two years
- No access to the 2018 Union World Conference

If you have questions, please contact press@theunion.org.

NURSES AND ALLIED PROFESSIONALS

TB EDUCATIONAL MATERIAL DISPLAY
All conference participants are invited to bring patient and provider tuberculosis (TB) education and training materials to display and discuss at The Union Conference. Bring any material you have, including: brochures, posters, fact sheets, training curricula, videos.

The TB education and material display will be in the exhibition area (Booths 53 and 54)
- Bring samples of education and training materials to share
- Network with colleagues involved in TB education and materials development
- Learn about TB education and training materials being used worldwide

TB EDUCATIONAL MATERIAL DISCUSSION SESSION
Join us for this discussion on Friday, 14 October 13:30-15:30 in room Cabanas I.
- Find out about the development and availability of TB education and training materials from a variety of programmes and organisations
- Meet with material developers
- Share your own TB education and training ideas

To display materials, or if you have questions, please contact:
Linette McElroy Hawkes, email: thelearningrx@shaw.ca
THE UNION WORLD CONFERENCE APP

Access maps of the conference centre, find a full listing of events, and speakers, and receive regular updates.

Search the programme by day, session type, speaker and scientific track; create a personalised itinerary of selected sessions; follow our social media feeds and view video.

DOWNLOAD THE APP WITH YOUR APPLE IOS OR ANDROID DEVICE. SEARCH FOR ‘THE UNION2017’ BY DOCUMEDIAS

CONFERENCE SOCIAL MEDIA

worldlunghealth.org
Follow the conference on social media #unionconf

@The.Union.World.Conferences.On.Lung.Health
@UnionConference @theunionNGO
CAREERS WITH THE UNION

Explore the world of opportunities waiting for you at The Union.

Since our founding as a global scientific organisation in 1920, The Union has drawn from the best evidence and the skills, expertise and reach of our staff, consultants and membership in order to advance solutions to the most pressing public health challenges affecting people living in poverty around the world.

Our team of over 900 staff and consultants offered technical assistance, conducted research and provided training in around 80 countries this year – and we are expanding.

WHAT WE OFFER

We are seeking talented, dedicated professionals to join us at our Paris headquarters and regional and country offices in China, DR Congo, India, Mexico, Myanmar, Peru, Singapore, Uganda, the UK, the USA and Zimbabwe. The principal areas of work are:

- TB/MDR-TB/childhood TB and clinical & operational management
- TB-HIV clinical & programmatic management
- Tobacco control policy development
- Laboratory skills
- Pharmacy/pharmacology
- Health programme management
- Health systems strengthening
- Operational research
- Clinical trials management
- Training and capacity building
- Advocacy and empowerment

AS PART OF THE UNION TEAM, YOU WILL

- Work in a world-renowned scientific organisation
- Receive tailored induction, training and mentoring
- Collaborate with leading experts
- Experience working in the field
- Help fulfil our vision: Health solutions for the poor

COME TO THE UNION CAREERS STAND TO LEARN ABOUT CURRENT VACANCIES.
Visit theunion.org/get-involved/careers or contact hr@theunion.org
ENCUENTRO

A SPACE FOR ALL OUR VOICES

THE 48TH UNION WORLD CONFERENCE ON LUNG HEALTH

11-14 OCTOBER 2017
GUADALAJARA, MEXICO

JOIN THE CONVERSATION
worldlunghealth.org  @TheUnionLungHealth  @UnionConference #UnionConf
Encuentro, meaning ‘meeting’ or ‘gathering’ in Spanish, is a place at the conference where community activists, civil society, local organisations and others come together with scientists, researchers and policy-makers to rally for a common cause.

**PROGRAMME HIGHLIGHTS INCLUDE:**

- A bike ride for lung health through the city of Guadalajara
- Film screenings
- ‘Meet the Artist’ sessions
- Daily plenary broadcasts
- Discussion and networking sessions
- Vaccines, health screening and HIV testing
- Art exhibitions
- Games and interactive sessions

**ENCUENTRO WELCOMES THE FOLLOWING EXHIBITORS:**

- ACTION
- Burundian Alliance Against Tuberculosis and Leprosy
- Centro de Atención Integral en VIH-sida A.C.
- Cohesión de diversidades para la sustentabilidad A.C.
- Comité Promotor por una Maternidad Segura en Jalisco A.C.
- Consejo Estatal Para Prevenir y Eliminar la Discriminación
- Fibrosis Quística de Occidente A.C.
- Fundación Ecuatoriana de la Salud Respiratoria (FESAR)
- Fundación Hospitales Civiles de Guadalajara
- Fundación Voluntarias Contra el Cáncer A.C.
- Galilea 2000
- Mesón de la Misericordia Divina A.C.
- MIBICI
- Neumología y Fisiología Pulmonar del Hospital Civil de Guadalajara Fray Antonio Alcalde
- Pequeño Gran Gourmet
- Programa Nacional de Tuberculosis en México
- Quiero Vivir, A.C.
- Secretaría de Salud, Jalisco
- State Council for HIV-AIDS Prevention, Secretariat of Health, Jalisco, Mexico
- TB Alliance
- Trasplantados en el Hospital Civil Fray Antonio Alcalde, AC.
- Una Sonrisa al Dolor
- UNICEF
- Unidad de Apoyo a las Comunidades Indígenas – Universidad de Guadalajara
INFORMACIÓN GENERAL

Libro de resúmenes
Los participantes podrán descargar el Libro de resúmenes desde la web de la conferencia una vez haya finalizado.

Descansos
Del 11 al 14 de octubre en la sala de exposiciones y en el espacio Encuentro habrá un servicio de catering de pago con una oferta variada de bebidas y comidas frías y calientes.

Primeros auxilios
Durante la conferencia se contará con un servicio médico. Todos los problemas médicos deben comunicarse al personal del centro de conferencias o a los voluntarios de la conferencia. En caso de emergencia, el delegado será trasladado al hospital más cercano. Los delegados se harán cargo de los gastos del hospital.

Wifi gratuito
Los delegados gozarán de acceso wifi gratuito en el centro de conferencias. El usuario y la contraseña para acceder al wifi gratuito se le anotarán in situ en la parte posterior del pase para la conferencia.

Webcasts y streaming en directo
Los webcasts de las presentaciones de las sesiones plenarias, de los simposios y de los resúmenes orales estarán disponibles en la web de la conferencia.

La sesión inaugural y la de clausura, así como las sesiones plenarias y de ponencias se emitirán por streaming en directo.

Dianamente encontrará fotos y noticias sobre la conferencia en worldlunghealth.org y theunion.org.

Sesión inaugural y recepción de bienvenida
Nos honra que el Sr. José Narro Robles, Secretario de Salud de México, intervenga en la sesión inaugural y dé la bienvenida a los participantes de la conferencia en nombre del Excmo. Sr. Enrique Peña Nieto, Presidente de México.

La Unión invita cordialmente a todos los delegados registrados y a sus acompañantes y los expositores a la Sesión inaugural que tendrá lugar el miércoles 11 de octubre a las 18:00 h. A continuación, se celebrará una recepción de bienvenida entre las 20:00 h y las 21:30 en el Palacio de la Cultura y la Comunicación (PALCCO).

Certificado de asistencia
Una vez concluida la evaluación tras la conferencia se entregará a los delegados un certificado de asistencia. Los delegados que deseen incluir en su certificado de asistencia el título de la sesión a la que han asistido o a la que han contribuido deben enviar su petición a scientific@theunion.org tras la conferencia.

Material fotográfico
Con el registro, los delegados autorizan al fotógrafo y al cámara oficial de La Unión, así como a los medios de comunicación asistentes, a que les tomen fotografías durante el transcurso de la 48ª Conferencia Mundial de La Unión sobre Salud Pulmonar para su uso posterior por parte de La Unión como material promocional interno y externo.

Prensa
Los representantes de prensa acreditados tomarán fotos y grabarán partes de la conferencia.

Otros materiales fotográficos
Los delegados pueden tomar fotografías de la conferencia para su uso personal, o con fines educativos y/o promocionales.

La Unión no se hace responsable si los delegados se oponen a ser fotografiados en estas circunstancias.

INSCRIPCIÓN

La zona de registro se encuentra en la entrada del centro de convenciones Expo Guadalajara. La inscripción a la conferencia incluye un pase de delegado, un cordón y la bolsa de la conferencia, así como la participación en los eventos que se llevarán a cabo antes de la conferencia, acceso a todas las sesiones científicas, acceso al espacio de exposición y a la zona de exposición de pósters, y una invitación a la Recepción de bienvenida.

La Recepción de bienvenida se celebrará el miércoles 11 de octubre en el centro PALCCO. Un servicio de lanzaderas trasladará a los invitados desde el centro de conferencias a la recepción y les traerá de vuelta.

Talleres y cursos de posgrado
Los cursos de posgrado y los talleres se realizan el miércoles 11 de octubre. Los delegados pueden inscribirse a los cursos de posgrado in situ. El precio de cada curso es de 50-100 euros en función de la duración.

Los talleres son gratuitos para los delegados, pero el aforo es limitado. Si no está registrado a la conferencia, los talleres tienen un coste de 50-100 euros en función de la duración.

FORO DE CONTACTOS DE ESTUDIANTES

Los jóvenes delegados están invitados a asistir al Foro de contactos de estudiantes que tendrá lugar el viernes 13 de octubre de 17:45 h a 18:45 h en The Union Village.

Este acto es el resultado del popular foro del año pasado, que reunió a jóvenes delegados y a expertos de La Unión y les brindó la oportunidad de charlar y hacer contactos.

Si desea más información, visite el stand de afiliados en The Union Village.
Horario de atención
07:00 h – 18:00 h Miércoles 11 de octubre
07:00 h – 18:00 h Jueves 12 de octubre
07:30 h – 16:00 h Viernes 13 de octubre
07:00 h – 18:00 h Sábado 14 de octubre

Métodos de pago
- Tarjetas de crédito internacionales: Visa, Eurocard, Mastercard
- Metálico: Euros, dólares estadounidenses o pesos mexicanos

Transferencia de las inscripciones
Todas las solicitudes para transferir una inscripción de una persona a otra deben enviarse a la Secretaría de la Conferencia por escrito. La transferencia tiene un coste de gestión de 50 €.

Pérdida del pase
En caso de perder el pase, comuníquelo inmediatamente al personal encargado de las inscripciones. Deberá acreditar su identidad para poder recibir un nuevo pase. Un nuevo pase puede ser proporcionado con un costo administrativo de 150 euros.

INFORMACIÓN PARA LOS PONENTES

El personal técnico es el encargado de cargar las presentaciones de los simposios, resúmenes orales, talleres y cursos de posgrado en el Centro del ponente.

Los ponentes deben dirigirse al Centro del ponente como mínimo cuatro horas antes de que empiece su sesión para cargar y revisar sus presentaciones. Deben respetarse las directrices enviadas por la Secretaría de la Conferencia. El Centro del ponente se encuentra en el Hall 1 – Salón de eventos.

Horario de atención
Martes 10 de octubre: 15:00 h - 19:00 h
Miércoles 11 a viernes 13 de octubre: 07:00 h - 19:00 h
Sábado 14 de octubre: 07:00 h - 17:00 h

Pósters
El centro de ayuda para pósters estará situado en la zona de pósters. Todos los días, dentro del horario de atención, habrá personal que podrá prestarle asistencia.

Instalación: Las personas que presenten pósters pueden instalarlos a partir del jueves 12 de octubre a las 7:30 h. Los autores deben mostrar sus pósters del 12 al 14 de octubre. De este modo, los delegados tendrán la oportunidad de visitar los pósters fuera del horario de las sesiones oficiales.

Retirada: Todos los pósters deben ser retirados el sábado 14 de octubre entre las 14:00 h y las 16:00 h.
Nota importante: Los pósters deben instalarse únicamente en el tablón asignado de la zona de pósters y no en ningún otro tablón.

Política de embargo de la conferencia: información para los ponentes
Todos los resúmenes de la conferencia se distribuyen bajo una estricta política de embargo. A continuación, se ofrece un desglose detallado de las variaciones del embargo para los diferentes tipos de resúmenes.

Se pide a todos los delegados, ponentes y medios de comunicación que respeten esta política.

Resúmenes orales y resúmenes orales breves
La información sobre los resúmenes orales no se puede publicar ni presentar antes del inicio de la sesión en la Conferencia Mundial en la que se presente el resumen.

Resúmenes del debate sobre los pósters
La información sobre los resúmenes del debate sobre los pósters no se puede publicar ni presentar antes del 12 de octubre a las 12:45 h.

Incumplimiento del embargo por parte de los ponentes
Una comisión analizará los posibles casos de incumplimiento del embargo por parte de los ponentes. Se estudiará caso por caso y, en última instancia, podría decidirse la eliminación del resumen de la conferencia.

Los autores pueden publicar el hecho de que su resumen ha sido seleccionado para su inclusión en la Conferencia Mundial, pero no podrán publicar los resultados del estudio antes del levantamiento del embargo (como se detalla más arriba).
Si desea realizar cualquier consulta, póngase en contacto con scientific@theunion.org.
Horario de la sala de prensa
Desde el martes 10 de octubre hasta el sábado 14 de octubre, de 08:00 h a 20:00 h.

Conferencias de prensa
Todas las conferencias de prensa tendrán lugar en la sala Moda 1 salvo que se indique lo contrario en el dossier de prensa.

Política de embargo para los medios
Todos los resúmenes de la conferencia se distribuyen a los delegados y a los medios bajo una estricta política de embargo.

A continuación, se ofrece un desglose detallado de las variaciones del embargo para los diferentes tipos de resúmenes. Se pide a todos los delegados, ponentes y medios de comunicación que respeten esta política.

Incumplimientos del embargo
Además de tener acceso a los materiales detallados anteriormente, los medios de comunicación también tienen acceso previo a las presentaciones de los ponentes. Sin embargo, este acceso solo se concede a los medios de comunicación presentes en la conferencia y se aplican las mismas normas de embargo, lo que significa que no se puede hacer referencia ni publicar la información de las presentaciones de los ponentes antes del inicio de la presentación.

El incumplimiento de la política de embargo por parte de un periodista conducirá a una o varias de las siguientes medidas:
- Suspensión inmediata de las credenciales del periodista para asistir a la conferencia.
- Prohibición inmediata del acceso del periodista a las instalaciones donde se realizan las reuniones.
- Eliminación del nombre del periodista de la lista de distribución de medios de comunicación de La Unión durante dos años.
- Prohibición para acceder a la Conferencia Mundial de La Unión del 2018.

Si tiene cualquier duda, póngase en contacto con press@theunion.org.

ENFERMERÍA Y PROFESIONALES SANITARIOS

MUESTRA DE MATERIAL EDUCATIVO SOBRE LA TUBERCULOSIS
Se invita a todos los participantes de la conferencia a traer materiales educativos y formativos sobre tuberculosis para pacientes y profesionales sanitarios. Estos se mostrarán y debatirán en la Conferencia de La Unión. Puede traer cualquier material del que disponga, incluidos folletos, pósters, fichas técnicas, planes de formación y vídeos.

La muestra de material educativo sobre la tuberculosis se ubicará en el Espacio de exposiciones (stands 53 y 54).
- Traiga muestras de materiales educativos y formativos para compartir.
- Contacte con colegas implicados en la formación en tuberculosis y el desarrollo de materiales.
- Conozca los materiales educativos y formativos sobre la tuberculosis que se utilizan a nivel mundial.

SESIÓN DE DEBATE EN TURNO AL MATERIAL EDUCATIVO SOBRE LA TUBERCULOSIS
Únase a este debate el viernes 13 de octubre de 13:30 h a 15:00 h, en la Sala de Cabanas I.
- Descubra más información sobre el desarrollo y la disponibilidad de materiales educativos y formativos sobre la tuberculosis disponibles a través de diversos programas y organizaciones.
- Reúna con los desarrolladores de los materiales.
- Comparta sus propias ideas sobre la educación y la formación en torno a la tuberculosis.

Para mostrar los materiales, o si tiene cualquier duda, póngase en contacto con:
Linette McElroy Hawkes, correo electrónico: thelearningrx@shaw.ca
UNION CONFERENCES AROUND THE WORLD

USA
22ND CONFERENCE OF THE UNION NORTH AMERICA REGION
27 February - 3 March 2018
The Westin Michigan Hotel
Chicago, Illinois, USA

EGYPT
29TH CONFERENCE OF THE UNION MIDDLE EAST REGION
27-30 March 2018
Cairo, Egypt

THE NETHERLANDS
49TH UNION WORLD CONFERENCE ON LUNG HEALTH
24-27 October 2018
The Hague, The Netherlands

17TH CONFERENCE OF THE UNION LATIN AMERICA REGION
More details coming soon

4TH CONFERENCE OF THE UNION SOUTH-EAST ASIA REGION
More details coming soon

Find out more: theunion.org/what-we-do/conferences
### SCHEDULE AT A GLANCE

#### WEDNESDAY 11 OCTOBER

<table>
<thead>
<tr>
<th>Hall 2</th>
<th>Hall 3</th>
<th>Hall 4</th>
<th>Hall 5</th>
<th>Hall 6</th>
<th>Hall 7</th>
<th>Hall 8</th>
<th>Hall 9</th>
<th>Expo</th>
<th>Encuentro session room</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08:15</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08:30</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:00</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:45</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:15</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:45</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:45</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:15</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:45</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:00</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:15</td>
<td>08:00-14:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>08:00-11:00</td>
<td>09:00-14:00</td>
<td>09:00-14:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17:15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17:30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17:45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18:15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18:30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18:45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19:15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19:30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19:45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21:00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21:15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21:30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
<td>Room</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------------------------------</td>
<td>--------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08:00-14:00</td>
<td>Accelerating the uptake of new diagnostics, medicines and regimens to eliminate TB through improved guidance and coordination</td>
<td>Cabanas II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:00-12:00</td>
<td>Introducing new and re-purposed anti-TB agents in the era of increasing antimicrobial resistance under programmatic conditions</td>
<td>Cabanas II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30-13:30</td>
<td>Making sense and use of routine TB data for management</td>
<td>Cabanas II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:30-17:30</td>
<td>Designing digital health solutions for supporting patient and community-based TB monitoring</td>
<td>Cabanas II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:30-17:30</td>
<td>How to help TB patients to quit smoking, improve their outcomes and reduce the risk of their family developing TB</td>
<td>Cabanas II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:30-17:30</td>
<td>Unveiling, mapping and triangulating underutilised sources of data to identify missing TB cases locally for differentiated programme planning</td>
<td>Cabanas II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:00-15:00</td>
<td>Accelerating urban TB control - a roadmap</td>
<td>Cabanas II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**General Information**

Welcome Reception

Inaugural Session
THURSDAY 12 OCTOBER

<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Event Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:30</td>
<td>Plenary Hall</td>
<td>01. The road to the UNHLM</td>
</tr>
<tr>
<td>08:00</td>
<td>Hall 2</td>
<td>02. Eliciting effective ways to implement community and TB programmes on the frontline</td>
</tr>
<tr>
<td>08:45</td>
<td>Hall 3</td>
<td>03. TB and diabetes: experiences from high-burden settings in high-income settings</td>
</tr>
<tr>
<td>09:15</td>
<td>Hall 4</td>
<td>04. National and subnational strategic approaches to TB elimination</td>
</tr>
<tr>
<td>09:45</td>
<td>Hall 5</td>
<td>05. TB and the indigenous people – developing positive relationships between community and TB programme</td>
</tr>
<tr>
<td>10:00</td>
<td>Hall 6</td>
<td>06. TB and non-communicable diseases in adults – recent updates</td>
</tr>
<tr>
<td>10:15</td>
<td>Hall 7</td>
<td>07. Access to patient care is it their right, privilege or ethical challenge?</td>
</tr>
<tr>
<td>10:30</td>
<td>Hall 8</td>
<td>08. Risks and reasons for drug-resistant TB</td>
</tr>
<tr>
<td>10:45</td>
<td>Satellite</td>
<td>02. Overcoming Challenges: TB in indigenous communities</td>
</tr>
<tr>
<td>11:00</td>
<td>Satellite</td>
<td>03. Global Laboratory Initiative (GLI) TB diagnostic connectivity symposium</td>
</tr>
<tr>
<td>11:45</td>
<td>Satellite</td>
<td>04. Global Laboratory Initiative (GLI) TB diagnostic connectivity symposium</td>
</tr>
<tr>
<td>12:00</td>
<td>Satellite</td>
<td>05. The role of civil society and patient-centred care experiences from the TB Regional EECA Project (TB-REP): a major programme across the Americas, Africa, Asia, South America, and South Africa</td>
</tr>
<tr>
<td>12:30</td>
<td>Satellite</td>
<td>06. From bench to basin: scientific innovations in the fight against TB and MDR/TB in South Africa</td>
</tr>
<tr>
<td>13:00</td>
<td>Satellite</td>
<td>07. Global Laboratory Initiative (GLI) TB diagnostic connectivity symposium</td>
</tr>
<tr>
<td>13:30</td>
<td>Satellite</td>
<td>08. Identifying factors to reach 50-50-50 goals for treatment and cure</td>
</tr>
<tr>
<td>13:45</td>
<td>Satellite</td>
<td>09. How can we ensure TB co-morbidities are updates</td>
</tr>
<tr>
<td>14:00</td>
<td>Satellite</td>
<td>10. TB and non-communicable diseases in adults – recent updates</td>
</tr>
<tr>
<td>14:15</td>
<td>Satellite</td>
<td>11. Air pollution effects on lung health and TB risk</td>
</tr>
<tr>
<td>14:30</td>
<td>Satellite</td>
<td>12. Using Good Participatory Practice (GPP) to bridge the gap: engaging researchers and communities in the fight against TB</td>
</tr>
<tr>
<td>14:45</td>
<td>Satellite</td>
<td>13. Improving care and support for active TB cases in low-income settings</td>
</tr>
<tr>
<td>15:00</td>
<td>Satellite</td>
<td>14. Improving care and support for active TB cases in high-income settings</td>
</tr>
<tr>
<td>15:15</td>
<td>Satellite</td>
<td>15. Integrated TB and diabetes programmes</td>
</tr>
<tr>
<td>15:30</td>
<td>Satellite</td>
<td>16. Integrated TB and diabetes programmes</td>
</tr>
<tr>
<td>15:45</td>
<td>Satellite</td>
<td>17. Integrated TB and diabetes programmes</td>
</tr>
<tr>
<td>16:00</td>
<td>Satellite</td>
<td>18. Integrated TB and diabetes programmes</td>
</tr>
<tr>
<td>16:15</td>
<td>Satellite</td>
<td>19. Integrated TB and diabetes programmes</td>
</tr>
<tr>
<td>16:30</td>
<td>Satellite</td>
<td>20. Integrated TB and diabetes programmes</td>
</tr>
<tr>
<td>16:45</td>
<td>Satellite</td>
<td>21. Integrated TB and diabetes programmes</td>
</tr>
<tr>
<td>17:00</td>
<td>Satellite</td>
<td>22. Integrated TB and diabetes programmes</td>
</tr>
<tr>
<td>17:15</td>
<td>Satellite</td>
<td>23. Integrated TB and diabetes programmes</td>
</tr>
<tr>
<td>17:30</td>
<td>Satellite</td>
<td>24. Integrated TB and diabetes programmes</td>
</tr>
<tr>
<td>17:45</td>
<td>Satellite</td>
<td>25. Integrated TB and diabetes programmes</td>
</tr>
<tr>
<td>18:00</td>
<td>Satellite</td>
<td>26. Integrated TB and diabetes programmes</td>
</tr>
<tr>
<td>18:15</td>
<td>Plenary Hall</td>
<td>Satellite Session 01</td>
</tr>
<tr>
<td>18:30</td>
<td>Plenary Hall</td>
<td>Satellite Session 02</td>
</tr>
<tr>
<td>18:45</td>
<td>Plenary Hall</td>
<td>Satellite Session 03</td>
</tr>
<tr>
<td>19:00</td>
<td>Plenary Hall</td>
<td>Satellite Session 04</td>
</tr>
<tr>
<td>19:15</td>
<td>Plenary Hall</td>
<td>Satellite Session 05</td>
</tr>
<tr>
<td>19:30</td>
<td>Plenary Hall</td>
<td>Satellite Session 06</td>
</tr>
<tr>
<td>19:45</td>
<td>Plenary Hall</td>
<td>Satellite Session 07</td>
</tr>
<tr>
<td>20:00</td>
<td>Plenary Hall</td>
<td>Satellite Session 08</td>
</tr>
<tr>
<td>20:15</td>
<td>Plenary Hall</td>
<td>Satellite Session 09</td>
</tr>
<tr>
<td>20:30</td>
<td>Plenary Hall</td>
<td>Satellite Session 10</td>
</tr>
<tr>
<td>20:45</td>
<td>Plenary Hall</td>
<td>Satellite Session 11</td>
</tr>
<tr>
<td>Hall 9</td>
<td>Hall 10</td>
<td>Hall 11</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20:45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROOM</td>
<td>Plenary Hall</td>
<td>Events Ballroom</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Hall 2</td>
<td>Hall 3</td>
<td>Hall 4</td>
</tr>
<tr>
<td>07:30</td>
<td>07:45</td>
<td>08:00</td>
</tr>
<tr>
<td>08:45</td>
<td>09:00</td>
<td>09:15</td>
</tr>
<tr>
<td>10:00</td>
<td>10:15</td>
<td>10:30</td>
</tr>
<tr>
<td>11:15</td>
<td>11:30</td>
<td>11:45</td>
</tr>
<tr>
<td>12:30</td>
<td>12:45</td>
<td>13:00</td>
</tr>
<tr>
<td>13:45</td>
<td>14:00</td>
<td>14:15</td>
</tr>
<tr>
<td>15:00</td>
<td>15:15</td>
<td>15:30</td>
</tr>
<tr>
<td>16:15</td>
<td>16:30</td>
<td>16:45</td>
</tr>
<tr>
<td>17:30</td>
<td>17:45</td>
<td>18:00</td>
</tr>
<tr>
<td>18:45</td>
<td>19:00</td>
<td>19:15</td>
</tr>
<tr>
<td>20:00</td>
<td>20:15</td>
<td>20:30</td>
</tr>
<tr>
<td>Hall 9</td>
<td>Hall 10</td>
<td>Hall 11</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>10:00-12:00</strong>&lt;br&gt;28. Tuberculosis in public health settings&lt;br&gt;28.1 Tuberculosis in healthcare settings</td>
<td><strong>10:00-12:00</strong>&lt;br&gt;29. Modelling to support acceleration toward elimination</td>
<td><strong>10:30-12:30</strong>&lt;br&gt;30. Shifting TB treatment paradigms: from diagnosis to drug delivery</td>
</tr>
<tr>
<td><strong>12:30-14:30</strong>&lt;br&gt;34. TB vaccines and future directions</td>
<td><strong>12:30-14:30</strong>&lt;br&gt;35. TB vaccines and future directions</td>
<td><strong>12:30-14:30</strong>&lt;br&gt;36. TB vaccines and future directions</td>
</tr>
<tr>
<td><strong>14:00-16:00</strong>&lt;br&gt;39. TB vaccines and future directions</td>
<td><strong>14:00-16:00</strong>&lt;br&gt;40. TB vaccines and future directions</td>
<td><strong>14:00-16:00</strong>&lt;br&gt;41. TB vaccines and future directions</td>
</tr>
<tr>
<td><strong>16:00-18:00</strong>&lt;br&gt;44. TB vaccines and future directions</td>
<td><strong>16:00-18:00</strong>&lt;br&gt;45. TB vaccines and future directions</td>
<td><strong>16:00-18:00</strong>&lt;br&gt;46. TB vaccines and future directions</td>
</tr>
</tbody>
</table>

**Foro - Encuentro Expo**

<table>
<thead>
<tr>
<th>Room</th>
<th>Poster area</th>
<th>IDDHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:30</td>
<td>07:45</td>
<td>08:00</td>
</tr>
<tr>
<td>09:00-10:00</td>
<td>10:00-11:00</td>
<td>10:15</td>
</tr>
<tr>
<td>10:30</td>
<td>10:45</td>
<td>11:00</td>
</tr>
<tr>
<td>11:15</td>
<td>11:30</td>
<td>11:45</td>
</tr>
<tr>
<td>12:00</td>
<td>12:15</td>
<td>12:30</td>
</tr>
<tr>
<td>12:45</td>
<td>13:00</td>
<td>13:15</td>
</tr>
<tr>
<td>13:30</td>
<td>13:45</td>
<td>14:00</td>
</tr>
<tr>
<td>14:15</td>
<td>14:30</td>
<td>14:45</td>
</tr>
<tr>
<td>15:00</td>
<td>15:15</td>
<td>15:30</td>
</tr>
<tr>
<td>15:45</td>
<td>16:00</td>
<td>16:15</td>
</tr>
<tr>
<td>16:30</td>
<td>16:45</td>
<td>17:00</td>
</tr>
<tr>
<td>17:15</td>
<td>17:30</td>
<td>17:45</td>
</tr>
<tr>
<td>18:00</td>
<td>18:15</td>
<td>18:30</td>
</tr>
<tr>
<td>18:45</td>
<td>19:00</td>
<td>19:15</td>
</tr>
<tr>
<td>19:30</td>
<td>19:45</td>
<td>20:00</td>
</tr>
<tr>
<td>20:15</td>
<td>20:30</td>
<td>20:45</td>
</tr>
<tr>
<td>Time</td>
<td>Room</td>
<td>Event</td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>08:00</td>
<td>Hall 2</td>
<td>16: Patient-centred care - What does it mean?</td>
</tr>
<tr>
<td>08:00</td>
<td>Hall 3</td>
<td>16: Should patients be mere recipients? How can it be made a reality?</td>
</tr>
</tbody>
</table>
| 08:00 | Hall 5     | 16: Accelerating lung health over the life course 10: | 09:00-10:00  
| 08:15 | Hall 6     | 16: La enfermedad pulmonar obstructiva crónica en México 10: | 09:00-10:00  
| 08:45 | Hall 7     | 16: Implementing and sustaining the appropriate biosafety in TB laboratories, ZN smear through to drug susceptibility testing (DST) cultures 10: | 09:00-10:00  
| 10:00 | Hall 8     | 16: Advancing laboratory diagnostics for greatest impact 10: | 09:00-10:00  
| 10:15 | Hall 9     | 16: Reducing catastrophic costs for people with TB through patient-centred care 10: | 09:00-10:00  
| 10:30 | Hall 10    | 16: Women, tobacco and cancer in Mexico 10: | 09:00-10:00  
| 10:30 | Hall 1      | 16: TB and Pregnancy Jeopardy 10: | 09:00-10:00  
| 10:45 | Hall 2      | 16: Strategically integrating tobacco control 10: | 09:00-10:00  
| 11:00 | Hall 3      | 16: TB and immigrant populations 10: | 09:00-10:00  
| 11:15 | Hall 5      | 16: TB laboratory services: lessons from the field 10: | 09:00-10:00  
| 11:30 | Hall 6      | 16: Prospects for elimination of multidrug-resistant TB 10: | 09:00-10:00  
| 11:45 | Hall 7      | 16: Thinking holistically - many contributors to improving TB treatment outcomes 10: | 09:00-10:00  
| 12:00 | Hall 8      | 16: TB in healthcare workers 10: | 09:00-10:00  
| 12:15 | Hall 9      | 16: Nursing interventions for support of patients with MDR-TB 10: | 09:00-10:00  
| 12:30 | Hall 10     | 16: TB and Psychotherapy, how much, and to what end? 10: | 09:00-10:00  
| 12:45 |           | 16: Epidemiología de la tuberculosis infantil en América Latina 10: | 09:00-10:00  
| 13:00 |           | 16: TB and nutrition 10: | 09:00-10:00  
| 13:15 |           | 16: More TB drugs, less rock and roll! Quizás algún mariachi 10: | 09:00-10:00  
| 13:30 |           | 16: Using knowledge from pharmacokinetics and pharmacodynamics (PK/PD) studies to adapt TB treatment 10: | 09:00-10:00  
| 13:45 |           | 16: Preparación y respuesta ante una pandemia de influenza en México 10: | 09:00-10:00  
| 14:00 |           | 16: Using knowledge from pharmacokinetics and pharmacodynamics (PK/PD) studies to adapt TB treatment 10: | 09:00-10:00  
| 14:15 |           | 16: TB laboratory services: lessons from the field 10: | 09:00-10:00  
| 14:30 |           | 16: TB laboratory services: lessons from the field 10: | 09:00-10:00  
| 14:45 |           | 16: TB laboratory services: lessons from the field 10: | 09:00-10:00  
| 15:00 |           | 16: TB laboratory services: lessons from the field 10: | 09:00-10:00  
| 15:15 |           | 16: TB laboratory services: lessons from the field 10: | 09:00-10:00  
| 15:30 |           | 16: TB laboratory services: lessons from the field 10: | 09:00-10:00  
| 15:45 |           | 16: TB laboratory services: lessons from the field 10: | 09:00-10:00  
| 16:00 |           | 16: Rapporteur Session 10: | 09:00-10:00  
| 16:15 |           | 16: Rapporteur Session 10: | 09:00-10:00  
| 16:30 |           | 16: Rapporteur Session 10: | 09:00-10:00  
| 16:45 |           | 16: Rapporteur Session 10: | 09:00-10:00  
| 17:00 |           | 16: Closing Session 10: | 09:00-10:00  
| 17:15 |           | 16: Closing Session 10: | 09:00-10:00  
| 17:30 |           | 16: Closing Session 10: | 09:00-10:00  
| 17:45 |           | 16: Closing Session 10: | 09:00-10:00  
| 18:00 |           | 16: Closing Session 10: | 09:00-10:00  

**Plenary Hall**  
- Room 1  
- Room 2  
- Room 3  
- Room 4  
- Room 5  
- Room 6  
- Room 7  
- Room 8  
- Room 9  
- Room 10  

**Events Ballroom**  
- Hall 1  
- Hall 2  
- Hall 3  
- Hall 4  
- Hall 5  
- Hall 6  
- Hall 7  
- Hall 8  
- Hall 9  
- Hall 10
<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00-08:45</td>
<td>Room 1</td>
<td>Patient-centred care - What does it mean? Should patients be mere recipients? How can it be made a reality?</td>
</tr>
<tr>
<td>09:00-10:00</td>
<td>Room 2</td>
<td>Plenary Broadcast</td>
</tr>
<tr>
<td>10:00-10:15</td>
<td>Room 3</td>
<td>Meet the Artist: Campaña Haza de Toc por aire limpio</td>
</tr>
<tr>
<td>09:00-12:00</td>
<td>Room 4</td>
<td>10.00</td>
</tr>
<tr>
<td>10:00-10:15</td>
<td>Room 5</td>
<td>03.00</td>
</tr>
<tr>
<td>09:00-12:00</td>
<td>Room 6</td>
<td>10.00</td>
</tr>
<tr>
<td>09:00-12:00</td>
<td>Room 7</td>
<td>10.00</td>
</tr>
<tr>
<td>09:00-12:00</td>
<td>Room 8</td>
<td>10.00</td>
</tr>
<tr>
<td>09:00-12:00</td>
<td>Room 9</td>
<td>10.00</td>
</tr>
<tr>
<td>09:00-12:00</td>
<td>Room 10</td>
<td>10.00</td>
</tr>
<tr>
<td>09:00-12:00</td>
<td>Room 11</td>
<td>10.00</td>
</tr>
<tr>
<td>09:00-12:00</td>
<td>Room 13</td>
<td>10.00</td>
</tr>
<tr>
<td>08:00-10:00</td>
<td>Room 14</td>
<td>Encounter Meet the Expert session</td>
</tr>
<tr>
<td>10:00-12:00</td>
<td>Room 15</td>
<td>Poster discussion (nos. 41-57)</td>
</tr>
<tr>
<td>10:00-11:00</td>
<td>Room 16</td>
<td>TB and Pregnancy Jeopardy</td>
</tr>
<tr>
<td>11:00-12:00</td>
<td>Room 17</td>
<td>Meet the Artist: TB + cartel + prevention = Mexico free of tuberculosis, Seminario de las transformaciones del cartel en México</td>
</tr>
<tr>
<td>12:00-13:15</td>
<td>Room 18</td>
<td>TB and Pregnancy Jeopardy</td>
</tr>
<tr>
<td>13:15-14:00</td>
<td>Room 19</td>
<td>TB and Pregnancy Jeopardy</td>
</tr>
<tr>
<td>14:00-15:00</td>
<td>Room 20</td>
<td>TB and Pregnancy Jeopardy</td>
</tr>
<tr>
<td>15:00-16:00</td>
<td>Room 21</td>
<td>TB and Pregnancy Jeopardy</td>
</tr>
<tr>
<td>16:00-17:15</td>
<td>Room 22</td>
<td>Rapporteur Broadcast</td>
</tr>
<tr>
<td>17:15-18:00</td>
<td>Room 23</td>
<td>Closing Session broadcast</td>
</tr>
</tbody>
</table>
Union Administrative Meetings

TUESDAY
- 10:00-15:00: Board meeting (1) - Agave/Westin
- 15:30-17:30: Scientific Programme Committee Meeting (CCSA: Sub-group 2) - Cabañas I
- 16:00-18:00: Editorial Board of Public Health Action (PMA) - Cabañas I

WEDNESDAY
- 08:00-10:00: Membership Committee Meeting - Cabañas I
- 12:00-13:00: Editorial Board meeting of the International Journal of Tuberculosis and Lung Disease (IJTLD) - Cabañas I

THURSDAY
- 08:00-09:00: Membership Committee Meeting - Calzado I
- 12:00-13:00: Editorial Board meeting of the International Journal of Tuberculosis and Lung Disease (IJTLD) - Calzado I

FRIDAY
- 19:30 – 20:30: General Assembly - Hall 10 - Jalisco Hall

SATURDAY
- 08:00-09:00: Scientific Programme Committee Meeting (CCSA: Sub-group 2) - Cabañas I
- 10:30-14:30: Board meeting (2) - Westin/Sabila Maguey

Union Region Meetings

THURSDAY
- 12.15 – 13.15: Asia Pacific Region Meeting - Hall 5 - Events Ballroom
- 12.15 – 13.15: South-East Asia Region Meeting - Hall 6 - Events Ballroom
- 12.15 – 13.15: Middle-East Region Meeting - Hall 7 - Events Ballroom
- 12.15 – 13.15: Africa Region Meeting - Hall 8 - Events Ballroom
- 12.15 – 13.15: Europe Region Meeting - Hall 3 - Events Ballroom
- 12.15 – 13.15: North America Region Meeting - Hall 4 - Events Ballroom
- 12.15 – 13.15: Latin America Region Meeting - Hall 6 - Events Ballroom

THURSDAY
- 12.15 – 13.15: Asia Pacific Region Meeting - Hall 5 - Events Ballroom
- 12.15 – 13.15: South-East Asia Region Meeting - Hall 6 - Events Ballroom
- 12.15 – 13.15: Middle-East Region Meeting - Hall 7 - Events Ballroom
- 12.15 – 13.15: Africa Region Meeting - Hall 8 - Events Ballroom
- 12.15 – 13.15: Europe Region Meeting - Hall 3 - Events Ballroom
- 12.15 – 13.15: North America Region Meeting - Hall 4 - Events Ballroom
- 12.15 – 13.15: Latin America Region Meeting - Hall 6 - Events Ballroom

THURSDAY
- 08.30 – 09.30: Countering tobacco industry - Hall 8 - Events Ballroom
- 10.00 – 11.00: TB control in prisons - Hall 2 - Events Ballroom
- 12:15 – 13:15: Global indigenous STOP TB initiative - Mineo I
- 17.45 – 18.45: Europe Region Meeting - Hall 3 - Events Ballroom
- 17.45 – 18.45: North America Region Meeting - Hall 4 - Events Ballroom
- 17.45 – 18.45: Latin America Region Meeting - Hall 6 - Events Ballroom

FRIDAY
- 07.45 – 08.45: TB and migration - Mineo I
- 07.45 – 08.45: TB and infection control - Los Arcos
- 07.45 – 08.45: TB and mental health - Fray Alcado
- 07.45 – 08.45: Global indigenous STOP TB initiative - Mineo I
- 07.45 – 08.45: MPOWER Research Group on Tobacco Control - Cabañas II
- 07.45 – 08.45: Education and training - Degollado I
- 07.45 – 08.45: Zoonotic sub-section and working group - Hall 3 - Events Ballroom
- 07.45 – 08.45: MDR-TB working group - Mineo I

FRIDAY
- 10.30-14:30: Board meeting (2) - Westin/Sabila Maguey

Union Scientific Working Group Meetings

WEDNESDAY
- 08.30 – 09.30: Countering tobacco industry - Hall 8 - Events Ballroom
- 10.00 – 11.00: TB control in prisons - Hall 2 - Events Ballroom
- 12.15 – 13.15: Global indigenous STOP TB initiative - Mineo I
- 14.30 – 15.30: TB and migration - Mineo I
- 08.30 – 09.30: TB and infection control - Los Arcos
- 08.30 – 09.30: TB and mental health - Fray Alcado
- 10.00 – 11.00: Global indigenous STOP TB initiative - Mineo I
- 12.15 – 13.15: Global indigenous STOP TB initiative - Mineo I
- 17.45 – 18.45: Europe Region Meeting - Hall 3 - Events Ballroom
- 17.45 – 18.45: North America Region Meeting - Hall 4 - Events Ballroom
- 17.45 – 18.45: Latin America Region Meeting - Hall 6 - Events Ballroom
- 14.30 – 15.30: MPOWER Research Group on Tobacco Control - Cabañas II
- 14.30 – 15.30: Education and training - Degollado I
- 14.30 – 15.30: Zoonotic sub-section and working group - Hall 3 - Events Ballroom
- 14.30 – 15.30: MDR-TB working group - Mineo I

THURSDAY
- 07.45 – 08.45: TB and migration - Mineo I
- 07.45 – 08.45: TB and infection control - Los Arcos
- 07.45 – 08.45: TB and mental health - Fray Alcado
- 07.45 – 08.45: Global indigenous STOP TB initiative - Mineo I
- 07.45 – 08.45: MPOWER Research Group on Tobacco Control - Cabañas II
- 07.45 – 08.45: Education and training - Degollado I
- 07.45 – 08.45: Zoonotic sub-section and working group - Hall 3 - Events Ballroom
- 07.45 – 08.45: MDR-TB working group - Mineo I

FRIDAY
- 16.00 – 17.30: Tobacco control - Los Arcos
- 17.45 – 19.15: HIV section - Los Arcos

Union Scientific Section Meetings

WEDNESDAY
- 14.30 – 15.45: Bacteriology & Immunology - Hall 3 - Events Ballroom
- 16.15 – 17.15: Nurses & Allied Professionals - Degollado I

THURSDAY
- 16.00 – 17.30: Tobacco control - Los Arcos
- 17.45 – 19.15: HIV section - Los Arcos

FRIDAY
- 07.30 – 08.45: Adult and child lung health - Los Arcos
- 07.30 – 08.45: Tuberculosis - Hall 2 - Events Ballroom
In 2005 The Union launched a small project to provide integrated care for patients co-infected with TB-HIV living in Mandalay, Myanmar. There are now 44,000 people enrolled on The Union’s Integrated HIV Care (IHC) Programme, which through partnership with the public sector supports 22 percent of HIV positive people on antiretroviral therapy (ART) in Myanmar.

This exhibition tells the story of the lives this dynamic project has touched, and pays tribute to the unique partnerships that have made it possible. It celebrates a decade of unwavering commitment from TOTAL E&P to support the project, and illustrates the astonishing impact of a responsive funding relationship.

Photographer Jan Schmidt-Whitely spent time documenting patients, families, clinicians and volunteers with the support of The Union Myanmar Office and The Union Communications team. The project was directed by José Luis Castro, Executive Director.

We invite you to view the photos on display in Vestíbulo 4, just outside the exhibition area, during the 48th World Conference on Lung Health.

Special thanks go to all the people who had their photographs taken and shared their stories.
AWARD PRESENTATIONS

THE KAREL STYBLO PUBLIC HEALTH PRIZE
The Karel Styblo Public Health Prize is awarded by The Union to acknowledge a health worker (physician or lay person) or a community organisation for contributions to TB control or lung health over a period of 10 years or more.

PLENARY SESSION 01.
THURSDAY 12 OCTOBER
09:00 – 10:00 - PLENARY HALL

THE UNION SCIENTIFIC PRIZE
The Union Scientific Prize acknowledges researchers at any stage of their career for work on TB or lung health in the past five years.

PLENARY SESSION 02.
FRIDAY 13 OCTOBER
09:00 – 10:00 - PLENARY HALL

UNION HONORARY MEMBERS
The title of Honorary Member of The Union is granted to a person who has become distinguished through active participation in the Union’s activities and the fulfilment of its goals.

GENERAL ASSEMBLY
FRIDAY 13 OCTOBER
19:30 – 20:30 - HALL 10 - JALISCO HALL

THE UNION YOUNG INVESTIGATOR PRIZE
The Union Young Investigator Prize was established in 2011 to acknowledge a researcher for work in lung health published in the past five years, when age 35 year or younger.

THE UNION STUDENT LATE-BREAKER SESSION ON LUNG HEALTH
FRIDAY 13 OCTOBER
16:00 – 17:30
HALL 7 - EVENTS BALLROOM

THE STEPHEN LAWN TB-HIV RESEARCH LEADERSHIP PRIZE
The Stephen Lawn TB-HIV Research Leadership Prize was established in 2016 through a global partnership between the TB Centre in London, UK, the Desmond Tutu HIV Centre in Cape Town, South Africa and The Union. It acknowledges young researchers (under 40 years old) conducting promising work focused on reducing the disease burden of TB and HIV/AIDS in Africa.

THE HIV-TB AND DIABETES LATE-BREAKER SESSION
FRIDAY 13 OCTOBER
14:00 – 15:30
HALL 7 - EVENTS BALLROOM

PRINCESS CHICHIBU PRIZE
The Japan Anti-Tuberculosis Association (JATA) established the Princess Chichibu Memorial TB Global Award to encourage further progress in TB control. It is awarded to a person who has shown great achievements in anti-TB activities.

PLENARY SESSION 03.
SATURDAY 14 OCTOBER
09:00 – 10:00 - PLENARY HALL
THE UNION AWARDS

The 2018 awards will be presented at the 49th Union World Conference on Lung Health, 24 - 27 October 2018, The Hague, The Netherlands

THE UNION YOUNG INVESTIGATOR PRIZE
THE UNION SCIENTIFIC PRIZE
THE KAREL STYBLO PUBLIC HEALTH PRIZE
THE STEPHEN LAWN TB-HIV RESEARCH LEADERSHIP PRIZE
THE UNION MEDAL – for members only
HONORARY MEMBERSHIP – for members only

Nominate a colleague or an organisation for the 2018 Union Awards:

NOMINATIONS ARE OPEN NOW, AND WILL CLOSE ON 20 JANUARY 2018
theunion.org
Speaker Centre and Halls 2–8
Exhibition Area

- **Press Centre and Press Conference Room**
- **Halls 9-14**
- **Speaker Centre and Halls 2-8**
- **Encuentro**
- **Registration**

**Exhibitors:***
- Unima México
- SureAdhere Mobile Technology, Inc USA
- Qure.ai India
- World Health Organization Switzerland
- World Conference on Tobacco or Health (WCTOH) France
- Vital Strategies USA
- University Research Co, LLC (URC) USA
- The Hague The Netherlands
- TB Education and Training Materials Display – SystemOne USA
- Swizera Europe BV The Netherlands
- Stop TB Partnership Partners Lounge Switzerland
- QIAGEN USA
- Public Library of Science (PLOS) USA
- Oxford Immunotec Ltd United Kingdom
- Motic Instruments, Inc Canada
- Molbio Diagnostics India
- minXray Inc USA
- Macleods Pharmaceuticals Ltd India
- Laboratorios Silanes, X.A. de C.V. Mexico
- KNCV Tuberculosis Foundation The Netherlands
- Johnson & Johnson Global Public Health USA
- Japan Anti-Tuberculosis Association (JATA) Japan
- Inframedica Mexico
- IDA Foundation The Netherlands
- Human Gesellschaft für Biochemica und Diagnostica mbH Germany
- GlaxoSmithKline México Mexico
- Germfree USA
- FHI 360 USA
- DNA Genotek Canada
- Delft Imaging Systems The Netherlands
- Damien Foundation Belgium
- Challenge TB The Netherlands
- Celltrion Inc South Korea
- BD Diagnostics USA
- American Thoracic Society (ATS) USA
- Lifebox Foundation UK
- ALAT & Sociedad Mexicana de Neumologia (SMNyCT) Mexico

---

**Floor Plans:**
- **Row 1:**
  - Halls 1-4
- **Row 2:**
  - Halls 5-8
- **Row 3:**
  - Halls 9-12
- **Row 4:**
  - Halls 13-16
- **Row 5:**
  - Halls 17-20
- **Row 6:**
  - Halls 21-24
- **Row 7:**
  - Halls 25-28
- **Row 8:**
  - Halls 29-32
- **Row 9:**
  - Halls 33-36
- **Row 10:**
  - Halls 37-40

---

**Key Areas:**
- **Union Village**
- **Tech Innovation Zone**
- **Seating Area**
- **COURSES, WORKSHOPS AND MEETING ROOMS**

---

**Floor Plan Sections:**
- **PLENARY HALL:**
- **POSTER AREA:**
- **ONE TAB:**
- **ZERO TAB:**
- **TWO TAB:**
- **THREE TAB:**
- **FOUR TAB:**
- **FIVE TAB:**
- **SIX TAB:**
- **SEVEN TAB:**
- **EIGHT TAB:**
- **NINE TAB:**

---

**Map Details:**
- **Exhibition Floor Plan**
- **Area Numbers**
- **Booth Layout**
- **Vendor Details**
- **Conference Features**

---

**Contact:**
For further details, contact the conference organizers.

---

**Disclaimer:**
Information subject to change without notice.
**EXHIBITOR** | **COUNTRY** | **BOOTH**  
---|---|---  
ALAT & Sociedad Mexicana de Neumología (SMNyCT) | Mexico | 46  
American Thoracic Society (ATS) | USA | 59 + 60  
BD Diagnostics | USA | 51 + 52  
Celltrion Inc | South Korea | 49  
CEPHEID | France | 31 + 32  
Challenge TB | The Netherlands | 08  
Damien Foundation | Belgium | 07  
Delft Imaging Systems | The Netherlands | 33  
DNA Genotek | Canada | 01  
FHI 360 | USA | 58  
Germfree | USA | 17 + 27  
GlaxoSmithKline México | Mexico | 20  
Hain Lifescience | Germany | 06  
Hangzhou Shangchi Technology Co, Ltd | People’s Republic of China | 19  
Human Gesellschaft für Biochemica und Diagnostica mbH | Germany | 11 + 12  
IDA Foundation | The Netherlands | 14  
INCURE | Ukraine | 22  
Inframedica | Mexico | 36  
Japan Anti-Tuberculosis Association (JATA) | Japan | 16  
Johnson & Johnson Global Public Health | USA | 03 + 04 + 05  
KNCV Tuberculosis Foundation | The Netherlands | 09  
Laboratorios Silanes, X.A. de C.V. | Mexico | 41 + 42  
Macleods Pharmaceuticals Ltd | India | 35 + 45  
minXray Inc | USA | 56 + 57  
Molbio Diagnostics | India | 30  
Motic Instruments, Inc | Canada | 39  
Oxford Immunotec Ltd | United Kingdom | 37  
Public Library of Science (PLOS) | USA | 13  
QIAGEN | USA | 23 + 24  
Sanofi | France | 47  
Stop TB Partnership | Switzerland | 15 + 25  
Stop TB Partnership Partners Lounge | Switzerland | 26  
Swizera Europe BV | The Netherlands | 34 + 44  
SystemOne | USA | 43  
TB Education and Training Materials Display | - | 53 + 54  
The Hague | The Netherlands | 10  
University Research Co, LLC (URC) | USA | 29  
Vital Strategies | USA | 18 + 28  
World Conference on Tobacco or Health (WCTOH) | France | 55  
World Health Organization | Switzerland | 21  

**EXHIBITOR** | **COUNTRY** | **BOOTH**  
---|---|---  
Lifebox Foundation | UK | Tech Innovation Zone  
Qure.ai | India | Tech Innovation Zone  
SHOEOBOX Audiometry - a division of Clearwater Clinical | USA | Tech Innovation Zone  
SureAdhere Mobile Technology, Inc | USA | Tech Innovation Zone  
Unima | México | Tech Innovation Zone
<table>
<thead>
<tr>
<th>Session Title</th>
<th>Date</th>
<th>Row</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDR-TB: burden and trends</td>
<td>12 October</td>
<td>3</td>
</tr>
<tr>
<td>Mycobacterium bovis: transmission, detection and public health implications</td>
<td>12 October</td>
<td>1</td>
</tr>
<tr>
<td>Back to basics: diagnosis, notification and outbreak investigations</td>
<td>12 October</td>
<td>5</td>
</tr>
<tr>
<td>HIV-TB treatment and outcomes</td>
<td>12 October</td>
<td>6</td>
</tr>
<tr>
<td>Muddying the waters – co-morbidities in drug-resistant TB</td>
<td>12 October</td>
<td>7</td>
</tr>
<tr>
<td>The proof is in the pudding – treatment and outcomes for drug-resistant TB</td>
<td>12 October</td>
<td>20</td>
</tr>
<tr>
<td>A picture in time – chest X-ray and other diagnostic considerations in TB</td>
<td>12 October</td>
<td>21</td>
</tr>
<tr>
<td>Treatment delays misdiagnoses and losses to follow up – let’s close the gap</td>
<td>12 October</td>
<td>8</td>
</tr>
<tr>
<td>Progress engaging private and informal health providers in TB care in India</td>
<td>12 October</td>
<td>22</td>
</tr>
<tr>
<td>Where are they? Case finding and preventive therapy for paediatric TB</td>
<td>12 October</td>
<td>9</td>
</tr>
<tr>
<td>Tobacco advertising and smoke legislation</td>
<td>12 October</td>
<td>11</td>
</tr>
<tr>
<td>Knowledge is power</td>
<td>12 October</td>
<td>10</td>
</tr>
<tr>
<td>Tobacco use prevalence and risk of diseases</td>
<td>12 October</td>
<td>1</td>
</tr>
<tr>
<td>Tobacco control at the global perspective</td>
<td>12 October</td>
<td>13</td>
</tr>
<tr>
<td>The role of civil society organisations and communities in case finding</td>
<td>12 October</td>
<td>24</td>
</tr>
<tr>
<td>Key affected populations</td>
<td>12 October</td>
<td>14</td>
</tr>
<tr>
<td>Overcoming laboratory challenges in the field</td>
<td>12 October</td>
<td>19</td>
</tr>
<tr>
<td>Don’t resist! Finding the pattern through sequencing</td>
<td>12 October</td>
<td>17</td>
</tr>
<tr>
<td>Next generation sequencing versus PCR (polymerase chain reaction) based typing: what is all the fuss?</td>
<td>13 October</td>
<td>18</td>
</tr>
<tr>
<td>HIV-TB services: how can we do better?</td>
<td>13 October</td>
<td>19</td>
</tr>
<tr>
<td>Maximising results but minimising harm - adverse events in MDR-TB treatment</td>
<td>13 October</td>
<td>7</td>
</tr>
<tr>
<td>Using technology to advance drug-resistant TB care</td>
<td>13 October</td>
<td>21</td>
</tr>
<tr>
<td>Extra-pulmonary TB, vitamin D, treatment outcomes and Aspergillus</td>
<td>13 October</td>
<td>22</td>
</tr>
<tr>
<td>Los medicamentos correctos en la dosis adecuada en el momento adecuado - TB drugs: use them right</td>
<td>13 October</td>
<td>2</td>
</tr>
<tr>
<td>Lungs matter – recent developments in adult lung health</td>
<td>13 October</td>
<td>23</td>
</tr>
<tr>
<td>Private sector engagement in TB care: lessons learned from low-income countries</td>
<td>13 October</td>
<td>9</td>
</tr>
<tr>
<td>TB across key populations</td>
<td>13 October</td>
<td>2</td>
</tr>
<tr>
<td>Using media campaigns to raise awareness in tobacco control and to counter tobacco industry</td>
<td>13 October</td>
<td>2</td>
</tr>
<tr>
<td>Latent TB infection: The last frontier</td>
<td>13 October</td>
<td>24</td>
</tr>
<tr>
<td>Elevating knowledge in the field: an essential tool</td>
<td>13 October</td>
<td>26</td>
</tr>
<tr>
<td>Protecting youth from the harms of tobacco use</td>
<td>13 October</td>
<td>5</td>
</tr>
<tr>
<td>Making virtual a reality: mHealth solutions to TB care</td>
<td>13 October</td>
<td>25</td>
</tr>
<tr>
<td>Supply-side issues in tobacco control: production and industry</td>
<td>13 October</td>
<td>4</td>
</tr>
<tr>
<td>What you see is what you get: understanding TB in children</td>
<td>13 October</td>
<td>27</td>
</tr>
<tr>
<td>Double trouble: the impact of diabetes and TB</td>
<td>13 October</td>
<td>12</td>
</tr>
<tr>
<td>Cost benefit analysis in TB investments; or people and products</td>
<td>13 October</td>
<td>13</td>
</tr>
<tr>
<td>Xpert implementation: realities in the field</td>
<td>13 October</td>
<td>15</td>
</tr>
<tr>
<td>Solution to laboratory implementation challenges</td>
<td>13 October</td>
<td>16</td>
</tr>
<tr>
<td>Searching high searching low: case finding strategies</td>
<td>13 October</td>
<td>28</td>
</tr>
<tr>
<td>Advocacy, communication and social mobilisation for TB elimination; involving gender, children, peer educators, and civil society organisations</td>
<td>13 October</td>
<td>14</td>
</tr>
<tr>
<td>Detect, report and treat: an echo from Suriname to South Africa</td>
<td>14 October</td>
<td>3</td>
</tr>
<tr>
<td>You can’t treat what you don’t diagnose: considerations in MDR-TB diagnosis and molecular epidemiology</td>
<td>14 October</td>
<td>1</td>
</tr>
<tr>
<td>Challenges to the implementation of drug-resistant TB treatment on the ground</td>
<td>14 October</td>
<td>6</td>
</tr>
<tr>
<td>TB drugs, and rock ’n’ roll – updates on our understanding of TB drugs</td>
<td>14 October</td>
<td>5</td>
</tr>
<tr>
<td>The bug, the host, and points between</td>
<td>14 October</td>
<td>8</td>
</tr>
<tr>
<td>Knock Knock? Who is there? Household and contact case finding. Know, share, act!</td>
<td>14 October</td>
<td>23</td>
</tr>
<tr>
<td>Diagnosis and treatment: updates on paediatric TB</td>
<td>14 October</td>
<td>25</td>
</tr>
<tr>
<td>Looking after little lungs: updates in child lung health</td>
<td>14 October</td>
<td>10</td>
</tr>
<tr>
<td>TB and co-morbidity: where are we?</td>
<td>14 October</td>
<td>12</td>
</tr>
<tr>
<td>Latent TB infection: testing and perceptions</td>
<td>14 October</td>
<td>4</td>
</tr>
<tr>
<td>Human rights and ethics</td>
<td>14 October</td>
<td>11</td>
</tr>
<tr>
<td>Sustainable role of civil society organisations and communities in TB diagnosis, care and control</td>
<td>14 October</td>
<td>18</td>
</tr>
<tr>
<td>Nursing care to improve patient care</td>
<td>14 October</td>
<td>27</td>
</tr>
<tr>
<td>Vulnerable populations: homeless to migrants</td>
<td>14 October</td>
<td>26</td>
</tr>
<tr>
<td>Expert use of Xpert: developing the evidence base</td>
<td>14 October</td>
<td>15</td>
</tr>
<tr>
<td>Infection control: ending transmission</td>
<td>14 October</td>
<td>16</td>
</tr>
<tr>
<td>MiCs, MAC, and immunity</td>
<td>14 October</td>
<td>17</td>
</tr>
</tbody>
</table>
Business Centre II (Mezzanine)

- Fray Alcalde
- Minerva II
- Minerva I
- Degollado II
- Degollado I
- Colomos II
- Colomos I
- Cabañas II
- Cabañas I
- Los Arcos
The Americas TB Caucus

The Americas TB Summit – a regional meeting of parliamentarians who make up the Americas TB Caucus – will take place in Guadalajara from 9 to 12 October 2017, before the Union World Conference.

The Summit will focus on the regional efforts to tackle TB and explore opportunities to accelerate collaborative work from legislative, governments, civil society and international organisations. Delegates will agree a proposal for how governments from across the Americas should tackle TB, including a common approach to the UN High-Level Meeting on TB, and discussing a minimum legal standard on tuberculosis for Latin-American countries.

The Americas TB Caucus (ATBC) is the regional network from the Global TB Caucus, an organisation that gathers over 2,300 active members of parliament from over 130 countries.

The Global TB Caucus was founded in October 2014 as a product of a conversation between Nick Herbert MP, co-chairman of the UK All Party Parliamentary Group on Global TB, and José Luis Castro, Executive Director of The Union. As a result a meeting of parliamentarians was held at the Union World Conference in Barcelona forming the inaugural Global TB Summit under the leadership of Dr Aaron Motsoaledi, Health Minister of South Africa and Chairman of the Stop TB Partnership and Nick Herbert MP. The Union has continued to support subsequent TB Caucus summits at every conference since then.

globaltbcaucus.org

The World Health Organization Global TB Symposium

Multisectoral Action to Accelerate Progress towards Ending TB
10 October, 9:00 – 17:00, Centro Universitario de Ciencias de la Salud

Note: Interpretation in Spanish and English will be available throughout the Symposium.

There will be transportation between Centro Universitario de Ciencias de la Salud and the Expo Guadalajara Convention Centre.

Background

The World Health Organization (WHO) Global TB Report 2015 had two top messages:

- Tuberculosis is now the leading infectious disease killer
- Actions and investments worldwide are far from those needed to accelerate to end the TB epidemic.

Governments have begun to recognise this inadequate start to the 15 year push to end the epidemic. The roadmap for action is provided by the WHO End TB Strategy, the UN Sustainable Development Goal (SDG) agenda, and the Stop TB Partnership’s five-year Global Plan to End TB, 2016 to 2020. Yet, the political momentum is insufficient.

Mario Raviglione
Director of the Global TB Programme for the World Health Organization

Mario Raviglione
Director del Programa Mundial contra la Tuberculosis de la Organización Mundial de la Salud
Simposio Mundial sobre la Tuberculosis de la Organización Mundial de la Salud

Medidas multisectoriales para acelerar el progreso hacia el fin de la tuberculosis

10 de octubre, 9:00 – 17:00, Centro Universitario de Ciencias de la Salud

Nota: Durante el simposio se ofrecerá un servicio de interpretación de español e inglés.

Habrá un servicio de transporte entre el Centro Universitario de Ciencias de la Salud y el centro de convenciones Expo Guadalajara.

Antecedentes

El informe mundial sobre la tuberculosis de 2015 de la Organización Mundial de la Salud (OMS) tenía dos mensajes principales:

1. La tuberculosis es actualmente la principal enfermedad infecciosa causante de muerte.
2. Las medidas y las inversiones a nivel mundial están muy lejos de las necesarias para acelerar el fin de la epidemia de tuberculosis.

Los gobiernos han empezado a reconocer que este inicio ha sido insuficiente de cara al plan a 15 años para acabar con la epidemia. El programa de acción se fija en la estrategia «Alto a la tuberculosis» de la OMS, en la agenda de los Objetivos de Desarrollo Sostenible (ODS) de las Naciones Unidas, y en el Plan mundial a cinco años para detener la tuberculosis 2016 - 2020 de Stop TB Partnership. Aun así, el impulso político es insuficiente.

Para solucionar esta situación, la Asamblea General de las Naciones Unidas (AGNU) ha convocado por primera vez una Reunión de Alto Nivel de la AGNU sobre tuberculosis para el 2018. Y en noviembre, diferentes jefes de estado y otros líderes celebran la primera Conferencia Ministerial Mundial «Poner fin a la tuberculosis en la era del Desarrollo Sostenible: una respuesta multisectorial».

Objetivos del simposio

El Simposio Mundial sobre la Tuberculosis de este año tratará cuestiones relativas a estos temas y a las medidas adoptadas por gobiernos, colaboradores no gubernamentales y de la sociedad civil, y agencias mundiales para mejorar el tratamiento y la prevención de la tuberculosis. El simposio se aprovecha de la colaboración y la participación de la Oficina Regional para las América de la OMS, la Organización Panamericana de la Salud, gestores del Programa Nacional de Control de la Tuberculosis de la región y la Universidad de Guadalajara, e incluirá una sesión especial para abordar las iniciativas encaminadas a la erradicación de la tuberculosis adoptadas por socios nacionales y locales en México.

Objetivos:

1. Revisar los avances logrados con relación al fin de la tuberculosis durante el año pasado, sobre la base de las deliberaciones de la Cumbre del 2017 de la OMS sobre el fin de la tuberculosis de los 40 países con una mayor tasa de incidencia, y resaltar las medidas adoptadas por gobiernos, sociedad civil, parlamentarios, investigadores, y agencias y organismos multilaterales como el G20.
2. Debatar las principales esferas de resultados que deben tratarse en la Conferencia Ministerial Mundial de la OMS «Poner fin a la tuberculosis en la era del Desarrollo Sostenible: una respuesta multisectorial» del 2017 así como las medidas que se están adoptando, dentro y fuera del sector sanitario, para garantizar el éxito de la Reunión de Alto Nivel de la Asamblea General de las Naciones Unidas sobre Tuberculosis que se celebrará en el 2018 y superar los obstáculos inmediatos para poder actuar.
3. Abordar las medidas adoptadas en las Américas encaminadas a alcanzar el fin de la epidemia de tuberculosis y las prioridades estratégicas clave para avanzar, incluidos los programas de investigación.
Union Courses help develop clinical expertise, management skills and the ability to discover solutions through research and advocacy. Public health professionals, such as physicians, nurses, healthcare managers and other healthcare staff, receive detailed training and instruction from our experienced faculty.

**Union Courses**

**Tuberculosis and Lung Health**

These courses cover:
- Tuberculosis (TB)
- Multidrug-Resistant TB (MDR-TB)
- TB-HIV management and programme collaboration
- Childhood TB
- Tobacco control

**International Management Development Programme (IMDP)**

IMDP courses cover:
- Human resources management
- Developing strategic partnerships
- Programme management and monitoring and evaluation
- Health communications
- Budgeting and financial management
- Supply chain management

**Operational Research**

The SORT IT (Structured Operational Research and Training Initiative) courses help participants to:
- Build research capacity using a successful model of product-oriented training
- Advance in an operational research fellowship programme and research alumni network
- Implement relevant operational research in low- and middle-income countries

For more information on Union Courses, visit our website at unioncourses.org

To learn more, visit the Union Courses booth in The Union Village, located in the Exhibition Area.
SATELLITE SESSIONS

THURSDAY 12 OCTOBER

SATELLITE SESSION 07.30 – 08.45 HALL 6 - EVENTS BALLROOM

01. Ordinary people doing extraordinary work to improve the clinical and programmatic management of DR-TB in South Africa

Organised by: Janssen Pharmaceutica

This session will share the advances and best practices that were implemented by the clinical and programmatic staff in South Africa with regards to:

1. The introduction of bedaquiline at a primary healthcare level in both an urban as well as in a limited resource setting
2. The successful management of DR-TB care at primary healthcare facilities
3. Community management of bedaquiline, a working solution (Free State Province)
4. The risk of nosocomial acquisition in a specialised TB hospital
5. Introduction of a national DR-TB register and how it has improved DR-TB programme management within the South African context

Chair: Lerole David Mametja (South Africa)

07.30 Comparing early treatment outcomes of bedaquiline based and conventional MDR -TB within the South African national TB programme, in primary healthcare clinics in the Cape Metro / Comparación de los resultados del tratamiento precoz convencional o con bedaquilina de la tuberculosis multirresistente dentro del Programa Nacional de Control de la Tuberculosis de Sudáfrica en centros de atención primaria en Cape Metro
Lenny Naidoo (South Africa)

07.45 Primary healthcare clinics are successfully managing MDR-TB: Comparing MDR-TB treatment outcomes in TB hospitals to clinics in the Western Cape, South Africa / Manejo satisfactorio del tratamiento de la tuberculosis multirresistente: Comparación de los resultados del tratamiento de la tuberculosis multirresistente en hospitales especializados en tuberculosis y en centros de salud en la provincia Occidental del Cabo, Sudáfrica
James Kruger (South Africa)

08.00 Community management of bedaquiline in a limited resource setting / Gestión comunitaria de la bedaquilina en un entorno con recursos limitados
Leole Sethlare (South Africa)

08.15 Incidence of nosocomial infections in patients admitted to a drug-resistant TB hospital / Incidencia de las infecciones nosocomiales en pacientes ingresados en un hospital para el tratamiento de la tuberculosis multirresistente
Razia Gaida (South Africa)

08.30 Introduction of a national DR-TB register and how it has improved DR-TB programme management within the South African context / Implantación de un Registro Nacional de tuberculosis resistente y cómo ha mejorado la gestión del programa de tuberculosis resistente dentro del contexto de Sudáfrica
Riyadh Manesen (South Africa)

SESIONES SATÉLITE 07.30 – 08.45 HALL 6 - SALÓN DE EVENTOS

01. Gente corriente que hace una labor extraordinaria para mejorar la gestión clínica y programática de la tuberculosis resistente en Sudáfrica

Organizada por: Janssen Pharmaceutica

Compartir los avances y las mejores prácticas que el equipo clínico y programático implantaron en Sudáfrica con relación a:

1. La introducción de la bedaquilina a nivel de la atención primaria tanto en el ámbito urbano como en entornos con recursos limitados.
2. Una gestión satisfactoria del tratamiento de la tuberculosis resistente en los centros de atención primaria.
3. La gestión comunitaria de la bedaquilina, una solución funcional (provincia de Estado Libre)
4. El riesgo de infección nosocomial en un hospital especializado en tuberculosis
5. Implantación de un Registro Nacional de tuberculosis resistente y cómo ha mejorado la gestión del programa de tuberculosis resistente dentro del contexto de Sudáfrica

Presidente: Lerole David Mametja (Sudáfrica)

07.30 Comparando los resultados del tratamiento precoz convencional o con bedaquilina de la tuberculosis multirresistente dentro del Programa Nacional de Control de la Tuberculosis de Sudáfrica en centros de atención primaria en Cape Metro
Lenny Naidoo (Sudáfrica)

07.45 Manejo satisfactorio de la tuberculosis multirresistente (MDR-TB) en los centros de atención primaria: Comparación de los resultados del tratamiento de la tuberculosis multirresistente en hospitales especializados en tuberculosis y en centros de salud de la provincia Occidental del Cabo, Sudáfrica
James Kruger (Sudáfrica)

08.00 Gestión comunitaria de la bedaquilina en un entorno con recursos limitados
Leole Sethlare (Sudáfrica)

08.15 Incidencia de las infecciones nosocomiales en pacientes ingresados en un hospital para el tratamiento de la tuberculosis multirresistente
Razia Gaida (Sudáfrica)

08.30 Implantación de un Registro Nacional de tuberculosis resistente y cómo ha mejorado la gestión del programa de tuberculosis resistente dentro del contexto de Sudáfrica
Riyadh Manesen (Sudáfrica)
O2. New innovations in the fight to end TB

Organised by: Cepheid
One of the key components of WHO’s new End TB Strategy is to modernise all aspects of TB care and prevention through the use of fast molecular diagnostics. This symposium will provide insights into new and upcoming innovations in diagnostic care, as well as explore implementation strategies of these new diagnostic tools, to combat the TB epidemic in a variety of settings.

Chair: Philippe Jacon (France)

07.30 Expanded drug resistance testing for TB using the GeneXpert system
David Alland (United States of America)

07.45 End TB in China
Sha Wei (China)

08.00 Advances in molecular diagnostics for pulmonary TB: Xpert MTB/RIF, Xpert MTB/RIF Ultra, and RealTime MTB
Ribka Berhanu (United States of America)

08.15 Three years of roll out of GeneXpert in Brazil
Kleydson Bonfim Andrade (Brazil)

08.30 Discussion

04. Achieve End TB Strategy: Innovation techniques of TB immunophrophylaxis, diagnostics and anti-TB therapy developed in China

Organised by: Chinese Anti-tuberculosis Association
This session will share the techniques and progress of TB immunoprophylaxis, diagnostics, prevention and anti-TB therapy that have developed in China.

Co-Chairs: Xiaolin Wei (Canada), Yan-Lin Zhao (China)

18.00 Scientific bottleneck and research strategy of TB control and prevention in China
Cheng Shiming (China)

Gao Lei (China)

18.20 Application of systems biology and ‘omics’ in TB vaccine development
Bi Lijun (China)

18.30 A new diagnosis For latent TB infection: a novel skin test
Pu Jiang (China)

18.40 Highly sensitive detection of hetero-resistant mutations in \textit{M. tuberculosis}
Li Qingge (China)

18.50 An automatic digital scanning and image analysis system, developed in China
Zhao Yanlin (China)

19.00 \textit{M. tuberculosis} concentration technology
Cheng Yongning (China)

19.10 Discussion

05. Bending the curve – ending TB in the WHO South-East Asia region

Organised by: The Union - Challenge TB India
WHO’s South-East Asia region has 26 percent of the world’s population, yet accounts for 41 percent of incident TB cases globally. The current decline in TB incidence must be accelerated here to achieve the End TB vision. India’s new national strategic plan proposes bold strategies with commensurate resources to rapidly decline TB in order to attain the vision of a TB-free India. Optimal implementation of proven strategies and synergistic efforts of all stakeholders is key to end the TB epidemic. This symposium shares the potential impact of implementing high-impact interventions, contextualised for each country in the region, and the experiences in India.

Co-Chairs: Jagdish Prasad (India), Jamhoih Tonsing (India)

18.00 The why and how of bending the curve in South-East Asia region
Md Khurshid Alam Hyder (India)
Severe forms of TB are the main reasons for most cases of TB deaths or disability. Severe forms of TB include:

- **miliary TB**
- **caseous pneumonia**
- **extrapulmonary TB**
- **tuberculous meningitis.**

Moreover, TB is often combined with severe general condition of the patient, or the presence of severe comorbidities which worsen through the course of TB, and/or limit the ability to take anti-TB drugs. Today, treatment of such patients is associated with a variety of challenges, the solution for which could save tens of thousands of lives each year.
07. Innovating TB diagnostics: how can we maximise new opportunities and overcome existing challenges?

Organised by: BD

Solution based innovation is key to the fight to eliminate TB. During this session we will discuss the early results of the BD MAX MDR-TB molecular test with both RIF and INH resistance markers, as well as the development work on bedaquiline as a susceptibility reagent for BD BACTEC MGIT. We will then convene a panel of experts in TB to lead an interactive discussion and Q&A with the audience to discuss how we as a community of clinicians, scientists and advocates can best support the elimination of TB leveraging existing and new technology despite existing challenges.

**Co-Chairs: Renuka Gadde (United States of America)**

18.00  **Innovating TB diagnostics then and now: BD MAX MDR-TB pre-clinical trial results**
Courtney Maus (United States of America)

18.25  **The need for first and second line drug susceptibility testing**
Salman Siddiqi (United States of America)

18.50  **TB expert panel discussion**
Renuka Gadde (United States of America)

19.00  **Discussion**

---

08. Lancet Respiratory Medicine Symposium on Lung Disease in Resource-limited Settings: Advances in Tuberculosis including LTBI and Drug-resistant TB

Organised by: The Lancet

Drug-resistant TB threatens to wipe out marginal gains made in global TB control over the last decade. This session, targeted at the practicing clinician, translational scientist, and clinician scientist, seeks to highlight several recent advances in the management of drug-sensitive and drug-resistant TB. The session will report several new advances, yet address practical issues facing clinicians at the coalface. The session will also cover the treatment of LTBI in the 21st century, an intervention imperative for the elimination of tuberculosis.

**Co-Chairs: Keertan Dheda (South Africa), Tawanda Gumbo (United States of America)**

18.00  **Introduction and brief comments on the Lancet Symposium**
Keertan Dheda (South Africa)

18.05  **New insights into the pathogenesis of drug-resistant TB and implications for clinical practice**
Keertan Dheda (South Africa)

18.25  **Next generation whole genome sequencing for TB: ready for clinical practice?**
Megan Murray (United States of America)

18.40  **Therapeutic drug monitoring in clinical practice for drug sensitive and drug resistant TB: when, where and how?**
Tawanda Gumbo (United States of America)

18.55  **Key practice points: The short course WHO-recommended regimen and the use of new drugs like bedaquiline and delamanid**
Christoph Lange (Germany)

19.10  **New tools for TB elimination: treating latent tuberculosis in the 21st century**
Neil Schluger (United States of America)

19.20  **Discussion**

---

08. Simposio Lancet de medicina respiratoria: Enfermedad pulmonar y entornos con recursos limitados Avances en tuberculosis, incluyendo el caso de la infección latente y la resistencia farmacológica

Organizada por: The Lancet

En esta sesión se destacan las intervenciones e implicaciones para la práctica clínica cuando se tratan pacientes con tuberculosis activa y con infección latente, mediante abordajes tanto existentes como innovadores.

La tuberculosis resistente a los fármacos amenaza con borrar los pequeños avances logrados en el control de la tuberculosis a nivel mundial en la última década. Esta sesión, dirigida al clínico en activo, al científico dedicado a la investigación traslacional y al científico clínico, busca destacar avances recientes en la gestión de la tuberculosis sensible y la tuberculosis resistente a fármacos. Esta sesión analizará distintos avances novedosos, al tiempo que tratará temas prácticos que los clínicos deben afrontar en su práctica cotidiana. En la sesión también se cubrirán las opciones de tratamiento en el siglo 21 para la tuberculosis latente, una intervención necesaria para la erradicación de la enfermedad.
Introducción y breves comentarios acerca del Simposio Lancet

18:00  Nuevas percepciones de la patogénesis de la tuberculosis resistente a fármacos e implicaciones para la práctica clínica
Keertan Dheda (Sudáfrica)

18:25  Secuenciación de genoma completo de próxima generación para la tuberculosis: ¿se puede aplicar ya en la práctica clínica?
Megan Murray (Estados Unidos de América)

18:40  Monitorización de la farmacoterapia en la práctica clínica para la tuberculosis sensible y la tuberculosis resistente a fármacos: ¿cuándo, dónde y cómo?
Tawanda Gumbo (Estados Unidos de América)

18:55  Aspectos prácticos clave: El tratamiento a corto plazo recomendado por la OMS y el uso de nuevos fármacos como bedaquilina y delamanid
Christoph Lange (Alemania)

19:10  Nuevas herramientas para la eliminación de la tuberculosis: tratamientos de la tuberculosis latente en el siglo 21
Marcos Restrepo (Estados Unidos de América)
Neil Schluger (Estados Unidos de América)

19:20  Debate

---

**FRIDAY 13 OCTOBER**

**SATELLITE SESSION 18.00 – 19.30 HALL 3 - EVENTS BALLROOM**

**09. Bedaquiline roll-out: sharing experience from India and other countries**

Organised by: The Union - Challenge TB India

Bedaquiline has been introduced in several countries for the treatment of severe forms of DR-TB. Encouraging evidence from South Africa indicated the drug’s safety, effectiveness, and importance in treating DR-TB.

The USAID funded and KNCV led Challenge TB Project facilitates the introduction of new drugs and shorter regimens in 23 countries, including India.

The national TB programme India rolled out bedaquiline Conditional Access Programme (Bdq CAP) at six sites, where 538 DR-TB cases were put on bedaquiline by June 2017. Nation-wide bedaquiline access is planned by end of 2017.

The symposium aims to share processes, challenges and solutions for successful roll-out of new drugs.

Co-Chairs: Sunil Khaparde (India), Fraser Wares (Netherlands)

18.00  My journey: from XDR TB to 20000 feet above the ground
Saurabh Rane (India)

18.15  The Union’s perspective for the implementation of the shorter treatment regimen for MDR-TB
Alberto Piubello (Niger)

18.30  Challenges and successes in introducing bedaquiline and delamanid in South Africa
Norbert Ndjeke (South Africa)

18.45  National experience in Bdq CAP: how we prepared to roll out new drugs and regimens in India
VS Salhotra (India)

19.00  USAID’s experiences and perspective of introduction of new drugs and regimens for DR-TB
Mukadi Ya Diul (United States of America)

19.15  Discussion

---

**SATELLITE SESSION 18.00 – 19.30 HALL 4 - EVENTS BALLROOM**

**10. The road to 2018: paving the way for NCD prevention and control**

Organised by: NCD Alliance and Vital Strategies

The 2011 UN High Level Meeting on NCDs catalysed a global chain of commitments and events to address NCD prevention and control. The subsequent 2014 UN High Level Review found the response to have fallen short. With a third High Level Meeting on NCDs to be held in 2018, together with a High Level Meeting on TB, it is crucial that governments, healthcare practitioners, civil society, private sector and people living with NCDs come together to ensure concrete action to deliver progress on WHO and UN NCD targets, in time for good practice to be evaluated and scaled up.

Co-Chairs: Ehsan Latif (United Kingdom)

18.00  WHO global action plan for the prevention and control of NCDs 2013–2020 – progress and challenges
Douglas Bettcher (Switzerland)

18.15  Using advocacy to gather momentum for the 2018 High Level Meeting on NCDs and increase political will
Paula Johns (Brazil)
Organised by: IOM - The UN Migration Agency, Jordan, and CDC Atlanta, USA

Over 65 million people are forcibly displaced from home; in Africa in 2015 alone, 9,500 daily flee their homes. The Syrian conflict has displaced half the population. The Iraqi protracted war has displaced 3.3 million. Population displacement, coupled with health infrastructure and system destruction poses challenges to control of TB inside these countries and in neighboring countries.

The speakers will share overviews of the impact of conflict and displacement on TB incidence and prevalence, highlight the main challenges related to TB control among crisis-affected populations, and share good practices and models to address TB in humanitarian emergencies in different countries.

**SATellite Session 18.00 - 19.30 Hall 8 - Events Ballroom**

**11. Advancing New Technologies and Approaches to Novel TB Regimen-Development**

Organised by: Otsuka Novel Products GmbH

Rapid advancements are taking place in the field of new TB drug and regimen development, particularly in combination with recently developed anti-TB medications. This symposium will focus on three areas: 1) late-breaking data on results from the delamanid phase 3 clinical trial and an integrated analysis of delamanid’s global clinical trial database 2) updates on the development of the new anti-TB compound OPC-167832 and 3) a panel discussion on cutting-edge approaches to TB regimen development with leaders in the field from the Critical Path to TB Drug Regimens (CPTR), the UK Medical Research Council (MRC) and others.

**Chair: Lawrence Geiter (United States of America)**

- **18.00** Delamanid global clinical database and phase 3 trial results make
  Lawrence Geiter (United States of America)

- **18.20** Early programmatic experiences with delamanid for MDR-TB and an update on clinical development of OPC-167832
  Rajesh Gupta (United States of America)

- **18.40** Optimising innovation: cutting-edge approaches to novel TB regimen development
  Debra Hanna (United States of America)

- **19.00** Optimising innovation: cutting-edge approaches to novel TB regimen development
  Patrick Phillips (United States of America)

- **19.20** Discussion

**SATellite Session 18.00 - 19.30 Hall 8 - Events Ballroom**

**12. TB care for communities in emergency contexts: addressing the challenges of treatment disruption and minimising development of drug resistance**

Organised by: IOM - The UN Migration Agency, Jordan, and CDC Atlanta, USA

Over 65 million people are forcibly displaced from home; in Africa in 2015 alone, 9,500 daily flee their homes. The Syrian conflict has displaced half the population. The Iraqi protracted war has displaced 3.3 million. Population displacement, coupled with health infrastructure and system destruction poses challenges to control of TB inside these countries and in neighboring countries.

The speakers will share overviews of the impact of conflict and displacement on TB incidence and prevalence, highlight the main challenges related to TB control among crisis-affected populations, and share good practices and models to address TB in humanitarian emergencies in different countries.

**Co-chairs: Susan Cookson (United States of America), Aleksandar Galev (Jordan)**

- **18.00** Challenges in management of TB for Internally Displaced Populations (IDPs) in Iraq
  Nedal Odeh (Iraq)

- **18.20** The Syrian civil war: Impact on TB care delivery inside Syria
  Ghada Mujhazi (Syrian Arab Republic)

- **18.40** Syrian Refugees in Jordan and Lebanon: Joint TB control initiatives among the international communities and national programmes
  Saful Qayyum (Jordan)

- **19.00** Assessment of tuberculosis burden, treatment, and detection rates among Syrian refugees—Jordan and Lebanon, 2015–2016
  Andrew T. Boyd (United States of America)

- **19.20** Discussion
The objective of the symposium is to present evidence of the impact of COPD on the public health of the Mexican population, as well as the economic impact that the disease represents for health institutions in Mexico. Reposition the need to prioritise COPD for its high impact on public health by opening the intercessional dialogue between healthcare providers, policy makers, health authorities and pharmacoeconomists.

Target audience:
- National and international policy makers
- Health authorities and health institutions
- Healthcare providers
- Funders

Chair: Jesús Felipe Gonzalez Roldan (Mexico)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>07.30</td>
<td>Introduction and presentation of the panel</td>
<td>Jesús Felipe Gonzalez Roldan (Mexico)</td>
</tr>
<tr>
<td>07.45</td>
<td>Clinical Approach to COPD</td>
<td>Margarita Fernández (Mexico)</td>
</tr>
<tr>
<td>08.00</td>
<td>Situation of COPD in Mexico</td>
<td>Jesús Felipe Gonzalez Roldan (Mexico)</td>
</tr>
<tr>
<td>08.15</td>
<td>Economic impact of COPD</td>
<td>Herman Soto (Mexico)</td>
</tr>
<tr>
<td>08.30</td>
<td>COPD in Latin America: Peru case</td>
<td>To be confirmed</td>
</tr>
</tbody>
</table>
UNION ADMINISTRATIVE, REGION AND SECTION MEETINGS

Anyone (Union member or not) is welcome to attend the region, section, sub-section and working group meetings and find out more about projects and plans for 2017, as well as how to become involved.

Tuesday 10 October

Union Administrative Meetings

Board meeting (1)
10:00–15:00, Agave/Westin
Attendees: All current Board members

Editorial Board of Public Health Action (PHA)
16:00-18:00, Calzado I
Attendees: PHA Editorial Board and Institute representatives

Coordinating Committee of Scientific Activities (CCSA)
15:30-17:30, Cabañas I
Attendees: CCSA Chair, all section officers, Institute representatives and Union President

Wednesday 11 October

Membership Committee Meeting
08:00-10:00, Calzado I
Attendees: Membership Committee, Institute representatives and invited guests

Union Scientific Working Group Meetings

The Union currently has 16 working groups that undertake specific projects within fixed time-frames. Activities undertaken by current groups include developing official policy statements, publishing technical guides and other resources, carrying out research projects, raising global awareness of topical TB and lung health issues and providing a forum for discussion and development. Self-funded, working groups rely on the support and dynamism of members in order to flourish and achieve their aims.

Non-Union members are welcome to attend the working group meetings and find out more about projects and plans for 2017, as well as how to become involved.

Union Scientific Sub-section Meetings

The Tuberculosis Scientific Section is split into sub-sections that give members the option of focusing on key TB issues and approaches. Non-members are welcome to attend the sub-section meetings to find out how to become more involved.

Thursday 12 October

Union Scientific Working Group Meetings
Union Administrative Meeting

Editorial Board meeting of the International Journal of Tuberculosis and Lung Disease (IJTLD)
12:00 - 13:00, Calzado I

Attendees: IJTLD Editorial Board members, Institute representatives

Union Region Meetings

The Union is divided into seven regions to provide a platform to address lung health and related issues from a regional perspective. The structure offers members opportunities to network with colleagues who face the same regional challenges and contributes to The Union’s deep understanding of local issues. All conference delegates (members and non-members) are encouraged to attend their region’s meeting to share ideas for strengthening their region and turning The Union’s vision of ‘health solutions for the poor’ into a reality at a local level.

<table>
<thead>
<tr>
<th>Time</th>
<th>Region</th>
<th>Hall</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.15 – 13.15</td>
<td>Asia Pacific</td>
<td>Hall 5 - Events Ballroom</td>
</tr>
<tr>
<td>12.15 – 13.15</td>
<td>South-East Asia</td>
<td>Hall 6 - Events Ballroom</td>
</tr>
<tr>
<td>12.15 – 13.15</td>
<td>Middle-East</td>
<td>Hall 7 - Events Ballroom</td>
</tr>
<tr>
<td>12.15 – 13.15</td>
<td>Africa</td>
<td>Hall 8 - Events Ballroom</td>
</tr>
<tr>
<td>17.45 – 18.45</td>
<td>Europe</td>
<td>Hall 3 - Events Ballroom</td>
</tr>
<tr>
<td>17.45 – 18.45</td>
<td>North America</td>
<td>Hall 4 - Events Ballroom</td>
</tr>
<tr>
<td>17.45 – 18.45</td>
<td>Latin America</td>
<td>Hall 6 - Events Ballroom</td>
</tr>
</tbody>
</table>

Union Scientific Section Meeting

The Union's scientific sections give members the opportunity to affiliate with others who share the same interests and collaborate on research, publications and projects. One of their principal activities is to propose sessions and contribute to the planning of The Union World Conference on Lung Health, the largest annual conference focusing on lung health issues as they affect low- and middle-income populations. They also participate in the governance of The Union through the General Assembly.

Non-members are welcome to attend the section meetings to find out more.

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Hall</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.00 – 17.30</td>
<td>Tobacco control</td>
<td>Los Arcos</td>
</tr>
<tr>
<td>17.45 – 19.15</td>
<td>HIV section</td>
<td>Los Arcos</td>
</tr>
</tbody>
</table>

Friday 13 October

Union Scientific Section Meetings

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Hall</th>
</tr>
</thead>
<tbody>
<tr>
<td>07.30 – 08.45</td>
<td>Adult and child lung health</td>
<td>Los Arcos</td>
</tr>
<tr>
<td>07.30 – 08.45</td>
<td>Tuberculosis</td>
<td>Hall 2 - Events Ballroom</td>
</tr>
</tbody>
</table>

Union Region Meeting

14.00 – 15.30 | Inter-regional meeting | Los Arcos             |

Union Administrative Meeting

19.30 – 20.30 | General Assembly | Hall 10 - Jalisco Hall |

All members are encouraged to participate and cast their votes to help shape The Union’s future. The General Assembly is the annual meeting where Union members review the past year, support plans for the coming one, and elect new members and officers of the Board of Directors, and conduct other business.

Newly appointed Honorary Members are announced. The title of Honorary Member of The Union is granted to a person who has become distinguished through active participation in The Union’s activities and the fulfillment of its goals. These members serve as informal advisors to The Union.

Finally the winners of the annual Christmas Seals Contest will be announced.

Saturday 14 October

Union Administrative Meeting

Scientific Programme Committee Meeting (CCSA: Sub-group 2)
08:00-09:00, Cabanas I

Attendees: CCSA Chair, programme Secretaries, Civil Society representative and Institute representative, Director of Scientific Activities

Board meeting (2)
10:30-14:30, Westin/Sabila Maguey

Attendees: All Board members, including newly elected
SIDE-MEETING

Wednesday 11 October

13.00 – 17.00 HALL 9 - JALISCO HALL

FIND and New Diagnostics Working Group

(Open to all delegates)

This year, FIND and the New Diagnostics Working Group (NDWG) join in convening partners and members at a symposium to be held on 11 October as a side-event at the 48th Union World Conference on Lung Health.

During the symposium, we will provide an overview of the most recent advances in the global TB diagnostics pipeline and review progress made in various areas to address diagnostic needs towards ending the TB epidemic. Sessions will focus on the use of next-generation sequencing for surveillance, diagnosis and patient management, and on the development of new tests for latent TB infection to support TB elimination.

The event will also involve a round table discussion around the challenges in molecular testing roll-out on a programmatic level. Panelists will consider how the interpretation of genetic mutations can guide clinical decision for treatment and will share different perspectives about the prospects of scaling up molecular approaches in different settings.

Chairpersons: Catharina Boehme, Chief Executive Officer, FIND; Daniela Cirillo, San Raffaele Scientific Institute, NDWG.

IN MEMORIAM

The passing of Dr. Sabine Ruesch-Gerdes was a great loss for the global TB community. BD acknowledges her significant contributions in developing new TB diagnostic procedures. Her keen interest in improving TB diagnostics helped BD and many others in different ways. Dr. Ruesch-Gerdes carried out evaluation studies of newly developed tests and procedures based on liquid medium and published her findings in scientific journals. She trained laboratory personnel from all over the world in the proper use of many TB diagnostic tests and co-authored the BD BACTEC MGIT 960 Manual with a BD scientist published by FIND. She was also involved in several multi-center studies in establishing new procedures especially for rapid detection of drug resistance with MGIT liquid medium.

She was responsible for developing her laboratory as the leading WHO Supra National TB Reference Laboratory and lead External Quality Assurance program for laboratories globally.

Dr. Ruesch-Gerdes was a great scientist with profound observation and strong work ethic. She established herself as a leading Mycobacteriologist and everyone had enormous respect for her. She devoted her entire life in finding rapid and better diagnostic tests for TB helping fight against tuberculosis disease and is incredibly missed by us all.
JOIN THE UNION

Union members make up a powerful international network across more than 140 countries, working together to transform public health and provide health solutions for the poor.

Help shape the future of lung health by joining The Union.

BENEFITS

- Benefit from a worldwide network, active in over 140 countries
- Share knowledge and expertise with colleagues
- Link up with an international network of members through the online Members Directory
- Stay up to date with the latest policy and research
- Gain unique regional insight into issues faced on the ground – and be involved in finding solutions
- Access a collection of dedicated resources and materials put together by experts
- Take advantage of professional opportunities and training
- Participate in Union conferences at a discounted rate
- Obtain voting rights in the governance of The Union
- Get a discounted rate for selected Union courses

I strongly believe the only way to make real impact is by collective effort, with everyone working for and with each other towards a common goal. The Union’s success, and the impact our work has had on millions of people, has only been possible thanks to our members.

Dr Jeremiah Chakaya Muhwa
President
International Union Against TB and Lung Disease

JOIN THE UNION

Find out more at theunion.org @TheUnion_TBLH facebook.com/TheUnionLungHealth
WEDNESDAY
11 OCTOBER
PLENARY SESSION

18.00 – 20.00 PALACIO DE LA CULTURA Y LA COMUNICACIÓN (PALCCO)

Inaugural Session

Hon Dr José Narro Robles, Mexico’s Secretary of Health, has been appointed by H.E. Enrique Peña Nieto, President of Mexico, to officially open this year’s conference. H.E. Dr. Tabaré Vázquez, President of Uruguay, will also address delegates with special remarks.

The session will include remarks from The Union President Dr Jeremiah Chakaya Muhwa and Executive Director José Luis Castro. Remarks will also be given by Maestro Jorge Aristóteles Sandoval Díaz, Governor of the state of Jalisco, Dr Carissa F. Etienne, Director of the Pan American Health Organization (PAHO) and Mo Mileni Romero, an odontologist and TB survivor from Venezuela. The opening keynote address Childhood Tuberculosis: At the Tipping Point will be delivered by Dr Jeffrey Starke, an internationally recognised expert in childhood tuberculosis, introduced by Stacie C Stender, Chair of the Coordinating Committee of Scientific Activities.

Entertainment, generously sponsored by the City of Guadalajara, will feature two of Mexico’s most iconic cultural arts: a mariachi band and ‘folkloric’ ballet.

18.00 – 20.00 PALACIO DE LA CULTURA Y LA COMUNICACIÓN (PALCCO)

Sesión inaugural

El Hon. Dr. José Narro Robles, Secretario de Salud de México, ha sido designado por Su Excelencia Enrique Peña Nieto, Presidente de México, para inaugurar oficialmente la conferencia de este año. Su Excelencia el Dr. Tabaré Vázquez, Presidente de Uruguay, también se dirigirá a los delegados con consideraciones importantes.

La sesión incluirá intervenciones del Presidente de La Unión, el Dr. Jeremiah Chakaya Muhwa y el Director General, José Luis Castro. También participará Maestro Jorge Aristóteles Sandoval Díaz, Gobernador del estado de Jalisco, la Dra. Carissa F. Etienne, Directora de la Organización Panamericana de la Salud (OPS) y la Sra. Mileni Romero, una odontatóloga y sobreviviente de TB de Venezuela. El discurso de apertura estará a cargo del Dr. Jeffrey Starke, un experto en tuberculosis infantil reconocido internacionalmente.

La sesión de entretenimiento, patrocinada generosamente por la ciudad de Guadalajara, presentará dos de las artes más icónicas de la cultura mexicana: una banda de mariachis y un ballet “folklórico”.

Hon Dr José Narro Robles graduated with honors as a surgeon from the Faculty of Medicine of the National Autonomous University of Mexico (UNAM). He is a full time tenured professor, with more than 35 years’ experience at the National University, where he served as Secretary General and Director of the Faculty of Medicine. Between 2007 and 2015 he was Rector of the UNAM.

He is the author and co-author of 114 articles and scientific book chapters, as well as more than 238 dissemination products. Since 1992, he belongs to the National Academy of Medicine and in 2004 he entered the Mexican Academy of Sciences. He has received numerous awards and national and international recognitions for academic and charitable work.

He was appointed corresponding foreign academic by the Royal National Academy of Medicine of Spain, Honorary Professor by the University of Buenos Aires, Argentina and member of the Royal College of Physicians of London, England.

In the Federal Government Public Administration he has served as Secretary General of the Mexican Social Security Institute, and Deputy Secretary of the Secretariat of the Interior and Health, and in 2016 he was appointed Secretary of Health by the President of the United States of Mexico, Lic. Enrique Peña Nieto.

Jorge Aristoteles Sandoval Díaz is the current Governor of the State of Jalisco. Position he assumed in March 2013, after being the mayor of the municipality of the City of Guadalajara from 2009 to 2012. He previously held a seat in the state congress from 2003 to 2006, and a seat in Guadalajara’s City Council from 2000 to 2003.

As Governor, Mr. Sandoval has focused on improving the general wellbeing of the people of Jalisco through innovation. For this, he has implemented a strong international and local agenda; generating added value in both the traditional economic sectors of the state, such as agriculture and tourism, and in the advanced industries such as electronic and information technologies. He has also focused on implementing innovative policies in key social sectors such as health, culture, security, and education. As a result, Jalisco is the fastest growing state economy and that has achieved the highest social advancements in the country.

Moreover, Governor Sandoval has invested great efforts in strengthening the state’s environment, transparency, mobility and social participation agendas, which has lead Jalisco to become a local and international leader in the fight against climate change. He has also improved the anti-corruption mechanism in the public sector, the implementation of alternative mobility systems, and governance models.
Dr. Carissa F. Etienne was elected Director of the Pan American Health Organization (PAHO) in 2012. From March 2008 until 1 November 2012, Dr. Etienne served as Assistant Director-General for Health Systems and Services at the World Health Organization in Geneva, Switzerland. Prior to that, as Assistant Director of PAHO, she led five technical areas: Health Systems and Services; Technology, Health Care and Research; Health Surveillance and Disease Management; Family and Community Health; and Sustainable Development and Environmental Health.

During her tenures at WHO and PAHO, Dr. Etienne led the efforts to renew primary health care and to strengthen health systems based on primary health care, promoting integration and improved functioning of health systems. She has also spearheaded policy directions for reducing health inequalities and advancing health for all through universal coverage, people-centered care, the integration of health into broader public policies, and inclusive and participatory health leadership.

Dr. Etienne has also led the WHO global agenda to support universal access to safe and efficacious medical products and the development of a global code of practice for the international recruitment of health personnel. She also chaired the International Health Partnership (IHP+)-initiative, which seeks to commit partners to work together and put into practice international principles for effective aid and development cooperation in the health sector.

Dr. Etienne began her career as a medical officer at the Princess Margaret Hospital, where she eventually became the Chief Medical Officer. She has also served in other high-level posts in Dominica, including Coordinator of the National AIDS Program, Disaster Coordinator for the Ministry of Health, Chair of the National Advisory Council for HIV/AIDS, and Director of Primary Health Care Services.

Mileni Romero is a Venezuelan odontologist, who is sharing her story as a TB patient. In January 2017 she began experiencing back pain, linked to two herniated discs, spinal rotation and scoliosis. As the days went by and the pain worsened, she started to have night sweats and high temperatures, and was diagnosed with extra-pulmonary TB on February 23rd.

Over the next few months, she went to three health centres, and had to stop treatment several times because of severe side effects (dehydration, stomach parasites, strong allergies in limbs, abdomen and facial dermatitis). No doctor has been able to say how, when or where Romero contracted the disease, though she suspects it was through her work in the Center for Care of Patients with Infectious Diseases Nationally, or during her community work in the Military Hospital of Caracas to Political Prisoners.

Dr. Carissa F. Etienne

Dr. Jeffrey R. Starke, MD is an internationally recognised expert in the management of childhood tuberculosis and mycobacteria infections. He has served as the Director of the Children’s Tuberculosis Clinic for almost 30 years. He has participated in the writing of numerous clinical guidelines for the City of Houston, State of Texas, the U.S. Centers for Disease Control and Prevention, the American Thoracic Society, the International Union Against Tuberculosis and Lung Disease, and the World Health Organization. He has conducted and published research studies on various aspects of the epidemiology, diagnosis, treatment and prevention of childhood tuberculosis, and has delivered his findings in hundreds of regional, national and international talks, as well as over 150 papers and 40 chapters. Dr. Starke is the co-editor along with Peter Donald of the Handbook of Child and Adolescent Tuberculosis, a comprehensive international text written by the world’s experts in childhood tuberculosis. He also attends on the infectious disease service at Texas Children’s Hospital, and has served as the TCH Infection Control Officer for over 20 years. Dr. Starke is also active in medical education and has won several department and college-wide teaching awards.

Mileni Romero

Dr. Jeffrey R. Starke, MD

20.00 – 21.30 PALACIO DE LA CULTURA Y LA COMUNICACIÓN (PALCCO)

Welcome Reception

A welcome reception for all delegates, exhibitors and accompanying people will be held immediately after the Inaugural Session, hosted by Mr Enrique Alfaro Ramírez, Mayor of the city of Guadalajara.

Enrique Alfaro Ramírez has served as Mayor of the city of Guadalajara since 2015. He also held office as Mayor of Tlajomulco de Zúñiga, Jalisco, from 2009-2012 and is currently President of the political party Alianza Ciudadana.

He earned his degree in Civil Engineering from the Western Institute of Technology and Higher Education in 1995, and a Master’s degree in Urban Studies with a specialisation in Urban Economics from El Colegio de Mexico in 1999.

He has held several positions in the federal government working on sustainable urban development issues and held positions in building works for the municipality of Tlajomulco.

Between 2007 and 2009 he was local deputy of the LVIII Congressional Legislature of Jalisco, where he headed the first Commission of Metropolitan Affairs in the history of the state. In Congress, he pushed for a Metropolitan Coordination bill, led a recall election initiative and backed a proposal to reduce financing for political parties.

20.00 – 21.30 PALACIO DE LA CULTURA Y LA COMUNICACIÓN (PALCCO)

Recepción de bienvenida

Inmediatamente después de la Sesión inaugural, se realizará una recepción de bienvenida para todos los delegados, ponentes y acompañantes, dirigida por el Sr. Enrique Alfaro Ramírez, Presidente Municipal de la ciudad de Guadalajara.
POST-GRADUATE COURSES
All post-graduate courses are eligible for accreditation.

01. Qualitative data analysis

Objectives:
1. Develop capacity in analysing and interpreting qualitative data.
2. Progress from descriptive to critical, in-depth qualitative analyses.

Description and relevance: Qualitative research provides contextualised insight into the social and behavioural contexts of TB related determinants, challenges and outcomes. There is growing interest to integrate qualitative research into operational and clinical TB programmes. This course will strengthen participants’ capacity to analyse textual data derived from qualitative interviews or focus groups for optimal translation to TB policy and/or healthcare practice.

The course will cover:
1. Sample frameworks or approaches to analysis.
2. Iterative process of data coding, comparisons, contextualisation and representation.
3. Rigour and reflexive practice. The course will be interactive, hands-on and exercise-driven.

Expected outcomes:
1. Understand the principles of qualitative data analysis.
2. Gain hands-on experience coding and thematically analysing qualitative data.
3. Learn about the advantages, limits and levels of qualitative analysis.
4. Build capacity to be critical and reflexive researchers.
5. Appreciate approaches to determining rigour in qualitative research and their limitations.

Coordinator(s): Amrita Daftary (Canada), Gill Craig (United Kingdom)

1. Approaches to qualitative data analysis: framework and thematic analysis – Gill Craig (United Kingdom)
2. Breaking it down and building it up: from coding to meaning-making – Stephanie Law (Canada)
3. Descriptive versus in-depth qualitative analysis: multiple levels of inquiry and interpretation – Nora Engel (Netherlands)
4. Qualitative research rigour and critical appraisal – Amrita Daftary (Canada)

02. Measuring and improving quality of TB care

Despite the high coverage of diagnosis and treatment, TB continues to be a major threat. High TB mortality, the large number of missing TB cases, the emergence of severe forms of drug resistance and the slow decline in TB incidence indicate that merely expanding the coverage of TB services is insufficient to end the epidemic. Indeed, many TB services are well below standard and simply expanding them may make things worse. In the era of the End TB Strategy we need, therefore, to think beyond coverage and start focusing on the quality of the TB care that is routinely offered to patients in high-burden countries in both public and private sectors. This course, with leading international experts, will discuss and debate the best approaches to measurement of TB care quality; examples of quality improvement programmes that have worked or failed and lessons from such case studies; quality of care in private versus public sectors; use of quality dashboards, audits and tools and their likely impact on quality; and understanding and overcoming the pervasive know-do gap (i.e. gap between what healthcare providers know and what they actually do in practice).

Co-chairs: Paul Nunn (United Kingdom), Zelalem Temesgen (United States of America)
Coordinator(s): Madhukar Pai (Canada), Ramnath Subbaraman

1. What does quality of care mean to TB patients? – Deepthi Chavan (India)
2. What do we know about quality of TB care and how can we measure quality? – Madhukar Pai (Canada)
3. TB cascade of care: a valuable tool to identify quality gaps – Ramnath Subbaraman (United States of America)
4. Use of Operational Research to address quality of service delivery within National TB Programmes – Srinath Satyanarayana (India)
5. Creating ecosystems for quality assurance in TB care in the private sector – lessons from India – Shibu Vijayan (India)
6. Using implementation science to understand and improve the quality of TB diagnostic evaluation in Uganda – Adithya Cattamanchi (United States of America)
7. Quality improvement in the South African National TB Programme – Lindwe Mvusi (South Africa)
8. How can National TB Programmes incorporate quality improvement (QI)? – Paul Nunn (United Kingdom)
MDR and XDR-TB pose a significant threat to TB control and challenge clinicians and programme managers worldwide given the complexities in diagnosis, treatment and case management. This course presents cutting edge strategies for clinical and programmatic management of MDR-TB for the front-line clinician, nurse, epidemiologist, laboratorian and programme manager based on the newly updated World Health Organization (WHO) guidelines. It will use case-based and didactic presentations to illustrate ways to implement the most recent internationally recommended practices to address the challenges of MDR-TB diagnosis, treatment and care. The symposia entitled ‘Update on clinical and programmatic management of MDR-TB and XDR-TB’ is directly related to the theme of the 47th Union World Conference on Lung Health, because addressing the problem of MDR/XDR-TB will be one of the main challenges as we move forward towards ending and eliminating TB aligned with the targets of the End TB Strategy. Appropriate prevention and management of MDR/XDR-TB will be the key for ending the TB epidemic.

For individuals interested in modelling TB and the impact of TB care and prevention programmes.

The session will introduce participants to the basic structures, assumptions, principles and concepts of TB modelling, including key aspects of M. tuberculosis natural history and the impact and cost-effectiveness of TB care and prevention programmes. Participants will gain hands-on experience of using a TB model and how to appraise TB modelling papers. We will also highlight the role of modelling for policy and decision making, and the resources available from the TB Modelling and Analysis Consortium (www.tb-mac.org).

Co-chairs: Hsien-Ho Lin (Taiwan), Philip Welkhoff (United States of America)
Coordinator(s): Richard White (United Kingdom), Finn McQuaid (United Kingdom)

1. Introduction to the day – Richard White (United Kingdom)
2. Lecture 1: An introduction to Tuberculosis modelling – Richard White (United Kingdom)
3. Practical 1: Setting up a model of Mtb – Emilia Vynnycky (United Kingdom)
4. Paper Discussion: How to critically review a modelling paper – Philip Welkhoff (United States of America), Finn McQuaid (United Kingdom)
5. Lecture 2: Tuberculosis modelling – Interventions and cost effectiveness – Rein Houben (United Kingdom), Fiammetta Bozzani (United Kingdom)
6. Practical 2: Modelling the impact and cost effectiveness of TB Interventions – Tom Sumner (United Kingdom)
7. Summary of the day and TB MAC – Richard White (United Kingdom)
Co-chairs: Grigory Volchenkov (Russian Federation), Edward Nardell (United States of America)
Coordinator(s): Nii Nortey Hanson-Nortey (Ghana), Paul Jenson (United States of America)

1. Counting the cost of non-adherence to TB infection control: occupational risk factors, policies and practices – Carrie Tudor (Switzerland)
2. Saying YES to the FAST strategy (Finding Actively, Separating Safely and Treating): implementation and outcomes – Dylan Tierney (United States of America)
4. A practical approach to environmental controls: planning, budgeting and deployment – Paul Jenson (United States of America)
5. Implementing upper room ultraviolet germicidal irradiation (UVGI): concept and application issues – Edward Nardell (United States of America)
6. Breaking the cycle of transmission: practical solutions to designing safe buildings – Garry Blackwelder (United States of America)
7. Overcoming barriers and obstacles to sustainable personal respiratory programme implementation – Grigory Volchenkov (Russian Federation)
8. Barriers and alternative approaches to implementation of TB infection control – Edward Nardell (United States of America)
9. Making TB infection control effective at country level – the dos and don’ts – Paul Jenson (United States of America)
10. How safe is your laboratory? Practical integration of controls – Matsie Mphalele (South Africa)

POST-GRADUATE COURSE 11.30-17.30 COLOSII

07. Making sense and use of routine TB data for management

The course follows up similar post-graduate courses at The Union conferences in 2015 and 2016. It is based on a guide that the National TB Programme (NTP), The Union and TB CARE developed and piloted in Zimbabwe and which is used on The Union international courses. The objective is to introduce a simple and user-friendly approach to how health staff and managers at facility, district and higher levels tabulate and analyse their own routine TB data for management. Key indicators covering the main components of TB programmes are compared with expected values to identify strengths and challenges and to agree on action points targeting these challenges. The approach is implemented through strengthened supportive supervision which is data driven, using check lists with summary tables of routine data and through quarterly performance review meetings. The approach will also be presented from another setting (Kenya).

Expected outputs/outcomes: Participants will learn the importance of quality data, acquire skills in data tabulation and analysis directly linked to management at facility, district and provincial levels through practical examples; how to carry out strengthened supportive supervision, plus performance review meetings and how to roll out the approach in countries.

Relevance of the topic for the target audience: The approach strengthens implementation of the End TB Strategy by focusing on the facility-level, where TB patients are increasingly being diagnosed and treated, along with the district-level, which monitors the network of facilities, identifying both ‘hot’ and ‘cold’ spots where early case detection should be strengthened. The approach makes local staff more motivated, empowered and owners of their data, strengthening data quality, content of supervision, follow-up of training, supplies, usefulness of new tools and, ultimately, patient care.

The approach is very much in line with the conference theme (accelerating towards elimination) and contributes to health system strengthening.

Co-chairs: Charles Sandy (Zimbabwe), Enos Masini (Kenya)
Coordinator(s): Christopher Zishiri (Zimbabwe), Einar Heldal (Norway)

1. Introduction: key questions to be answered by the recording and reporting system, indicators to be monitored, recording and reporting tools – Charles Sandy (Zimbabwe)
2. How to tabulate and analyse data at facility level (with exercises) – Nicholas Szuza (Zimbabwe)
3. How to tabulate and analyse data at district level (with exercises) – Ronald Thulani Ncube (Zimbabwe)
4. How to tabulate and analyse data at provincial level (with exercises) – Nqobile Mloko (Zimbabwe)
5. How to do data-driven supportive supervision – Enos Masini (Kenya)
6. How to use data for decision-making at different levels – Christopher Zishiri (Zimbabwe)
7. How to conduct performance review meetings – Riutta Diodlo (Zimbabwe)
8. Rolling out the guide in the country and maintaining its use – Einar Heldal (Norway)
9. How to use digital health innovations to improve recording and reporting of TB data – sharing practical country experiences – Patrick Hazangwe (Zimbabwe)
10. Experiences in using routine TB data in Kenya – Godana Mamo (Kenya)

POST-GRADUATE COURSE 08.00 - 14.00 MINERVA I

10. TB prevention in children in high-burden TB settings: implementing the child contact management care (CCM) cascade

Course objective: Develop knowledge and build operational capacity to effectively implement and enhance the CCM in high-burden TB settings.

Description and relevance: As noted in Pillar 1 of the End TB Strategy, prevention re-emerged as a core strategy for reaching TB control targets. This course is for stakeholders and healthcare workers who work in high-burden TB countries and will specifically address CCM implementation of child household contacts under the age of five years who have been exposed to bacteriologically positive pulmonary TB.

CCM is recommended in all high-burden TB countries. This four-step care cascade includes identifying exposed child contacts under five years of age, screening them, initiating preventive treatment or TB disease treatment and ensuring completion of therapy. This course aims to engage stakeholders globally by discussing barriers and facilitators that impact CCM at each care cascade step and exploring various CCM strategies. Sharing evidence-based guidelines and reporting on implementation experiences is essential to improving CCM...
National health programmes and donor-funded projects need to improve their performances in terms of efficiency, effectiveness, quality and timeliness. This course provides participants with a conceptual framework to define and measure performance as well as practical tools to improve it. During this interactive course, participants will learn to develop scorecards to measure and compare different interventions and understand the importance of comparative feedback. Participants will learn to design a performance improvement approach using a 10 steps checklist.

Objectives:
1. Empower participants to define and measure performance in public health.
2. Enhance the participants’ approach to performance management and provide necessary tools and techniques.

Expected output/outcome: Participants will learn to recognize the importance of an early warning system for performance management and how to develop and apply techniques to improve performance.

Co-chairs: Simon Schaaf (South Africa), Anna Mandalakas (United States of America)  
Coordinator(s): Yael Hirsch-Moverman (United States of America), Daria Szkwarko (United States of America)

1. WHO strategy for CCM – Anna Mandalakas (United States of America)  
2. CCM overview – what are the major drivers in CCM? What are the various strategies? – Karen Du Preez (South Africa)  
3. Regimens for preventive treatment – Andrea Cruz (United States of America)  
4. Quantifying the impact of screening and treatment in child multidrug-resistant TB contacts – Helen E. Jenkins (United States of America)  
5. Multidrug-resistant TB preventive treatment considerations – Simon Schaaf (South Africa)  
6. Breakout groups – To be confirmed

POST-GRADUATE COURSE 08.00 - 14.00 MINERVA II

11. Strengthening performance management

National health programmes and donor-funded projects need to improve their performances in terms of efficiency, effectiveness, quality and timeliness. This course provides participants with a conceptual framework to define and measure performance as well as practical tools to improve it. During this interactive course, participants will learn to develop scorecards to measure and compare different interventions and understand the importance of comparative feedback. Participants will learn to design a performance improvement approach using scorecards through a 10 steps checklist.

Objectives:
1. Understand the current World Health Organization (WHO) CCM recommendations.  
2. Review the breakdown of the CCM care cascade into four distinct steps.  
3. Discuss barriers and facilitators that impact CCM at each step of the care cascade.  
4. Explore various CCM strategies and their effectiveness.  
5. Enhance knowledge and capacity to design an effective CCM programme.  
6. Investigate the most recent evidence regarding DR-TB CCM and preventive therapy regimens for DS and DR-TB.

Expected outputs:
1. Understand the current World Health Organization (WHO) CCM recommendations.  
2. Review the breakdown of the CCM care cascade into four distinct steps.  
3. Discuss barriers and facilitators that impact CCM at each step of the care cascade.  
4. Explore various CCM strategies and their effectiveness.  
5. Enhance knowledge and capacity to design an effective CCM programme.  
6. Investigate the most recent evidence regarding DR-TB CCM and preventive therapy regimens for DS and DR-TB.

Coordinator(s): Steffi Rust (Netherlands), Ersin Topcuoglu (Netherlands)

1. Defining and measuring performance – Ersin Topcuoglu (Netherlands)  
2. Using scorecards as a management tool for improving performance management – Steffi Rust (Netherlands)  
3. Ten steps to develop a scorecard – Imron Sahetapy (Netherlands)  
4. Comparative feedback as a tool for improving performance management – Mamuka Djibuti (Georgia)  
5. Use of scorecard at the national level: experience from Zambia – Clara Kasapo (Zambia)  
6. Introducing the scorecard: experiences from Bangladesh – Muluken Melese (Ethiopia)  
7. Use of a score-system (Standard of Care Tool) at district level: experiences from Ethiopia – Deneje Habte (Ethiopia)
A full day workshop on pharmacometrics approaches to suppressing emergence of multidrug-resistance (MDR-TB) and optimising existing anti-TB regimens to minimise side effects. The workshop will provide an overview of pharmacokinetics/pharmacodynamics (PK-PD) sciences’ role in chemotherapeutics, optimisation of traditional regimens and defining susceptibility breakpoints for the treatment of TB in adults, babies and toddlers and other special populations, including pregnant women and those with comorbid conditions. Experts in the field will present and review the latest evidence to support decision-making for both patient care in the clinic and TB programme management in the field.

**WORKSHOPS**

**WORKSHOP 11:30 – 17:30 HALL 2 - EVENTS BALLROOM**

**01. Pharmacokinetics/pharmacodynamics science to accelerate elimination drug-susceptible and drug-resistant TB**

Co-chairs: Tawanda Gumbo (United States of America), Helen McIlleron (South Africa)
Coordinator(s): Jotam G. Pasipanodya (United States of America), Wynand Goosen (South Africa)

1. Global collaboration for accelerating novel TB regimen development – Debra Hanna (United States of America)
2. The PK/PD principles of anti-TB drugs – the logic behind the madness – Eric Nuernberger (United States of America)
3. Principles of pharmacokinetic variability of anti-TB drugs – infinite diversity – Paolo Denti (South Africa)
4. TB drug delivery and penetration in human lung cavities and other difficult anatomical spaces – Keertan Dheda (South Africa)
5. Pharmacokinetic and minimum inhibitory concentration (MIC) variability as determinants of TB clinical outcomes in adults and children – state of the evidence – Tawanda Gumbo (United States of America)
7. Global perspectives on PK/PD for MDR-TB treatment and elimination – Dennis Falzon (Switzerland)
8. Building new treatment regimens for children sui generis-from FLAME to FTEM! – Devyani Deshpande (United States of America)
9. Resources to rapidly assess drug-resistance using genomic sequencing – Marco Schito (United States of America)
10. Resources for PK/PD modelling for industry, academia and TB programmes – Klaus Romero (United States of America)

**WORKSHOP 08.00 – 14.00 HALL 3 - EVENTS BALLROOM**

**02. Accelerated access to new TB medicines, regimens, and diagnostics: the supply management challenges during transitions**

There are recommended new drugs, new regimen and new formulations for the management of TB, from the standardised 20-24 months regimen for drug-resistant TB (DR-TB) to the shortened 9-12 months regimen, to new drugs and paediatric fixed dose combinations for paediatric TB. However to successfully ensure access to these newer and better regimen and drugs, systems need to be in place to ensure ‘transitions’ and switches are done in the most efficient way possible with minimum interruption for patients taking the medicines, proper supply chain planning and coordination at all stages of pharmaceutical and supply chain management.

The purpose of this session is to share lessons learned from selected countries that have accessed new drugs, shortened treatment regimen and paediatric formulation, and to look at how ‘waste’ of obsolete medicines was minimised or avoided. This information is timely and relevant to many country programmes that are already implementing the switch or in the midst of scaling up new drugs, shortened regimen and paediatric formulation.

Objectives:

1. To discuss challenges in the global TB commodities forecasting during the transitions from old treatment regimens to new drugs and formulation, and the importance of patient data in forecasting and procurement planning.
2. To describe the role played by technical assistance focused on quality assured TB medicines, tools used in quantification and the regional-based approach to ensure uninterrupted availability of TB commodities.
3. To share experiences from countries that have introduced new drugs and formulation, approaches to adoption of new drugs and forecasting and quantification.

Expected outcome:

1. Participants will learn the challenges in global forecasting and the role of patient estimates data.
2. Participants recognise the diverse countries’ contexts, partners involvement and National TB Programme (NTP) perspectives in the supply chain planning of paediatric formulations, shortened treatment regimen (STR), bedaquiline and delamanid.
3. Participants know where/when to access technical assistance for the supply chain planning during implementation.

Chair: Thomas Chiang (United States of America)
Coordinator(s): Edmund Rutta (United States of America), Andre Zagorski (Switzerland)
1. United States Agency for International Development (USAID) support for the accelerated access to new TB medicines, regimens, and diagnostics: updates – Thomas Chiang (United States of America)

2. Global and regional-based technical support to National TB Programme’s (NTP) forecasting and quantification of new TB medicines, regimens, and diagnostics: Global Drug Facility (GDF) updates and perspectives – Gustavo Do Valle Bastos (Switzerland)

3. Avoiding TB medicines stock-outs in Uzbekistan through proper quantification and early warning system – Liverko Irina (Uzbekistan)

4. Analysing TB medicines costs and reprogramming of TB medicines budget in Tanzania global fund grant – Jumane Marko Mumbo (Tanzania, United Rep.)


6. Country level experiences in implementing new tools, new paediatric formulation, STR transition and new drugs – Celina Garfin (Philippines)

7. Supporting TB drugs manufacturers to increase the supply of a life-saving anti-TB medicine: USP Promoting the Quality of Medicines (PQM) technical approach – Archil Salakaia (United States of America)

**WORKSHOP 11.30 – 17.30 HALL 4 - EVENTS BALLROOM**

**03. Adapting the Structured Operational Research and Training Initiative (SORT IT) model: innovations in capacity building and translating research evidence and data to health policy**

This is a one-day workshop on operational research and the translation of research and data to public health policy development. The workshop will provide an overview of operational research, the SORT IT model of operational research capacity building and its innovations, adaptations of the SORT IT model to tobacco taxation and the Vital Strategies/US CDC Data to Policy programme of using research evidence and data to change policy and practice. This workshop is designed to show participants how health data and operational research can help in changing policy and practice in low- and middle-income countries.

How the workshop is related to the conference: The theme of the conference is ‘accelerating towards elimination’. This workshop will show participants how health data and operational research on TB, HIV/AIDS and non-communicable diseases - including tobacco control - can be used to inform ministries of health and finance, disease-control programmes, health workers and the community about coverage, quality, effectiveness or safety of innovative strategies and innovative interventions to enable policy and practice to be changed to improve the health of people living in resource-poor countries.

**Objectives:**

1. Describing what is operational research, why is it needed and how it can be used to impact policy and practice in low- and middle-income countries.
2. Describing the SORT IT model of capacity building, its innovations, successes and challenges.
3. Sharing the experiences of adapting the SORT IT model to tobacco taxation.
4. Describing the Data to Policy Programme, its innovations, successes and challenges.
5. Understanding how to move data and research findings to policy and practice and how to monitor this progress.

**Expected outcome:**

Participants will finish the one-day workshop understanding the basic principles of operational research and the capacity building that is needed to develop operational research and use data strategically at a country or programmatic level.

**Co-chairs:** Anthony D Harries (United Kingdom), Rony Zachariah (Luxembourg)
**Coordinator(s):** Ajay Kumar (India), Srinath Satyanarayana (India)

1. Operational research, what, why and how? – Rony Zachariah (Luxembourg)
2. The SORT IT model: operational research capacity building – Anthony D Harries (United Kingdom)
3. Expanding SORT IT: new regions, new themes, new methods – Ajay Kumar (India)
4. Developing the tobacco and taxation course – Programme for Research, Advocacy and Capacity Building on Tobacco Taxation (PROACTT) – Alastair Bradstock (United Kingdom)
5. Results of first PROACTT workshop and thinking ahead – Skye Kurtis (United Kingdom)
6. The data impact programme – Adam Karpati (United States of America)
7. Data to Policy (D2P) training and mentorship programme – Mohammed Khogali (United States of America)

**WORKSHOP 08.00 – 11.00 HALL 5 - EVENTS BALLROOM**

**04. Transitioning from Global Fund financing and ensuring sustainability**

Outside of domestic resources, the Global Fund provides the main source of financial support for National TB Programmes in developing countries throughout the world. Many countries rely on this support to successfully implement their national strategic plans for TB. Under the Global Fund’s new Sustainability, Transition and Co-Financing Policy, the organisation has started the process for several countries, specifically in the Latin American and eastern European regions, to start planning their transitions without this funding. This will be a difficult process for many countries that have relied on this funding for many years and have limited domestic resources for their programmes.

This session will explore how countries can navigate these transition processes, strategically plan sustainable interventions and increase government commitment and domestic financing for TB programmes. This is aligned with Pillar 2 of the World Health Organization’s (WHO) END TB Strategy, which is focused on bold policies and supportive systems needed to end TB.
05. Innovative World Health Organization (WHO) policies on management of TB for accelerating towards elimination

Objectives of the workshop are to present the process and methods applied by WHO for the development of policy and to present updated WHO recommendations on the clinical, ethical and programmatic aspects of diagnosis, prevention, treatment and care of TB.

Participants in this workshop will learn about updates on the evidence-based recommendations for diagnosis and treatment of drug susceptible TB, drug-resistant TB; TB patient care and support; ethics of TB treatment and care; and innovation in the End TB Strategy.

Participants will have the chance to understand the development process and contents of WHO policies relevant to the implementation of the End TB Strategy and to discuss or provide feedback on the policy implementation.

Target audience: physicians, nurses, National TB Programme managers and public health professionals, policy-makers, donors, academia, civil society, non-governmental organisations (NGOs) and international technical partners.

Co-chairs: Charles Daley (United States of America), Linh Nguyen (Switzerland)
Coordinator(s): Ernesto Jaramillo (Switzerland)

1. Processes of assessing evidence and updating WHO guidelines – Linh Nguyen (Switzerland)
2. Updated guidance on diagnosis of TB and TB drug-resistance – Christopher Gilpin (Switzerland)
3. Updated guidance on treatment of drug-susceptible TB and patient care – To be confirmed
4. Updates on pharmacokinetics and pharmacodynamics of TB drugs and WHO recommendations on the treatment of drug-resistant TB – To be confirmed
5. Updated guidance on ethics of TB prevention, diagnosis, treatment and care – Ernesto Jaramillo (Switzerland)

06. Strengthening health systems to support management and control of TB burden in East, Central and southern Africa

In sub-Saharan Africa, TB is among the top five causes of death with about a third of the world’s 22 high-burden TB countries being in southern Africa. A particular trend of high prevalence has been observed in mining and peri-mining areas, cross-border areas, labour-sending communities and along the region’s transport corridors. Responding to the problem of TB in southern Africa, therefore, requires a regional multi-sectorial approach that focuses on addressing determinants of TB spread and tackling health systems constraints that inhibit TB response. These include:

1. Weak and non-standardised TB prevention and treatment strategies and protocols across countries.
2. Weak laboratory diagnostic capacity, laboratory networking and quality assurance.
3. Inadequate human resources for health.

The workshop brings together multi-sectorial experts including public health experts, policy makers and mining and labour experts, to discuss collaborative efforts to combat the TB burden in sub-Saharan Africa. The workshop will seek to meet the following objectives:

Discuss:
- The current efforts of building laboratory capacity to contribute to control of TB and other infectious diseases in East, Central and Southern Africa.
- Innovative approaches to cross-border management of TB and other infectious diseases.
- The value of harmonised guidelines and strategies for TB and occupational health.
- Current research efforts to inform management and control of the TB burden.
- Findings of the training needs assessment for the control and management of TB burden in the region.

The expected outputs of the workshop include:

1. Consensus on best practices in:
   - Laboratory system strengthening to support management and control of TB.
   - Cross-border management of TB and other infectious disease.

2. Identification of training and human resource capacity building needs to manage the TB burden in East, Central and southern Africa.
The United States Agency for International Development (USAID) and the Janssen bedaquiline donation programme (BDQ) made available 30,000 treatment doses over a four-year period for patients with multidrug-resistant TB (MDR-TB). Delamanid (DLM) is also available through the Stop TB Partnership and Otsuka initiative, where countries can now access DLM through the Global Drug Facility (GDF). Progress has been made with more than 50 countries placing orders for over 8,500 bedaquiline doses by the end of March 2017. However, DLM uptake has been much slower compared to BDQ.

The purpose of this session will be to share lessons learned from countries that have expanded BDQ and DLM through the GDF and have used that experience to strengthen pharmacovigilance in order to achieve better TB treatment outcomes. As countries introduce and scale up shorter treatment regimen (STR), the use of BDQ, DLM and companion medicines will be critical for those ineligible for STR.

Objectives:
1. Share different countries’ experiences on the programmatic introduction and scale up of BDQ and DLM.
2. To share countries’ approach on how they have strengthened the patient adverse drug safety monitoring system using the World Health Organization (WHO) active TB drug safety monitoring and management (aDSM) approach.
3. Understand how to apply successful experiences from introduction of BDQ and DLM in implementation and scale up of STR.
4. To provide updates on the BDQ donation programme and the future implementation plans.

Expected outcomes:
1. Participants will learn critical programmatic considerations as they introduce STR, BDQ and DLM for successful implementation and scale up.
2. Participants recognise the diverse countries’ contexts, partners and National TB Programme perspectives in the introduction of STR, BDQ and DLM.
3. Practical examples and lessons learned on active drug safety monitoring and management implementation are shared.
4. Participants know where to access technical resources to assist the implementation of STR, BDQ and DLM in their countries.
This joint workshop of the Global Drug-Resistant TB and Global TB Laboratory Initiatives (GDI and GLI) aims to discuss and present the missions, activities and achievements of the two working groups and their task forces in 2016-17, aiming to accelerate the global uptake of new diagnostics, anti-TB medicines and regimens through improved guidance and coordination.

The End TB Strategy aims for a 10 percent annual decline in TB incidence globally for 2025. In the workshop held at the previous Union Conference, in Liverpool, we discussed what brought about the rapid reduction in TB in Japan, Western Europe and North America. Through the discussion, we identified several factors possibly attributable to declining TB: intensified case findings, involvement of all healthcare providers, quality assurance mechanisms for diagnosis and care, continuous human resource development, community involvement and improved environment.

In the coming workshop, five speakers from Asia will present the current or planned policies or systems against TB in their countries, particularly related to Pillar 2 (Bold Policies and Supportive Systems), followed by adapting current progress to the framework of the End TB Strategy.

Objectives:

1. Strategic priorities and products of the Global Laboratory Initiative – Heather Alexander (United States of America)
2. World Health Organization (WHO) policies on new TB diagnostics and laboratory strengthening – Wayne van Gemert (Switzerland)
3. GLI model TB diagnostic algorithms for achieving universal access to rapid detection of TB and drug resistance – Martina Casenghi (Switzerland)
4. Essential ‘standards’ for a TB diagnostic network – Heidi Albert (South Africa)
5. GLI Africa: the need for a regional laboratory initiative – Amy Piatek (United States of America)
6. Global programmatic use of bedaquiline and delamanid for drug-resistant TB treatment: progress, challenges and possible solutions – Vivian Cox (South Africa)
8. Ensuring access to new drug-resistant (DR-TB) medicines and regimens for accelerated and seamless transition to better treatments – Andre Zagorski (Switzerland)
9. Concurrence of use of bedaquiline and delamanid and implementation of the nine-month multidrug-resistant TB (MDR-TB) regimen – Robert Horsburgh (United States of America)
10. Updated guidance on treatment of drug-resistant TB (DR-TB) – Charles Daley (United States of America)

WORKSHOP 08.00 – 14.00 LOS ARCOS

08. Accelerating the uptake of new diagnostics, medicines and regimens to eliminate TB through improved guidance and coordination

Co-chairs: Charles Daley (United States of America), Heather Alexander (United States of America)
Coordinator(s): Fuad Mirzayev (Switzerland), Wayne van Gemert (Switzerland)

WORKSHOP 14.30 – 17.30 LOS ARCOS

09. What we need to do for ending TB: adapting current progress to the framework of the End TB Strategy

The End TB Strategy aims for a 10 percent annual decline in TB incidence globally for 2025. In the workshop held at the previous Union Conference, in Liverpool, we discussed what brought about the rapid reduction in TB in Japan, Western Europe and North America. Through the discussion, we identified several factors possibly attributable to declining TB: intensified case findings, involvement of all healthcare providers, quality assurance mechanisms for diagnosis and care, continuous human resource development, community involvement and improved environment.

In the coming workshop, five speakers from Asia will present the current or planned policies or systems against TB in their countries, particularly related to Pillar 2 (Bold Policies and Supportive Systems), followed by adapting current progress to the framework of the End TB Strategy.

Objectives:

1. To review and analyse the factors attributable to having achieved 10 percent annual decline discussed in the previous workshop.
2. To review the current policies or systems in other Asian countries (the Philippines, China, Korea and Taiwan) especially in Pillar 2 of the End TB Strategy.
3. To discuss what we need to do for ending TB; adapting current progress to the framework of the End TB Strategy.

Expected outcomes:
The participants understand the progress in TB control towards ending TB in other countries and realise what policies or systems they should introduce in the era of the End TB Strategy. The participants will understand how they should develop policies or systems for ending TB through a multi-disciplinary approach and adapting current progress to the framework of End TB Strategy. Discussion points from the workshop, as well as the experiences shared among the participants, will be used in the TB programmes of respective countries so that the End TB Strategy can be translated into actions in Asia.

Co-chairs: Paula I. Fujiwara (United States of America), Seiya Kato (Japan)
Coordinator(s): Kosuke Okada (Japan)

1. Universal Health Coverage (UHC): social protection and other countermeasures against TB in Japan – Akihiro Ohkado (Japan)
2. New law against TB and UHC in the Philippines – Celina Garfin (Philippines)
3. UHC and social protection in China – Caihong Xu (China)
4. People-centred care, UHC and social protection in Korea – To be confirmed
5. Bold policy of UHC and social protection in Taiwan – To be confirmed
10. The evidence of impact from digital technologies most commonly used to support TB medication adherence

Digital technologies present innovative approaches to strengthen TB efforts in patient care, surveillance, programme management and eLearning. The documented experience in their use for TB control and the evidence base for the effect of certain technologies are steadily increasing.

This workshop will focus on the state of the evidence for one specific aspect of TB care – support of medication adherence – and the sessions will include review of evidence, lessons learned from trials and programmatic application of the technologies along with a modelling of the potential impact. It will focus on three technologies in particular which are being used at large scale, namely: electronic medication monitors, short message service (mobile texting) and video (or virtual) supported care.

The workshop discussion fits into the ongoing work that is being facilitated by the WHO Global TB Programme, the European Respiratory Society (ERS) and the Global Task Force on digital health for TB. As a direct outcome of this workshop we envisage the production of a paper which will be submitted for publication to a major journal. This will complement other information and new policies on TB care to guide professionals, decision-makers, system developers and technical and funding agencies to make better choices when applying digital products in support of TB programmes.

Co-chairs: Dennis Falzon (Switzerland), Giovanni Battista Migliori (Italy)
Coordinator(s): Kristian van Kalmthout (Netherlands), Dennis Falzon (Switzerland)

1. Translating evidence on TB medication adherence into action and into more questions – Richard Lester (Canada)
2. What can we learn and do about TB treatment adherence through the use of medication packaging technology? – Jessica Haberer (United States of America)
3. Modelling the costs and impacts of digital support for TB treatment – Kevin Schwartzman (Canada)
5. World Health Organization perspectives on evidence and digital health support to the End TB Strategy – Dennis Falzon (Switzerland)

11. Accelerating urban TB control – a roadmap

Sufficient evidence exists that the TB burden is greater in urban areas compared to rural zones, both in developed and developing countries. Rapid urban development has brought with it accelerated growth of slums, with increasing amounts of people living in (extreme) poverty. Their living conditions contribute to higher transmission. The growth of urban areas worldwide has been attributed to industrialisation attracting migrants from rural areas and small cities. Even across borders people are driven by the search for better quality of life, better job opportunities, higher wages and access to social services.

In this workshop, different urban models and examples will be presented of high-burden TB countries with rapid urbanisation such as India, Mexico, Nigeria and Nepal. An urban TB framework based on the Pan American Health Organization (PAHO) framework of ‘TB in Large Cities’ will be used as the basis of the participatory discussion. The different approaches and elements need to be taken into account to formulate a comprehensive, equitable and actionable roadmap for urban TB control. The various elements will be intersectoral and inter-programmatic in character, ranging from primary prevention to detection, treatment and care including the reduction of catastrophic costs. The inputs and the discussions will be used to draft a global roadmap to improve and accelerate the planning of urban TB strategies and their impacts.

Objective:
1. To review a number of recent initiatives in urban TB that merit scaling up.
2. To explore intersectoral elements of a comprehensive urban TB framework.
3. To develop a roadmap to identify quick wins to accelerate urban TB control.

Methodology of the workshop:
• Presentations of a variety of country case studies.
• Group discussions and exercises.
• Interactive co-creation.
• Roadmap development.

The outcome will be a draft roadmap to accelerate intersectoral urban TB control in countries.

Co-chairs: Netty Kamp (Netherlands), Erik Post (Netherlands)

1. A roadmap for urban TB control – Netty Kamp (Netherlands)
2. The EQUIP model: participatory engagement in case-finding and treatment of drug-susceptible and drug-resistant TB (DR-TB) – Ramya Ananthakrishnan (India)
3. The roles of community pharmacists and patent medicine vendors in urban TB control in Nigeria – Rupert Eneogu (Nigeria)
4. Mobilising frontline health workers and involving pharmacies to increase case finding – Ram Sharan Gopali (Nepal)
5. Measuring and improving TB-HIV services in the private sector: a stepwise approach – Aimee Asumah (Nigeria)
6. Intersectoral approach to control TB in urban municipalities in Mexico – Ivonne Orejel (Mexico)
12. Designing digital health solutions for supporting patient and community-based TB monitoring

New technologies are increasingly being used to promote and strengthen the management of healthcare through the development of inspiring eHealth and mHealth technology tools. However, the role of these innovative devices in the management of TB remains less explored. Currently, there is a wide gap in capturing data and information about the TB response at the community level for feedback to the National TB Programmes for improving the quality of care and services to the patient. In this context, the Stop TB Partnership provides a platform to develop tailored digital tools to address the spectrum of challenges faced by patients in communities, the specific needs of key populations and tackling the barriers at each stage of the TB treatment cascade in order to strengthen community-level monitoring as well as recognize their contribution to the response. As TB healthcare shifts towards a more patient-centred and outcome-based approach, exploiting the use of digital tools will enable this transformation at the community level.

Participants will be divided into groups based on the purpose of the intervention, the target population and specific challenges faced in community-based monitoring. Each group will work through a set of activities and scenarios towards developing a sample template that can be translated into a digital tool tailored to the specific needs of the TB community.

**Chair:** Vipin Yadav (Switzerland)
**Coordinator:** Caoimhe Smyth (Switzerland)

1. Stop TB Partnership: platform for capturing data and information about the TB response at community level for feedback to the national TB programmes – Fatima Kazi (Switzerland)
2. Using innovative technology solutions to transform data into experiences and empowerment of individuals in self-care health monitoring – To be confirmed
3. Responding to people’s needs in real time: an experience from Tajikistan – Safar Naimov (Tajikistan)
4. Communities reporting to the NTP in Cambodia – Choub Sok Chameun (Cambodia)

13. How to help TB patients quit smoking, improve their outcomes and reduce the risk of their family developing TB

In many high-burden TB countries, smoking is very common among TB patients. Smoking worsens TB outcomes; a TB patient who smokes is two to three times more likely to die of TB than a non-smoking patient. Even non-smokers exposed to tobacco smoke have a higher risk of TB. However, TB care providers have a window of opportunity to help patients quit and, in the process, improve their outcomes and life expectancy. Unfortunately, most TB patients are neither asked about their smoking nor offered any advice. In general, policy makers express skepticism about the cost-effectiveness of smoking cessation and its potential benefit to TB patients. TB managers struggle to put systems and support in place to promote smoking cessation, health professionals lack motivation and skills needed to encourage their patients to quit, and researchers find it a challenge to evaluate the impact of such interventions. This workshop will address these barriers to supporting TB patients to quit smoking and ultimately improve their outcomes. After the workshop, attendees will be able to:

1. Summarize the best scientific evidence on the effect of smoking in TB patients and the interventions to help them quit.
2. Know how to offer smoking cessation to TB patients and to integrate it within TB care.
3. Plan to evaluate the impact of smoking cessation interventions on quit rates, TB outcomes and patients making their homes smoke-free.

The workshop will be facilitated by world-leading experts in the field who will combine their brief presentations with interactive group activities and one-to-one coaching; a Spanish speaking facilitator will work with attendees with such a preference. The outputs will include:

1. Take-home briefing on the updated evidence.
2. A worked-up plan to offer and implement smoking cessation in the participant’s setting.
3. A worked-up plan to evaluate smoking cessation interventions.

**Chair:** Mark Parascandola (United States of America)
**Coordinator:** Chris Bullen (New Zealand)

1. The case for integrating tobacco cessation interventions in TB programmes – Omara Dogar (United Kingdom)
2. Tobacco cessation interventions in TB programmes – evidence on behavioural support and pharmacotherapy – To be confirmed
3. Measures of tobacco use and exposure – Mark Parascandola (United States of America)
4. How to evaluate smoking cessation interventions using trials – Chris Bullen (New Zealand)
5. Implementing and evaluating tobacco and TB messaging – Surabhi Joshi (Switzerland)
14. Shorter regimens today, new regimens tomorrow: the practicalities of transition, waste and procurement cycles

Concerns about wasting medicines have contributed to delays in introducing and scaling up new, optimised formulations and regimens used to treat TB. Large amounts of medicines kept in stock or ordered far in advance can be a barrier to phasing in optimal products as some National TB Programmes (NTPs) feel compelled to continue treating people with suboptimal products to exhaust existing inventory. This practice delays access to optimal treatment and must be addressed.

In the short-term – when funding is sufficient – NTPs should immediately introduce and scale up optimal medicines and should not wait until existing stocks of suboptimal medicines are used. In the medium to long-term, NTPs and TB stakeholders should agree on improvements to procurement practices that enable supply chains to more readily adapt to advances in treatment. At the national level, changes could include: increasing utilisation of QuanTB to improve quantification; increasing the frequency of procurement; monitoring procurements made at the end of funding cycles; and ensuring order volumes align with actual enrollment. At the global level, Stop TB's Global Drug Facility has re-engineered its Strategic Rotating Stockpile (SRS) to support changes in national procurement practices and aims to deliver medicines in less than three months for at least 60 percent of its orders.

Objectives:
1. Discuss the roles of stakeholders to ensure procurement and supply management (PSM) policy and practice frameworks promote prompt access to optimised products.
2. Describe PSM challenges encountered with new tool introduction and identify resources and solutions to overcome these challenges.
3. Review national experiences with PSM and lessons learned during new tool introduction.

Expected outcomes:
1. Recall the available resources to facilitate introduction of new tools.
2. Recognise how specific changes in procurement practices can expedite product introduction and improve supply chain efficiency.
3. Describe the costs and savings associated with converting to shorter regimens.

Co-chairs: Brenda Waning (Switzerland), Erica Lessem (United States of America)
Coordinator(s): Brian Kaiser (Switzerland), Ramon Crespo (Switzerland)

1. The ethical imperative to move to shorter regimens and role of civil society in accelerating access — Donald Kila (Papua New Guinea)
2. Guidance on using shorter regimens and waste of old stocks — Mohammed Yassin (Switzerland)
3. How can changes in procurement practices and the Global Drug Facility (GDF) strategic rotating stockpile help to expedite new product introduction? — Luis Gustavo do Valle Bastos (United States of America)
4. Indonesia experience in the accelerated adoption of shorter MDR-TB treatment regimen — Asik Surya (Indonesia)
5. Shorter lead times and more frequent orders — the new strategic rotating stockpile — Richard Muthoka (Kenya)

14. Tratamientos más cortos hoy, nuevos tratamientos mañana: aspectos prácticos de la transición, gestión de residuos y ciclos de compra

La preocupación generada por el desperdicio de medicamentos ha contribuido a un retraso en la incorporación y ampliación de nuevos tratamientos y formulaciones contra la tuberculosis, así como su optimización. Grandes cantidades de medicinas en almacén o pedidos que se hacen con mucha anticipación pueden representar un obstáculo para la adopción de mejores productos, y esto da como resultado que algunos programas nacionales contra la tuberculosis (PNT) continúen haciendo uso de productos de calidad insuficiente para acabar con las existencias. Esta práctica retrasa el acceso a tratamientos óptimos y debe resolverse.

A corto plazo, cuando la financiación lo permita, los PNT deberían incorporar y ampliar inmediatamente los medicamentos más apropiados y no deberían esperar a que se agoten las existencias de medicamentos obsoletos. En el medio a largo plazo, tanto los PNT como las partes interesadas deberían pactar mejoras en las prácticas de compra que permitan a las cadenas de suministro adaptarse rápidamente a los avances en los tratamientos. A nivel nacional, los cambios podrían incluir: un aumento en el uso del sistema QuanTB para mejorar la cuantificación; aumentar la frecuencia de las compras; control de las adquisiciones al finalizar los ciclos de financiación y asegurarse de que los volúmenes de los pedidos se adapten al verdadero uso. A nivel global, el Servicio Mundial de Medicamentos de la Alianza Alto a la Tuberculosis ha rediseñado su sistema estratégico de rotación de existencias (SRS) para apoyar los cambios en las prácticas de compra nacionales y cumplir con el objetivo de entrega de medicinas en menos de 3 meses para el 60 por ciento de los pedidos que recibe, como mínimo.

Objetivos:
1. Discutir la función de los interesados para garantizar una política de gestión de compras y suministros (PSM) así como marcos de prácticas que promuevan un rápido acceso a productos optimizados.
2. Describir los problemas a los que se enfrentan las PSM cuando se implementan nuevas herramientas e identificar los recursos y soluciones para resolver dichos problemas.
3. Hacer un análisis de las experiencias a nivel nacional de las PSM y de las experiencias adquiridas durante la implementación de nuevas herramientas.

Resultados previstos:
1. Hacer uso de los recursos disponibles para facilitar la implementación de nuevas herramientas.
2. Reconocer la forma en la que cambios específicos en las prácticas de compras pueden acelerar la adopción de nuevos productos y mejorar la eficiencia de la cadena de suministro.
3. Describir los costos y ahorros asociados con la adopción de tratamientos más cortos.

Presidentes: Brenda Waning (Suiza), Erica Lessem (Estados Unidos de América)
Coordinadores: Brian Kaiser (Suiza), Ramón Crespo (Suiza)
1. **El imperativo ético de adoptar tratamientos más cortos y el papel de la sociedad civil para acelerar el acceso** – Donald Kila (Papúa Nueva Guinea)
2. **Directrices para el uso de tratamientos más cortos y gestión de las existencias antiguas** – Mohammed Yassin (Suiza)
3. **¿En qué medida los cambios en las prácticas de adquisición y el sistema estratégico de rotación de existencias del Servicio Mundial de Medicamentos (GDF) ayudan a acelerar la adquisición de nuevos productos?** – Luis Gustavo do Valle Bastos (Estados Unidos de América)
4. **La experiencia en Indonesia de la adopción acelerada de un tratamiento más corto para la tuberculosis resistentes** – Ask Surya (Indonesia)
5. **Plazos más cortos y pedidos más frecuentes – el nuevo sistema estratégico de rotación de existencias** – Richard Muthoka (Kenia)

### WORKSHOP 09.00 – 12.00 DEGOLLADO II

#### 15. Introducing new and repurposed anti-TB agents in the era of increasing antimicrobial resistance under programmatic conditions

The aim of this session is to share information and lessons learned from South Africa with regards to the introduction of novel and repurposed agents in order to support TB programmes in countries that are considering introduction of novel and repurposed agents.

**Main objectives:** To discuss the South Africa experience in preparing and implementing the introduction of new anti-TB agents; to provide an update in the clinical and programmatic management of rifampicin-resistance (RR-TB); to discuss the role of a patient-centred care, support and adherence package; to discuss the management of difficult clinical cases and the role of clinical governance in the introduction of new and repurposed anti-TB agents.

It is expected that participants of this workshop should understand key regulatory, ethical, clinical and programmatic issues that need to be considered during the planning and implementation phases. The participants should also be knowledgeable about resources required for successful programme implementation. Participants of this session should be able to scale up new and repurposed agents in order to improve their treatment success rate for those patients that are difficult to treat. The United States Agency for International Development (USAID) started a free bedaquiline programme but the uptake has been very low across the countries. Initially it was thought the countries require finances to scale up new agents although we now know that even when agents are available, free scale up may be slow like in this particular case. Therefore this session will address non-monetary issues that may affect introduction of new agents.

**Chair:** Jennifer Furin (United States of America)
**Coordinator(s):** Norbert Ndjeka (South Africa), Martin Enwerem (South Africa)

1. **Planning an introduction of new and repurposed drugs in the TB programme – lessons from South African National TB Programme – bedaquiline Clinical Access Programme (BCAP) and delamanid Clinical Access Programme (DCAP)** – Norbert Ndjeka (South Africa)
2. **Redefining the role of para-amino salicylic acid in the management of RR-TB** – Peter Donald (South Africa)
3. **The role of clinicians in supporting introduction of new and repurposed drugs** – Romero Leyet (South Africa)
4. **Designing an effective regimen in the era of increasing antimicrobial resistance using clinical case scenarios from the field** – Martin Enwerem (South Africa)
5. **The role of audiometry in support of the use of novel agents** – Shadrack Mngemane (South Africa)

### WORKSHOP 14.30 – 17.30 DEGOLLADO II

#### 16. Unveil, map and triangulate underutilised sources of data to identify missing TB cases locally for differentiated programme planning

The workshop will explore how to strengthen capacities to use publicly available, user friendly tools to analyse subnational data effectively to identify target populations and TB transmission hot spots.

The outcomes of this analysis will be used to understand and interpret the main programmatic gaps and challenges in order to plan appropriate local interventions that reduce the burden of TB.

In order to achieve the Sustainable Development Goal (SDG) targets by 2030, it is imperative for National TB Programmes to allocate resources more effectively towards key populations and areas of continuous TB transmission, utilising available information that informs locally tailored approaches. A new approach will be introduced, which includes mapping and triangulating previously underutilised sources of data, with the aim of identify missing TB cases throughout the pathway of care at subnational level.

At the end of the workshop participants are expected to:

1. **Appreciate the use of subnational data to effectively understand and interpret the main gaps and challenges in their TB programme.**
2. **Be able to interpret and evaluate health maps.**
3. **Describe and interpret spatial patterns (such as hot spots) of health indicators and epidemiological data.**
4. **Understand triangulation of data from various sources to explain variations in TB notification and suggest appropriate actions.**

**Co-chairs:** Suvanand Sahu (Switzerland), Lucie Blok (Netherlands)
**Coordinator(s):** Mirjam Bakker (Netherlands)

1. **Introduction to the approach** – Lucie Blok (Netherlands)
2. **Geographical analysis and data triangulation: knowing your local epidemic** – Mirjam Bakker (Netherlands)
3. **Geographical analysis and data triangulation: understand the TB response** – To be confirmed
4. **Develop locally tailored approaches** – Jacob Creswell (Switzerland)
This workshop consists of a plenary part with presentations and a ‘speed-course’ on the QuanTB tool with practical exercises.

The new recommended TB medicines and treatment regimen posed challenges to the National TB Programmes during introduction and scale up. While reviewing treatment guidelines and adapting diagnostic algorithms to local context, countries need to develop transition plans for phasing in new regimens while phasing out others. There is a need to quantify potential wastage of ‘old’ medicines in order to enable informed decision making on the introduction of more effective regimens to treat patients and eliminate TB. With better tools incorporated into diagnostic algorithms, treatments for drug-resistant TB (DR-TB) are becoming more individualised and diverse. The current scenario of transition from donor support to domestic funding sources contributes to challenges in forecasting medicine usage. Complex calculations are required for quantification of multiple regimens and optimised procurement with more frequent deliveries. Analyses of funding gaps are critical to ensure that patients have continuous access to appropriate TB treatment.

Speakers will present on the implementation of an open-source, freely downloadable digital health early warning system (EWS) for TB medicines, including quantification of second-line and paediatric medicines to timely predict variations on enrollment, consumption and costs, and how to take opportunistic corrective actions.

During the ‘speed-course’, participants will have the opportunity to use QuanTB with hands-on practical exercises. At the end of the workshop, participants will be able to identify key data for quantification, quantify first and second-line medicines and review quantification outputs. Participants will develop transition plans for introduction of new tools in different scenarios and implement an EWS suitable for their context.

Co-chairs: Job van Rest (Netherlands), Luis Gustavo do Valle Bastos (United States of America)
Coordinator(s): Niranjan Konduri (United States of America)

1. Applying the Pharmaceutical Systems Strengthening (PSS) approach in improving quantification and early warning systems for TB commodities – Wonder Goredema (United States of America)
2. The impact of introducing new drugs and regimen for quantification and drug management in Kazakhstan and Kyrgyzstan – Svetlana Pak (Kazakhstan)
3. A new e-learning methodology to meet the demand for quantification and forecasting – Kanjinga Kakanda (United States of America)
4. A speed course on quantification: the basics – Job van Rest (Netherlands)
5. A speed course on QuanTB: early warning system and in-depth analysis – Luis Gustavo do Valle Bastos (United States of America)
ENCUENTRO
WEDNESDAY 11 OCTOBER
Efforts to tackle TB are still falling short. While progress and tangible achievements have certainly been made, M/XDR-TB treatment outcome in the European region remains far from international targets.

Civil society could be in a position to play a role in providing psychosocial support and care for those affected by M/XDR-TB and ensure that socially vulnerable groups, such as the Roma community, homeless people, former prisoners, sex workers, or people who inject drugs, have access to TB treatment and care, as well as helping reduce stigma and discrimination. However, there is not a clear consensus on what this involvement could look like and there is not always a willingness to engage.

This symposium will use an Oxford Style debate model whereby two pairs argue polarised positions over a motion to influence audience opinions. The audience votes on the motion pre- and post-debate. The pair who sway opinion most have ‘won’.

The incidence and impact of TB-HIV co-infection is significant and growing. Approximately one-third of the 34 million people living with HIV are infected with latent TB and TB is the leading cause of death among people living with HIV. Individuals co-infected with HIV and TB are also 30 times more likely to progress to active TB disease. Co-infected individuals also face the potential of drug-resistant TB, including multiple drug resistance TB (MDR-TB) and extensively drug resistant TB (XDR-TB), both of which further complicate HIV and TB care and treatment.

Methods: Community engagement is a key component of research. Integrating TB and HIV outreach and education is essential to reduce the impact of co-infection. The Community Research Advisors Group (CRAG), the community-based advisory body to the U.S. CDC’s Tuberculosis Trials Consortium (TBTC), Community Partners (CP) and a group of community representatives working across the five National Institutes of Health (NIH) HIV/AIDS clinical trials networks, formed a collaboration to address issues related to community engagement in TB-HIV clinical research.

Results: CP and CRAG collaborate to address global research issues of mutual concern. Efforts have included joint work on pregnancy inclusion in TB trails, the development of materials and webinars on ethics of standard of care, incidental findings to foster research literacy and co-infection awareness, peer mentoring for community engagement and tools to reduce stigma and integrate community input in TB-HIV research.

Conclusions: Intentional and focused collaborations between researchers, communities, government and non-governmental agencies and organisations are needed to support TB-HIV education and awareness. A new global integrated community of practice for TB-HIV should address cultural, social, community, structural, biomedical and intersectional determinants of TB-HIV co-infection. Such an approach, with support from researchers and communities, could develop more effective approaches and tools for community engagement in TB-HIV research.

The End TB Strategy aims to achieve elimination of TB by 2025 in India, which will be possible only through development and rapid endorsement of communication strategies. Communities are most effectively reached when engaging the mind-space of a community. Identifying key factors that can trigger behaviour change and develop ideal behaviour among the intended population.

The participatory activity will take the form of fish bowl discussion, and describe the current and potential ways to develop an effective strategy to engage mind-spaces of community over and above reaching the community through mass communication and using credible messengers– a celebrity, someone in authority or a group member. A blue print will be created and shared with implementers to give simple directions to connect with target audience and intended population.
La TB es una de las enfermedades infecciosas más antiguas y conocidas de la humanidad. El gran reto es disminuir el impacto de dicha enfermedad en virtud de la complejidad de su diagnóstico, tratamiento y curación, así como el reforzamiento de acciones y estrategias específicas para su abordaje en las poblaciones con VIH-SIDA y Diabetes Mellitus, así como otros determinantes sociales que se vinculan a la TB. Describimos el escenario en México y así establecer estrategias para intervenciones exitosas, basadas en la información veraz, completa y oportuna, en beneficio de la población afectada por enfermedad.

Tuberculosis among young people has received little or no attention in TB programmes; clinical and radiological findings of TB in young people are almost absent because they are usually combined with adults. This does not provide opportunities to meet their unique needs. Control of TB is ultimately a question of justice and human rights, and young people should not be left behind.

In 2013, TB was the leading cause of death among youths in South Africa killing 10,962 young people. A recent prevalence survey among adults conducted in Kenya reported a TB prevalence among 15-24-year-olds of 3.7 per 1000 (95 percent confidence interval (CI) 2.2-6.2) among females and 1.8 per 1000 (95 percent CI 0.8-4.2) among males. Peer to peer approaches in addressing issues around stigma are not common because there is a lack of effective engagement with young people. Appropriate use of language and education about TB can play a vital role in empowering and encouraging people affected by TB and young people can play a role as influencers, educators, and champions in the fight against TB.

This session is aimed at creating an environment for young people to network and to discuss the role young people can play as community change makers for TB. It is also an environment aimed at providing opportunities for experience sharing and how these experiences can fit into varying community contexts, in order to facilitate an accelerated response towards the elimination of TB.

Feria por la VIHda

Feria por la vihda es un proyecto que pertenece a las líneas estratégicas del área de prevención del centro de atención integral en VIH-sida A.C. Éste proyecto nace en el 2013 a través de un grupo de jóvenes preocupados por la educación sexual en jóvenes. Se maneja lo que es una metodología par, donde en este caso los participantes son jóvenes al igual que los expositores.

Coordinator: Elias Félix Hernández (Mexico)
Speaker: Ana Luisa Solís Lara (Mexico)

La TB es de las enfermedades infecciosas más antiguas y conocidas de la humanidad. El gran reto es disminuir el impacto de dicha enfermedad en virtud de la complejidad de su diagnóstico, tratamiento y curación, así como el reforzamiento de acciones y estrategias específicas para su abordaje en las poblaciones con VIH-SIDA y Diabetes Mellitus, así como otros determinantes sociales que se vinculan a la TB. Describimos el escenario en México y así establecer estrategias para intervenciones exitosas, basadas en la información veraz, completa y oportuna, en beneficio de la población afectada por enfermedad.

Coordinator: Marina Kasten (Mexico)
Chair: Eduardo Rodríguez Noriega (Mexico)
Speakers: Sergio Quintero (Mexico) Héctor Raúl Pérez Gómez (Mexico) Eduardo Rodríguez Noriega (Mexico) Jaime Federico Andrade Villanueva (Mexico)

Networking zone for young people with TB

Tuberculosis among young people has received little or no attention in TB programmes; clinical and radiological findings of TB in young people are almost absent because they are usually combined with adults. This does not provide opportunities to meet their unique needs. Control of TB is ultimately a question of justice and human rights, and young people should not be left behind.

In 2013, TB was the leading cause of death among youths in South Africa killing 10,962 young people. A recent prevalence survey among adults conducted in Kenya reported a TB prevalence among 15-24-year-olds of 3.7 per 1000 (95 percent confidence interval (CI) 2.2-6.2) among females and 1.8 per 1000 (95 percent CI 0.8-4.2) among males. Peer to peer approaches in addressing issues around stigma are not common because there is a lack of effective engagement with young people. Appropriate use of language and education about TB can play a vital role in empowering and encouraging people affected by TB and young people can play a role as influencers, educators, and champions in the fight against TB.

This session is aimed at creating an environment for young people to network and to discuss the role young people can play as community change makers for TB. It is also an environment aimed at providing opportunities for experience sharing and how these experiences can fit into varying community contexts, in order to facilitate an accelerated response towards the elimination of TB.

Coordinator: Wuese Iho (Nigeria)
Coordinator: Folashade Bamigboye (Nigeria)
Speakers: Mayowa Joel (Nigeria) Maximina Jokonya (Zimbabwe) Nicholas Niwagaba (Uganda)

Research literacy networking zone: Interactive workshop

Background: Community Engagement (CE) and Good Participatory Practice in TB Trials (GPP-TB and GPP-TB VACC) continue to become more purposefully incorporated into TB clinical trial planning and implementation, and are accepted as the standard of practice in TB clinical research. TB Alliance and Aeras are collaborating to advance the field of CE in clinical research, and work with research site-level stakeholders to support the engagement of communities in ongoing and planned TB clinical trials.

Research Literacy is a key component of a successful CE strategy, and true engagement with community stakeholders in the process of TB drug and vaccine research and development requires a high level of understanding about TB disease, treatment, the need for new tools, and the process of clinically testing experimental products.
The Research Literacy Networking Zone: Interactive Workshop is an interactive session to allow TB Alliance and Aeras to introduce research literacy, childhood TB and GPP materials to participants to receive feedback. This interactive workshop is a component of the overall Research Literacy Networking Zone exhibition space, where TB Alliance and Aeras will provide opportunities for participants to learn more about TB drug and vaccine research through a variety of activities detailed in educational tool kits for communities involved in TB research.

**Coordinator:** Stephanie Seidel (United States of America) **Coordinator:** Anja van der Westhuizen (South Africa)

**Speaker:** Stephanie Seidel (New York, United States of America) Anja Van der Westhuizen (Cape Town, South Africa)

---

**ENCUENTRO: PANEL DISCUSSION 16.30 – 17.30 ENCUENTRO SESSION ROOM**

**Agenda ambiental para Jalisco, como una opción para revertir las enfermedades respiratorias**

El Colectivo Ambiente y Salud (CAS) propone la realización de una Agenda Ambiental para el estado de Jalisco como una opción para revertir las enfermedades respiratorias agravadas por un ineficiente sistema de transporte público, excesiva cantidad de automotores, deficiente calidad de los hidrocarburos que contaminan aire y agua, la incidencia de incendios forestales, la deforestación o la utilización de especies vegetales alergénicas por la falta de planeación y una prácticamente nula formación ambiental de las autoridades.

**Coordinator:** Chair: Filemón García (Mexico) **Coordinator:** Ludivina Calderón (Mexico)

**Speakers:** Mónica Abarca (Mexico) Roberto Novelo (Mexico) Raúl López Velázquez (Mexico) Filemón García (Mexico)
JOIN THE UNION AS A STUDENT MEMBER

BENEFITS
Student membership is an investment in your career, enabling you to grow and publish your own work; investigate mentoring opportunities and link up with the experts in TB and lung health.

- Online membership for as low as 20 euros per year
- Access to the online Members Directory – a comprehensive guide to who’s who in TB and lung disease research
- Opportunities to participate in an internationally recognised network of experts, mentors and colleagues working together to find health solutions for the poor
- Online subscription to the International Journal of Tuberculosis and Lung Disease (IJTLD)
- Discounted registration at Union conferences

YOU CAN BECOME A STUDENT MEMBER IF YOU ARE:
- A first-time member of The Union
- In training
- Under 35 years of age

JOIN US FOR A STUDENT NETWORKING FORUM
The Union Village
Friday, 13 October from 17:45–18:45

JOIN THE UNION
Find out more at theunion.org
@TheUnion_TBLH facebook.com/TheUnionLungHealth
In 2015, UN Secretary-General Ban Ki-moon appointed Dr. Eric P. Goosby as the United Nations Special Envoy on Tuberculosis (TB). He also serves as a Professor of Medicine and the Director of the Institute for Global Health Delivery and Diplomacy in Global Health Sciences at the University of California, San Francisco (UCSF).

Dr Goosby has over 30 years of experience with TB and HIV/AIDS as a clinician, researcher, and policy maker. He served as Deputy Director of the White House National AIDS Policy Office and Director of the Office of HIV/AIDS Policy at the U.S. Department of Health and Human Services (1995-2000). In 2001, he became Professor of Medicine at UCSF, and the founding Chief Executive Officer and Chief Medical Officer of Pangaea Global AIDS Foundation.

In 2009, he returned to government service as the Ambassador-at-Large and United States Global AIDS Coordinator, where he led all U.S. Government international HIV/AIDS efforts. In this role, he oversaw implementation of the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), and served as the U.S. Board Member to the Global Fund to Fight AIDS, Tuberculosis and Malaria.

In December 2012, Dr Goosby was appointed as the founding Director of the Office of Global Health Diplomacy at the U.S. Department of State in addition to his role as the U.S. Global AIDS Coordinator. In October 2013, he returned to UCSF to start an institute for Global Health Delivery and Diplomacy.

Dr Goosby has published extensively in peer-reviewed journals, magazines, and newspapers and has contributed to several books. He is a tireless advocate for patients, and in addition to his leadership roles, continues his clinical practice in the HIV clinic and the in-patient AIDS ward at San Francisco General Hospital.

Dr Lucica Ditiu is the Executive Director of the Stop TB Partnership since January 2011. A native of Romania, Dr Ditiu is a physician and a public health expert, who has devoted her career to helping those affected by TB and people living in communities heavily burdened by TB.

Dr Ditiu has been instrumental in developing a clear identity for Stop TB Partnership, in ensuring a strong voice for the TB community in international arena. She has deepened engagement with The Global Fund working with the board, the secretariat and at the country level. She has worked to ensure the provision of continued access of quality-assured TB drugs and diagnostics through the Global Drug Facility. A strong believer in innovation and change, Dr. Ditiu is restless in pushing for more ambition in TB work and in challenging status quo.

Dr Ditiu began her international career with the WHO in January 2000 as a medical officer for TB in Albania, Kosovo and Macedonia within the disaster and preparedness unit of the WHO European Regional Office. In 2006 she was selected to be a medical officer in the TB unit of the European Regional Office in Copenhagen. In January 2010 Dr Ditiu joined the Stop TB Partnership Secretariat in Geneva to lead the TB REACH initiative - a programme that awards grants up to US$ 1 million for improving access to TB treatment.
The Ministerial Special Session will be an integral component of the conference to mirror political commitments and actions in achieving the global targets of ending TB and improving lung health. This session will highlight five principle areas: political leadership, priority setting to end TB, tobacco control and non-communicable diseases (NCDs), resource mobilisation and policy implementation, and the UN General Assembly High Level Meeting on TB. This session will host an interactive discussion informed by international experiences and best practices, as well as the local innovation and experience of the participating ministers.

Honourable Dr José Narro Robles, Secretary of Health, Mexico
Honourable Dr Paulyn Jean B. Rosell-Ubial, Secretary of Health, Philippines
Honourable Dr Rajitha Senaratne, Minister of Health, Nutrition and Indigenous Medicine, Sri Lanka
Dr Kumiko Eiguchi, Deputy Minister of Health, Argentina
Mr Aldrin Musiwa, Deputy Minister of Health, Zimbabwe

Chief Wilton Littlechild is a member of the Maskwacis First Nation of Northern Alberta, Canada. He was a student at residential schools, where he says sport gave him a saving passion and escape. He was the first Canadian First Nation person to acquire his law degree (1976). He practiced in Maskwacis and subsequently served as a Member of the Canadian parliament 1988-1993 where he was named parliamentary delegate to the UN. A respected lawyer and advocate for the rights of Indigenous Peoples, Chief Littlechild is an avid promoter of self-determination and Treaty implementation. The Chiefs of Treaties 6, 7, 8 (Alberta) appointed him as the Regional Chief for the Three Treaty territories in 2006 and in a traditional ceremony honoured him as International Chief for Treaty No. 6 Confederacy. He has drafted and negotiated legislation and agreements regarding oil and gas industry and specific claims on his people’s lands. Chief Littlechild has served as the Chairperson for the Commission on First Nations and Métis Peoples and Justice Reform in Saskatchewan and the recently concluded Residential Schools Truth and Reconciliation Commission of Canada. The University of Alberta awarded him a Doctor of Laws degree for his achievements.

Chief Littlechild represented North America for two three-year terms as the North American representative to the UN Permanent Forum on Indigenous Issues. He currently serves as an Expert Member of the UN Expert Mechanism on the Rights of Indigenous Peoples which provides advice to the UN Human Rights Council. From his childhood in the residential school, continuously in his community, through the work of his wife, community nurse Helen Peacock he has been aware of the burden of TB. He is an advocate for seeing the burden of TB through a human rights lens whether in Canada or around the world.

Professor Michel Kazatchkine, M.D.
UN Secretary-General’s Special Envoy On HIV/AIDS in Eastern Europe and Central Asia
Professor Michel Kazatchkine has spent the last 30 years fighting AIDS. He attended medical school at Necker-Enfants-Malades in Paris; and then studied at the Pasteur Institute, St Mary’s Hospital and Harvard Medical School. Professor Kazatchkine’s roles have included: Director of the National Agency for Research on AIDS, Chair of the WHO’s Strategic and Technical Committee on HIV/AIDS, and French Ambassador for the fight against HIV/AIDS and Communicable Diseases. He served as Executive Director of the Global Fund until 2012, when he was appointed as the UN Secretary-General’s Special Envoy on HIV/AIDS in Eastern Europe and Central Asia. He is a Senior Fellow with the Global Health Centre of the Graduate Institute for International and Development Studies in Geneva and a member of the Global Commission on Drug Policy.

MINISTERIAL PANEL 10:30-12.00 PLENARY HALL

The Ministerial Special Session will be an integral component of the conference to mirror political commitments and actions in achieving the global targets of ending TB and improving lung health. This session will highlight five principle areas: political leadership, priority setting to end TB, tobacco control and non-communicable diseases (NCDs), resource mobilisation and policy implementation, and the UN General Assembly High Level Meeting on TB. This session will host an interactive discussion informed by international experiences and best practices, as well as the local innovation and experience of the participating ministers.

Honourable Dr José Narro Robles, Secretary of Health, Mexico
Honourable Dr Paulyn Jean B. Rosell-Ubial, Secretary of Health, Philippines
Honourable Dr Rajitha Senaratne, Minister of Health, Nutrition and Indigenous Medicine, Sri Lanka
Dr Kumiko Eiguchi, Deputy Minister of Health, Argentina
Mr Aldrin Musiwa, Deputy Minister of Health, Zimbabwe

MESA REDONDA MINISTERIAL 10:30-12:00 SALÓN DE PLENOS

La Sesión Ministerial Especial será un elemento esencial de la conferencia a la hora de reflejar los compromisos políticos y las acciones que se llevarán a cabo para alcanzar los objetivos globales de poner fin a la tuberculosis y mejorar la salud pulmonar. Esta sesión destacará cinco áreas principales: liderazgo político; el establecimiento de prioridades para poner fin a la tuberculosis; el control del tabaquismo y las enfermedades no transmisibles (ENT); la movilización de recursos y la implementación de políticas; y la Reunión de Alto Nivel de la Asamblea General de las Naciones Unidas sobre tuberculosis. Esta sesión acogerá un debate interactivo basado en experiencias internacionales y las mejores prácticas, así como en las innovaciones y las experiencias locales de los ministros participantes.

Honorable Dr. José Narro Robles, Secretario de Salud, México
Honorable Dra. Paulyn Jean B. Rosell-Ubial, Secretaria de Salud, Filipinas
Honorable Dr. Rajitha Senaratne, Ministro de Salud, Nutrición y Medicina Indígena, Sri Lanka
Dra. Kumiko Eiguchi, Viceministra de Salud, Argentina
Sr Aldrin Musiwa, Viceministra de Salud, Zimbabue
01. Jump-starting the engagement of private TB providers: public-private mix (PPM) action plans and system-wide interventions

Achieving universal health coverage will be impossible without the productive engagement of private providers. The past decade has seen many innovations in engaging private providers in TB care and prevention but most countries struggle with scale up. To overcome this block, the PPM action plan process structures planning for the entire health sector, including the definition of targets, costing and budgeting. Experiences with this process from Bangladesh and Ethiopia will be presented, along with ideas and an example from India on how to design system-wide policies that enable large numbers of private providers to contribute to public health goals in TB.

Co-chairs: William Wells (United States of America), Monica Dias (Switzerland)

1. Plans and progress for nationwide scale up of private providers’ engagement: Bangladesh experience – Akramul Islam (Bangladesh)
2. Charting the way forward for private TB healthcare: the action plan process in Ethiopia – Asfawesen Gebryohannes (Ethiopia)
3. Managing markets for health: how to bring a unified governance approach to mixed health systems – William Wells (United States of America)
4. Using technology-based solutions to address quality of care for patients seeking care with private providers in India – Bhavin Vadera (India)
5. Discussion

02. Regional Prospective Observational Research in TB (RePORT) International: biomarkers of TB and comorbidities across Brazil, India and South Africa

RePORT International builds upon collaborations between US investigators and those based in high-burden settings with co-funding from local governments and the US National Institutes of Health’s (NIH) National Institute of Allergy and Infectious Diseases (NIAID) and Division of AIDS (DAIDS).

Objectives for participants include:
1. Understanding the goals and methods the RePORT network utilises to facilitate data and specimen sharing.
2. Learning how immunologic signatures are informing new biomarkers of TB progression and severity, including in TB-diabetes and TB-HIV co-infection.
3. Increasing knowledge about how the investigations are shaping new diagnostic options for children.

The topics are of relevance to researchers and government policy makers to consider for the direction of future programmatically relevant research.

Co-chairs: Carol Hamilton (United States of America), Roxana Rustomjee (United States of America)

1. Introduction of RePORT International – Sudha Srinivasan (United States of America)
2. Approaching TB diagnostics using transcriptional and cytokine signatures in TB-HIV – Valeria Rolla (Brazil)
3. Clinical and immunological findings from the Effect of Diabetes on TB Study (EDOTS) in India – Hardy Kornfeld (United States of America)
4. Biological differences in TB diagnosis and disease in women – Amita Gupta (United States of America)
5. Pushing the boundaries of TB diagnostics in children – Heather Zar (South Africa)
6. Discussion

03. Heat not burn – new challenges for tobacco policy

Major tobacco companies are attempting to change the game with the introduction of a new tobacco product known as ‘Heat Not Burn’. This product heats tobacco in a device designed to release nicotine without producing smoke. With current evidence limited to clinical trials conducted by Philip Morris International, the immediate and long-term health implications of these products are unknown. Furthermore, Heat Not Burn products present a new challenge for the health sector as the industry move at accelerated speeds to encourage governments to make exceptions in tobacco and smokefree legislations for what they are presenting as low-harm products.
Overcoming challenges in the introduction and scale-up of newer drugs for the treatment of MDR-TB: lessons from the field

It has been almost four years since the World Health Organization recommended the use of bedaquiline for the treatment of multidrug-resistant tuberculosis. Since that time, more than 8,000 people have been treated with bedaquiline and another 490 treated with delamanid under programme conditions. While there has been significant discussion around successful models of care, a frank discussion of barriers encountered both in introduction and in scaling up in some settings has been missing from the scientific literature. In order to accelerate uptake of these urgently needed drugs, exploring barriers to their use as well as strategies for overcoming them is vital.

SYMPOSIUM 10.30 – 12.00 HALL 9 - JALISCO HALL

04. Overcoming challenges in the introduction and scale-up of newer drugs for the treatment of MDR-TB: lessons from the field

Co-chairs: Rosa Herrera (Mexico), Erica Lessem (United States of America)

1. The impact of limited access to newer drugs: a patient perspective on overcoming barriers – Deepti Chavan (India)
2. Overcoming challenges to introducing newer drugs in higher-income countries: example from Mexico – Rafael Laniado-Laborin (Mexico)
4. Limited access, limited good: barriers to wider scale up of bedaquiline in India – Jai Mullerpattan (India)
5. Scaling up multiple innovations: bedaquiline, delamanid and shortened regimens in Swaziland – Debrah Vambe (Swaziland)
6. Discussion
Co-chairs: Wendy Wobeser (Canada), William Littlechild (Canada)

1. Indigenous principles for positive engagement for TB elimination – Malcolm King (Canada)
2. Tuberculosis in indigenous communities of Colombia: epidemiology and beliefs – Jose Mauricio Hernandez Sarmiento (Colombia), Loselinio Velasquez (Colombia)
3. The importance of cultural safety for NTP managers – Martin Castellanos (Mexico)
4. Addressing ethnicity and TB from the Pan American Health Organization – Sandra del Pino (Mexico)
5. Discussion

SIMPOSIO 10.30 – 12.00 HALL 2 - SALÓN DE EVENTOS

06. Erradicación de la tuberculosis en la población indígena - desarrollo de relaciones positivas entre la comunidad y el programa de tuberculosis

A nivel mundial, la población indígena presenta tasas de tuberculosis elevadas. Es necesario establecer relaciones efectivas entre los programas de control de la tuberculosis y la población indígena para reducir estas tasas. En muchos países se está llevando a cabo una labor innovadora dirigida a entender mejor la situación e incorporar las formas de conocimiento de los indígenas en la planificación y la asignación de recursos de los programas de tuberculosis. Proponemos reunir a líderes indígenas y a personas con experiencia en el desarrollo de relaciones positivas con respecto a los programas de control de la tuberculosis, para que intercambien su experiencia y compartan ejemplos prácticos de comunidades que se han involucrado satisfactoriamente.

Presidentes: Wendy Wobeser (Canadá), William Littlechild (Canadá)

1. Principios indígenas para un compromiso positivo con la erradicación de la tuberculosis – Malcolm King (Canadá)
2. La tuberculosis en comunidades indígenas de Colombia: Epidemiología y creencias – Jose Mauricio Hernandez Sarmiento (Colombia), Loselinio Velasquez (Colombia)
3. La importancia de la seguridad cultural para los gestores del Programa Nacional de Control de la Tuberculosis – Martin Castellanos (México)
4. Abordaje de la etnicidad y la tuberculosis por parte de la Organización Panamericana de la Salud – Sandra del Pino (México)
5. Discusión

SIMPOSIO 10.30 – 12.00 HALL 6 - SALÓN DE EVENTOS

Medio ambiente y daños a la salud

Los principales efectos de la contaminación atmosférica sobre la salud van desde alteraciones de la función pulmonar, problemas cardíacos y otros síntomas y molestias hasta un aumento del número de defunciones, de ingresos hospitalarios y de visitas a urgencias, especialmente por causas respiratorias y cardiovasculares. Las Partículas en Suspensión (PM) afectan a más personas que cualquier otro contaminante y sus principales componentes son los sulfatos, los nitratos, el amoniaco, el cloruro sódico, el carbón, el polvo de minerales y el agua.

Presidentes: Esteban González Diaz (Mexico), Marina de Jesús Kasten Monges (Mexico)

1. Contaminación ambiental y daño pulmonar – Hermes Ulises Ramirez Sanchez (Mexico)
2. Contaminación ambiental y cancer – Ruth Araceli De Celis Carrillo (Mexico)
3. Contaminación ambiental y enfermedad renal – Felipe De Jesús Lozano Kasten (Mexico)
4. La contaminación ambiental y el daño cardiovascular – Jose Luis Ruiz Sandoval (Mexico)
5. Discusión

SYMPOSIUM 10.30 – 12.00 HALL 6 - EVENTS BALLROOM

Environment and damage to health

The main effects of air pollution on health vary from lung disorders, heart problems and other symptoms and discomforts to an increase in the number of deaths, hospital admissions and visits to A&E, especially due to respiratory and cardiovascular causes. Particulate matter (PM) affects more people than any other pollutant and its main components are sulphates, nitrates, ammonia, sodium chloride, coal and dust from minerals and water.

Co-chairs: Esteban González Diaz (Mexico), Marina de Jesús Kasten Monges (Mexico)

1. Environmental pollution and lung damage – Hermes Ulises Ramirez Sanchez (Mexico)
2. Environmental pollution and cancer – Ruth Araceli De Celis Carrillo (Mexico)
3. Environmental pollution and kidney disease – Felipe De Jesús Lozano Kasten (Mexico)
4. Environmental pollution and cardiovascular damage – Jose Luis Ruiz Sandoval (Mexico)
5. Discussion
**48. Accelerating the response on drug resistance: TB and the antimicrobial resistant (AMR) agenda**

TB is the world’s leading drug-resistant killer, causing one in three AMR deaths. Recent years have seen momentum building to put TB at the centre of the AMR response. G20 leaders have acknowledged that AMR poses a serious threat to public health and pledged to take action. Looking ahead to the Russian Ministerial Conference and UN High Level Meeting on TB, this session aims to review the progress made on the TB/AMR response and chart the way forward to build the political will necessary to ensure TB continues to be a top priority of the AMR agenda.

**Co-chairs:** Rachael Crockett (United Kingdom), Mandy Slutsker (United States of America)

1. The role of the World Health Organization in addressing TB and AMR – Mario Raviglione (Switzerland)
2. Engaging policymakers in TB and AMR advocacy – Matthew Oliver (United Kingdom)
3. The role of policymakers in addressing TB and AMR – Elías Octavio Iñiguez (Mexico)
4. Engaging civil society in high-burden countries ahead of the Russian Ministerial Conference and UN high-level meeting on TB – Yuliya Chorna (Ukraine)
5. The human impact of drug-resistance – Enrique Delgado (Panama)
6. Discussion

---

**48. Potenciación de la respuesta en casos de resistencia a fármacos: La tuberculosis y la agenda de resistencia a los antimicrobianos (AMR)**

La tuberculosis es la tercera causa de mortalidad en lo referente a enfermedades que presentan resistencia al tratamiento por antimicrobianos: una de cada tres muertes por AMR se da en casos de TB. En los últimos se han hecho esfuerzos monumentales por darle importancia a la tuberculosis como un problema de AMR. Los líderes del G20 han reconocido que la AMR supone una grave amenaza a la salud pública y se han comprometido a realizar acciones. Anticipándose a la Conferencia Ministerial Rusa y a la reunión de alto nivel de la ONU sobre tuberculosis, esta sesión tiene por fin analizar el progreso hecho en el campo de TB/AMR y señalar el camino a seguir para reforzar la voluntad política que se requiere para que la TB continúe siendo una prioridad en la agenda de los programas de AMR.

**Presidentes:** Rachael Crockett (Reino Unido), Mandy Slutsker (Estados Unidos de América)

1. El papel de la Organización Mundial de la Salud para solucionar la problemática de la tuberculosis y AMR – Mario Raviglione (Suiza)
2. Comprometer a los responsables políticos para la lucha contra la tuberculosis y la AMR – Matthew Oliver (Reino Unido)
3. El papel de los responsables políticos para solucionar el problema de tuberculosis y AMR – Elías Octavio Iñiguez (México)
4. Compromiso de la sociedad civil en países con una elevada carga antes de la Conferencia Ministerial Rusa y el encuentro de alto nivel de Naciones Unidas sobre la tuberculosis – Y Chorna (Ucrania)
5. El impacto humano de la resistencia farmacológica – E Delgado (Panamá, Estados Unidos de América)
6. Discusión

---

**07. Experience of operational research on tuberculosis in Peru, driving the End TB Strategy: intensified research and innovation**

This research was possible thanks to the support of the TREAT TB Project, an initiative of the United States Agency for International Development (USAID). It presents the results and experiences of the first national course of Operational Research according to the SORT-IT model in South America, focusing on resistant TB: pre-XDR and XDR treatment, resistance to INH, infantile TB and rapid tests for detecting MDR-TB. The aim of the symposium is to report the successful experience of a partnership between an NGO (The Union) and Peru’s national TB programme to develop competencies in operational research and achieve an appropriate scientific use for the information collected in the past five years in the PCT.

**Co-chairs:** Alberto Mendoza (Peru), Einar Heldal (Norway)

1. Overview of the first course of IO for TB in Peru – Edith Alarcón (United States of America)
2. Evaluation of the programmatic management of XDR-TB and Pre-XDR-TB in Peru – Antonieta Alarcón (Peru)
3. Programmatic treatment of isoniazid-resistant TB, infantile TB and patients hospitalised due to TB in Peru – José Cornejo (Peru)
4. Effect of rapid sensitivity tests in the treatment and mortality of MDR-TB in Peru – George Obregón (Peru)
5. Sponsorship and perspectives of operational research on tuberculosis in the Americas – Zaida Yadon (Argentina)
6. Discussion
07. Experiencia de investigación operativa en tuberculosis en Perú, impulsando la estrategia end TB: investigación intensificada e innovación

Esta investigación fue posible gracias al apoyo del Proyecto TREAT TB, una iniciativa de la Agencia de los Estados Unidos para el Desarrollo Internacional (USAID).

Presentar los resultados y experiencias del primer curso nacional de Investigación Operativa según el modelo SORT-IT en Sudamérica, enfocado en TB resistente: tratamiento de pre-XDR y XDR, resistencia a INH, TB infantil y pruebas rápidas para detectar TB-MDR. El Simposio tiene la finalidad comunicar una experiencia exitosa de alianza entre una ONG (The Union) y el Programa Nacional de TB (PCT) de Perú para desarrollar competencias en investigación operativa y lograr una adecuado uso científico de la información colectada e los últimos 5 años en el PCT. Otro objetivo es presentar una perspectiva de la IO en America Latina.

**Co-chairs: Alberto Mendoza (Peru), Einar Heldal (Norway)**

1. Visión global del Primer Curso de IO de TB en Perú – Edith Alarcón (United States of America)
2. Evaluación del manejo programático de la TB-XDR y la TB Pre-XDR en Perú – Antonieta Alarcón (Peru)
3. Tratamiento programático de la TB resistente a isoniacida, la TB infantil y pacientes hospitalizados por TB en Perú – José Cornejo (Peru)
4. Efecto de las pruebas de sensibilidad rápidas en el tratamiento y la mortalidad de la TB-MDR en Perú – George Obregón (Peru)
5. Patrocinio y perspectivas de la investigación operacional sobre la tuberculosis en las Américas – Zaida Yadon (Argentina)
6. Discusión

08. The economics of tobacco and tobacco control in Latin America: opportunities and challenges

While progress in tobacco control has been made in high, low and middle-income countries, tobacco use remains one of the world’s leading causes of preventable premature death. Effective evidence-based interventions to reduce tobacco use and related morbidity and mortality are not yet utilised to their full potential. Building on Monograph 21: The Economics of Tobacco and Tobacco Control, a collaboration between the U.S. National Cancer Institute and the World Health Organization, this session will highlight the most cost-effective interventions for tobacco control and address arguments about the economic impact of tobacco control policies with specific examples from multiple countries.

**Chair: Jorge Laucirica (Mexico)**

1. Tobacco control does not harm economies – Mark Parascandola (United States of America)
2. Progress in tobacco control and tobacco taxation in Latin America: perspectives, opportunities and challenges – Rosa Sandoval (United States of America)
3. Comparative study of the impact of tobacco tax and price on tobacco use – Guillermo Paraje (Chile)
4. Illicit tobacco trade – the real challenge to tobacco tax sustainability? – Roberto Iglesias (Brazil)
5. Channeling tobacco taxes towards Tobacco Control in Panama – Víctor Hugo Herrera (Panama)
6. Discussion

09. TB and non-communicable diseases: recognising risks and mitigating impact

The session objective is to better understand the impact of various non-communicable diseases on TB morbidity and mortality and the implications for TB control and prevention.

**Co-chairs: Alfred Lardizabal (United States of America), Marila Gennaro (United States of America)**

1. Epidemiology of TB in the state of Baja California, Mexico – Rosa Herrera (Mexico)
2. Impact of diabetes and hyperlipidemia on host defense – Hardy Kornfeld (United States of America)
3. TB and chronic kidney disease: an emerging global syndemic – James Johnston (Canada)
4. The effect of diabetes and undernutrition trends on reaching 2035 global TB targets – Knut Lönnroth (Suiza)
5. Potential impact of tobacco control on TB – Kurshid Alam Hyder (India)
6. Discussion
**09. Tuberculosis y enfermedades no contagiosas: reconocer los riesgos y mitigar el impacto**

El objetivo de la sesión es entender mejor el impacto de diversas enfermedades no contagiosas sobre la morbilidad y la mortalidad de la tuberculosis y las implicaciones para el control y la prevención de la tuberculosis.

**Presidentes:** Alfred Lardizabal (Estados Unidos de América), Maríla Gennaro (Estados Unidos de América)

1. **Epidemiología de la tuberculosis en el estado de Baja California, México** – Rosa Herrera (México)
2. **El impacto de la diabetes y la hiperlipidemia sobre los mecanismos de defensa del huésped** – Hardy Kornfeld (Estados Unidos de América)
3. **Tuberculosis y enfermedad renal crónica: una sindemia global emergente** – James Johnston (Canadá)
4. **El efecto de la diabetes y las tendencias de desnutrición de cara a alcanzar los objetivos globales de tuberculosis para el 2035** – Knut Lönroth (Suiza)
5. **El posible impacto del control del tabaco sobre la tuberculosis** – Kurshid Alam Hyder (India)
6. **Discusión**

---

**10. Air pollution effects on lung health and TB risk**

Exposición a la contaminación – both household and ambient – is the most important global environmental risk factor for premature mortality, mainly from lung and cardiovascular conditions. In addition, growing evidence links exposure to combustion pollutants to a wide range of adverse effects on lung health across the life course. This symposium will provide an update on findings of recent research concerning the effects of exposures to household and ambient air pollution on lung function, risk of pneumonia and TB. The mechanisms linking smoking and TB risk and their implications for possible effects of air pollution will also be discussed.

**Chair:** Asma El Sony (Sudán)

1. **Inhaled environmental toxins and vulnerability to pneumococcal infection – epidemiology and mechanisms** – Jonathan Grigg (United Kingdom)
2. **Air pollution and other environmental factors associated with lung function decline: the Cronicas Study in Peru** – William Checkley (United States of America)
3. **Air pollution and risk of TB: evidence and the way forward** – Chen-Yuan Chiang (Taiwan)
4. **Smoking and air pollution: The new social determinants of TB?** – Neil Schluger (United States of America)
5. **Discussion**

---

**10. Efectos de la contaminación atmosférica sobre la salud pulmonar y el riesgo de tuberculosis**

La exposición a la contaminación atmosférica —tanto en el interior de la vivienda como en el exterior— es el principal factor de riesgo medioambiental a nivel mundial en la mortalidad prematura, principalmente por afecciones pulmonares y cardiovasculares. Además, cada vez hay más evidencias que vinculan la exposición a contaminantes de combustión con un amplio abanico de efectos adversos sobre la salud pulmonar a lo largo de toda la vida. Este simposio aportará datos actualizados sobre los hallazgos de las investigaciones recientes con relación a los efectos de la exposición a la contaminación atmosférica, tanto en el interior de la vivienda como en el exterior, sobre la función pulmonar, el riesgo de neumonía y el riesgo de tuberculosis. También se tratarán aspectos relativos a los mecanismos que vinculan el fumar con el riesgo de tuberculosis y sus implicaciones por los posibles efectos de la contaminación atmosférica.

**Presidente:** Asma El Sony (Sudán)

1. **Inhalation of environmental toxins and vulnerability to pneumococcal infection – epidemiology and mechanisms** – Jonathan Grigg (Reino Unido)
2. **La contaminación atmosférica y otros factores medioambientales asociados al deterioro de la función pulmonar: el estudio Cronicas en Perú** – William Checkley (Estados Unidos de América)
3. **Contaminación atmosférica y riesgo de tuberculosis: evidencias y camino a seguir** – Chen-Yuan Chiang (Taiwán)
4. **Fumar y la contaminación atmosférica: ¿Los nuevos determinantes sociales de la tuberculosis?** – Neil Schluger (Estados Unidos de América)
5. **Discusión**
11. Using Good Participatory Practice (GPP) to bridge the gap: engaging researchers and communities in the fight against TB

Researchers, advocates and affected communities all play an essential role in the development of new tools to accelerate TB elimination. GPP guidelines for TB research provide a framework which can be used to foster greater interaction and collaboration between these groups and to encourage researchers to engage communities in all aspects of research - from the design and conduct of clinical trials to the delivery and uptake of successful innovations. Speakers in this session will present perspectives on the importance of using GPP to improve collaboration between researchers, advocates and communities.

**Co-chairs:** Kristin Croucher (South Africa), Michael Frick (United States of America)

1. The role of GPP guidelines in clinical research for TB – Mitchell Warren (United States of America)
2. How The Union is working to engage communities in research – I.D. Rusen (United States of America)
3. The role of researchers in advocacy – Keertan Dheda (South Africa)
4. Beyond tokenism: meaningful engagement with vulnerable communities – Sarah Mulera (Kenya)
5. Discussion

12. Accelerating TB elimination through access to bedaquiline and delamanid

The growing burden of rifampin-resistant TB (RR-TB), estimated at 580,000 in 2015, threatens End-TB Strategy goals. Rapid integration of new tools - drugs, regimens, diagnostics, case finding and prevention strategies - are key to counter this threat. This symposium will report on the implementation of the UNITAID-funded End TB initiative that is increasing access to bedaquiline and delamanid in 13 countries across six World Health Organization regions. We will highlight, among the 600 plus patients who began receiving bedaquiline or delamanid before 30 September 2016, the indications for use of bedaquiline and delamanid; culture conversion and reversion; adverse events and the delivery of bedaquiline and delamanid under public-private partnership.

**Co-chairs:** Aamir Kahn (Pakistan), Nana Kiria (Georgia)

1. Six-month sputum culture conversion among patients receiving MDR-TB treatment with bedaquiline and delamanid – Molly Franke (United States of America)
2. Twelve-month sputum culture reversion among patients receiving MDR-TB treatment with bedaquiline and delamanid – Naira Khachatryan (Armenia)
3. Adverse events and serious adverse events among patients receiving MDR-TB treatment with bedaquiline and delamanid – Nino Lomtadze (Georgia)
4. Experience with expanded indications for bedaquiline and delamanid – Odumayo Johnson Alakaye (Lesotho)
5. Engaging all healthcare providers: introduction of bedaquiline and delamanid in high-burden TB countries through public-private mix initiatives – Sana Adnan (Pakistan)
6. Discussion

13. TB and mental health: effects of (MDR-TB) and (XDR-TB) treatment drugs and regimens

The management of TB, especially MDR-TB, XDR-TB and TB-HIV is challenging as these patients are subject to long and potentially toxic treatments. In addition, many of the drugs used in MDR-TB, XDR-TB and antiretroviral therapy (ART) can lead to various symptoms related to mental illness such as anxiety, depression and suicidal tendencies. The overall objective of the session is to explore the interface between MDR/XDR-TB and mental disorders and elaborate strategies for identification and management of challenges arising from comorbid mental illness that patients face as a result of TB treatment especially MDR/XDR-TB and TB-HIV.

**Chair:** Tamar Gabunia (Georgia)

1. Mental health aspects of palliative care – Samson Malwa Haumba (Swaziland)
2. Patient-centred care approaches to reduce stigma – Hala Jassim Al-Mossawi (United States of America)
3. TB management and the importance of mental health – Ignacio Monedero (Spain)
4. The role of counselling and patient support systems in mitigating mental health consequences of MDR/XDR-TB treatment – Tamar Gabunia (Georgia)
5. Facilitation of regular patient interaction with SMS-based mHealth technology tools – A.N.M. Al-Imran (Canada)
6. Discussion
14. Adapting an innovative approach to TB workforce development: implementing the ECHO telementoring model in a variety of contexts

The ECHO (Extension for Community Healthcare Outcomes) telementoring model — based on a combination of video conferencing, case-based learning, sharing of best practices and monitoring outcomes — is being adapted in a growing number of global contexts. The model develops communities of practice and learning that link national and international experts with site level TB practitioners. In this symposium, we will introduce participants to the basic principles of the ECHO model, review examples of adaptation and implementation in a variety of country and transnational contexts and promote discussion of challenges and opportunities for adapting the model to TB workforce development globally.

Co-chairs: Bruce Struminger (United States of America), Lisa Chen (United States of America)

1. The experience of developing and implementing an MDR-TB ECHO Programme in Kenya, the first in Africa — Maureen Kamene Kimenye (Kenya)
2. The experience of developing and implementing an MDR-TB ECHO in Delhi State, a high-burden context — Neeta Singla (India)
3. The experience of developing and implementing a TB ECHO programme in New Mexico, a low-burden context — Diana Fortune (United States of America)
4. The experience of developing an MDR-TB ECHO programme in the country of Georgia — Giorgi Kuchukhidze (Georgia)
5. The experience of developing an MDR-TB ECHO programme in Guatemala — Diana Patricia Forno (Guatemala)
6. Discussion

58. Improved and differentiated TB programme planning through more effective use of various sources of (sub-national) data

In order to achieve the Sustainable Development Goals (SDGs) targets by 2030, it is imperative for National TB Programmes to allocate resources more effectively towards key populations and areas of continuous TB transmission. Mapping and triangulating previously underutilised sources of data have been used to identify programmatic gaps throughout the pathway of care. This session’s objective is to present a framework of analysis and to share experiences from a number of countries in spatial analyses of their subnational TB and other relevant data to locate key populations and areas which require locally tailored interventions.

Co-chairs: Lucie Blok (Netherlands), Suvanand Sahu (Switzerland)

1. Valorize TB data for local health planning — Mirjam Bakker (Netherlands)
2. Differentiated TB planning in Viet Nam using sub-national data — Nguyen Hoa (Viet Nam)
3. Identifying geographic areas and key populations for prioritised interventions in Kenya — Enos Masini (Kenya)
4. Mapping and microdata analysis to inform public-private partnership in TB response, in Mumbai — Shibu Vijayan (India)
5. Using GIS and statistical algorithms to map and analyse TB hotspots in affected communities — John Dann (South Africa)
6. Discussion

15. From bench to bassinet: scientific innovations in the fight against maternal-infant TB

New data from pregnant women and infants is improving our understanding of the pathogenesis and the management of TB in these two populations, each of which is critical to stopping the spread of the disease. Immunologic and physiologic changes occur rapidly during pregnancy and the neonatal period, impacting TB transmission, disease course and drug metabolism. This symposium will feature emerging research on the diagnosis, treatment and prevention of TB in mothers and infants which will contribute to the elimination of TB globally.

Co-chairs: Anneke Hesseling (South Africa), Vanessa Rouzier (Haiti)

1. New insights into the pathogenesis of maternal TB from a cohort of pregnant Indian women — Jyoti Mathad (United States of America)
2. Dynamic pharmacokinetic modelling and new treatment trials in pregnant women — Paolo Denti (South Africa)
3. Harnessing maternal immunity: the role of breast milk Iga in TB pulmonary disease — Rogelio Hernandez-Pando (Mexico)
4. Early immune responses to M. tuberculosis and BCG vaccine in Kenyan infants — Lisa Cranmer (United States of America)
5. Gut microbiota and BCG vaccine immunogenicity in South African infants — Jerome Wendoh (South Africa)
6. Discussion
16. Childhood pneumonia in the sustainable development era: innovations targeting diagnosis and care in low-income settings

Despite noteworthy reductions in child pneumonia mortality in low-income settings over two decades, as of 2015 pneumonia remains the leading cause of death globally for children aged one to 59 months of age. Continued innovations are urgently needed to further reduce mortality in low-income countries. This symposium aims to gather leading child pneumonia experts working in low-income settings to provide updates on advances in key areas of child pneumonia care namely, pulse oximetry and oxygen treatment technology, the current state-of-the-art in lung imaging by chest radiography and ultrasound and innovations aimed at reducing household air pollution, a key risk factor for severe pneumonia.

Co-chairs: Keith Klugman (United States of America), Eric D. McCollum (Lesotho)

1. Household air pollution and pneumonia in children: are cleaner-burning cookstoves part of the solution? – Kevin Mortimer (United Kingdom)
2. Paediatric pulse oximeters for low-income countries: Lifebox Foundation experience – Nick Boyd (United Kingdom)
3. Oxygen for all – are we there yet? – Hamish Graham (Australia)
4. Update from the WHO Chest Radiography in Epidemiological Studies (CRES) project – Nick Fancourt (Australia)
6. Discussion

17. TB and diabetes mellitus in high-burden settings: implementation and research experiences from Asian, African, Caribbean and Latin American countries

We now have strong evidence and programmatic experience that demonstrate the feasibility and high yield of bi-directional screening for TB and diabetes mellitus (DM). However more data is needed on larger scale implementation experiences in real-life situations and in settings with diverse backgrounds. Our specific objectives are to:

1. Review global updates on the implementation of TB/DM integration.
2. Share innovations and implementation experiences from different regions of the world.

Co-chairs: Pedro Guillermo Suarez (United States of America), Kerri Viney (Australia)

1. Diabetes mellitus: an important challenge in the Americas for achieving the Sustainable Development Goal (SDG) TB targets – Mirtha Del Granado (United States of America)
2. Innovative models for TB/diabetes integration: a successful example from Ethiopia – Degu Jerene (Ethiopia)
3. Results of the implementation of a pilot model for bidirectional screening and joint management of patients with pulmonary TB and diabetes mellitus in Mexico – Joya Martin (Mexico)
4. Exploring the magnitude of TB among patients with diabetes mellitus in Afghanistan – Qader Ghualm (Afghanistan)
5. Discussion

17. Tuberculosis y diabetes mellitus en entornos con una carga elevada: implementación y experiencias de investigación de países de Asia, Afric, Caribe y América Latina

Actualmente contamos con una fuerte evidencia y experiencia programática que demuestra la viabilidad y el elevado rendimiento de la evaluación bidireccional para la tuberculosis y la diabetes mellitus. No obstante, es necesario disponer de más información relativa a experiencias de implementación a mayor escala en situaciones reales y en entornos con contextos diversos. Nuestros objetivos específicos son:

1. Revisar la información global más reciente sobre la implementación de la integración tuberculosis/diabetes mellitus.
2. Compartir las innovaciones y las experiencias de implementación de diferentes regiones del mundo.

Presidentes: Pedro Guillermo Suarez (Estados Unidos de América), Kerri Viney (Australia)

1. Diabetes mellitus: un desafío importante en las Américas para alcanzar las metas fijadas en los Objetivos de Desarrollo Sostenible (ODS) en cuanto a la tuberculosis y la diabetes mellitus – Mirtha Del Granado (Estados Unidos de América)
2. Innovative models for TB/diabetes integration: a successful example from Ethiopia – Degu Jerene (Ethiopia)
3. Resultados de la implementación de un modelo piloto para la evaluación bidireccional y la gestión conjunta de los pacientes con tuberculosis pulmonar y diabetes mellitus en México – Joya Martin (México)
4. Análisis de la magnitud de la tuberculosis entre los pacientes con diabetes mellitus en Afganistán – Qader Ghualm (Afganistán)
5. Debate
18. Global Laboratory Initiative (GLI) TB diagnostic connectivity symposium

Over the few last years, there has been significant movement in the area of TB diagnostic connectivity. This has led to a clear understanding of the potential utility and role of diagnostic connectivity to optimise diagnostic and clinical services for TB.

In this session, an overview of the TB diagnostic connectivity landscape will be given as well as approaches on how to best utilise available diagnostic data, build capacity for data utilisation and how to link diagnostic data to patient care. New developments like the Ultra cartridge, multi-device connectivity and the GeneXpert Omni will be featured as well.

**Co-chairs: Wayne van Gemert (Switzerland), Kristian van Kalmthout (Netherlands)**

1. **TB diagnostic connectivity: current state, progress and future** – Kristian van Kalmthout (Netherlands)
2. **Diagnostic data: what can we collect and how can we use it?** – Patricia Campbell (United States of America)
3. **Building capacity for practical and applicable use of diagnostic data: experiences from two countries** – Chris Isaacs (Switzerland)
4. **Linking diagnostic data to care: a success story from Kenya** – Jeremiah Ogono (Kenya)
5. **Cepheid GeneXpert Omni: a new era for diagnostic connectivity?** – Vish Kulkarni (United States of America)
6. **Discussion**

**SYMPOSIUM 16.00 – 17.30 HALL 5 - EVENTS BALLROOM**

19. Cookstove intervention trials: research update and implications for clean household energy strategies

Nearly three billion people live in households depending on solid cooking fuels that cause indoor and ambient pollution and harm to health across the life course. Interventions to reduce these impacts have included providing improved solid fuel stoves or clean fuels and stoves. This symposium will provide an update and review of results from randomised cook stove intervention trials, including recent and earlier trials. Evidence will be presented concerning efficacy for reducing health risks as well as stove performance, preference, use and scalability.

The implications for practice, future research and for reducing global air pollution health impacts will be discussed.

**Chair: Rajendra Prasad (India)**

1. **Health effects of biomass household air pollution (HAP) and results of an improved stove intervention trial in Michoacán, Mexico.** – José Rogelio Pérez Padilla (Mexico)
2. **Design and implementation update for a multi-country randomised trial** – William Checkley (United States of America)
3. **Adoption, preference and use of improved or clean cook stoves and fuels: lessons learned** – Caroline Ochieng (Sweden)
4. **Cookstove intervention trials: what we have learned and implications for future research** – Kevin Mortimer (United Kingdom)
5. **Discussion**

**SIMPOSIO 16.00 – 17.30 HALL 7 - SALÓN DE EVENTOS**

19. Estudios de intervención en cocinas: últimas investigaciones e implicaciones de cara a estrategias para una energía doméstica limpia

Casi tres mil millones de personas viven en hogares que dependen de combustibles sólidos para cocinar que provocan contaminación en el interior de la vivienda y en el exterior, y dañan la salud a lo largo de la vida. Las intervenciones para reducir estos impactos han incluido la entrega de cocinas con combustibles sólidos de mayor calidad o cocinas y combustibles limpios. Este simposio aportará datos actualizados y revisará los resultados de los estudios de intervención aleatorizados en cocinas, incluidos estudios recientes y previos. Se aportarán evidencias relativas a la eficacia en la reducción de los riesgos para la salud, así como el rendimiento, la preferencia, el uso y la escalabilidad de las cocinas. También se analizarán las implicaciones para la práctica, las investigaciones futuras y la reducción de los impactos globales sobre la salud de la contaminación atmosférica.

**Presidente: Rajendra Prasad (India)**

1. **Efectos sobre la salud de la contaminación del aire del interior de la vivienda por combustión de biomasa y resultados de un estudio de intervención con una cocina mejorada en Michoacán, México.** – José Rogelio Pérez Padilla (México)
2. **Actualizaciones en el diseño y la implementación de un ensayo aleatorizado realizado en múltiples países** – William Checkley (Estados Unidos de América)
3. **Adopción, preferencia y uso de cocinas y combustibles mejorados o limpios: lecciones aprendidas** – Caroline Ochieng (Suecia)
4. **Estudios de intervención en cocinas: qué hemos aprendido e implicaciones para la investigación futura** – Kevin Mortimer (Reino Unido)
5. **Debate**
20. Role of civil society in people-centred care: experiences from the TB Regional EECA Project (TB-REP): a major programme across East Europe and Central Asia

What does people-centred care for TB mean? Ensuring the person with TB is at the centre of care and has support in order not to interrupt necessary treatment and complete the course is crucial for successful TB care. Civil society not only provides much needed advocacy efforts to ensure the right policies are in place for people-centred care, but also plays a vital role as service providers.

An interactive discussion bringing together the World Health Organization (WHO) and civil society to discuss experience of working collaboratively for improved people-centred TB care as well as presenting the challenges and successes under the Global Fund regional project TB-REP.

**Co-chairs:** Paul Sommerfeld (United Kingdom), Stela Bivol (Moldova)

1. Multi-partner approach to people-centred TB prevention and care: WHO’s role and contributions and its linkages with civil society organisations – Martin van den Boom (Denmark)
2. Civil society response for bringing the patient into the centre of TB care – Yuliya Chorna (Ukraine)
3. Focusing on essential interventions to increase patient adherence and building sustainability – Oxana Rucsineanu (Moldova)
4. Defining the degree of people-centredness of TB care in eastern Europe and Central Asia from the patient perspective – Timur Abdullaev (Uzbekistan)
5. Discussion

**SYMPOSIUM 16.00 – 17.30 HALL 10 - JALISCO HALL**

21. Addressing challenges of drug-resistant TB

(MDR-TB) is a public health crisis claiming an estimated 250,000 lives globally in 2015. Many countries are currently in the process of remodelling MDR-TB care in line with the End TB Strategy and updated treatment recommendations by the World Health Organization. NTPs worldwide as yet fail to fully utilise access to new TB treatment drugs and shorter regimens. The overall objective of this session is to provide the participants with the status of MDR-TB in high priority countries, including status of national guidelines availability and implementation.

**Chair:** Hind Satti (Lesotho)

1. Community-based MDR-TB care: lessons from field implementations in TB CARE II – Refiloe Matji (South Africa)
2. Integrating new drugs – short treatment regimen in high-burden countries – Hind Satti (Lesotho)
3. WHO guidelines for the use of new medicines for drug-resistant TB – Dennis Falzon (Switzerland)
4. Bottleneck analysis of the drug-resistant TB continuum of care – Alexander Moran (United States of America)
5. mHealth tools to support community-based programmes – A.N.M. Al-Imran (Canada)
6. Discussion

**SYMPOSIUM 16.00 – 17.30 HALL 14 - JALISCO HALL**

22. Accelerating toward elimination of paediatric TB through child contact management

Isoniazid preventive therapy (IPT) has proven efficacy to prevent TB in children. Child contact management (CCM) is recommended in high-burden TB countries. This four-step care cascade includes identifying exposed child contacts, screening them, initiating IPT or TB treatment and ensuring completion of therapy. Many programmes have adopted CCM. However implementation remains limited. In 2015, only 7.1 percent of eligible children aged less than 5 years initiated IPT. This session aims to engage stakeholders by discussing barriers and facilitators at each care cascade step and exploring CCM strategies. Sharing evidence-based experiences is essential to improve CCM and accelerate towards the elimination of paediatric TB.

**Co-chairs:** Daria Szkwarko (United States of America), Yael Hirsch-Moverman (United States of America)

1. CCM systematic review – Daria Szkwarko (United States of America)
2. Preventive treatment preferences among caregivers of child TB contacts in Lesotho – Yael Hirsch-Moverman (United States of America)
3. Challenges in ensuring preventive therapy for child contacts in Lima, Peru – Courtney Yuen (United States of America)
4. Road to TB elimination – Contact Management is critical in children in Pakistan – Hamidah Hussain (Pakistan)
5. Discussion
ORAL ABSTRACT SESSIONS

ORAL ABSTRACT SESSION 10.30 – 12.00 HALL 7 - EVENTS BALLROOM

01. Non-communicable lung diseases in adults – recent updates

Chair: Jean-William Fitting (Switzerland)

10.40 OA-101-12 Non-communicable lung disease in Malawi: a meta-analysis of community-based cross-sectional studies in urban and rural settings
R Nightingale, S Rylance, J Meghji, G Fitz, J Balmes, M Lesosky, K Mortimer (United Kingdom, Malawi, United States of America, South Africa)

10.50 OA-103-12 Indoor air pollution from cooking with biomass fuels and chronic bronchitis among women in a rural district of Rwanda
O M Manzi (Rwanda)

11.00 OA-104-12 A comparison of paper and smartphone-based data collection tools in a Burden of Obstructive Lung Disease (BOLD) study conducted in rural Sudan
R Ahmed, R Robinson, K Mortimer (Sudan, United Kingdom)

11.10 OA-105-12 Byssinosis amongst ‘home-based’ power loom workers in Madhya Pradesh, India
D Kundu, A Das, K Sagili, S Chadha (India, Timor-Leste)

11.20 OA-106-12 Indoor air pollution and tuberculosis: analysis of National Family Health Survey-III, a nationally representative survey, India
J P Tripathy, H O Shewade, A M V Kumar, A D Harries (India, France)

ORAL ABSTRACT SESSIONS

ORAL ABSTRACT SESSION 10.30 – 12.00 HALL 7 - SALÓN DE EVENTOS

01. Enfermedades pulmonares no contagiosas en adultos - últimas actualizaciones

Los principales efectos de la contaminación atmosférica sobre la salud van desde alteraciones de la función pulmonar, problemas cardíacos y otros síntomas y molestias hasta un aumento del número de defunciones, de ingresos hospitalarios y de visitas a urgencias, especialmente por causas respiratorias y cardiovasculares. Las Partículas en Suspensión (PM) afectan a más personas que cualquier otro contaminante y sus principales componentes son los sulfatos, los nitratos, el amoníaco, el cloruro sódico, el carbón, el polvo de minerales y el agua.

Presidentes: Jean-William Fitting (Suiza)

10:40 OA-101-12 Enfermedades pulmonares no contagiosas en Malawi: un metaanálisis de estudios de prevalencia de base comunitaria en entornos urbanos y rurales
R Nightingale, S Rylance, J Meghji, G Fitz, J Balmes, M Lesosky, K Mortimer (United Kingdom, Malawi, United States of America, South Africa)

10:50 OA-103-12 Contaminación del aire en el interior de la vivienda como resultado de cocinar con combustibles de biomasa y la bronquitis crónica entre las mujeres de un distrito rural de Ruanda
O M Manzi (Ruanda)

11:00 OA-104-12 Una comparativa de herramientas de recopilación de datos de base papel y a través de teléfonos inteligentes en el estudio BOLD (Prevalencia de la enfermedad pulmonar obstructiva) realizado en una comunidad rural del Sudán
R Ahmed, R Robinson, K Mortimer (Sudan, United Kingdom)

11:10 OA-105-12 Bisinosis entre los trabajadores de telares mecánicos “caseros” en Madhya Pradesh, India
D Kundu, A Das, K Sagili, S Chadha (India, Timor-Leste)

11:20 OA-106-12 Contaminación del aire en el interior de la vivienda y tuberculosis: análisis de la Encuesta Nacional sobre Salud Familiar-III, una encuesta representativa a nivel nacional, India
J P Tripathy, H O Shewade, A M V Kumar, A D Harries (India, France)

ORAL ABSTRACT SESSION 10.30 – 12.00 HALL 8 - EVENTS BALLROOM

02. Access to patient care: is it their right, privilege or ethical challenge?

Co-chairs: Alice Christensen (Tanzania, United Rep.), Amrita Daftary (Canada)

10.30 OA-107-12 To B or not to B: the rights versus programme debate for access to bedaquiline
N Aora, K Ayagari (India)

10.36 OA-108-12 Solidarity in addressing ethical challenges in the implementation of new technologies: a qualitative study
A Komparic, R Boulanger, D Silva (Canada)

10.42 OA-109-12 Improving documentation of tuberculosis cases notified by community health volunteers in high-burden TB facilities in Kenya
A Munene, C Mwamsi, E Marita, T Kiptai, J Sekento, B Ulo (Kenya)

10.48 OA-110-12 Civil society experiences in community engagement in the fight against TB
K Mshali, D Kuphanga, J Mpongwa, I Dambe, B Nindi, B Girma, A Ngosi (Malawi)

10.54 OA-111-12 Role of ex-tuberculosis patient engagement in TB care and control in Afghanistan: data review
B Ahmad, M Shefa, N Ahmadzada, G Qader, M N Samadi, M Melese, M Kamin (Afghanistan, United States of America)
03. HIV-TB: from diagnosis to outcomes – something for everyone

Co-chairs: Katharina Kranzer (United Kingdom), Stacie C. Stender (South Africa)

10.30  OA-115-12  Identification of geospatial hotspots of TB-HIV co-infection distribution in USAID/PEPFAR supported LGAs in Nigeria: using GIS for intensified case finding
A Onovo, T Odusote, D Nongo, Y Mukadi, U Rowo, D Williams, K Badiane, H Kang (Nigeria, United States of America)

10.40  OA-116-12  Patient education versus clinician mentoring for increasing isoniazid preventive therapy uptake in the South African primary care setting
C Hanrahan, B Jarrett, K Mothaoleng, J Golub, N Martinson (United States of America, South Africa)

10.50  OA-117-12  Barriers to and enablers of sputum collection and HIV testing during household contact investigation in Uganda
M Armstrong-Hough, J M Ggita, I Ayakaka, E Ochom, A Katamba, J L Davis (United States of America, Uganda)

11.00  OA-118-12  Improving sputum collection to increase TB case finding among HIV-positive persons enrolling in HIV care and treatment clinics in Botswana, 2012 – 2014
U Mathebula, C Emerson, T Agizew, R Boyd, A Mathoma, S Pals, A Auld, E Mao (Botswana, United States of America)

11.00  OA-119-12  Substantial increase in risk for HIV patients with multidrug-resistant tuberculosis for aminoglycoside-induced hearing loss
H Hong, C Budhathoki, J Farley (United States of America)

H Wenyega, E Masini, A Katana, E Ngugi, K P Cain, S Puye (Kenya)

11.30  OA-121-12  Treatment outcomes among people living with HIV and non-tuberculosis mycobacteria versus M. tuberculosis in Botswana
T Agizew, R Boyd, U Mathebula, A Mathoma, J Basotli, C Serumola, S Pals, A Auld (Botswana, United States of America)

11.30  OA-122-12  Urinary LAM with TB disease severity and culture outcomes in HIV-infected adults in ambulatory South African clinics
R Kubiak, E Losina, S Coleman, J Giddy, D Ross, K Freedberg, I Bassett, P Drain (United States of America, South Africa)

ORAL ABSTRACT SESSION 10.30 – 12.00 HALL 14 – JALISCO HALL

04. Recent developments in TB co-morbidities: updates from the front line

Co-chairs: Anthony D Harries (United Kingdom), Zohar Mor (Israel)

10.30  OA-123-12  Impact of untreated depression on tuberculosis treatment outcomes, disability, and quality of life in Ethiopia: a cohort study
F A Getahun, R Mayston, C Hanlon, G Medihin, A Alem (Ethiopia, United Kingdom)

10.40  OA-124-12  Glycemic control and prevalence of LTBI: population-based study using HbA1c, fasting plasma glucose and 2-h plasma glucose
L Martinez, L Zhu, M E Castellanos, C Cheng, Q Liu, B Hallowell, C Whalen (United States of America, China)

10.50  OA-125-12  High rates of active hepatitis C amongst multidrug resistant tuberculosis patients in Armenia
N Khachatryan, M Bastard, H Huerga, A Hayrapetyan, O Kirakosyan, J Faqirzai, C Hewison (Armenia, Switzerland, France)

11.00  OA-126-12  Costs per accurate diagnosis of bi-directional screening in Indonesia and Romania: integrating tuberculosis and diabetes services
Y Laurence, J Critchley, R Livia, D Grinn, P Hill, N M Panduru, D A J Moore, U Griffiths, TANDEM Consortium (United Kingdom, Indonesia, New Zealand, Romania, United States of America)

11.10  OA-127-12  Effectiveness of screening drug addicts for pulmonary tuberculosis in Afghanistan: a cross-sectional study
G Q Qader, M K Rashidi, A Hamim, M Shefa, M S Sayedi, M K Seddigi, N Ahmadzada, P G Suarez (Afghanistan, United States of America)

11.20  OA-128-12  Use of metformin and risk of tuberculosis among incident diabetic patients: a population-based study
P W Chu, H H Lin (Taiwan)

11.30  OA-129-12  High burden of DM-TB co-morbidity in Cambodia: initiation of bi-directional DM-TB screening in three operational districts
S T Khoeang, A Fom, K E Khun, B Bith, S Nget, R Ou, E Mao, P Koeut (United States of America, Cambodia)
## 05. Psychosocial support: impact on health seeking behaviour and treatment outcomes

**Co-chairs:** D’Arcy Richardson (United States of America), Manuel Sandoval (Mexico)

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.00</td>
<td>OA-138-12 Behavioural activation counselling as part of a psychosocial support package for people receiving treatment for MDR-TB in Nepal: a feasibility study</td>
<td>S Khanal, S Baral, J Walker, B Lamichhane, H Elsey, J Newell (Nepal, United Kingdom)</td>
</tr>
<tr>
<td>16.10</td>
<td>OA-131-12 Evaluating a nursing intervention to improve the quality of life of chronic MDR-TB patients hospitalised for a long time</td>
<td>E Tarasova (Russian Federation)</td>
</tr>
<tr>
<td>16.20</td>
<td>OA-132-12 The impact of the Brazilian Family Health Strategy and the Conditional Cash Transfer on tuberculosis treatment outcomes in Rio de Janeiro: an individual-level analysis</td>
<td>B Durovni, V Saraceni, A Trajman, M S Puppin, W Tassinari, D Cruz, C M Coeli, S Cavalcante (Brazil, Canada)</td>
</tr>
<tr>
<td>16.30</td>
<td>OA-133-12 Impact of hospitalisation subsidy incentives on tuberculosis treatment outcomes: experience of Wuhan City, China</td>
<td>G X Chen, W H Wang, B D Yuan, Y H Liu, Y Zhang (China)</td>
</tr>
<tr>
<td>16.50</td>
<td>OA-135-12 Using mathematical disease transmission models and population-level epidemiological data to analyse care-seeking behaviour in South Africa</td>
<td>B Wagner, S Chang (United States of America)</td>
</tr>
<tr>
<td>17.00</td>
<td>OA-136-12 Self-verification and behavioural interventions via mobile phones drastically improves tuberculosis treatment success in a randomised control trial</td>
<td>E Yoeli, J Rathaeuer, D Rand (United States of America)</td>
</tr>
<tr>
<td>17.10</td>
<td>OA-137-12 Wirelessly observed therapy is accurate and confirms more TB medication doses than directly observed therapy</td>
<td>S Browne, K Moser, J Low, F Vaida, A Tucker-Maytom, J Gonzalez-Garcia, C Peloquin, C Benson (United States of America)</td>
</tr>
</tbody>
</table>

## 06. TB in vulnerable populations

**Co-chairs:** Wendy Wobeser (Canada), Kevin Schwartzman (Canada)

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.00</td>
<td>OA-138-12 Evaluation of innovative active case finding strategies for TB case detection in remote communities in Cambodia and India</td>
<td>E Uhlig, K Johnson, C Monyrath, A Vyas, Z Z Qin, A Codlin, J Creswell, H Sohn (United States of America, Cambodia, India, Switzerland)</td>
</tr>
<tr>
<td>16.10</td>
<td>OA-139-12 Pulmonary tuberculosis a public health problem amongst Saharia, a vulnerable tribal group in Madhya Pradesh, Central India</td>
<td>V G Rao, J Bhat, R Yadav, R K Sharma (India)</td>
</tr>
<tr>
<td>16.30</td>
<td>OA-141-12 Tuberculosis in Syrian immigrants in Turkey</td>
<td>E Kabasakal, S Ozkan, S H Aksu, A Yildirim, S Otkara, Z Kilicaslan (Turkey)</td>
</tr>
<tr>
<td>16.40</td>
<td>OA-142-12 Active TB case finding among marginalised and vulnerable populations of India: results of targeted approach</td>
<td>S Pandurangan, S Mohanty, S Chadha (India)</td>
</tr>
<tr>
<td>16.50</td>
<td>OA-143-12 Systematic screening for TB among high-risk populations in India: whom to prioritise?</td>
<td>B Vadera, K Rade, S Mannan, J Jaju, R Rao, D Gupta, A Seenivas, S Khaparde (India)</td>
</tr>
<tr>
<td>17.00</td>
<td>OA-144-12 Successful integrated biomedical and social support for vulnerable people affected by tuberculosis in Nicaragua</td>
<td>M D J Bravo Reyes, M Pérez, T Bongaerts, N Ortuño-Gutiérrez (Nicaragua, Belgium)</td>
</tr>
</tbody>
</table>
# SHORT ORAL ABSTRACT SESSIONS

## 01. At the front line of resistance

**Chair:** Vivian Cox (South Africa)

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.30</td>
<td><strong>SOA-300-12</strong> Bedaquiline and clofazimine resistance in MDR- and XDR-TB patients from Armenia</td>
<td>E Ardizzone, I Oganezova, F Varaine, C Hewison, L Rigouts, A Hayrapetyan, A Mirzoyan, B de Jong (Belgium, France, Armenia)</td>
</tr>
<tr>
<td>10.36</td>
<td><strong>SOA-301-12</strong> Frequency of mutation Arg463Leu of the katG gene in historical multidrug-resistant tuberculosis in South Africa</td>
<td>N Maningi, L Daum, S Worthy, J Rodriguez, H Said, G Fischer, J Chambers, B Fourie (South Africa, United States of America)</td>
</tr>
<tr>
<td>10.42</td>
<td><strong>SOA-302-12</strong> High degree of fluoroquinolone resistance among pulmonary tuberculosis patients at a tertiary care centre in North India</td>
<td>R Sharma, B K Singh, P Jorwal, S Sinha, R Ramachandran (India)</td>
</tr>
<tr>
<td>10.48</td>
<td><strong>SOA-303-12</strong> Performance of a rapid DST system for <em>M. tuberculosis</em>, QMAC DST, integrated with MGIT960 culture</td>
<td>H Kim, E Jo, S Lee, E-G Kim, S Kwon, S Shin (Korea, Republic of)</td>
</tr>
<tr>
<td>10.54</td>
<td><strong>SOA-304-12</strong> Can Geno Type MTBDRplus v 2.0: be a rapid diagnostics tool in smear-negative pulmonary tuberculosis?</td>
<td>B Kumar Singh, R Sharma, S Sharma, S Sinha, P Jorwal, U Alavadi, V P Myemudu (India)</td>
</tr>
<tr>
<td>11.00</td>
<td><strong>SOA-305-12</strong> Genetic mutations associated with second line drug resistance in <em>M. tuberculosis</em> strains isolated from North-west India</td>
<td>S B Rafai, J Singh, P Kumar, S Singh (India)</td>
</tr>
<tr>
<td>11.06</td>
<td><strong>SOA-306-12</strong> Is what you see really there? The conundrum behind faint bands with the GenoType MTBDRplus line probe assay</td>
<td>F Ismail, N Ismail, L Joseph, B Samson, Y Gardee, L Danisa, S Vally Omar (South Africa)</td>
</tr>
<tr>
<td>11.18</td>
<td><strong>SOA-308-12</strong> Reliance on Xpert® MTB/RIF to start DR-TB treatment reduced time to treatment but seemed to worsen treatment outcomes in Tanzania</td>
<td>E Mollel, T Decroo, L Lynen (Tanzania, United Rep., Belgium)</td>
</tr>
<tr>
<td>11.24</td>
<td><strong>SOA-309-12</strong> Determination of true drug susceptibility of <em>M. tuberculosis</em> using quantitative minimum inhibitory concentration tests</td>
<td>M-H Wu, W-H Lin, R Jou (Taiwan)</td>
</tr>
<tr>
<td>11.30</td>
<td><strong>SOA-310-12</strong> Plasma <em>M. tuberculosis</em> cell wall metabolites identify patients with MDR-TB: a pilot study</td>
<td>J Collins, D Walker, R Kempler, N Tukvadze, H Blumberg, D Jones, T Ziegler (United States of America, Georgia)</td>
</tr>
</tbody>
</table>

## 02. Improving care and support for patients

**Chair:** Netty Kamp (Netherlands)

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.30</td>
<td><strong>SOA-311-12</strong> Evaluating the effectiveness of tuberculosis care providers on treatment outcomes in Afghanistan: a cross-sectional study</td>
<td>G Q Qader, S M Sayedi, M N Samadi, M K Ayubi, M H Akhgar, A B Maseed, N A Zahid (Afghanistan)</td>
</tr>
<tr>
<td>10.36</td>
<td><strong>SOA-312-12</strong> Exploring tuberculosis services provision and patient satisfaction in Afghanistan</td>
<td>M Shefa, N Ahmadzada, M Sarwari, A Hamim, T Noori, H Habib, B Ahmad, M N Samadi (Afghanistan)</td>
</tr>
<tr>
<td>10.42</td>
<td><strong>SOA-313-12</strong> Does physical tracing of treatment interrupters improve treatment outcomes? Patient-centred care approach to care and treatment in Busia County, Kenya</td>
<td>A Kikanga, B Otsyula, T Abongo, P Nagide, G Wandeyi Okoko (Kenya)</td>
</tr>
<tr>
<td>10.48</td>
<td><strong>SOA-314-12</strong> Decentralisation of healthcare facilities is contributing to early tuberculosis treatment initiation in Central India</td>
<td>M Biswas, S Dhawan, T Nale, K Kharaota (India)</td>
</tr>
<tr>
<td>10.54</td>
<td><strong>SOA-315-12</strong> Efficacy of DOTS implementation in densely populated cities of Afghanistan: experience from Jalalabad city</td>
<td>G Q Qader, F Bahktani, L Faqiri, A Hamim, A B Maseed, S M Sayedi, N Ahmadzada, M K Rashidi (Afghanistan)</td>
</tr>
<tr>
<td>11.00</td>
<td><strong>SOA-316-12</strong> Standard of TB-HIV care monitoring tool improves quality of care</td>
<td>B G Belaineh, H Kaymerere, I Dambere, B Shiggit, K Mbendera, S Myango, Y Babaye, J Mpunga (Malawi)</td>
</tr>
<tr>
<td>11.06</td>
<td><strong>SOA-317-12</strong> Supporting the patients: training social workers for an expanded role in patient-centred care for drug-resistant tuberculosis and HIV in South Africa</td>
<td>J Zelnick, B Seppamore, A Daftary, K R Amico, X Bhengu, N Padayatchi, G Friedland, M O’Donnell (United States of America, South Africa, Canada)</td>
</tr>
<tr>
<td>11.12</td>
<td><strong>SOA-318-12</strong> Traditional beliefs and practices related to treatment non-adherence among TB patients in North Gondar, Ethiopia</td>
<td>S Tigabe, TB Patients (Ethiopia)</td>
</tr>
</tbody>
</table>
03. Aspects of TB – immunology and host genetics

Chair: Geraint Davies (United Kingdom)

14.00 SQA-321-12 Study of long non-coding RNA (lncRNA) expression profiles in pulmonary tuberculosis
Y Li, H Peng, H Song, G Li, L Zhu, W Lu (China)

14.06 SQA-322-12 Helminths induce persistent epigenetically-mediated TB immune perturbations
A Di Nardo, A Kay, G Mtwana, T Mndebele, G Maphala, A Mandelakas (United States of America, Swaziland)

14.12 SQA-323-12 Activation of hypoxia-inducible factor 1 (HIF-1) enhanced bactericidal effects of macrophages to M. tuberculosis
Q Li, C Shi, W Wang, L Lu, Y Zhang (China)

14.18 SQA-324-12 Effects of aldehyde dehydrogenase 2 (ALDH2) genetic polymorphism on mouse lungs in vitro
J Gao (China)

14.24 SQA-325-12 Gut microbiota and BCG vaccine immunogenicity in South African infants
J Wendoh, B Brown, R Lennard, D Nyangahu, U Karaoz, E Brodie, C M Gray, H Jaspan (South Africa, United States of America)

14.30 SQA-328-12 Animal vaccine dose-response curve predicts lower optimal TB vaccine dose in humans: proof-of-concept study of immunostimulation/immunodynamic modelling methods
S Rhodes, H Fletcher, T Evans, R White (United Kingdom)

14.36 SQA-330-12 Genetic polymorphism effects of genes-enzymes, responsible for biotransformation of xenobiotics, on TB drug-related hepatotoxicity
A Kazakov, S Smerdin (Russian Federation)

04. Risks and reasons for modifying approaches

Co-chairs: Michael Kimerling (Netherlands), Chawangwa Modongo (Botswana)

14.00 SQA-331-12 Risk of recurrent TB in the UK
J A Davidson, C N J Campbell, M K Lalor (United Kingdom)

14.06 SQA-332-12 Obesity, diabetes and risk of tuberculosis in two Taiwan cohorts: a double-edged sword?
H-H Lin, C-Y Wu, C-H Wang, H Fu, K Lonroth, Y-C Chang, Y-T Huang (Taiwan, United Kingdom, Switzerland)

14.12 SQA-333-12 Demographic predictors of active tuberculosis in migrants to British Columbia, Canada: a retrospective cohort study
L Ronald, J Campbell, R Balshaw, K Romanowski, D Roth, F Marra, V Cook, J Johnston (Canada)

14.18 SQA-334-12 Factors associated with use of bacteriological tests for diagnosing TB in Kenya
J N Oliva, J Maina, D Gathara, I Kathure, E Masini, A van’t Hoog, M Boele van Hensbroek, M English (Kenya, Netherlands, United Kingdom)

14.24 SQA-335-12 Heavy alcohol consumption increases the risk of active tuberculosis in Taiwanese adults: a nationwide population-based cohort study
Y-F Yen, Y-Lai, D Chu (Taiwan)

14.30 SQA-336-12 Tuberculosis: one disease, one geographic region, several epidemiological profiles
F Quinsburg Hamburger, M C de A. S. Ribeiro, M J Penon Rujula Gonçalves, C Silveira (Brazil)

14.36 SQA-337-12 Potential mechanisms for the high tuberculosis notification rate among the elderly in Taiwan: a modelling approach
H Fu, N Arinaminpathy (United Kingdom)

14.42 SQA-338-12 Joint impact of modifiable risk factors on tuberculosis: a population-based cohort study
W-C Lo, C-H Wang, H-H Lin (Taiwan)

14.48 SQA-339-12 High rates of undetected tuberculosis in medical and oncology wards in Botswana
O Fane, S Shin, C Modongo, O Wang, M Ogodets, M Dima, K Lamboly, N Zotola (Botswana, United States of America)

15.00 SQA-341-12 Seasonality in tuberculosis case notification rate and its implications for developing season-based case finding strategies in Ethiopia
Z Gashu, D Jerene, D Bekele, G Alem, N Hiruy, D Habte, Y Kebede Haile, P Suarez (Ethiopia, United States of America)
05. TB in correctional facilities: an update on detection and care

Co-chairs: Harry Hauster (South Africa), Martín Castellanos (Mexico)

14.00 SOA-342-12 Promising TB case finding in prison settings: a lesson learned from 10 Indonesian prisons/detention centres
U Salamah, S Winarnanto, N Tanggiringan, A Surya, W Waworuntu, M Kurniasari, R W Palupi, A Gebhard (Indonesia)

14.06 SOA-343-12 Can a prison health facility provide quality TB and DR-TB care and management? A case study of Shimo La Tewa Prison Health Center, Kenya
A Mohmed, E Deche, L Mugambi-Nyaboga, M Katana, G Mamo, B Mungai, M Maina (Kenya)

14.12 SOA-344-12 TB in prisons: CTB contribution to improving health conditions in eight prisons in Mozambique
A Abdula, A Mataruse, Z Cuina, D Bomba, T Guambe, J Conjeira, A Moundlane, C Anli (Mozambique)

14.18 SOA-345-12 Identifying missing cases among prisoners through a health camp approach: experience from India
N Solanki, A Pathak, S Waikar, B Pandya, V Ghule, S Chadha (India)

14.24 SOA-346-12 Tuberculosis in the La Esperanza Prison, Cundinamarca, Colombia
D González Ruge (Colombia)

14.30 SOA-347-12 Increasing TB screening, diagnosis, and treatment in a large Zambian correctional facility by integrating TB services into a universal HIV test and treat programme
S Hatwiinda, H Smith, M Moyoyeta, G Magwende, C Moyo, S Reid, S Topp, M Herce (Zambia, United States of America, Australia)

14.36 SOA-348-12 Epidemiology of tuberculosis in maximum prison health facilities, Kenya
J Limo, V Kimathi, D Mutua (Kenya)

14.42 SOA-349-12 Effectiveness of active case finding in addressing tuberculosis control in prisons
A Hamimi, S M Sayedi, G G Qader, L Manzoor, N Ahmadzada, H Faqiryar, M R Rashidi, P G Suarez (Afghanistan, United States of America)

14.48 SOA-350-12 Intensified TB-HIV activity in prisoners at a central jail in Faridkot, Punjab, India
M Kaur, P Agarwal (India)

14.54 SOA-351-12 Is it possible to ensure treatment completion of TB patients identified from prison intervention? Experience from India
S Upadhyay, P Singh, S Waikar, B Pandya, V Ghule, S Chadha (India)

06. Recent developments in paediatric TB and lung health

Co-chairs: Andrew Steenhoff (United States of America), James Seddon (United States of America)

14.00 SOA-352-12 Urine LF-LAM positivity predicts mortality in hospitalised HIV-infected children
S M LaCourse, L M Cranmer, I N Njuguna, J Gatimu, E Maleche-Obinde, D Wamalwa, G John-Stewart, P Pavlinac (United States of America, Kenya)

14.06 SOA-353-12 Genotyping and whole genome sequencing to identify tuberculosis transmission related to paediatric patients in British Columbia, Canada, 2005 – 2014
J L Guthrie, D Jorgensen, M Rodrigues, P Tang, L Hoang, D Roth, J Johnston, J L Gardy (Canada, Qatar)

14.12 SOA-354-12 ABCB1 polymorphism (C3435T) influences the plasma concentration of rifampicin
A Mukherjee, S Arora, O Choudhary, K Luthra, M Kabra, S K Kabra, R Lodha (India)

14.18 SOA-355-12 Engaging the community in TB household contact screening improved IPT uptake among child TB contacts under 5 years in Uganda
J P Doris (Uganda)

14.24 SOA-356-12 Tuberculosis infection is inversely associated with atopic symptoms in HIV-infected and non-infected South African children
H Van Deventer, A M Mandalaikas, H M Grewal, H R Draper, H L Kirchner, I S S Chaaf, R P Gie, A C Hesseling (South Africa, United States of America, Norway)

14.30 SOA-357-12 Reducing antibiotic prescribing for upper respiratory tract infections in children at primary care facilities in rural China: a clustered RCT
X Wei (Canada)

14.36 SOA-358-12 Monocyte-to-lymphocyte ratio is associated with confirmed TB disease and declines with anti-tuberculosis treatment in HIV-infected children
H Huerga, M Bastard, N Melikyan, A Hayrapetyan, N Khachatryan, E Sanchez, F Varaine, M Bonnet (France, Armenia)

14.42 SOA-359-12 Incidence of LTBI and TB disease after 24-month follow-up in paediatric contacts of drug-resistant tuberculosis patients in Armenia
H Hergua, M Bastard, N Melikyan, A Hayrapetyan, M K Choudhary, M R Wall, P Pavlinic, I Njuguna, E Maleche-Obinde, D Wamalwa, G John-Stewart, L M Crammer (United States of America, Kenya)

14.48 SOA-360-12 Accelerating access to quality TB care for paediatric TB cases through a better diagnostic strategy in four major cities of India
N Raizada, S Khaparde, A Kalra, S Sarin, R Rao, V S Salhotra, C Denkinger, C Boehme (India, Switzerland)

14.54 SOA-361-12 Piloting upfront Xpert® MTB/RIF testing on various specimens for infant presumptive TB cases for early and appropriate treatment initiation
N Raizada, S Khaparde, S Sarin, C Denkinger, C Boehme, R Rao, V S Salhotra (India, Switzerland)

15.00 SOA-362-12 Drug resistance surveillance in children with bacteriologically-confirmed tuberculosis in the Western Cape, South Africa
H S Schaaf, E Walters, M van der Zalm, M Palmer, B Bosch, C Rautenbach, A C Hesseling (South Africa)
07. National and subnational strategic approaches to TB elimination

Co-chairs: Caterina Casalini (Tanzania, United Rep.), Janet Ginnard (Switzerland)

16.00 SOA-363-12 Quantifying the impact of sustainable development goal 1 on TB: a statistical exploration
D J Carter, R M Houben, K Lönnroth, P Glaziou, D Boccia (United Kingdom, Switzerland)

F R Mugabe, R K Majwala, C Marra, B J Kirenga, E Mabumba, S Tuyahabwe, A Buraa, A Nkolo (Uganda)

16.12 SOA-365-12 Many national TB programmes are out of step with international recommendations for testing, treatment and prevention: results of a 30-country survey
K Saran, S Sahu, S Lynch, G Paton, T Masini, I Chikwanha, T Swan, C Perrin (Switzerland, United States of America, Italy, France)

16.18 SOA-366-12 The use of sub-national TB modelling to inform decision making in South Africa
P Hippner, T Sumner, R Houben, V Cardenas, L Musi, G Churchyard, R White (South Africa, Switzerland)

16.24 SOA-367-12 Landscape assessment of TB programme infrastructure for subnationally differentiated TB programme planning in 10 South and South-East Asian countries
C Mergenthaler, M I Bakker, E Rood, L Blok, S Sahu, D Lekharu (Netherlands, Switzerland)

16.30 SOA-368-12 Setting the national tuberculosis research agenda: the experience of Ethiopia
D Fiseha, E Negussie, D Hable, L Kefadu, D Assefa, K Hailu, S Tsegaye (Ethiopia)

16.36 SOA-369-12 Ending tuberculosis in Israel: current progress and future challenges
D Chemtob, D Bendayan, E Rorman, Y Levin, N Harel, N Averick, I Grotto (Israel)

16.42 SOA-370-12 Is it possible to achieve the end of tuberculosis in Colombia?
L López, D M Marín, Z V Rueda, Salud Pública (Colombia)

16.48 SOA-371-12 Size and characteristics of the tuberculosis drug market in ten high-burden countries
S Malhotra, K Cain, D Kappel, M Exter, C Ge, I Ursu, C Albert, N Patel (United States of America, United Kingdom)

16.54 SOA-372-12 Implementing an early warning system to improve access to TB medicines in 12 countries
W Goredema, K Sawyer, S Mwatawala (United States of America)

17.00 SOA-373-12 Implementing collaborative, consensus-based forecasting to improve access to TB medicines in Nigeria
W Goredema, K Sawyer, M A Ochigbo (United States of America)
08. Identifying factors to reach 90-90-90 goals

Co-chairs: Silvia Kelbert (Tanzania, United Rep.), Karen Du Preez (South Africa)

16.00 SOA-374-12 Tuberculosis patients from outside Kampala city carry a higher risk of unfavourable treatment outcomes
R Kaliisa, A Bunua, D Kimuli, E Birabwa, C Nanziri, D Okello, D Lukoye, P Suarez (Uganda, United States of America)

16.06 SOA-375-12 Effect of HIV status and antiretroviral treatment on treatment outcomes of tuberculosis patients in a rural primary healthcare clinic in South Africa
J R Ncayiyana, T Umamah, P Nyasulu (South Africa)

16.12 SOA-376-12 Revised estimate of TB mortality in England and Wales: the need to use both vital registration and national surveillance data
M K Lalor, T Mohiyuddin, T Uddin, H L Thomas, M Lipman, C Campbell (United Kingdom)

16.18 SOA-377-12 Long-term mortality among patients with tuberculosis is high in both patients with drug sensitive and multi-drug resistant tuberculosis
M J Saunders, T Wingfield, M A Tovar, M Baldwin, A Necochea, R Monteoya, E Ramos, C Evans (United Kingdom, Peru)

H Kyu, S Hay, T Vos, B Reiner, J Ross, E Maddison, N Henry, C Murray (United States of America)

16.30 SOA-379-12 Understanding tuberculosis health system performance in Indonesia through subnational incidence estimation for 514 districts
C G Parwati, M N Farid, H Suryani, S Sulistyo, C Basri, A Suya, A Gebhard, R M G J Houben (Indonesia, United Kingdom)

16.36 SOA-380-12 Análisis de la letalidad por tuberculosis en Uruguay, periodo 2014 – 2015
P Lasserra, B Alvarez, M Buglioli, D Brener, I Carrieri, M Contera (Uruguay)

16.42 SOA-381-12 Exploring quality of tuberculosis surveillance data in Afghanistan: a cross-sectional study
G Q Qader, A B Maseed, M K Rashidi, M K Seddiq, H Manochehr, S H Danish, N Ahmadzada (Afghanistan)

16.48 SOA-382-12 Why does a high proportion of M. tuberculosis transmission occur outside households and known social contacts in high-incidence settings?
N McCreesh, R White (United Kingdom)
09. Leave no one behind – the hard work of finding cases

Co-chairs: Carrie Tudor (Switzerland), Alberto Garcia-Basteiro (Mozambique)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.00</td>
<td>SOA-384-12</td>
<td>Yield of TB contact screening in North West England, 2012-2016: a retrospective, descriptive study to inform reconsideration of the United Kingdom’s 2016 TB guidelines</td>
<td>T Wingfield, P Cleary, P Ormend (United Kingdom, Sweden)</td>
</tr>
<tr>
<td>16.06</td>
<td>SOA-385-12</td>
<td>Systematic screening of household contacts of tuberculosis cases in sub-Saharan Africa: derivation of a predictive risk score</td>
<td>L Martinez, A Handel, Y Shen, S Chakkaburty, F Quinn, C Whalen (United States of America)</td>
</tr>
<tr>
<td>16.12</td>
<td>SOA-386-12</td>
<td>Impact of community health worker household TB screening on case notification in Afghanistan: a data review</td>
<td>M N Samadi, M Shefa, B A Maseed, G Q Qader, M K Rashidy, N Ahmadzada, M Melese, P G Suarez (Afghanistan, United States of America)</td>
</tr>
<tr>
<td>16.18</td>
<td>SOA-387-12</td>
<td>Increasing TB case notification through a quality improvement intervention</td>
<td>H Kisamba, S Nakibusuka Munube (Uganda)</td>
</tr>
<tr>
<td>16.30</td>
<td>SOA-389-12</td>
<td>Should we screen contacts of non-pulmonary tuberculosis cases?</td>
<td>S M Cavany, E Vynnycky, R G White, H L Thomas, H Maguire, C Anderson, T Sumner (United Kingdom)</td>
</tr>
<tr>
<td>16.36</td>
<td>SOA-390-12</td>
<td>Tuberculosis screening in asylum seekers in Germany: case characteristics and yield of screening</td>
<td>L Fiebig, B Hauer, M Andrés Miguel, W Haas, N Perumal (Germany)</td>
</tr>
<tr>
<td>16.42</td>
<td>SOA-391-12</td>
<td>Is it possible to increase TB notification from the private sector in India? Experience from nine cities</td>
<td>S Waikar, R Tewari, S Nagre, D Alam, P Shokeen, A Pathak, P Singh, V Ghule (India)</td>
</tr>
<tr>
<td>16.48</td>
<td>SOA-392-12</td>
<td>Gaps in TB screening at health facilities have contributed to decline in TB case notification in Kampala city</td>
<td>D Lukoye, S Ntudhu, R Mpirirwe, B Byaruhanga, A Burua, S Dejene, D Sama, P Suarez (Uganda, United States of America)</td>
</tr>
<tr>
<td>16.54</td>
<td>SOA-393-12</td>
<td>Barriers to tuberculosis case detection and treatment in a densely populated rural areas</td>
<td>E Somefun, O Sobande, U Esiet (Nigeria)</td>
</tr>
</tbody>
</table>
POSTER DISCUSSION SESSIONS

01. MDR-TB: burden and trends

Chair: Patrick Phillips (United States of America)

- PD-500-12 Prevalence of drug-resistant tuberculosis in Nigeria: a systematic review and meta-analysis
  K N Ukwaja, C C Onyedum, I Alobo (Nigeria)

- PD-501-12 Prevalence of resistance to second-line drugs and pyrazinamide resistance among multidrug-resistant tuberculosis patients in China
  G Wang, H Huang (China)

- PD-502-12 Resistance pattern of the drugs included in the short-course MDR regimen according to susceptibility to fluoroquinolones and injectables in Peru
  Z Puyen, G Obregon, J Rios, A Mendoza, Ministry of Health (Peru)

- PD-503-12 Decline in MDR-TB prevalence among new TB patients in Rwanda: impact of implementing rapid molecular tests in programmatic management
  J C Ngabonziza S., Y M Habimana, E Kamanzi, P Migambi, C M Muvunyi, J B Mazarati, G Torrea, B C de Jong (Rwanda, Belgium)

- PD-504-12 Prevalence of rifampin resistance among presumptive TB and drug-resistant TB populations: TB-HIV coinfected, paediatric and extra-pulmonary patients, Mumbai, 2015—16
  D Shah, A Karad, B Khatun, J Salve, U Waghmare, S Kamble (India)

- PD-505-12 Paradigm shift in all types of presumptive DR-TB: a comparative analysis of MDR-TB diagnosis in Bangladesh
  N Arefin Saki, M A H Salim, P K Modiak, K Jahan, R A Ali, R Haq (Bangladesh)

- PD-506-12 Increasing trends of drug resistance in extra-pulmonary tuberculosis in India
  S Kant, A K Maurya, V L Nag, K Srivastava, Tuberculosis Study Group (India)

- PD-507-12 Prevalence of drug resistance among patients with presumptive TB in Namibia
  N Ruswa, F Mavhunga, A Beukes, E Shipiki, B Makumbi, D Tiruneh, A Zezai, N Forster (Namibia)

- PD-508-12 Panorama de la resistencia a inyectables y quinolonas en casos multirresistentes, Colombia, 2015—2016
  C Llerena Polo, A Zabaleta, Y A Valbuena Arias (Colombia)

02. Mycobacterium bovis: transmission, detection and public health implications

Chair: Francisco Olea-Popelka (United States of America)

- PD-509-12 First appraisal of genetic diversity of M. tuberculosis isolated from captive Asian elephants (Elephas maximus)
  J Singh, D Abraham, V Rawat, S Singh (India)

- PD-510-12 Knowledge, awareness and practices of small household milk producers regarding zoonotic tuberculosis in rural India
  V Dogra, I Dwivedi, M B Aghi (India)

- PD-511-12 Genotyping of mycobacterial isolates from Ghana’s tuberculosis prevalence survey – M. bovis not found
  K K Azad, S O Addo, G I Mensah, F A Bonsu (Ghana)

- PD-512-12 Detection of drug resistance and efflux pump mutations in M. bovis in cattle and human isolates from Baja California, México, using whole-genome sequencing
  R Muñiz-Salazar, S E Sandoval-Azuela, R Perez-Jacobo, S Robbe-Austermann, A Perera-Ortiz, G Lopez-Valencia, D Miranda-Guzmán, R Laniado-Laborin, RemiTB (www.remitb.org) (Mexico, United States of America)

- PD-513-12 Reverse zoonotic transmission of tuberculosis from an emerging strain of M. tuberculosis and associated risk factors in south-eastern Nigeria
  H Adesokan, V Akinseye, P Otuh, E Nwanga, E Streicher, R Warren, P van Helden, S Cadmus (Nigeria, South Africa)

- PD-514-12 M. bovis on Michigan dairy farms: evidence of animal-to-human transmission
  P Davidson, K Signs, J Sunstrum, J Averill, J Tilden, R Smith, J McKeller, J B Kaneene (United States of America)
### 03. Back to basics: diagnosis, notification and outbreak investigations

**Chair:** Frederick Quinn (United States of America)

<table>
<thead>
<tr>
<th>PD-515-12</th>
<th>Seasonal pattern of tuberculosis case notification in Afghanistan, 2005—2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M N Samadi, M Shefa, A Hamim, G Q Qader, M K Rashidi, N Ahmadzada, M Melese, P G Suarez (Afghanistan, United States of America)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-516-12</th>
<th>Gearing contact screening through SM, a missing link for TB control in the private sector, Khyber Pakhtunkhwa Pakistan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M Ali, Q Abbas, M D Khan, A Khaliq (Pakistan)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-517-12</th>
<th>Improved TB case notification by private healthcare providers: an experience from 40 urban sites of India</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S Pandurangan, S Mohanty, S Chadha (India)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-518-12</th>
<th>Mapping tuberculosis case relative locations to inform active case detection and linkage to care in Swaziland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M Brunetti, S Rajasekharan, P Ustero, K Ngo, B Molele, W Sihkondze, A Mandalakas, A Kay (Swaziland, United States of America)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-519-12</th>
<th>Yield of facility-based verbal screening amongst household contacts of patients with multi-drug resistant tuberculosis in Pakistan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E Qadeer, R K Fatima, M Ul Haq, A Yaqoob, N T Thu Kyaw, S Shah, P Isaakidis (Pakistan, Myanmar, Luxembourg)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-520-12</th>
<th>The missing link between DOTS expansion, functionality and case detection: review of the DOTS expansion strategy in Nigeria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L Okwunoye, O Kisimo, A Hassan, R Okolokade, O Kuye, Q Ogbugi, O Isho, O Ladipo (Nigeria)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-521-12</th>
<th>Active tuberculosis case search pilot intervention in selected communities: birth of the first TB prevalence survey in Nigeria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R Okolokade, A Hassan, L Okwunoye, O Kisimo, Q Ogbugi, Q Ojibo, R Osho, K Osoowo, O Ladipo (Nigeria)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-522-12</th>
<th>Scale-up of house-to-house TB case finding in Nigeria: best practices and lessons learnt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O Kisimo, Q Ogbugi, A Osho, R Okolokade, L Okwunoye, A Hassan, O Ladipo (Nigeria)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-523-12</th>
<th>Association between prediabetes and tuberculosis: a cohort study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T-H Ko, H-H Lin (Taiwan)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-524-12</th>
<th>Intensified case finding for tuberculosis at health facilities in Palawan, the Philippines</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>K H Oh, R-P Yadav, J Reston, L Infante, F Camacho, N Nobuyuki, H J Kim, C J Kim (Korea, Republic of, Philippines)</td>
</tr>
</tbody>
</table>

### 04. HIV-TB treatment and outcomes

**Chair:** Charles Ssonko (United Kingdom)

<table>
<thead>
<tr>
<th>PD-525-12</th>
<th>Antiretroviral therapy and viral suppression during and three years after completion of tuberculosis therapy in an inner-city cohort in Atlanta, Georgia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M C Schechter, D Bizune, M Kagei, O Olukolade, Y Wang, P A Rebollo, S M Mckay, R R Kempner (United States of America)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-526-12</th>
<th>Tuberculosis treatment outcomes in HIV-positive and -negative adolescents in Kenya</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E Maxi, S Puryear, K Kasera (Kenya, United States of America)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C Eze, J Okogbue, C Nwafor, O Ekekwe, J Ikubuudu, A Meka, C Alphonsus, O Mbah (Nigeria)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-528-12</th>
<th>Mortality of TB-HIV co-infected patients in Kampala remains high despite early initiation of ART</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N Kiratibawa Sebuliba, D Kimuli, R Byunghanga, D Lukoye, D Okello, S Dejene, P Suarez, S Kasozi (Uganda, United States of America)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-529-12</th>
<th>Mortality predictors among women of reproductive age on tuberculosis treatment in Kampala, Uganda</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F A Yusuf, D Kimuli, D Walusimbi, N S Kiratibawa, B Kwikika (Uganda)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-530-12</th>
<th>Treatment outcomes among HIV co-infected MDR TB patients in Uganda</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M Nakawooya, D Sama, D Lukoye, S Dejene, P Suarez, S Turyahabawe, R Byunghanga, D Kimuli (Uganda, United States of America)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-531-12</th>
<th>Autopsy characterisation of lung microbiome of HIV-positive patients in a tertiary referral hospital in Ghana</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D Yoboah-Manu, P Badu, S E Quayson, S Osei-Wusu, M Lorenzo Ayeley, J Darko Otchere, A Darkwah Abrahams (Ghana)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-532-12</th>
<th>A tweak in policy, an increase in usage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>J Mpunga, I Dambe, K Mbendera, B Girma, M Chiwaula, L Kachule (Malawi)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD-533-12</th>
<th>TB-HIV services for HIV key and vulnerable populations in Tanzania: who and what should be prioritised?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C Casalini, D Boyee, M Njozi, M Drake, S Kelbirt, B Mutayoba, E Mhango, A Komba (Tanzania, United Rep., United States of America)</td>
</tr>
</tbody>
</table>
05. Muddying the waters – co-morbidities in drug-resistant TB

Chair: Ajay Kumar (India)

PD-534-12  Feasibility and yield of screening for common non-communicable diseases in a cohort of patients treated for TB in Lima, Peru
A Byrne, B Marais, C Mitnick, F Garden, L Lecca, C Contreras, Y Yaun, G Marks (Australia, Peru, United States of America)

PD-535-12  'Depression' as a concomitant illness needs attention in the treatment regimen of DR-TB patients: a study from Jharkhand, India
S K Nayak, V H Ghule, R K Beck, R Dayal, R R Pathak, O Prakash, K Hansda, S Chadha (India)

PD-536-12  Treatment outcome and mortality in pulmonary TB in lower-income countries: impact of drug resistance and HIV co-infection
K Zicher, on behalf of the IeDEA TB Genomics Project Group (Switzerland)

PD-537-12  Introduction of short standardised treatment for multidrug-resistant tuberculosis in Mozambique: cohort description and early culture conversion in HIV-positive and negative patients
M Bastard, E Poulet, L Cozza, E Graglia, I Manhiça, B Rusch, L Molfino, A Telnov (Switzerland, France, Mozambique)

PD-538-12  Co-infections and DR-TB treatment outcomes: a four-year retrospective study in Mumbai, India
D Shah, M Sabharwal, S Surendran, U Waghmare, P Keskar, R Kadam, H Dadas (India)

PD-539-12  Mortality predictors among drug-resistant tuberculosis patients in Uganda
S Kasozi, N Kirabwa Sebuloba, E Kizito, H Luwaga, E Mabumba, P Suarez, E Birabwa, R Byaruhanga (Uganda, United States of America)

PD-540-12  Association of diabetes mellitus and smoking with treatment outcomes of drug-resistant tuberculosis patients in Pakistan, 2010—2014
A Latif, A Ghafoor, N Mahmood, Z Toor (Pakistan)

PD-541-12  Demographic and co-morbidity patterns at initiation of treatment among MDR-TB clients in Lagos, Nigeria
B Oluosola-Faleye, H Abdur Razaq, O Momoriolu, O Adejumo, O Joseph, A Ihedigbo, O Olarewaju, M Gidado (Nigeria, Netherlands)

06. The proof is in the pudding – treatment and outcomes for drug-resistant TB

Chair: Molly Franke (United States of America)

PD-542-12  Tratamiento de tuberculosis extensamente resistente, manejo centrado en el paciente en un programa nacional: Perú
D Vargas Vasquez, V Alarcon Arrasca, D Vela Trejo, E Heldal (Peru, Norway)

PD-543-12  Pneumonectomy in the complex treatment of pulmonary extensively drug-resistant tuberculosis
S Sklyuev, D Krasnov, I Felker (Russian Federation)

PD-544-12  Advantages of using vats in delayed thoracoplasty after surgery of destructive forms of pulmonary TB
N Parijaya, M Tilyashaykov, D Giller, O Nemato, S Mayyasupov (Uzbekistan, Russian Federation)

PD-545-12  What happened to patients with MDR-TB in Zambia who were reported as lost to follow-up from 2011 to 2014?
C C Kasapo, R Chimzizi, S C Simwanza, J Mzyece, H-Y Lee, A D Harries, N Kapata (Zambia, Malawi, France)

PD-546-12  Scaling-up of shortened multidrug-resistant tuberculosis regimens in Niger: Eight year experience
M B Souleymane, A Piubello, B Moustapha, S Morou, I Boukary, A Sala, I Maman Lawan, S Adamou (Niger, France)

PD-547-12  Outcomes and risk factors in a programme treating MDR-TB in Swaziland for 2011—2013 cohorts
M Verdeccia, K Keus, D Vambe, C Soinko, E C Casas (Swaziland, United Kingdom, Netherlands)

PD-548-12  Totally implantable central venous access device in the treatment of MDR and XDR tuberculosis
A Krainik, D Pechinski, M Makouski, K Dobys, A Sinha, M Khmyz, H Hlushanina, A Skrahina (Belarus, Netherlands)

PD-549-12  The efficacy, safety and tolerability of the short 12-month pre-XDR-TB regimen in Ukraine
N Lytvynenko, O Chobutar, V Davydenko, L Sherbacova (Ukraine)

PD-550-12  Primary healthcare clinics are successfully managing (MDR-TB): comparing outcomes in TB hospitals to clinics in the Western Cape, South Africa
R Vannie, G Reagon, J Kruger (South Africa)

PD-551-12  Treatment outcomes for drug-resistant TB under an out-patient model of care in Johannesburg, South Africa
K Hirases, R Berhanu, D Evans, L Long, S Rosen, I Samnie (South Africa, United States of America)
07. A picture in time – chest X-ray and other diagnostic considerations in TB

Chair: James Johnston (Canada)

PD-552-12 Assessing sensitivity of symptoms for efficiency in TB case detection in a male clinic in Lesotho
M Ramapepe, A Rozario, S Stender, P Matsinyane (Lesotho, South Africa)

PD-553-12 Improving tuberculosis diagnosis with deep learning algorithm to analyse chest x-rays
M Alcantara, Y Cao, L Benyuan, M Brunette, C Morocho-Albarracin, L Lecca, J Peinado, W Curiosa (United States of America, Peru)

PD-554-12 Evaluation of LED fluorescence microscopy for the diagnosis of tuberculosis

PD-555-12 ‘Missing TB cases’: potential of offering chest X-ray upfront to all smear-negative cases in narrowing this gap
G C Mallick, G Kumar, M Malik (India)

PD-556-12 Role of chest X-ray and symptom screening tool for tuberculosis case detection: national TB prevalence survey 2015–2016, Bangladesh
S Rahman, V Begum, I Law, M Rahman, M M Husain, M A Hannan, R Haq (Bangladesh, Switzerland)

PD-557-12 Increasing the yield of TB cases from communities: experience from India
P Shokeen, S Waikar, B Pandya, V Ghule, S Chadha (India)

K Cain, J Agaya, C Yuen, J Cowlden, E Masini, M Acholla, S Lee, M Borgdorff (Kenya, United States of America)

PD-559-12 Active search for TB cases on a campaign mode in India – modus operandi and early experience
J Jaju, S Achanta, S A Nair, M Parmar, S Kharapade, G Gupta, S Mannan, K Rade (India)

PD-560-12 Computer aided diagnostics tool for chest X-rays using deep neural networks
G Gana, T Madzorera (Zimbabwe)

PD-561-12 Chest X-ray radiologist reading agreement analysis in screening for TB: the IOM Global Teleradiology Quality Control Program
S M Gelaw, T S Egzertegegne, Teleradiology and Quality Control (Philippines)

08. Treatment delays, misdiagnoses and losses to follow up – let’s close the gap

Chair: Anete Trajman (Brazil)

PD-562-12 Effect of delayed treatment on tuberculosis treatment outcomes among patients on DOTS in districts of South-west Ethiopia: a prospective cohort study
A Acra, D Jerene, W Dorelsa (Ethiopia)

PD-563-12 Determinants of TB patient lost to follow-up treatment outcome and fate thereafter – a retrospective case study from an Indian State
R Kumar, R K Baria (India)

PD-565-12 Pre-treatment loss to follow-up among smear-positive pulmonary tuberculosis patients in Cameroon
E Oyono, C Kukwam, H-H Lin (Cameroon, Taiwan)

PD-566-12 Yield of bacteriologically confirmed TB from a national population-based TB prevalence survey in Zimbabwe, 2014—2015
K Charambira, H Muturu, R Ncube, C Sandy, C Zishiri (Zimbabwe)

PD-567-12 Patient and health system delay among pulmonary tuberculosis patients in Switzerland
C Auer, S Kiefer, M Zusch, C Schindler, K Wyss, S Bosch-Capblanch, J-P Zellweger, E Altpeter (Switzerland)

PD-568-12 TB or non-TB? Factors associated with misdiagnosis of tuberculosis in Yogyakarta, Indonesia
A M I Saktiawati, Y W Subronto, T S van der Werf (Indonesia, Netherlands)

PD-569-12 Can active case finding help reduce patient’s delay in TB diagnosis in rural India?
P Shokeen, S Waikar, B Pandya, V Ghule, S Chadha (India)

PD-570-12 TB case finding in crisis situation: lessons learnt from Borno state, Nigeria
E Ubochioma (Nigeria)

PD-571-12 TB patient cost analysis, Cavite Province, The Philippines: assessment of households experiencing catastrophic costs
V Mendoza, E Tomeny, I Langley, C Yo, S B Squire (Philippines, United Kingdom)
09. Progress engaging private and informal health providers in TB care in India

Chair: Aakshi Kalra (India)

PD-572-12  Involving private practitioners in Indian’s national tuberculosis control programme: a randomised trial
T Battagliotti, V Yellappa, S K Gurum, D Narayanan, P Van der Shuyt (Belgium, India)

PD-573-12  Improving quality of care delivered by private providers: Patna, Bihar
S Papineni, N Jha, P Das, K N Sahai, D Gupta, S Khaparde, P Shukla, P Bawan (India)

PD-574-12  Private provider engagement through effective service delivery: Patna, India
S Papineni, N Jha, P Das, K N Sahai, D Gupta, S Khaparde, P Shukla, P Bawan (India)

PD-575-12  Can India’s informal healthcare providers become a strategic alliance in TB care and prevention?
K Sagili, S S Chadha (India)

PD-576-12  High loss to follow up of TB patients treated in private sector: follow-up study in urban, rural and tribal parts of Maharashtra
O M Bera, S Kamble, M Chandge, S Nayak, R Tate (India)

PD-577-12  Notification of TB patients from private healthcare providers in India: inter-district variation and underlying characteristics
B Vadera, K Rade, S Manman, V Roddowar, R Rao, D Gupta, A Sreenivas (India)

PD-578-12  Managing resources for maximising patient benefit: an experience from private provider interface agency, Mumbai, India
S Vijayan, V Naveen, S Pandey, R Gandhi, V Chandale, P Kandasamy, R Chopra, P Mahesh (India)

PD-579-12  Private sector TB notifications. Where are we? Experience in 13 provinces of India
V Ghaile, S Saruk, S Chadha, S Srivastava, A Tandon (India)

PD-580-12  Combating TB through private provider engagement: PPIA model
L Sadasivan, S Vijayan, R Chopra, P Kandasamy, R Gandhi, V Chandale, M Datta, R Taralekar (United States of America, India)

PD-581-12  Simple, cost-effective strategy for increased TB case notification by private sector healthcare providers in 100 cities of India
S Mukhopadhyay, B Samuel, D Livingstone, B Bish, S Corneillus, A Victor, G Karapetyan, D Cherian (India, United States of America)

10. Where are they? Case finding and preventive therapy for paediatric TB

Chair: Lisa Cranmer (United States of America)

PD-582-12  Addressing bottlenecks in the childhood tuberculosis cascade: a model to accelerate case detection, treatment and prevention of TB among children in Viet Nam
B Vu Ngoc, L Tran Thi Huong, K Green, J Driscoll, B Mai Thanh, Q Dau Minh, L Thai Dinh, L Sadasivan (Viet Nam, United Kingdom, United States of America)

PD-583-12  “That is why others give up”: care giver perspectives on TB case-finding and HIV clinical services among paediatric TB patients, Tanzania
C Emerson, E Ndakidemi, B Ngowi, B Ng’eno, G Munuo, A Medley, W Kohl, S Modi (United States of America, Tanzania, United Rep.)

PD-584-12  Quantifying exposure to tuberculosis in child contacts: a validation study
J Coit, M Mendoza, C Pinedo, H Marin, J Galea, S R Leon, L Lecca, M Franke (United States of America, Peru)

PD-585-12  Improvements in IPT uptake rates in under-five children in Ethiopia: results of a five-year programme
G Gashu, D Jerene, N Hnuy, D Habte, G Kabeto, K Melkieni, S Negash, P Suarez (Ethiopia, United States of America)

PD-586-12  Decentralisation of child TB services increases child TB case detection in Uganda
R Niyongabo, A Nakwanwagi, D Dongo (Uganda)

PD-587-12  Finding the missing cases: improving childhood TB case detection through active screening in Meru county hospital
E Kanana, M Munya, R Ngata, D Barkebo, I Kathune (Kenya)

PD-588-12  Do intensified case finding activities among malnourished children yield results? Prospective cohort study at nutritional rehabilitation centres,
Maharashtra
S Sardul, S Kamble, S Patil, O M P Bera (India)

PD-589-12  Barriers to contact screening and isoniazid preventive therapy among paediatric contacts of adults with smear-positive tuberculosis
V Belgaukmr, A Chandanawale, C Valvi, S Khade, D Jain, G Dhumal, R C Bollinger, A Deluca (India, United States of America)

PD-590-12  Modelo de abordaje para la atención al contacto de tuberculosis en edad pediátrica basado en la estructura comunitaria en los Altos de Chiapas
N Enriqez Rios, A Bencomo Alerm (Mexico)
## 11. Tobacco advertising and smoke legislation

**Chair: Tara Singh Bam** *(Singapore)*

| PD-591-12 | Compliance with smoke-free legislation and smoking behaviour: observational field study from India  
S Goel, D Sharma, R Gupta, V Mahajan *(India)* |
| PD-592-12 | Validity of indirect indicators of smoking in predicting active smoking behaviour in public places: cross sectional survey of Tobacco Smoke Free state of India  
S Goel, D Sharma, R J Singh *(India)* |
| PD-593-12 | Compliance with Uganda’s new smoke-free law in hospitality venues: challenges and opportunities from a civil society perspective  
L Robertson, K Namusisi Nyanumung, S Gravely, A Elvis Ndikum, K K Chuan Heng, S Kakoulides, A Oginni, J Christophe Rusatra, World Heart Federation Emerging Leaders Smoke-Free Study Group *(New Zealand, Uganda, Canada, Cameroon, China, United States of America, Nigeria, Rwanda)* |
| PD-594-12 | An evaluation of compliance, knowledge and attitudes related to the 100 percent smoke-free law in bars and restaurants in Kampala, Uganda  
S Gravely, K Namusisi Nyanumung, S Nduwiga Kabwama, L Robertson, K K Chuan Heng, A Elvis Ndikum, A Oginni, J Christophe Rusatra, World Heart Federation Emerging Leaders Smoke-Free Study Group *(Canada, Uganda, New Zealand, China, Cameroon, Nigeria, Rwanda)* |
| PD-595-12 | Tobacco information in Brazil’s high participation social media: an analysis based on indirect television advertising, 2014  
H Carvalho, C Cortes, S Bialous, V Figueiredo *(Brazil, United States of America)* |
| PD-596-12 | Implement the tobacco advertising and promotion regulation in Viet Nam – a cross-sectional data  
V Tran, N B Nguyen, T T H Le, K L Tran, X L Nguyen *(Viet Nam, Zimbabwe)* |
| PD-598-12 | Fight for 85 percent pictorial health warnings on tobacco product packages: a success story from India  
R Singh, A K Pandey, P Lal *(India)* |
| PD-599-12 | Impact of India’s film rule for tobacco control messages on attitudes, intentions and cessation-related behaviour of Bangladeshi tobacco users  
T Turk, F Newton, S Reza Choudhury, S Islam *(United States of America, Australia, Bangladesh)* |
| PD-600-12 | India’s single cigarette economy: a back of the envelope assessment of its volume and size in 2014 and 2016  
P Lal, A K Pandey, D Mishra, C Alexander *(India)* |

## 12. Knowledge is power

**Chair: Stephanie Vaswani** *(Singapore)*

| PD-601-12 | Effectiveness of peer education for the prevention and control of tuberculosis among injecting drug users in Osogbo, Nigeria  
A Adelekan *(Nigeria)* |
| PD-602-12 | Provider Behaviour Change Communication (PBCC) approach for increasing private sector engagement for TB programme in India  
D Alam, P Shokeen, S Waikar, V Ghule *(India)* |
| PD-603-12 | Target audience responses to television public service announcements on awareness of TB testing and treatment: message-testing findings from India  
V Mallik, T Turk, P Puri, N Singh Negi, S Mullin, N Murukutla, C Curell, C Curell *(United States of America)* |
| PD-604-12 | Atención centrada a personas afectadas por tuberculosis, mediante planes de cuidado, en la región costa chica del Estado de Guerrero  
J Lopez Caballero, C Melquiades Chavez, M V Leyva Avila, R E Huicochea Lozano *(Mexico)* |
| PD-605-12 | I’m not going to play with my life: qualitative study of tuberculosis patient education and empowerment  
S Law, A Daftary, D Menzies *(Canada)* |
| PD-606-12 | Tuberculosis knowledge, attitudes and practices in a fragile emergency situation: the experience of Somalia  
| PD-607-12 | Myths and realities of knowledge, attitudes and practices of household contacts of patients with tuberculosis in five cities of Colombia  
N Gil, L Lopez, D Rodriguez, M Rondon, A Betancourt, B Gutierrez, Z Rueda *(Colombia)* |
| PD-608-12 | Mapping the needs for training on drug-resistant TB clinical decision making  
P Lempens, T Decron, L Rigouts, A Van Deun, B de Jong, L Lynen *(Belgium)* |
13. Tobacco use prevalence and risk of diseases

Chair: Gan Quan (China)

PD-609-12 What is the prevalence of E-cigarette use among current smokers and users of tobacco in India? A multicultural, cross-sectional study
G K Tripathi, R J s Singh, S Khatri, R (India)

PD-610-12 Prevalence of tobacco use among priests and their willingness to spread anti-tobacco messages among devotees in Delhi
S Grover, T Anand, P Lal, D N Sinha, R Mehrotra (India)

PD-612-12 Cigarette smoking and pancreatic cancer survival
N Juliet (Uganda)

PD-613-12 Active and passive smoking in relation to lung cancer incidence in the Women’s Health Initiative prospective cohort study
S Brian Adriane (Uganda)

PD-614-12 Opportunistic screening for oral cancer and precancerous lesions in dental OPDs of Government hospitals of Punjab, India
R Gupta, V Mahajan, H S Bali, S Goel, N Kaur, G Singh (India)

PD-615-12 Women and tobacco in Mexico. Gender differences found in a tobacco cessation programme
G Ponciano-Rodriguez (Mexico)

14. Tobacco control at the global perspective

Chair: Dean Schraufnagel (United States of America)

PD-616-14 Sustainable funding and plan for tobacco control
Syed Mahbubul Alam (Bangladesh)

PD-617-12 How do we measure progress in tobacco control? Comparing GATS results from 2010 and 2017
P Lal, A K Pandey, M B Aghi, R J Singh, J Tripathi (India)

PD-618-12 Comparison of tobacco control programmes worldwide: a quantitative analysis of the 2015 WHO MPOWER report
G Heydari (Iran, Islamic Rep. Of)

PD-619-12 Ten years of India’s National Tobacco Control Programme: achievements, challenges and the way forward
A K Pandey, R J Singh, P Lal, B Gopal (India)

PD-620-12 Bangladesh Tobacco Control Research Network: a journey towards programmes sustainability
M S Islam, M Shahjahan, K Ahmed (Bangladesh)

PD-622-12 Systems strengthening for reduction in prevalence of tobacco use in Punjab, India
R Gupta, V Mahajan, H S Bali, R J Singh, S Goel, T Kaur, G Singh (India)

PD-623-12 Ten year support of Bloomberg initiative grants programme for tobacco control in Bangladesh
B Gopal, S M A Tahir (India, Bangladesh)

PD-624-12 Awareness and implementation of a national tobacco control law in Northern India
R S Rath, A Krishnan, B Nongkynrih, P Misra (India)

15. The role of civil society organisations and communities in case finding

Chair: Jonathan Daniels (United States of America)

PD-625-12 Impact of project Aashya on tuberculosis indicators in Punjab State, India
S Singh, H Deepak Shewade, S Mohanty, N Kumar, S Satyanarayana, S Chadha, A M V Kumar (India)

PD-626-12 Community TB outreach using Xpert® MTB/RIF in urban slums of Ogun state, Nigeria: are the missing cases detected?
N Chukwueme, F Soji, S Onafade, A Lawanson, O Omosebi, C Ogudebe, A Thedigbo, M Gidado (Nigeria, Netherlands)

PD-627-12 Impact of two video formats on understanding tuberculosis vaccine clinical trials among community volunteers in South Africa
A Fernandez, M Aderiye, A van der Westhuizen, K Rutkowski, W Rida, V Mhlole, A Diacon, K Croucher (South Africa, United States of America)

PD-628-12 Project Aashya: a civil society initiative in India pushing the agenda of END TB
S S Nayak, J P Tripathy, S Mohanty, G Mallick, P Agarwal (India)

PD-629-12 Effectiveness of community engagement in increasing case detection among current and ex-miners: Swaziland experience
S Ngwena, T Dlamini, M Bhebhe, M Zwane (Swaziland)
16. Key affected populations

<table>
<thead>
<tr>
<th>Poster ID</th>
<th>Title</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-635-12</td>
<td>Active screening for tracing hidden TB cases in a vulnerable community, Punjab, India</td>
<td>N Kumar Sharma, P Agarwal, R P Verma (India)</td>
</tr>
<tr>
<td>PD-636-12</td>
<td>Identifying missing cases from key affected population through active case finding in rural India</td>
<td>P Shokeen, N Solanki, S Upadhyay, P Jha, S Gaikwad, N Sinha, R Kumar, P Amrit (India)</td>
</tr>
<tr>
<td>PD-637-12</td>
<td>Implementation of high-yield intervention package for urban TB control: experience from 40 urban sites of India</td>
<td>S Pandurangan, S Mohanty, S Chadha (India)</td>
</tr>
<tr>
<td>PD-638-12</td>
<td>Potential determinants of treatment outcomes in tuberculosis patients from the Shimla hills in Himachal Pradesh, India</td>
<td>H Singh, S R Maat, A Thakur, I Chauhan (India)</td>
</tr>
<tr>
<td>PD-639-12</td>
<td>Addressing a persistent outbreak in a socially disengaged, mobile population. Infection, outreach, and treatment in shearing gangs in New Zealand</td>
<td>J R McLane, N Gough (New Zealand)</td>
</tr>
<tr>
<td>PD-640-12</td>
<td>Yield of tuberculosis screening using Xpert MTB/RIF among HIV-infected pregnant women in Lilongwe, Malawi</td>
<td>R Flick, M Herce, A Jumbe, M John, C Melhrado, B Mhluza, M Husseinipour (Malawi, United States of America, Zambia)</td>
</tr>
<tr>
<td>PD-641-12</td>
<td>Cross border TB in Malawi: case notifications and treatment outcomes</td>
<td>H S Kamene, M Mbuya, B Girma, S Kaminsa, S Mtambalika, P Ngwira, L Banda, T Kavembu (Malawi)</td>
</tr>
<tr>
<td>PD-642-12</td>
<td>Peer-led active case finding of TB in high-risk groups in the South-Kivu province of DRC</td>
<td>O Bahati Rusumba, A Ishara, E Marhegane Munguakonkwa, C Habimana Ndec, V Bola, L Kitete, J P Kabuya, E André (Congo (Democratic Rep.), Belgium)</td>
</tr>
<tr>
<td>PD-643-12</td>
<td>Comité de monitores de tuberculosis en CERESOS del Estado de Puebla</td>
<td>V Zarate Lemuz, A D Gonzalez Santellán (Mexico)</td>
</tr>
</tbody>
</table>

17. Overcoming laboratory challenges in the field

<table>
<thead>
<tr>
<th>Poster ID</th>
<th>Title</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-644-12</td>
<td>Sputum collection factors affecting diagnostic yield</td>
<td>S Datta, M Tovar, T Valencia, E Ramos, R Montoya, J Lewis, C Evans (United Kingdom, Peru)</td>
</tr>
<tr>
<td>PD-645-12</td>
<td>Implementation of a system for laboratory specimen transportation in the Kyrgyz Republic</td>
<td>A Ibrahimova, R Chukurova, A Kadyrov, A Ibraeva (Kyrgyz Republic)</td>
</tr>
<tr>
<td>PD-646-12</td>
<td>Pattern of usage of TB diagnostic procedures in private sector across three cities of a central Indian state: a cross sectional study</td>
<td>J Samal, S Jonnalagade, S Chandra, V Upadhyaya, S Vejendla, M Abraham (India)</td>
</tr>
<tr>
<td>PD-647-12</td>
<td>Evaluation of implantation strategies for the use of innovative sample transport reagent for tuberculosis-healthcare worker preferences of the use of the OMNIgene Sputum reagent</td>
<td>H-Y Kim, I Corduroi, S Choi, C Urarte-Gil, R Song, H Sohn (United States of America, Peru, Switzerland)</td>
</tr>
<tr>
<td>PD-648-12</td>
<td>The use of same-day, spot sputum testing leads to improved pre-diagnosis retention of tuberculosis patients in public health facilities in Ethiopia</td>
<td>N Hino, Z Yangal, A Alem, B Belayneh, D Jerene, S Tsegaye, Y Kassie, P Suarez (Ethiopia, United States of America)</td>
</tr>
<tr>
<td>PD-649-12</td>
<td>Status of sputum and slide transportation approach on TB case notification in 19 provinces of Afghanistan</td>
<td>M H Akhtar, M Z Deldar (Afghanistan)</td>
</tr>
<tr>
<td>PD-650-12</td>
<td>Status of accreditation of TB diagnostic tests in Africa</td>
<td>T Maruta (Tanzania, United Rep.)</td>
</tr>
<tr>
<td>PD-651-12</td>
<td>Integrating and optimising public sector CBNAAT diagnostic services for private sector TB patients in Mumbai, India</td>
<td>R Taralekar, P Bogam, J Thakker, A Banne, A Sayed, D Gangurde, A Aggarwal, P Keskar (India)</td>
</tr>
<tr>
<td>PD-652-12</td>
<td>Impact of introducing LED-FM services in increasing case detection among smear-positive tuberculosis patients under the RNTCP, India</td>
<td>S Goel, R Pandey, A Kankaria (India)</td>
</tr>
<tr>
<td>PD-653-12</td>
<td>QMS implementation in the TB laboratory network in Uzbekistan: phase I</td>
<td>Z Sayfuldinov, N Parpieva, M Akhmadova, D Ulmasova, A Housey, M Volik (Uzbekistan, Armenia)</td>
</tr>
</tbody>
</table>
18. Don’t resist! Finding the pattern through sequencing

**Chair:** Alberto Garcia-Basteiro (Mozambique)

**PD-654-12** Detection of M. tuberculosis in extra-pulmonary specimens: comparison between Xpert MTB/RIF and screening for multi-drug resistance using BACTEC™ MGIT™ 960 system with thin layer agar

T Realpe, G I Mejia, E Zapata, G Cadavid, P Baron, J Robledo (Colombia)

**PD-655-12** Performance of the GenoType MTBDRplus assay v2.0 in the diagnosis of tuberculosis and drug resistance in Lima-Peru

K Lopez, A Winnet, J Coll, D Martel, J Aliaga, N Barreda, R Calderon, C D Mitnick (Peru, United States of America)

**PD-656-12** Drug susceptibility of rifampin-resistant tuberculosis using whole genome sequencing to identify genes of interest in Pune, India

J A Tornheim, A K Madugundu, N Pradhan, R Bharadwaj, V Mave, J Golub, A Pandey, A Gupta (United States of America, India)

**PD-657-12** Molecular characterisation of pre XDR and XDR-TB at tertiary care centre of New Delhi, India

B K Singh, R Sharma, S K Sharma, S Sinha, P Jorwal, U Alavadi, V P Myeenuddu (India)

**PD-658-12** Evaluation of Xpert MTB/RIF assay for the diagnosis of tuberculosis and rifampicin resistance in pulmonary tuberculosis

T Kuyucu, O Akkan, G Erdal, G Catmabacak, B Aksu, Tuberculosis Study Group (Turkey)

**PD-659-12** Diagnostic accuracy of Xpert® MTB/RIF assay in detection of M. tuberculosis in extra-pulmonary samples

A K Ilustre, J Caoili (Philippines)

**PD-660-12** Ethical considerations and data governance for the ReSeqTB data platform

C Emerson, M Schito, M Zignol, P Miotto, D Cirillo, A Starks, T Rodwell, D Hanna (Canada, United States of America, Switzerland, Italy)

**PD-661-12** An incremental cost-effectiveness analysis of the second Xpert® MTB/RIF assay for detecting M. tuberculosis and rifampicin resistance

G Wang, H Huang (China)

**PD-662-12** Role of next generation sequencing in tuberculosis diagnostics: resolving the clinical dilemma of discrepancies in laboratory findings

A Van der Spoel van Dijk, U Hallbauer, C Mahonono, M Nyaga (South Africa)
ENCUENTRO
THURSDAY 12 OCTOBER
In comparison to epidemics like HIV or, more recently, Ebola, civil society has played a lesser role in TB and the response has been led more by the medical community. However, civil society can play a critical role in supporting the WHO End TB objectives. Meaningful civil society engagement can contribute to more informed communities and key populations, who can better support TB patients in accessing and completing treatment.

Meaningful community engagement can only take place if; 1) All stakeholders understand what ‘meaningful community engagement’ means and how it benefits the fight against TB; and, 2) There is a clear understanding of the factors that influence community engagement.

Questions that need to be answered include: How we can prepare communities to undertake active case finding activities and how they can support home or community based counselling and treatment completion? Can community members with limited education acquire requisite skills to accurately screen and identify people with TB-like symptoms? What are the factors in the immediate environment of the communities that prevent or support case detection and treatment adherence/completion? Should interventions be specific to key population groups or cover the general population in high burden areas? Are data collection and monitoring tools used and adapted to the needs of local civil society organisations and are they aligned to the national TB programmes’ data collection tools?

This panel discussion will explore these issues through lessons learnt while implementing community based active case finding activities in high-burden TB settings in nine sub-Saharan African countries and in India. It identifies some of the barriers, such as human resources, training, collaboration with other stakeholders, assessment of intervention areas, preparation of the health facilities, acceptance of the communities and shares local solutions that have been used to address such challenges.

Since World TB Day 2016, more than 50 global institutions have joined under the banner of the Louder Than TB campaign to raise awareness and address the challenges posed by TB. These efforts focus on the integration of TB into maternal and childhood services, boosting TB prevention, and driving investments in new TB drugs, diagnostics, and vaccines.

The campaign centres on the universality of music and sound, transforming the bad sounds of TB into good sounds. The global coalition of organisations who support the effort includes WHO, UNITAID, Médicins Sans Frontières, Save The Children, ONE, The Global Fund, World Bank Group, and dozens more.

This space will showcase the impact of the Louder Than TB Campaign, including informational pamphlets, factsheets, and brochures. We will also bring posters and two dry-erase boards that would encourage participants to write in their names and to join the Louder Than TB coalition and share on social media. We would like to see the space used as a forum to speak with interested parties and spread the message of TB awareness.

*This activity will be going from 8am until the end of the day at the entrance hall of Expo Guadalajara.

**Background:** Conducting clinical research, such as STREAM Stage 2, in developing countries presents distinct opportunities and challenges, and cannot succeed without the support of affected communities. Recent controversies regarding clinical research conducted in developing countries indicate that much remains to be learned about what constitutes effective community collaboration.

**Defining Community:** Community members in the area surrounding a research site can include traditional healers, faith-based organisations, individuals and families affected by MDR-TB, and other community organisations. Traditional healers, or shamans, in Africa are highly revered since illness is thought to be caused by witchcraft, pollution or through neglect of the ancestors. In South Africa, compared to 25,000 Western-trained doctors there are 200,000 traditional healers who are consulted by approximately 60 percent of South Africans. Broader community engagement stakeholders include political decision makers, civil society, donors, and advocacy groups.
The continued reliance on the injectable agents for the treatment of MDR-TB causes significant problems for people living with MDR-TB, the providers who support their care, and the programmes within which they are treated. In the past, there were limited options, but with the new and repurposed drugs available, mandatory use of these toxic agents is questionable.

This panel will review the evidence supporting the use of the injection and then present a discussion on the ethics of continued injectable use in the era of patient-centred care. The panel discussion will include perspectives from DR-TB survivors and other members of the affected community.

**Do we still need the injection for treating MDR-TB?**

The continued reliance on the injectable agents for the treatment of MDR-TB causes significant problems for people living with MDR-TB, the providers who support their care, and the programmes within which they are treated. In the past, there were limited options, but with the new and repurposed drugs available, mandatory use of these toxic agents is questionable.

This panel will review the evidence supporting the use of the injection and then present a discussion on the ethics of continued injectable use in the era of patient-centred care. The panel discussion will include perspectives from DR-TB survivors and other members of the affected community.

Elaboración de un estudio de caso de una paciente con insuficiencia renal que ha concluido sus estudios de protocolo, se encuentra en tratamiento sustitutivo de hemodiálisis y está programado para recibir la cirugía de Trasplante. En la etapa previa a su cirugía presenta síntomas que sugieren TB, lo cual se confirma mediante pruebas de laboratorio y esta situación implica que el paciente sea sometido a tratamiento por un año, para recuperar las condiciones necesarias y poder recibir la cirugía de trasplante. Esta situación tiene muchas complicaciones para el paciente desde varias perspectivas, esto es médicas, obviamente en su salud, económicas, psicológicas principalmente.

El trabajo contempla, explicar el acompañamiento que el paciente y su familia reciben a través de la Asociación de Trasplantados en el HCFAA, para sobrellevar esta situación que lo vulnera y no le permite recibir el Trasplante Renal.

**Strengthening collaborative advocacy for clean air action**

Air pollution is by far the most important global environmental health risk, with 6.5 million deaths per year attributable to poor indoor and outdoor air quality. This burden falls disproportionately on low-income populations and on people living in low- and middle-income countries. Aggressive clean air action is needed not only to reduce pollution-related illness and death but also to reduce emissions contributing to climate change. History shows that advocacy by civil society organisations is crucial for driving public health action and environmental protection measures by government.
As economies of countries are growing, many countries around the world are gradually becoming ineligible for development assistance, including donor support to health systems. There are concerns that the global development and financing landscape in some of these countries is changing too fast, and if not managed correctly, it could prevent progress, and even put past investments at risk. This is especially true for health, where constrained resources could lead to people and children not getting the life-saving TB treatment or vaccinations they need.

This transition process is something countries are facing from multiple donors, often at the same time, or with only a few years apart. The process for many donors such as the Global Fund, Gavi, PEPFAR, USAID and other bilateral donors are not dissimilar.

It is critical to ensure donor withdrawal is gradual and responsible and does not put at risk development gains and cause harm to individuals and services. The challenges countries face from simultaneous withdrawal of financing for health must be taken seriously.

This panel discussion will provide an opportunity for the TB and HIV communities to discuss the impact of simultaneous transition with representatives from affected communities, civil society, donors and representatives from countries faced with simultaneous transition and innovative solutions to counteract this.

The 2017 G20 German presidency saw the world’s richest economies discuss health for the first time. Antimicrobial resistance, emerging health threats and health systems strengthening were some of the issues high on the agenda. Ever wondered how the G20 works? Want to know the processes and opportunities for influence? How can we work together as civil society with parliamentarians and international organisations for best impact?

This interactive workshop with advocates who have worked within the G20 will share experience and learning and provide a space where civil society and community can plan join engagement within the Argentinian presidency.

This networking session will be an opportunity for community organisations, lung health clinicians and researchers to meet and share experiences of TB and tobacco control advocacy, and develop strategies for building capacity and collaborate more closely on effective clean air advocacy.

**ENCUENTRO: PANEL DISCUSSION 13.00 – 14.00 FORO EXPO GUADALAJARA**

**The impact of simultaneous donor withdrawal on health systems**

**ENCUENTRO: PANEL DISCUSSION 14.15 – 15.45 FORO EXPO GUADALAJARA**

**Communication platform for global insertion and local change in poor communities**

**ENCUENTRO: SKILLS BUILDING 14.15 – 15.15 ENCUEANTERO SESSION ROOM**

**What is the G20 and how can we use it?**
This is a highly interactive session that provides participants with a better understanding of the basics of power and influence and how to use them more effectively through creating networks, partnerships and alliances.

In this two hour practical exercise, participants will come away with a better understanding of how to use their power and influence with their superiors, subordinates, peers and those within and outside their organisation.

Focus is given to developing the interpersonal communication skills necessary to facilitate an enhanced sense of community and cooperation as well as to establish strong partnerships for promoting public health initiatives, in the context of the World Lung Health Conference.

Chair: Marianne Gaye-Ayrault  (France)
Speaker: Bartholomew J. Timm (United States of America)
The Union publishes two scientific, peer-reviewed journals, disseminating the latest research to public health professionals, healthcare workers and researchers.

THE UNION JOURNALS

The International Journal of Tuberculosis and Lung Disease (IJTLD)
- Print and online versions published monthly, plus supplements
- Over 12,000 readers and close to 200,000 full-text downloads annually
- Open access six months after publication online
- Now in its 22nd volume
- Impact factor: 2.468 (2016)

Submit an Article
The IJTLD encourages submissions of original research on tuberculosis control and the promotion of lung health. Visit theunion.org/what-we-do/journals/ijtld for more information

ISSN 1027-3719 (PRINT)
e-ISSN 1815-7920 (ONLINE)
journal@theunion.org

Public Health Action
- Open-access online journal
- Focus on health systems and health services for vulnerable groups
- Emphasis on operational research
- All issues accessible on PubMed via PubMed Central
- Less than five months turnaround time from submission to publication
- Now in its 8th volume

Submit an Article
PHA welcomes the submission of articles on health systems and health services research. Visit theunion.org/what-we-do/journals/pha for more information

e-ISSN 2220-8372 (ONLINE)
pha@theunion.org

“PHA encourages articles that contribute to making the greatest possible impact on health in developing countries.”
Dr Dermot Maher, MD – Editor in Chief, Public Health Action

JOIN THE UNION: All Union memberships include full access to the IJTLD. Contact membership@theunion.org for more information.
Lived experience of the impact of the tobacco industry’s corporate abuse of economically disenfranchised groups

Chair: Mr. Matthew Myers, President, Campaign for Tobacco-Free Kids (United States of America)

Women’s tobacco use
Dr. Lorraine Greaves, British Columbia Centre of Excellence for Women’s Health (Canada)

Legal and human rights implications of tobacco use
Mr. Gustavo Sóñora, Legal Consultant for tobacco control in Latin America, International Union Against Tuberculosis and Lung Disease (Mexico)

The tobacco industry’s corporate abuse of vulnerable groups
Ms. Adriana Carvalho, Legal Director at ACT Health Promotion (Brazil)

Tobacco destroyed my family
Ms. Alicia Yolanda, Coordinator of CODICE in the state of Jalisco (Mexico)

Experiencia vivida del impacto del abuso corporativo de la industria tabacalera en grupos económicamente excluidos

Presidente: Sr. Matthew Myers, Presidente, Campaign for Tobacco-Free Kids (Estados Unidos de América)

Tobacuismo en mujeres
Dra. Lorraine Greaves, British Columbia Centre of Excellence for Women’s Health (Canadá)

Consecuencias jurídicas y en materia de derechos humanos del tabaquismo
Sr. Gustavo Sóñora, Asesor jurídico para el control del tabaquismo en América Latina, Unión Internacional Contra la Tuberculosis y Enfermedades Respiratorias (México)

El abuso corporativo de la industria tabacalera en grupos vulnerables
Sra. Adriana Carvalho, Directora jurídica de ACT Health Promotion (Brasil)

El tabaco destruyó a mi familia
Sra. Alicia Yolanda, Coordinadora de CODICE en el estado de Jalisco (México)

Lorraine Greaves
Lorraine Greaves PhD is a medical sociologist and Senior Investigator at the Centre of Excellence for Women’s Health in Vancouver, Canada and its former Executive Director from 1997–2009. Dr. Greaves has worked in academic, government, education and NGO settings. She was the Senior Policy Advisor for BC Women’s Hospital and Health Centre and Executive Director of the Health Systems Strategy Division of the Ontario Ministry of Health and Long-Term Care. Dr. Greaves is a Clinical Professor in the Faculty of Medicine at UBC and an expert in tobacco, substance use, violence and trauma, and the integration of sex, gender and equity into research, care, programme and policy development. She has published 100 journal articles, hundreds of reports, and several books, including Smoke Screen: women’s smoking and social control, Becoming Trauma Informed (with Poole), Making it Better: gender transformative health promotion (with Poole and Pederson), Transforming Addiction: gender, trauma and transdisciplinarity (with Poole and Boyle) and Designing and Conducting Gender, Sex and Health Research, (with Oliffe). Her latest book is Gender Unchained: notes from the equity frontier (with Poole). She has received numerous awards, among them the Outstanding Ontario Achievement Award, the VancouverYWCA Woman of Distinction, the Lifetime Achievement Award from the International Network of Women Against Tobacco (INWAT) and an Honorary Doctorate from the University of Ottawa.
**Alicia Yolanda Reyes Alexander** is a journalist by training and an activist by vocation. Originally from Guadalajara, she lived in Mexico City for 10 years where she studied communications. She has worked with several different print and broadcast news outlets including Excelsior, La Jornada, Prensa Latina, Informador, El Occidental, Milenio, Radio Escucha and Radio Vital. She has spoken in front of the national AIDS programme of Mexico on the behalf of NGOs in Jalisco working in HIV. She is currently the representative for ‘Codice – Communication, Dialogue, Conscience’, in the state of Jalisco. Through her work with this organisation, she conducts workshops on health topics including HIV/AIDS, sexual health and tobacco control. As a journalist, she has covered International AIDS Conferences in South Africa and Brazil and has spoken on television about smoke-free spaces and public policy. She is the author of a book titled, Abortion: a freeing. She is a spokesperson and campaigner for smoke-free spaces and protections for non-smokers in Guadalajara, Zapopan and Tlaquepaque – three zones of Jalisco.

**Gustavo Sóñora** has been a legal consultant for tobacco control in Latin America at The Union since 2008. He was a member of the WHO’s expert panel on Article 19 of the Framework Convention for Tobacco Control (WHO FCTC), which focuses on tobacco industry liability. He provided expert advice for the design and enactment of Uruguay’s 2008 tobacco control law, which is regarded as an international model for tobacco control legislation. Throughout Latin America and the Caribbean, he has supported the development of tobacco control policies, trained lawyers from governments and civil society on WHO FCTC implementation, and built capacity among government officials to counter tobacco industry interference. He was a contributor to the Pan-American Health Organization’s Manual for Developing Tobacco Control Legislation in the Region of the Americas. He participated in Canada’s International Development Research Centre project on Public Health Implications of Alcohol Industry Corporate Social Responsibility Programs (Latin America) together with National Commission of Drugs and the Center for Research in Tobacco Control by Uruguay.

**Adriana Carvalho** is a Brazilian lawyer, legal director at ACT Health Promotion, current name for Alliance for the Control of Tobacco Use (ACT), in São Paulo, where she has worked since August, 2008. Carvalho contributes to public policies for tobacco control and other risk factors for non-communicable diseases. She is a fellow from the Global Tobacco Control Leadership Program / Johns Hopkins University of Public Health. She is an advocate in Brazil before the Judiciary, Executive and Legislative Branches, Public Prosecutor Offices, Labor Public Prosecutor Offices, General Attorney Office, National Sanitary Agency (ANVISA) and others.
The Christmas Seals tradition dates back to 1904, when a Danish postman named Einar Holboell developed the idea of adding an additional charitable stamp onto seasonal letters as a way to raise funds to fight tuberculosis.

The tradition was quickly adopted by other countries and continues today. Lung health associations have since raised millions of dollars in funds by selling these Christmas or TB seals.

The Union holds its annual Christmas Seals Exhibit and Contest during the World Conference every year in recognition of this colourful tradition. Heritage and organisational members are invited to submit their Christmas Seals for exhibition at the conference.

Visit the Christmas Seals exhibit in the Exhibition Area.

UNION MEMBERS VOTE FOR THEIR FAVOURITE SEALS AT THE UNION VILLAGE, IN THE EXHIBITION HALL.

RESULTS OF THE CONTEST WILL BE ANNOUNCED AT THE GENERAL ASSEMBLY:

Hall 10 – Jalisco Hall
Friday, 13 October 19:30–20:30

2016 1st prize winner: The Tuberculosis Association of India

2016 2nd prize winner: Taiwan Anti-Tuberculosis Association

2016 3rd prize winner: The Japan Anti-Tuberculosis Association
At these sessions, experts will meet with small groups of participants to discuss, face to face, the challenges and opportunities presented by working to promote lung health. These sessions are free of charge for registered participants only and can hold a maximum of 50 people. Please register for the ‘Meet the expert’ sessions at the conference registration desk. Participation will be on a first-come, first-served basis.

12.15 – 13.15 HALL 2 - EVENTS BALLROOM

01. Managing tuberculosis in pregnant women and newborns

This session will highlight some of the key knowledge, ongoing science and research gaps relevant to TB prevention and treatment in pregnant and postpartum women.

**Speakers:** Amita Gupta (USA), Adrie Bekker (South Africa)

Amita Gupta, MD MHS is an Associate Professor of Medicine and International Health at Johns Hopkins University, USA. She conducts HIV/TB studies in India and globally as part of the International Maternal Pediatric Adolescent AIDS Clinical Trials (IMPAACT) and Adult AIDS Clinical Trials Networks (ACTG) focused on treatment and prevention of TB, including in pregnant women.

Adrie Bekker, MBChB, MMed (Paeds), PhD is a neonatologist at Stellenbosch University, South Africa. She conducts TB and HIV pharmacokinetic studies in South African newborns as part of the International Maternal Pediatric Adolescent AIDS Clinical Trials (IMPAACT) network. She is a clinician at Tygerberg Hospital, Cape Town where she manages TB- and HIV-exposed and infected newborns.

12.15 – 13.15 HALL 3 - EVENTS BALLROOM

02. Zoonotic TB at the human/animal interface in North America

**Speakers:** Suelee Robbe-Austerman (USA), Alejandro Perera (Mexico)

International trade often supports TB control programmes in livestock, however, regions with high zoonotic TB (ZTB) prevalence are often cordoned off from trade, meaning they receive less support for TB control and increasing the risk for zoonotic transmission. Current investigation practices of ZTB in humans do little to prevent new ZTB cases. We will discuss how we can use whole genome sequencing to coordinate information between veterinary and public health agencies to change this paradigm for mutual benefit.

12.15 – 13.15 HALL 5 - EVENTS BALLROOM

03. MDR-TB challenging cases and potential role of therapy to drug monitoring

**Speakers:** Chen-Yuan Chiang (Taiwan), Francesca Conradie (South Africa), Jan-Willem Alffenaar (Netherlands)

1. **Management of MDR-TB under programme conditions** – Chen-Yuan Chiang (Taiwan)
   Programmatic management of drug-resistant tuberculosis in resource limited settings heavily depends on efficient diagnostic algorithms and effective standardised regimens. Introduction of shortened MDR-TB regimens has great potential in improving treatment outcome of MDR-TB, but adverse drug reactions (especially QT prolongation) should be closely monitored.

2. **Management of difficult MDR-TB cases** – Francesca Conradie (South Africa)

3. **The role of therapeutic drug monitoring** – Jan-Willem Alffenaar (Netherlands)
   Therapeutic drug monitoring (TDM) is a practical tool to tailor the dose to the individual need of the patient to optimise drug exposure to increase efficacy and reduce toxicity. Implementation can be challenging, specifically in high burden – low resource setting. Dos and don’ts in TDM implementation are discussed and questions from the audience are addressed.
04. Xpert MTB/RIF is more sensitive than smear microscopy and allows for rapid diagnosis of rifampicin-resistant TB. Despite this, multiple randomised controlled trial (RCT) have failed to show a benefit on patient relevant outcomes – does this call for a change in how we utilise GXP in resource limited settings?

---

Speakers: Tom Boyles *(South Africa)*, Claudia Denkinger *(Switzerland)*

1. Recent implementation studies suggest that the current role of GXP in diagnostic algorithms in high burden, low resource settings is not having an impact on TB outcomes, and as such use of this test in these settings requires a rethink. Xpert MTB/RIF was strongly endorsed by WHO based on diagnostic accuracy studies, but before diagnostic intervention research had been completed. Since then evidence from multiple studies of varying designs have shown Xpert to have no benefit on patient relevant outcomes such as mortality. This suggests that a strong endorsement was premature and a reappraisal of the evidence is urgently warranted – Tom Boyles *(South Africa)*

2. While recent RCTs have not demonstrated the anticipated benefit on patient outcomes, there are study design and implementation issues that may play a role in this, and we shouldn’t throw the baby out with the bath water. Absence of evidence is not evidence of absence. While major RCTs have not demonstrated the anticipated benefit on patient outcomes, there are study design and implementation issues that may play a role in this. We should learn from the implementation of other diagnostics tests and look at the issue in a differentiated way – Claudia Denkinger *(Switzerland)*

---

04. Xpert MTB/RIF es más sensible que el análisis microscópico directo y permite un diagnóstico rápido de la tuberculosis resistente a la rifampicina. A pesar de ello, múltiples RCT no han venido a mostrar beneficios en resultados relevantes con los pacientes. ¿Impone ello un cambio en la forma en que utilizamos GXP en entornos con recursos limitados?

---

Speakers: Tom Boyles *(South Africa)*, Claudia Denkinger *(Switzerland)*

1. Recientes estudios sobre implementación sugieren que el actual rol de GXB en algoritmos de diagnóstico en entornos con alta carga de la enfermedad y bajos recursos no está teniendo un impacto en los resultados, y por ello el uso de este test en esos entornos exige reconsideración – Tom Boyles *(Sudáfrica)*

2. Aunque recientes RCT no han acreditado los previstos beneficios sobre los resultados con pacientes, hay cuestiones relativas a diseño de los estudios y aspectos de implementación que pueden estar desempeñando un papel relevante en ello, por lo que no debemos actuar con exceso de celo – Claudia Denkinger *(Suiza)*
23. Cross-cutting issues in advancing research and development of new tools to end TB

Meeting the targets for eliminating TB as set forth in the UN Sustainable Development Goals and the World Health Organization’s End TB Strategy will require the introduction of new, more effective tools to prevent, diagnose and treat TB. Presenters in this session will discuss the urgent need to advance TB research and development (R&D) – with a particular focus on vaccines, drugs and diagnostics – and cross-cutting issues such as scientific innovations, community engagement, advancing a research agenda, and the importance of increased investment in R&D.

Co-chairs: David Lewinsohn (United States of America), Martina Casenghi (Switzerland)

1. Advancing a framework for action on TB research – Christian Lienhardt (Switzerland)
2. How scientific innovation can lead to the development of new tools to eliminate TB – Hanif Esmail (United Kingdom)
3. Community engagement in TB R&D – Sarah Mulera (Kenya)
4. Accelerating toward elimination will require increased investment in R&D – Michael Frick (United States of America)
5. Discussion

24. Preventing a public good from becoming a market failure: sustainability of drug-resistant TB medicines markets and supply chains amidst decentralised financing and procurement

National governments are assuming more responsibility for financing and procuring drug-resistant TB (DR-TB) medicines. Regulatory, quality assurance and other procurement requirements of donors fall away with domestic financing and procurement, resulting in many changes including: the number of manufacturers supplying medicines, the quality and prices of medicines and supplier performance in delivering medicines to countries. Sustainability of the upstream market also depends upon robust national forecasting, inventory management and supply chain visibility. This symposium aims to: describe TB financing and procurement trends, provide projections on how financing and procurement trends will affect the DR-TB market size and function, describe country challenges and strategies in financing and procuring medicines and suggest recommendations on how to sustain market and access gains achieved over the past 15 years.

Co-chairs: Prashant Yadav (United States of America), Wim Vandevelde (South Africa)

1. Financing trends, sustainability strategies, and DR-TB lessons learned from the donor perspective – Michael Borowitz (Switzerland)
2. Procurement trends: estimating the minimum volume needed to sustain the global market of pre-qualified DR-TB medicines – Brenda Waning (Switzerland)
3. Financing and procurement of DR-TB medicines from the Georgian perspective: lessons learned with the transition from Global Fund to domestic financing – Irma Khonelidze (Georgia)
4. Financing and procurement of DR-TB medicines from the perspective of Swaziland: lessons learned with the transition from Global Fund to domestic financing – Welile Sikhondze (Swaziland)
5. Prescription for DR-TB medicines market sustainability: recommendations for donors, National TB Programmes and other stakeholders – Sharonann Lynch (United States of America)
6. Discussion
Este simposium se propone: dar cuenta de las tendencias en financiación y aprovisionamiento relacionados con la enfermedad de la tuberculosis, ofrecer proyecciones sobre el modo en que las tendencias en financiación y aprovisionamiento afectarán a las dimensiones y funcionamiento del mercado de medicamentos para tuberculosis drogorresistente, describir los retos y estrategias que existen y que habrán de seguirse en esos procesos de financiación y aprovisionamiento y plantear recomendaciones sobre cómo apoyar al mercado y acceder a los logros cosechados durante los últimos 15 años.

Presiden: Prashant Yadav (Estados Unidos de América), Wim Vandevelde (Sudáfrica)

1. Tendencias en financiación, estrategias de sostenibilidad y lecciones en materia de tuberculosis drogorresistente aprendidas desde la perspectiva del donante
   Michael Borowitz (Suiza)

2. Tendencias en aprovisionamiento: estimar el volumen mínimo necesario para sostener el mercado global de medicamentos para tuberculosis drogorresistente precualificados
   B. Waning (Suiza)

3. Financiación y aprovisionamiento de medicamentos para tuberculosis drogorresistente desde la perspectiva de Georgia: lecciones aprendidas con la transición desde Global Fund a la financiación nacional
   I. Khonelidze (Georgia)

4. Financiación y aprovisionamiento de medicamentos para tuberculosis drogorresistente desde la perspectiva de Suazilandia: lecciones aprendidas con la transición desde Global Fund a la financiación nacional
   W. Sikhondze (Suazilandia)

5. Propuesta para la sostenibilidad del mercado de medicamentos para cuadros de tuberculosis drogorresistentes: recomendaciones para donantes, programas nacionales sobre TB y demás partes interesadas
   S. Lynch (Estados Unidos de América)

6. Debate

SYMPOSIUM 10.30 – 12.00 HALL 5 - EVENTS BALLROOM

25. Gender and TB: programmatic considerations and tools

Men and women face different risk factors for TB and different barriers to successful TB diagnosis and treatment. In order to effectively combat the TB epidemic, gender needs to be considered in programming.

In this session, participants will learn about differences regarding how men and women experience TB, with a focus on men; learn to use disaggregated data to gain a better understanding of the epidemic; be introduced to tools and approaches for integrating gender in TB programming; and hear about programme successes and lessons learned.

Co-chairs: Elizabeth Pleuss (United States of America), Virginia Nagy (United States of America)

1. Gender differences in the experience of TB – Elizabeth Pleuss (United States of America)

2. Understand the epidemic: using gender disaggregated data – Charlotte Colvin (United States of America)

3. Masculinities and TB: implications for programming – Ellen MH Mitchell (Netherlands)

4. Integrating gender in TB programming: tools and resources – Niyati Shah (United States of America)

5. Integrating gender into TB programming: experiences and lessons learned through Challenge TB in Tanzania – Vishnu Mahamba (Tanzania, United Rep.)

6. Discussion

SYMPOSIUM 10.30 – 12.00 HALL 4 - EVENTS BALLROOM

26. Making the tobacco industry accountable – success stories and lessons learned for accelerating action

At great cost to human life, health systems and governments the tobacco industry's interference in public health policies continues unabated as part of its strategy to increase tobacco addiction and profits in poorer countries. While numerous deceitful practices to derail tobacco control and undermine public health have been documented, only a small number of countries have implemented measures to prevent tobacco industry interference in health and tobacco tax policies.

This session aims to present success stories and lessons learned from countries where governments or civil society are actively protecting health policies from industry interference, including measures based on the Framework Convention on Tobacco Control (FCTC) Article 5.3.

Co-chairs: Mira Aghi (India), Michelle Reyes-Palmones (Philippines)

1. Status report on global and national measures for protecting health policies from tobacco industry interference – Anne Jones (Australia)

2. Making tobacco companies accountable in African countries – building capacity for monitoring, advocacy and policy change – Daouda Adam (Chad)

3. Countering tobacco industry interference in sin tax and smoke-free law in the Philippines: gains and lessons from civil society monitoring – Maricar Limpin (Philippines)

4. Observing the observatory: results from Brazil following establishment of first regional tobacco industry observatory in 2016 – Silvana Rubano Turci (Brazil)

5. Why Philippines wants to revise its landmark joint memorandum circular on FCTC Article 5.3 after seven years: gains, challenges and gaps – Alicia Dela Rosa-Bala (Philippines)

6. Discussion
27. Zoonotic TB: every TB case counts! Diagnostics, vaccines and surveillance: from the Americas to India

*Mycobacterium TB* is the primary causal agent of human TB worldwide. The official incidence estimates of zoonotic TB (ZTB) - caused by *M. bovis*, the causal agent of bovine TB – are based only on global TB estimates. The main challenge lies with the *Mycobacterium* specie-unspecific diagnostic used in most of the high-burden TB countries. This bottle-neck is of particular resonance for developing countries, which are characterised by a high TB burden. There is now recognition that the success of the current elimination strategy must include ZTB. This symposium will discuss current scientific and evidence-based research on ZTB globally and the challenges with special emphasis on the Americas.

**Chair:** Alejandro Perera (Mexico)

1. Non-invasive diagnostic sampling for TB in humans and animals – Gerard Cangelosi (United States of America)
2. Whole genome sequence linkages to cows in the US – Kathleen Moser (United States of America)
3. Estimates of *M. bovis* disease in India: insights from the national anti-TB drug resistance survey – Patrick Moonan (India)
4. Whole genome sequencing of ZTB offers a pathway for collaboration between agencies and countries – Suelee Robbe-Austerman (United States of America)
5. Improved diagnosis of bovine TB – Shu-Hua Wang (United States of America)
6. Discussion

**SYMPOSIUM 10.30 – 12.00 HALL 7 - EVENTS BALLROOM**

28. Tuberculosis en poblaciones especiales de America

Es conocido que la tuberculosis es facilmente diseminable entre poblaciones vulnerables, entre ellos poblaciones indígenas, personas privadas de su libertad y migrantes, para lo cual cada población requiere de estrategias especificas para su atención y control de la tuberculosis.

**Presidente:** Anne Fanning (Canada)

1. Abordaje de la interculturalidad para la atención de la TB en comunidades indígenas – Brenda Medel (Mexico)
2. La tuberculosis en las prisiones de México – Dolores Arana (Mexico)
3. Tuberculosis en comunidades indígenas de Bolivia – Mirtha Del Granado (United States of America)
4. Tuberculosis en migrantes Mexicanos – Antonia Muñoz (Mexico)
5. Tuberculosis en trabajadores de la salud en México – Jose Sulca (Mexico)
6. Discussion
29. Modelling to support acceleration toward elimination

There is an urgent need to accelerate efforts towards elimination now that the World Health Organization’s End TB Strategy and the Stop TB Global Plan to End TB are in place. Mathematical modelling is a critical tool for exploring the health impacts, cost-effectiveness and resource implications of future TB care and prevention options. In this session we present new results on four key modelling initiatives, supporting acceleration toward elimination and a country-level National TB Programme perspective on the pros and cons of modelling for country-level decision making.

Co-chairs: Sismanidis Charalampos (Switzerland), Jeremiah Chakaya Muhwa (Kenya)

1. The potential for new diagnostics to improve TB case detection: a transmission dynamic model of nine high-burden countries – Nicolas A Menzies (United States of America)
2. Informing decision-making for universal access to quality TB diagnosis. India: an economic-epidemic model – Hojoon Sohn (Korea, Republic of)
3. Modelling the cost of TB interventions at scale: applied cost functions – Gabriela Gomez (Netherlands)
4. Country-level modelling guidance – Finn McQuaid (United Kingdom)
5. A country perspective: modelling as a useful tool to help think about elimination? – Pak Asik (Indonesia)
6. Discussion

30. Moving towards elimination: test and treat strategies for healthcare workers with TB infection in high-burden settings

Healthcare facilities in countries with high TB or TB-HIV burdens provide a potent environment for TB transmission, where 50 percent of healthcare workers (HCWs) in these settings test positive for latent TB infection (LTBI). Until recently, NTPs in high-burden countries have not prioritised HCW screening for TB infection. While infection control practices stand to be improved, the magnitude of LTBI infection in health facilities must be quantified to better understand current barriers and implementation strategies in HCW TB screening. This requires designing appropriate test and treat strategies for HCWs and determining implementation feasibility in the field setting.

Co-chairs: Fareed Abdullah (South Africa), Greg Perry (Switzerland)

1. What we have learned from all the IGRA (Interferon-Gamma Release Assays) studies among healthcare workers in high-incidence countries – Madhukar Pai (Canada)
2. Barriers to testing and treating LTBI among healthcare workers in high-burden settings – Edward Nardell (United States of America)
3. Integrating LTBI within occupational health strategies in South Africa – Lindiwe Mvusi (South Africa)
4. LTBI test and treat global guidelines – Soy Ty Kheang (Cambodia)
5. Challenges to LTBI testing and treatment implementation in resource-limited settings – Tamar Gabunia (Georgia)
6. Discussion

31. The role of public health licences to accelerate development and access to TB drugs

The agreement in January 2017 between the Medicines Patent Pool (MPP) and Johns Hopkins University for sutezolid was MPP’s first intellectual property licence for TB. This session will review the experience of MPP’s first TB licence and the importance of public health-oriented licences to ensure, not only the development of affordable products, but also to facilitate the clinical development of products further back in the clinical pipeline. It will also discuss what else needs to happen to facilitate and promote the development of new treatments for TB while ensuring affordability.

Co-chairs: Fareed Abdullah (South Africa), Greg Perry (Switzerland)

1. The process of licencing TB drugs: experience of the Medicines Patent Pool in sutezolid licence – Chan Park (Switzerland)
2. The importance of public health orientated licences to ensure academic research benefits all – Merith Basey (United States of America)
3. Utilising public health oriented licenses as a tool to facilitate the development of new regimens – Melvin Spigelman (United States of America)
4. The importance of data pooling in addition to IP pooling – Debra Hanna (United States of America)
5. The role of IP and data pooling to promote access for trials and beyond – Graania Brigden (Switzerland)
6. Discussion
32. Enhancing the role of pharmacists in the TB care cascade

Pharmacists are a critical entry point to healthcare services in lower-and-middle-income countries. They can play a key role in enhancing the cascade of TB prevention and care. This symposium will highlight how pharmacists may be utilised to improve patients' pathway to TB screening, notification, treatment initiation and adherence in order to achieve improved TB diagnostic and clinical outcomes. A range of intervention designs and findings from diverse resource-limited settings will be shared, including implementation challenges and mitigating strategies, with lessons learned for health systems strengthening and professional stewardship.

Co-chairs: Amrita Daftary (Canada), Madhukar Pai (Canada)

1. A global systematic review of pharmacy-based TB interventions – Madhukar Pai (Canada)
2. Pharmacists’ drug-dispensing practices: a call for professional stewardship in lower-and-middle-income countries – Srinath Satyanarayana (India)
3. Reducing TB diagnostic delay via public-private pharmacy partnerships: results of the IC-IMPACTS Study, India – Amrita Daftary (Canada)
4. Pharmacists’ use of SMS messaging to improve TB re-treatment success in the IMPRESS Study, South Africa – Bhavna Maharaj (South Africa)
5. Engaging private pharmacists for TB control efforts in Chennai, South India – Ramya Ananthakrishan (India)
6. Discussion

33. Implementation of the WHO’s tool for measuring TB patient costs: country-level results, adaptations and future directions

Poverty drives TB rates, limits access to care and impedes treatment success. The WHO End TB Strategy mandates combatting the financial burden of TB and that, by 2025, no TB-affected households should incur catastrophic costs. Since 2015, a tool developed by WHO to measure catastrophic costs of TB-affected households has been rolled-out in multiple countries. This symposium, delivered by WHO and key country-partners, will highlight country-level experiences of catastrophic costs measurement including: implementation and adaptation of the WHO tool; rates of catastrophic costs in TB-affected households; and the next steps of National TB Programmes to eliminate catastrophic costs.

Co-chairs: Nobu Nishikiori (Switzerland), Andrew Siroka (Switzerland)

1. Development of the WHO TB patient costs tool – Tom Wingfield (United Kingdom)
2. Implementation of the WHO TB costs survey in all TB-affected households in Timor Leste: a unique case study – Susana Vaz Nery (Australia)
3. Implementation of the WHO TB costs tool in Ghana and linking with National TB Programme treatment outcome data – Debora Pedrazolli (United Kingdom)
4. Rolling out the WHO TB costs tool in Uganda with special consideration of patients with multidrug-resistant TB – Charles Batte (Uganda)
5. Overview of the implementation of the WHO TB costs tool around the world so far and future expansion – Ines Garcia Baena (Switzerland)
6. Discussion

34. Plain packaging as it happens: progress and challenges in Latin America

Plain packaging is gaining momentum across Latin America hot on the heels of Uruguay’s legal victory against Philip Morris International (PMI). Several legislative initiatives are currently being discussed in Uruguay, Brazil, Ecuador, Panama and Chile - most of them with legal, technical, and financial support from The Union. Top government officials from the above countries will discuss legal and political strategies, challenges and perspectives on the road to plain packaging in our region.

Chair: Mirta Molinari (Mexico)

1. Plain packaging legislation: experiences and challenges – Guido Girardi (Chile)
2. Plain packaging bill for tobacco development, approval and implementation: the Panama example – Reina Roa (Panama)
3. Role of multisectional consultations in framing of plain packaging law in Canada – Lorie Dunbar (Canada)
4. Introducing plain packaging regulations in Uruguay: the key steps – Enrique Soto (Uruguay)
5. Brazil’s experience with tobacco plain packaging law – Tania Cavalcante (Brazil)
6. Discussion
34. Empaquetado genérico, qué ocurre.: Avances y desafíos en las Américas

El empaquetado genérico están ganando impulso en las Américas, a raíz de la victoria legal de Uruguay contra Philip Morris International (PMI). Actualmente se están discutiendo varias iniciativas legislativas en Uruguay, Brasil, Panamá, Chile y Canadá, la mayoría con apoyo legal, técnico y financiero de la Unión. Una o más de estas propuestas podrían convertirse en ley antes de la WLC en Guadalajara. Los altos funcionarios gubernamentales de estos países discutirán estrategias legales y políticas, desafíos y perspectivas en el camino hacia el empaquetado genérico en nuestra región.

Presidente: Mirta Molinari (Mexico)

1. Legislación de empaquetado genérico: Experiencias y desafíos – Guido Girardi (Chile)
2. Proyecto de ley sobre empaquetado genérico: desarrollo, aprobación e implementación – Reina Roa (Panama)
3. Rol de la consulta multisectorial del empaquetado genérico en Canadá – Lorie Dunbar (Canadá)
4. Presentación del empaquetado genérico en Uruguay: los pasos claves – Enrique Soto (Uruguay)
5. La experiencia de Brasil en el proyecto de ley de empaquetado genérico – Tania Cavalcante (Brazil)
6. Discusión

35. Helping to realise the vision of zero suffering from the End TB Strategy with palliative care

Multidrug-resistant TB (MDR-TB) is a major source of morbidity and mortality globally and some forms of MDR-TB are highly lethal. Affected people suffer while on treatment or in its absence. The World Health Organization defines palliative care as the relief of suffering in people affected by life threatening conditions. This symposium will present policy perspective and experiences from countries mainstreaming palliative care in the management of MDR-TB.

Chair: Viet Nhung (Viet Nam)

1. Palliative care in the management of XDR-TB in Khayelitsha, Western Cape, South Africa – Jennifer Hughes (South Africa)
2. Developing guidelines for mainstreaming palliative care into programmatic management of MDR-TB: the experience of Kyrgyzstan and South Africa – Stephen Connor (United States of America)
3. Integrating infection control and palliative care in Viet Nam: a marriage that works? – Viet Nhung (Viet Nam)
4. WHO perspective in palliative care in 2017 – Eric Krakauer (Switzerland)
5. Discussion

36. The evolving landscape of multidrug-resistant TB (MDR-TB) trials in children

The aim of the session is to provide relevant stakeholders with emerging global consensus on paediatric research priorities, trial methods and future regimens for evaluation for the treatment of MDR-TB in children. Much needed critical emerging data updates will be provided on the pharmacokinetics of novel and existing drugs and formulations needed for future MDR-TB regimens in children, including the effect of formulation manipulation and child friendly formulations (delamanid, bedaquiline and levofloxacin). Finally, the role of community engagement and advocacy will be explored to improve the access of children to trials and strengthen participation of relevant stakeholders to design and implement MDR-TB trials in children.

Co-chairs: Anneke Hesseling (South Africa), James Seddon (United States of America)

1. MDR-TB treatment in children: current landscape and future prospects for treatment shortening trials – Anthony Garcia-Prats (South Africa)
2. Updates on delamanid pharmacokinetic and safety data in children with MDR-TB – Jeffrey Hafkin (United States of America)
4. Early experiences of the acceptability and palatability of a novel child-friendly levofloxacin formulation in young children – Susan Purchase (South Africa)
5. The role of community engagement in MDR-TB trials in children – Musonda Simwinga (Zambia)
6. Discussion
37. The role of autopsy studies in estimating burden of TB mortality

There is a considerable uncertainty about the true mortality burden attributable to TB. In high-income countries mortality estimates rely on vital registration systems, but these services are unavailable in most low-resource settings. As some studies have shown the mortality estimates based on the case fatality rate reported by National TB Programmes, or on verbal autopsies, usually provide poor quality estimates. Thus, complete diagnostic autopsies remain the gold standard tool to ascertain TB diagnosis at death. The potential and limitations of these methods, as well as new strategies to diagnose TB at death, will be discussed.

Co-chairs: Quique Bassat (Spain), Frank Cobelens (Netherlands)

2. Minimally invasive tools for diagnosing TB at death. Results of a large post-mortem study in Maputo, Mozambique. – Alberto Garcia-Basteiro (Mozambique)
3. Combining autopsies and clinical metagenomic sequencing to finally get to the bottom of why so many children die from pneumonia despite available drugs and vaccines – Matthew Bates (Zambia)
4. Measuring mortality due to HIV-associated TB in South Africa: using data from verbal and minimally invasive autopsies, clinical records and prospective research – Aaron Karat (United Kingdom)
5. Discussion

38. Building and strengthening specimen transport and referral systems for TB testing networks: solutions through integration and innovation

Given that the tools for highly sensitive TB detection and comprehensive drug susceptibility testing (DST) do not yet exist at point-of-care (POC), an efficient specimen transport and referral network is critical in reaching the goals of increased TB case detection and universal DST as described in the End TB Strategy and Global Plan to End TB. In this symposium we will share current guidance and success stories in building efficient specimen transport and referral systems in integrated networks and using recent innovations, including alternative means of transport and use of sample transport media.

Co-chairs: Wayne van Gemert (Switzerland), Alaine Umubyeyi Nyaruhirira (South Africa)

1. Strengthening specimen transport and referral systems: the Global Laboratory Initiative perspective – Alaine Umubyeyi Nyaruhirira (South Africa)
2. Lessons learned about specimen referral networks across Africa and Global Laboratory Initiative guidance – Kameko Nichols (United States of America)
3. Successful integrated specimen referral system across the laboratory network in Rwanda – J. Claude Ngabonziza S (Rwanda)
4. Building and strengthening specimen transport and referral systems for TB testing networks: solutions through integration and innovation – Uganda’s experience – Charles Kyaga (Uganda)
5. Modelling an integrated TB-HIV sample transportation network using GPS coordinates in Ethiopia – Stephanie Denamps (United Kingdom)
6. Discussion

39. Pharmacokinetics and pharmacodynamics drugs used to treat other mycobacterial diseases: more difficult than TB!

The burden due to nontuberculous mycobacteria is substantial. In fact, in many programmes, patients are usually diagnosed during treatment for multidrug-resistant TB. However nontuberculosis mycobacteria are difficult to treat in their own right. For example Mycobacterium abscessus has been given the moniker ‘the antibiotic nightmare’ because of the bacteria's natural drug resistance. Outcomes for patients are also very poor, with sputum culture conversion less than 50 per cent for the majority of organism. This session will focus how pharmacokinetics and pharmacodynamics (PK/PD) can be used to minimise drug-adverse events, individualise and optimise clinical outcomes of patients, based on in-vitro studies, and clinical studies in patients.

Co-chairs: Tawanda Gumbo (United States of America), Jakko van Ingen (Netherlands)

1. Systematic review and meta-analyses of clinical outcomes of patients treated for nontuberculous mycobacteria – Patrick Moonan (India)
2. Treatment of Mycobacterium avium complex: European experience – Jakko van Ingen (Netherlands)
3. Building an optimised regimen for Mycobacterium abscessus – Beatriz Ferro (Colombia)
4. Optimising treatment of Mycobacterium kansasii – Shashikant Srivastava (United States of America)
5. PK/PD approach to setting therapeutic targets and determining MIC predictive of patients outcomes – Devyani Deshpande (United States of America)
6. Discussion
40. Accelerating research and development of new TB vaccine

New, effective vaccines to prevent TB could significantly accelerate global efforts to eliminate the disease. Several approaches are being undertaken, from early stage research through to clinical trials in order to streamline and accelerate TB vaccine research and development (R&D) in a cost-efficient and cost-effective manner. This symposium will provide an overview of some of these approaches, as well as the potential public health impact of new TB vaccines and progress in TB vaccine R&D.

Co-chairs: Ann Ginsberg (United States of America), Blessina Kumar (India)

1. Potential public health impact of new TB vaccines – Richard White (United Kingdom)
2. TB vaccines in clinical development and approaches to clinical research – Dereck Tait (South Africa)
3. TB vaccines: WHO perspectives and preferred product characteristics – Johan Vekemans (Switzerland)
4. Controlled human infection model for TB vaccine R&D – Dirk Schnappinger (United States of America)
5. Discussion

41. Ending TB epidemic with sound ethics

Involuntary detentions of people with TB, of migrants denied access to TB health services, healthcare workers operating in unsafe environments, people stigmatised and discriminated for having TB or patients without support to seek care and adhere to treatment, all compounded by the limited access to quality health services, bring the question of how to balance individual responsibilities, rights and liberties against the protection of public health and the reduction of inequities. This symposium will discuss the relevance of ethics in ending the TB epidemic.

Co-chairs: Lee Reichman (United States of America), Diego S. Silva (Canada)

1. Patient rights from the perspective of drug-resistant TB patients – Jens Seeberg (Denmark)
2. Ethics of preventive therapy in latent TB infection (LTBI) – Justin Denholm (Australia)
3. Neglected no longer: ethics of caring for migrants and other key TB populations – Ivett Reyes (Mexico)
4. The World Health Organization's new TB ethics guidance: challenges and opportunities to raise awareness and training for action – Rajita Bhavaraju (United States of America)
5. Discussion

42. Improving the cascade of TB-HIV care and prevention in maternal and child health programmes

TB is a leading cause of morbidity and mortality among pregnant women, mothers and children, especially in areas with a high HIV burden. However routine TB services are not widely available in maternal and child healthcare settings. This symposium will review emerging data on the performance of TB screening among pregnant and breastfeeding women and the experience of isoniazid preventive therapy and treatment for drug-resistant TB. Additionally, this symposium will highlight operational approaches to implement TB services in maternal and child healthcare settings, including ensuring TB screening and treatment for children are optimised.

Co-chairs: Anne Detjen (United States of America), Haileyesus Getahun (Switzerland)

1. Symptom screening for active TB in pregnant women living with HIV: a systematic review – Sylvia LaCourse (United States of America)
2. Enhanced integration of TB-HIV services in reproductive, maternal, newborn and child health settings in Swaziland – Andrea Howard (United States of America)
3. Implementing TB intensified case-finding and Isoniazid Preventive Therapy in maternal and child health settings in Kenya – Patrick Oyaro (Kenya)
4. Managing drug-resistant TB in pregnancy: experience from South Africa – Francesca Conradie (South Africa)
5. Quality of routine TB evaluation for children at primary healthcare facilities in Uganda – Achilles Katamba (Uganda)
6. Discussion
43. An update on mycobacteria species infections and surveillance

There is a mutual benefit of developing and strengthening partnerships between animal and human health workers with regards the diagnosis, surveillance, prevention and control of zoonotic TB (ZTB). Through presentations, dialogue and collaboration among different stakeholders this symposium lays a scientific foundation to inform the current policy development efforts.

- A dialogue between medical and veterinary fields to address challenges posed by ZTB.
- To create global awareness of zoonotic TB and its impact to public health.
- To highlight the incidence of its societal and clinical impact.
- To launch the ZTB policy road map.

Chair: Alejandro Perera (Mexico)

1. Relational Sequencing TB (ReSeqTB): global effort to standardise and consolidate Mycobacterium tuberculosis complex (MTBC) whole genome sequences through a collaborative data sharing platform – Marco Schito (United States of America)
2. Mycobacterium orygis: an emerging threat for cattle and primates in Southeast Asia – Zeaur Rahim (Bangladesh)
3. The Ibarapa Meje One Health Initiative – Simeon Cadmus (Nigeria)
4. Bovine response to candidate anti-TB vaccines? – Prasad H. Krishna (India)
5. Working toward effective ZTB control in the resource-poor setting: opportunities and challenges. – Thaddeus Miller (United States of America)
6. Discussion

44. Finding the ‘missing’ TB patients: a role for patient-pathway analysis

Among the ‘missing’ TB patients are people who are actively seeking care but who have not encountered TB diagnostic and treatment services in the locations where they accessed health services. Using commonly available survey data, the patient pathway analysis (PPA) methodology was developed to improve knowledge about the alignment between care seeking and TB service availability. PPA may guide programmes to identify health systems alignment gaps that can be addressed through targeted programme interventions. Examples of country-level use of PPA results will be discussed including the Philippines, South Africa and Kenya.

Co-chairs: Christy Hanson (United States of America), Mike Osberg (United States of America)

1. Patient-pathway analysis: methods and global lessons learned – Christy Hanson (United States of America)
2. Philippines: using patient-pathway analysis to improve patient-centred TB care in a decentralised health system – Celina Garfin (Philippines)
4. South Africa: using care cascades to support seamless care across the public health sector – Pren Naidoo (South Africa)
5. Patient-pathway analysis as an input to priority-setting: Comments from the Global Fund – Eliud Wandwalo (Switzerland)
6. Discussion

45. Innovative approaches to increase the performance of your health workforce

To strengthen the capacity of healthcare workers, health programmes require high training budgets. However direct funding for training is decreasing, the quality and impact of training programmes have been under discussion and there is a call for cheaper, less time-consuming and more effective capacity-building approaches. This symposium will show alternatives to traditional training including: blended learning programmes combining computer-based learning and onsite workshops; the use of mobile phones to share knowledge and improve problem solving skills; PhotoVoices, and participatory video, to raise awareness and come to action; and on the job learning, applying new skills and improving work practices.

Co-chairs: Marleen Heus (Netherlands), Liesbeth Oey (Netherlands)

1. Blended learning on TB-HIV diagnostics, treatment and care – Nadine Pakker (Netherlands)
2. Mobile phones to build the capacity of community healthcare workers in Kenya – Carolyne Wanyonyi (Kenya)
3. Learning on the job to improve TB infection control practices in health facilities in Malawi – Lameck Mlauzi (Malawi)
4. PhotoVoices to give a voice to TB patients and make TB care more patient-centred – Netty Kamp (Netherlands)
5. Participatory video to improve together the quality of care
6. Discussion
46. TB in child migrants: addressing unique needs to stride towards elimination

Child migrants may face higher TB exposure due to overcrowded living conditions and increased vulnerability to HIV, malnutrition and developmental delay propagated by marginalisation. TB diagnostic delays among child migrants may be associated with limited healthcare access, parental education, health seeking behaviours, cultural beliefs and stigma. Coupled with diagnostic and treatment challenges characteristic of child TB, these hazards can place child migrants at risk of missed diagnosis and treatment failure amplified by suboptimal continuity of care typical of migration. Absence of TB prevention and control strategies targeting child migrants can result in poor TB outcomes and thwart progress towards elimination.

Co-chairs: Poonam Dhavan (Switzerland), Anna Mandalakas (United States of America)

1. What is the evidence on migrant child health and TB? – Poonam Dhavan (Switzerland)
2. Child TB screening strategies for accompanied and unaccompanied children – Kathleen Moser (United States of America)
3. Expanding access to integrated childhood TB care and prevention in Uganda – Moorine Sekadde (Uganda)
5. Promoting the well-being of immigrant children through direct services and advocacy – Alan Shapiro (United States of America)
6. Discussion

47. Ending TB in children and adolescents in Latin America: country-level experiences of improving access to care

Few reports have been published on improving paediatric TB care in Latin America, and diagnosis, treatment, and prevention remain suboptimal for children and adolescents with TB. This session aims to inspire solutions to common challenges faced by children and adolescents with TB in Latin America. Following an epidemiologic and programmatic overview, speakers from Brazil, Peru and Argentina will present innovative ways in which their countries have addressed, or are working to address, gaps in care. At the end of the session, the co-chairs will moderate a discussion to facilitate idea exchange, feedback and collaboration among speakers and participants.

Co-chairs: Silvia Chiang (United States of America), Andrea Cruz (United States of America)

1. Challenges to the control of childhood and adolescent TB in Latin America – Mirtha Del Granado (United States of America)
2. Diagnosis of childhood and adolescent TB in Brazil – Clemax Sant’Anna (Brazil)
3. Treatment of childhood and adolescent multidrug-resistant TB in Peru – Leonid Lecca (Peru)
4. Prevention of childhood and adolescent TB in Argentina – Norma Gonzalez (Argentina)
5. Discussion

47. Erradicación de la tuberculosis en niños y adolescentes de América Latina: experiencias a nivel de país y mejora del acceso a los cuidados sanitarios

Se han publicado pocos informes acerca de la forma de mejorar la atención a la tuberculosis pediátrica en Latinoamérica, a la vez que el diagnóstico, tratamiento y prevención están lejos de los niveles ideales en el caso de las poblaciones de niños y adolescentes con tuberculosis. El objetivo de esta sesión es idear soluciones para resolver los problemas comunes que enfrentan los niños y adolescentes con tuberculosis en América Latina. Después de la presentación de datos epidemiológicos y programáticos, los ponentes de Brasil, Perú y Argentina hablarán sobre los modos novedosos en los que sus países han resuelto, o están trabajando para resolver, las deficiencias en la atención sanitaria. Al finalizar la sesión, los presidentes moderarán la discusión para facilitar el intercambio de ideas, la retroalimentación y colaboración entre participantes y ponentes.

Copresidentes: Silvia Chiang (Estados Unidos de América), Andrea Cruz (Estados Unidos de América)

1. Retos para el control de la tuberculosis en niños y adolescentes de América Latina – M Del Granado (Estados Unidos de América)
2. Diagnóstico de la TB pediátrica y de adolescentes en Brasil – C Sant’Anna (Brasil)
3. Tratamiento de la TB multirresistente en niños y adolescentes en Perú – Leonid Lecca (Peru)
4.Prevención de la tuberculosis en niños y adolescentes en Argentina – Norma González (Argentina)
5. Discusión
ORAL ABSTRACT SESSIONS

07. Active TB case finding and retrieving missing cases: engagement of community volunteers, civil society, pharmacists and other stakeholders

Co-chairs: Ingrid Schoeman (South Africa), Austin Obiefuna (Ghana)

10.30  OA-145-13  Enhancing active case finding among people living in the slums of Delhi, India: activity of project Axshya
A M Moeller, S Nath, S Chadha (India)

10.40  OA-146-13  Interventions led to improved contribution of community tuberculosis care to tuberculosis case notification in two regions of Ethiopia
E Getachew, D Bekele, N Gebrie, K Melkeneh, Z Gashu, S Negash, D Jerome, P Suarez (Ethiopia, United States of America)

10.50  OA-147-13  Finding missing TB cases through outreach chest camps in peri-urban and rural areas of Pakistan
I Fatima, F Naureen, A Rashid (Pakistan)

11.00  OA-148-13  Bloggers’ penetration to increase community awareness about tuberculosis
E Varella, Y Anandita, N Badriyah, D Prasetya, A Surya, W Waworuntu, B Sonata, A Gebhard (Indonesia)

11.10  OA-149-13  Community pharmacists in the RNTCP enhanced TB detection and increased outreach of DOTS services in Durg District
G Mallick, S K Mandal, M Deshpande, S Chadha (India)

11.20  OA-150-13  Contribution of active case finding strategy in tuberculosis case detection among selected facilities in Swaziland, Shiselweni region
T Mkhabela, J Sibanda, S Ngwenya, D Fundi, D Yam, T Dlamini (Swaziland, South Africa)

11.30  OA-151-13  Complementing the biomedical approach with patient-led active case finding: large-scale intervention in the Democratic Republic of Congo
O Bahati Rusumba, A Ishara, C Habimana Ndwanyi, E Marhegane Munguakonkwa, Y Bola, L Kitete, J P Kabuayi, E André (Congo (Democratic Rep.), Belgium)

11.40  OA-152-13  Tuberculosis contact investigation contributes over five-fold to total cases notified in Kampala
D Kimuli, S Ndushu, D Lukoye, F Angayo, N S Kirirabwa, M Nakawoya, F Birabwa, S Pedro (Uganda, United States of America)

10.30  OA-153-13  Improved treatment outcomes in HIV-positive adolescents with TB compared to adults in Kenya
S Puryear, K Kasera, B Sunguya, E Masini (United States of America, Kenya, Tanzania, United Rep.)

10.40  OA-154-13  Childhood multidrug-resistant tuberculosis in the European Union and European Economic Area
C Kődmön, M van den Boom, P Zucs, M J van der Werf (Sweden, Denmark)

10.50  OA-155-13  Pharmacokinetics of rifampicin in African children: evaluation of the new WHO dosing guidelines
P Dentl, C Gonzalez-Martinez, J Winkler, A Bekker, H Zacher, G Davies, A van Rie, H McIlerson, DATiC study team (South Africa, Malawi, United States of America)

11.00  OA-156-13  Hypoxaemia and the use of pulse oximetry and oxygen in Nigerian hospitals: preliminary results from a multi-country field trial
H Graham, A A Ayedde, A Bakare, O B Owolara, D Duke, A G Falade (Australia, Nigeria)

11.10  OA-157-13  Feasibility, safety and tolerability of nasopharyngeal aspirates and string tests for diagnosis of TB with Xpert® MTB/RIF in HIV-infected children: ANRS 22229 PAMPHAYT 01 study
D Bunnet, T-H Ly, B Laurence, N D Tran, S Bintou, A-N Francis, Q Catherine, M Olivier (Cambodia, Viet Nam, Burkina Faso, Cameroon, France)

11.20  OA-158-13  HIV-infected children with antiretroviral therapy from infancy have lung function comparable to population norms
S Benki-Nugent, H Moraa, D Waluwa, L A Gomez, E Maleche-Obimbo, S Rylance, R A Ferrand, G John-Stewart (United States of America, Kenya, United Kingdom)

11.30  OA-159-13  The WHO’s symptom-based screening approach for child contacts: a prospective validation from sub-Saharan Africa
L Martinez, A Handel, Y Shen, S Chakraburty, F Quin, C Whalen (United States of America)

08. State-of-the-art – updates on childhood TB and lung health

Co-chairs: Evaline Kibuchi (Kenya), Adrie Bekker (South Africa)

10.30  OA-153-13  Improved treatment outcomes in HIV-positive adolescents with TB compared to adults in Kenya
S Puryear, K Kasera, B Sunguya, E Masini (United States of America, Kenya, Tanzania, United Rep.)

10.40  OA-154-13  Childhood multidrug-resistant tuberculosis in the European Union and European Economic Area
C Kődmön, M van den Boom, P Zucs, M J van der Werf (Sweden, Denmark)

10.50  OA-155-13  Pharmacokinetics of rifampicin in African children: evaluation of the new WHO dosing guidelines
P Dentl, C Gonzalez-Martinez, J Winkler, A Bekker, H Zacher, G Davies, A van Rie, H McIlerson, DATiC study team (South Africa, Malawi, United States of America)

11.00  OA-156-13  Hypoxaemia and the use of pulse oximetry and oxygen in Nigerian hospitals: preliminary results from a multi-country field trial
H Graham, A A Ayedde, A Bakare, O B Owolara, D Duke, A G Falade (Australia, Nigeria)

11.10  OA-157-13  Feasibility, safety and tolerability of nasopharyngeal aspirates and string tests for diagnosis of TB with Xpert® MTB/RIF in HIV-infected children: ANRS 22229 PAMPHAYT 01 study
D Bunnet, T-H Ly, B Laurence, N D Tran, S Bintou, A-N Francis, Q Catherine, M Olivier (Cambodia, Viet Nam, Burkina Faso, Cameroon, France)

11.20  OA-158-13  HIV-infected children with antiretroviral therapy from infancy have lung function comparable to population norms
S Benki-Nugent, H Moraa, D Waluwa, L A Gomez, E Maleche-Obimbo, S Rylance, R A Ferrand, G John-Stewart (United States of America, Kenya, United Kingdom)

11.30  OA-159-13  The WHO’s symptom-based screening approach for child contacts: a prospective validation from sub-Saharan Africa
L Martinez, A Handel, Y Shen, S Chakraburty, F Quin, C Whalen (United States of America)

09. MDR-TB treatment: pharmacovigilance and adverse event outcomes from the field

Co-chairs: Francesca Conradie (South Africa), I.D. Rusen (United States of America)

10.30  OA-160-13  Setting up an active pharmacovigilance system for the emdTB project
N Lachenal, C Hewison, S Couttsos, E Osso, J Seung, S Ahmed, F Vuaraine (Switzerland, France, United States of America, Pakistan)
<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract ID</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:40</td>
<td>OA-3002-13</td>
<td>Improving TB laboratory capacity in Mexico: evaluation of a binational public-private strategy.</td>
<td>D C Téllez Peralta (Mexico)</td>
</tr>
<tr>
<td>11:00</td>
<td>OA-2947-13</td>
<td>Could GeneXpert replace culture in TB prevalence surveys?</td>
<td>J Wambugu (Kenya)</td>
</tr>
<tr>
<td>11:10</td>
<td>OA-2950-13</td>
<td>Rifampicin dosage and exposure are associated with superior activity in the PanACEA MAMS-TB study</td>
<td>N Heinrich (Germany)</td>
</tr>
<tr>
<td>11:20</td>
<td>OA-3028-13</td>
<td>What is the true TB mortality burden? Differences in TB mortality estimates by WHO and IHME</td>
<td>A Garcia-Basteiro (Mozambique)</td>
</tr>
<tr>
<td>11:30</td>
<td>OA-2905-13</td>
<td>Psychiatric comorbidity among drug-resistant tuberculosis patients</td>
<td>C Laxmeshwar, T Israni, M Das, S Jha, S Rastogi, M A Galindo, S Kalon, P Isaakidis (India, South Africa)</td>
</tr>
<tr>
<td>10:30</td>
<td>OA-2490-13</td>
<td>Conversión de la prueba cutánea de tuberculina y enfermedad progresiva primaria en lactantes y niños pequeños sudáfricanos: un estudio longitudinal en una cohorte de nacimiento</td>
<td>L Martinez (Estados Unidos de América)</td>
</tr>
<tr>
<td>10:40</td>
<td>OA-3002-13</td>
<td>Mejora de la capacidad de los laboratorios en relación con la tuberculosis en México: evaluación de una estrategia público-privada binacional.</td>
<td>D C Téllez Peralta (México)</td>
</tr>
<tr>
<td>10:50</td>
<td>OA-2962-13</td>
<td>El rendimiento y la rentabilidad de la radiografía de tórax digital masiva para la detección de la TB en instituciones penales sudáfricanas</td>
<td>H-Y Kim (Estados Unidos de América)</td>
</tr>
<tr>
<td>11:00</td>
<td>OA-2947-13</td>
<td>¿Podrá GeneXpert reemplazar al cultivo en TB prevalencia surveys?</td>
<td>J Wambugu (Kenia)</td>
</tr>
<tr>
<td>11:10</td>
<td>OA-2950-13</td>
<td>Biflucíncio dosaje y exposición están asociadas con superior actividad en el estudio PanACEA MAMS-TB</td>
<td>N Heinrich (Alemania)</td>
</tr>
<tr>
<td>11:20</td>
<td>OA-3028-13</td>
<td>¿Cuál es la verdadera carga de mortalidad de la tuberculosis? Diferencias entre las estimaciones de la mortalidad por TB de la OMS y el IHME</td>
<td>A Garcia-Basteiro (Mozambique)</td>
</tr>
<tr>
<td>11:30</td>
<td>OA-2905-13</td>
<td>Seguridad y eficacia inicial de la combinación de bedaquolina y delamanid para la TB resistente a fármacos en Armenia, India y Sudáfrica</td>
<td>G Ferlazzo (Sudáfrica), C Hewison (Francia)</td>
</tr>
</tbody>
</table>
### 11. The HIV-TB and diabetes late-breaker session

**Co-chairs:** Jeroen van Gorkom (Netherlands), Katharina Kranzer (Germany)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.00</td>
<td>OA-2971-13 Diabetes increases mortality during TB treatment and metformin use reverses this effect</td>
<td>N Degner (United States of America)</td>
</tr>
<tr>
<td>14.10</td>
<td>OA-2885-13 Feasibility and yield of routine bi-directional screening for TB and diabetes mellitus in primary health settings in Zimbabwe.</td>
<td>S Mufudz Machekera (Zimbabwe)</td>
</tr>
<tr>
<td>14.20</td>
<td>OA-2837-13 A rise in TB mortality where people who use drugs and commercial sex work co-exist: a retrospective cohort study in a rural county in Kenya</td>
<td>O Abdullahi (Kenya)</td>
</tr>
<tr>
<td>14.30</td>
<td>OA-2927-13 Can HbA1c help to predict TB risk? Early results from an active TB case-finding project in Ebeye, Republic of the Marshall Islands</td>
<td>R Brostrom (United States of America)</td>
</tr>
<tr>
<td>14.40</td>
<td>OA-2887-13 ADPP Mozambique’s strategies to track and support index HIV cases and their contacts through community-based interventions have been protecting PLHIV against TB in Mozambique</td>
<td>S Mukhopadhyay (Mozambique)</td>
</tr>
<tr>
<td>14.50</td>
<td>OA-3000-13 Detecting diabetes during latent TB testing</td>
<td>A Largen (United States of America)</td>
</tr>
</tbody>
</table>

### 12. Stopping TB transmission: infection control in congregate settings

**Co-chairs:** Nii Nortey Hanson-Nortey (Ghana), Grigory Volchenkov (Russian Federation)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.00</td>
<td>OA-168-13 Novel approaches to TB infection control in private general hospitals in Georgia</td>
<td>T Gabunia, I Khonehidze, N Solomonia, T Merabishvili, M Makharadze, G Kuchukhidze, M Danelia (Georgia)</td>
</tr>
<tr>
<td>14.10</td>
<td>OA-169-13 Evaluation of tuberculosis infection control strategies in the University of the Philippines – Philippine General Hospital</td>
<td>R Agustin, JA Lucem, R Berba (Philippines)</td>
</tr>
<tr>
<td>14.20</td>
<td>OA-170-13 FAST strategy to prevent TB and diabetes co-morbidity and prevent TB transmission in congregate settings</td>
<td>K Jahan, P Daru, R Haq, D Hossain, M Melene, M-U Alam (Bangladesh, United States of America)</td>
</tr>
<tr>
<td>14.50</td>
<td>OA-173-13 How fast does FAST strategy increase case detection: a facility case study in Osun, Nigeria</td>
<td>C Ogudede, A Lawanson, D Gbadamosi, C Ijezie, V Adepoju, T Odusote, N Chukwueme, M Girado (Nigeria, Netherlands)</td>
</tr>
<tr>
<td>15.00</td>
<td>OA-174-13 Hospital-based cough officer and 24 hours in a tuberculosis laboratory: acceptability and feasibility study, Beira Central Hospital, Mozambique</td>
<td>M Lisboa, I Fronteira, M Nhamonga, J Lequechane, M D R Martins (Mozambique, Portugal)</td>
</tr>
<tr>
<td>15.10</td>
<td>OA-175-13 Molecular and spatial analysis of Mycobacterium tuberculosis transmission among internal migrants and residents in Shanghai, China</td>
<td>C Yang, J Warren, Q Jiang, L Lu, J Hong, Q Gao, T Cohen (United States of America, China)</td>
</tr>
</tbody>
</table>
13. Multi-country experiences in tobacco industry interference in tobacco control

Co-chairs: Xiaolin Wei (Canada), Dean Schraufnagel (United States of America)

16.00  QA-176-13  Monitoreo de la política de impuestos al cigarrillo en Colombia
       N Maldonado, B A Llorente Carreño (Colombia)
16.10  QA-178-13  Consecuencias distributivas del incremento de la fiscalidad sobre el tabaco: evidencias resultantes de una reciente reforma fiscal aplicada en Argentina
       S Melitsko (Argentina)
16.20  QA-179-13  Impuestos sobre el tabaco como potencial fuente de financiación de la sanidad local en Indonesia
       A Ahsan (Indonesia)
16.30  QA-196-13  Seguimiento y rastreo de inversiones por parte de instituciones financieras en empresas tabaqueras: lo que necesitan saber y hacer los defensores del control sobre el tabaco sobre ese proceso
       P Lal, B Gopalan, A K Pandey (India)
16.40  QA-197-13  Estudio de observación para explorar la situación de los traders tabaqueros no regulados en Bangladesh
       A Islam (Bangladesh)
16.50  QA-199-13  Actuaciones de interferencia contra las empresas tabaqueras por parte de la sociedad civil y los medios de comunicación
       Saifuddin Ahmed (Bangladesh)
17.00  QA-200-13  Uso del tabaco en reality shows brasileños: situación y potencial influencia sobre población con bajos niveles de renta
       C Cortes, H Carvalho, S Bialous, V Figueiredo (Brasil, Estados Unidos de América)

14. The Union student late-breaker session on lung health

Co-chairs: Stacie C. Stender (South Africa), Jeremiah Chakaya Muhwa (Kenya)

16.00  QA-2926-13  Sensitivity and specificity of a novel nanogold assay in detecting patients with active pulmonary TB
       H El-Samadony (Egypt)
16.10  QA-2960-13  The changing face of paediatric TB in high-incidence, low-incidence countries: a 25-year conventional and molecular epidemiologic case study
       A Lau (Canada)
16.20  QA-2842-13  Impact of 2015 Southeast Asian haze crisis: particulate matter is associated with TB cases in Pekanbaru City, Riau Province, Indonesia
       S Unri (Thailand)
16.30  QA-2882-13  Insights into the effect of simvastatin on the immune response against Mycobacterium tuberculosis
       P Del Carmen Guerra de Blas (Mexico)
14. Sesión de última hora de estudiantes sobre salud pulmonar de La Unión

Copresiden: Stacie C. Stender (Sudáfrica), Jeremiah Chakaya Muhwa (Kenia)

16.00  OA-2926-13  Sensibilidad y especificidad de un nuevo ensayo con nano-oro para la detección de pacientes con TB pulmonar activa
       H El-Samadony (Egipto)

16.10  OA-2980-13  La naturaleza cambiante de la tuberculosis pediátrica en países con ingresos altos e incidencia baja: un estudio de caso epidemiológico convencional y molecular de 25 años
       A Lau (Canadá)

16.20  OA-2842-13  Impacto de la crisis por contaminación del aire en el sudeste asiático en 2015: la materia particulada se asocia con casos de TB en la ciudad de Pekanbaru, provincia de Riau, Indonesia
       S Unri (Tailandia)

16.30  OA-2882-13  Perspectivas sobre el efecto de la simvastatina en la respuesta inmunitaria contra la Mycobacterium tuberculosis
       P Del Carmen Guerra de Blas (México)

16.40  OA-2498-13  Drug-resistant TB outbreak on Daru Island, Papua New Guinea: driven by a unique modern Beijing strain of Mycobacterium tuberculosis
       A Bainomugisa (Australia)

16.50  OA-2867-13  The role of HIV co-infection in TB transmission in the low-incidence setting of England, Wales and Northern Ireland, 2010-2014
       J Rebecca Winter (United Kingdom)

17.00  OA-2987-13  Molecular analysis of streptomycin-resistance associating genes on Mycobacterium tuberculosis isolates from Nepal
       D Shrestha (Japón)

17.10  OA-2933-13  Epidemiología molecular de M. bovis entre pacientes con TB pulmonar en Etiopía
       M Getahun (Etiopía)

17.20  OA-2911-13  Edad recomendada para la vacunación BCG – modelado del impacto sobre la mortalidad pediátrica por TB global
       R C Harris (Reino Unido)
Co-chairs: Chen-Yuan Chiang (Taiwan), Wim Vandevelde (South Africa)

16.00 OA-188-13 Culture conversion and reversion of multidrug resistant tuberculosis patients receiving bedaquiline in a compassionate use programme in Armenia and Georgia
M Bastard, H Huerga, A Hayrapetyan, Z Avaliani, N Khachatryan, T Kotrikadze, F Varaine, C Hewison (Switzerland, France, Armenia, Georgia)

16.10 OA-189-13 The use of bedaquiline to treat patients with multi- and extensively drug-resistant tuberculosis in Belarus
A Skrahina, V Sokolovnikova, D Vetushko, D Klimuk, S Setkina, D Falzon, H Hurevich (Belarus, Switzerland)

16.20 OA-190-13 Bedaquiline and linezolid-based regimens for fluoroquinolone-resistant MDR-TB: how much better is it?
M Bastard, L Guglielmetti, H Huerga, A Hayrapetyan, N Khachatryan, L Egiazaryan, F Varaine, C Hewison (Switzerland, France, Armenia)

16.30 OA-191-13 Concomitant use of bedaquiline and delamanid in patients with pulmonary XDR-TB and additional resistance to other second-line drugs in Kazakhstan
Y Algozhin, M Rashitov, E Berikova, S Maretbayeva, Y Sahabutdinova, K Khashidinov, M Rich, A Yedilbayev (Kazakhstan, United States of America)

16.40 OA-192-13 Outcomes of multidrug-resistant tuberculosis patients receiving bedaquiline in a compassionate use programme in Armenia and Georgia
M Bastard, H Huerga, A Hayrapetyan, Z Avaliani, N Khachatryan, T Kotrikadze, F Varaine, C Hewison (Switzerland, France, Armenia, Georgia)

16.50 OA-193-13 Delamanid for rifampicin-resistant tuberculosis: an observational cohort study from Khayelitsha, South Africa
E Mohr, J Hughes, A Reuter, G Ferlazzo, V De Azevedo, A Shroufi, S Ade, P Isaakidis (South Africa, Benin)

17.00 OA-194-13 Drug resistant TB burden among contacts of drug resistant TB patients: results from routine programme implementation in three regions of Ethiopia
N Hiray, B Ayele, Y Molla, D Habte, T Setargie, G Gizatle, D Jerene, M Melese (Ethiopia, United States of America)

17.10 OA-195-13 Drug-resistant tuberculosis treatment failure: mutations associated with bedaquiline
L Joseph, S V Omar, N A Ismail (South Africa)
SHORT ORAL ABSTRACT SESSIONS

10. HIV and TB: lessons from Africa

Co-chairs: Nicola Zetola (Botswana), Keren Middelkoop (South Africa)

10.30 SOA-394-13 Clinic-based urinary LAM as a biomarker of clinical disease, tuberculosis bacillary burden, and mortality among ART-naive HIV-infected adults in South Africa

10.36 SOA-395-13 Subclinical tuberculosis among HIV positive adults in South Africa: a cohort study


10.48 SOA-397-13 Paediatric isoniazid preventative therapy in HIV-positive patients at the Baylor Center of Excellence in Mbabane, Swaziland

10.54 SOA-398-13 High HIV prevalence among presumptive tuberculosis patients in an urban setting: lessons from Kampala city, Uganda

11.00 SOA-399-13 A descriptive analysis of PEPFAR’s TB-HIV portfolio: TB cases with known HIV status and TB-HIV co-infected on ART in East and Southern Africa

11.06 SOA-400-13 Pulmonary function before and after ART initiation in South African adults with pulmonary TB and HIV

11.12 SOA-401-13 Health systems strengthening in TB-HIV programme: experience from the Tegemeza project

11.18 SOA-402-13 Value of determine-TB LAM test as screening test and diagnostic tool for tuberculosis diagnosis in HIV-positive adults

11.24 SOA-403-13 Diagnostic accuracy, incremental yield and cost of determine TB-LAM and sputum induction for in seriously ill adults with HIV, cough and WHO danger signs

11.30 SOA-404-13 Automated fluorescence AFB smear testing system for tuberculosis diagnosis based on a deep-learning technology, InBioDx-TB

11.36 SOA-405-13 Prevalence of contamination among paediatric samples collected by gastric aspiration in Botswana

11.42 SOA-406-13 Predominance of modern sublineage of M. tuberculosis Beijing genotype among clinical isolates in Nepal

11.48 SOA-407-13 Use of carbendazim in solid media as effective contamination control method for M. tuberculosis cultures

12.00 SOA-408-13 Prevalent non-tuberculous mycobacteria species among presumptive MDR-TB patients from peripheral health facilities referred for testing at KEMRI TB laboratory, Kisumu

12.06 SOA-409-13 Improving detection of tuberculosis in people living with HIV/AIDS using trained African giant pouched rats

12.12 SOA-410-13 PCR en tiempo real, multiplex para diferenciación de miembros del complejo M. tuberculosis

12.18 SOA-411-13 Molecular bacterial load assay as a marker for treatment response late during treatment

12.24 SOA-412-13 A portable electronic nose as a potential point-of-care screening device for pulmonary tuberculosis

SHORT ORAL ABSTRACT SESSION 10.30 – 12.00 HALL 8 - EVENTS BALLROOM

11. Pearls and pitfalls: tales from the lab

Co-chairs: Riitta Dlodlo (Zimbabwe), Christopher Gilpin (Switzerland)

14.00 SOA-404-13 Automated fluorescence AFB smear testing system for tuberculosis diagnosis based on a deep-learning technology, InBioDx-TB

14.06 SOA-405-13 Prevalence of contamination among paediatric samples collected by gastric aspiration in Botswana


14.18 SOA-407-13 Use of carbendazim in solid media as effective contamination control method for M. tuberculosis cultures

14.24 SOA-408-13 Prevalent non-tuberculous mycobacteria species among presumptive MDR-TB patients from peripheral health facilities referred for testing at KEMRI TB laboratory, Kisumu


14.36 SOA-410-13 PCR en tiempo real, multiplex para diferenciación de miembros del complejo M. tuberculosis

14.42 SOA-411-13 Molecular bacterial load assay as a marker for treatment response late during treatment

14.48 SOA-412-13 A portable electronic nose as a potential point-of-care screening device for pulmonary tuberculosis
12. MDR-TB: predictores de resultados terapéuticos

Co-chairs: Sarabjit Chadha (India), Robert Horsburg (United States of America)

14.00 SOA-414-13 Factores asociados con resultados terapéuticos desfavorables entre pacientes con cuadros de tuberculosis resistente a múltiples medicamentos tratados en un hospital terciario de la región de Tigray, norte de Etiopía
F Desalegne, E Michael, M Abraha, M Tshehaye, A Gebremedhin, N Thaimanot, E Hare got, y D Jerene (Etiopía)

14.06 SOA-415-13 Resultados a largo plazo de pacientes de los que se ha perdido el seguimiento de pacientes de cuadros de tuberculosis resistente a múltiples medicamentos en el país georgiano
N Adamashvili, G Kuchukhidze, D Balliashvili, A Kasradze, N Lomtadze, H M Blumberg, R R Kempker, M J Magee (Georgia, Estados Unidos de América)

14.12 SOA-416-13 Diagnóstico y gestión de base comunitaria de cuadros de tuberculosis resistente a múltiples medicamentos en Bangladesh
K Jahan, P Daru, R Haq, M Melese, V Begum, M Khan (Bangladés, Estados Unidos de América)

14.18 SOA-417-13 Contribución de servicios sanitarios privados a la gestión de la tuberculosis resistente a múltiples medicamentos: experiencias habidas en Kampala, Uganda
E Kizito, S Kasozi, N Kiorobwa, R Byaruhanga, D Birabwa, S Turyahabwe, S Dejene, P Suárez (Uganda, Estados Unidos de América)

14.24 SOA-418-13 Measurement of MDR-TB outcomes over time
S C Vilbrun, A Sourrtzidis, K F Walsh, S Delva, O Jeantiné, J W Pape, S Koenig (Haití, Estados Unidos de América)

14.30 SOA-419-13 Diagnóstico y gestión de base comunitaria de cuadros de tuberculosis resistente a múltiples medicamentos en el país georgiano
S C Vilbrun, A Sourrtzidis, K F Walsh, S Delva, O Jeantiné, J W Pape, S Koenig (Haití, Estados Unidos de América)

14.40 SOA-420-13 Lung tissue concentrations of linezolid among patients with drug-resistant tuberculosis
R Kempker, M T Heinrichs, I Sabulua, N Bablishvili, H Derendorf, H Blumberg, S Vashakidze, C Peloquin (United States of America, Georgia)

14.50 SOA-421-13 Impacto del ensayo Xpert® MTB /RIF en los índices de éxito en cuadros de tuberculosis resistente a múltiples medicamentos en el Distrito de Ugu, KwaZulu-Natal South Africa
T C Mathwin, M Zhuza, P Ndido (South Africa)

15.00 SOA-422-13 Contribución de servicios sanitarios privados a la gestión de la tuberculosis resistente a múltiples medicamentos: experiencias habidas en Kampala, Uganda

15.10 SOA-423-13 Tratamiento para tuberculosis resistente a isoniacida no multidrogorresistente en el Perú, 2012—2014
J. Cornejo, A. Alarcon, D. Moore (Perú, Reino Unido)
13. News and updates on latent TB infection

**Co-chairs:** Hendrick Simon Schaaf (South Africa), Kevin Schwartzman (Canada)

16.00  
SOA-424-13 Predicting tuberculosis among adult household contacts: external validation of a tuberculosis risk score  
M J Saunders, T Wingfield, M A Tovar, S Datta, M Baldwin, R Montoya, J J Lewis, C Evans (United Kingdom, Peru)

16.06  
SOA-425-13 Seasonality, HIV and invalid T-SPOT.TB results: piecing together the IGRA puzzle in childhood TB  
H Highsmith, H L Kirchner, E Graviss, A Mandalakas (United States of America)

16.12  
SOA-426-13 Pre-immigration latent tuberculosis infection screening in new migrants to low-incidence countries: a cost-effectiveness analysis  
J Campbell, J Johnston, V Cook, M Sadatsafavi, K Elwood, F Marra (Canada)

16.18  
SOA-427-13 Preventive treatment for contacts of multidrug-resistant tuberculosis: a systematic review  
Y Hamada, K Schenkel, D Falcon, H Getahun (Switzerland)

16.24  
SOA-428-13 Incidence and risk factors for tuberculosis infection in a high endemic region: a follow-up study among household and community contacts in Vellore, South India  
P Narasimhan, C R MacIntyre, D Mathai, J Wood (Australia, India)

16.30  
SOA-429-13 Factors associated to isoniazid-preventive therapy initiation and completion among household contacts < 5 years old of tuberculosis patients  
L Otero, T Battaglioli, A Rios, Z De la Torre, N Trocones, C Seas, P Van der Stuyft (Peru, Belgium)

16.36  
SOA-430-13 The cascade of care in LTBI in Indonesia  
P Hadisoeartmento, R Ruslami, K Andriani, N Manansana, P Hill, F Fregonese, B Alisjahbana, D Menzies (Indonesia, New Zealand, Canada)

16.42  
SOA-431-13 Strategies to reduce losses in the cascade of care of latent tuberculosis: a systematic review and meta-analysis  
S Moayedi-Nia, O Oxlade, D Menzies (Canada)

16.48  
SOA-432-13 Lack of TB knowledge among TST-positive household contacts of pulmonary cases: a missed opportunity  
A DeLuca, G Dhurnal, M Paradkar, N Suryavanshi, V Mave, R Kohli, S Shivakumar, A Gupta (United States of America, India)

16.54  
SOA-433-13 Barriers and achievements in promoting preventive therapy for contacts of tuberculosis patients in Lima, Peru  
A Millones, C Contreras, L Lecca, J Rios, M Becerra, C Yuen (Peru, United States of America)

17.00  
SOA-434-13 Potential clinical utility of borderline result with the T-SPOT®.TB test  
K Rego, W Cruikshank (United States of America)
19. Next generation sequencing versus PCR (polymerase chain reaction) based typing: what is all the fuss?

Chair: Silvia Kelbert (Tanzania, United Rep.)

PD-663-13 Investigation of a cluster of genotypically identical rifampicin-resistant TB cases in a district of South Africa
N Ismail, R Manesen, P Manana, R Mapuroma, R Chingonzoh, D Lathane, H Said, K Mccathy (South Africa)

PD-664-13 Genetic diversity of clinical M. tuberculosis strains from Yangon and Mandalay Regions, Myanmar: using MIRU-VNTR method
P W El, W W Aung, J S Lee, W W Nnyunt, T L Swe, M M Htwe, S M Win, C L Chang (Myanmar, Korea, Republic of)

PD-665-13 Whole genome sequencing analysis of drug-resistant M. tuberculosis in Peru
E D Santos Lázaro, Z Puyan, R Cavillan (Peru)

PD-666-13 Whole genome sequencing analysis of M. tuberculosis isolates from patients with drug-resistant tuberculosis in Japan
N Kobayashi, A Ichinose, T Kirikae, J Takasaki, K Ohta (Japan)

R Diaz, Y Herrera, Y Barbón, D Lemus, A Marrero (Cuba)

PD-668-13 Development of a molecular epidemiology surveillance system for tuberculosis in Mexico
D Munro-Rojas, J Zarrabali-Maza, J Hernández Illescas, A Santana Álvarez, M T Martínez-Cazares, A Parissi-Crivelli, M Lauzardo, R Zenteno-Cuevas (Mexico, United States of America)

PD-669-13 High genetic diversity among M. tuberculosis complex isolates circulating in the Central Region of Cameroon
E M Tekwu, CANTAM-TB UY1 Group (Ghana, Cameroon)

PD-670-13 Contribution of MIRU-VNTR genotyping to understand transmission dynamics of multidrug-resistant tuberculosis in patients from Medellin, Colombia
T Realpe, G Mejia, E Zapata, A Osorio, J Robledo (Colombia)

PD-671-13 Direct MIRU-VNTR genotyping of M. tuberculosis from Xpert® MTB/RIF remnants
E Mambuque, E Abscal, H Bulo, A L Garcia-Basteiro, D Garcia-de-Vedma (Mozambique, Spain, Netherlands)

PD-672-13 Estudio de la diversidad genética de aislados clínicos de M. tuberculosis
A Ordaz Vázquez, P Torres González, L Ferreyra Reyes, P Cruz Hervet, M D L Garcia Garcia, J Sifuentes Osornio, L A Ponce de Léon Garduño, M Bobadilla del Valle (Mexico)

PD-673-13 Operational issues in HIV-screening among TB patients in Central India: qualitative insights from healthcare providers and patients
M Biswas, T Nale, A Kharate (India)

PD-674-13 An improvement in identification of presumptive TB cases enhanced improved coverage of HIV testing and detection
B G Belaineh, M Llauzi, I Dambe, H Kanyerere, B Bouchut, K Mbendera, B Nindi, J Mpungose (Malawi)

PD-675-13 High HIV-TB burden but suboptimal HIV services uptake for paediatric TB patients in public health facilities in Tanzania
B Ngeno, W Kohi, B Ngowi, S Pals, G Munuo, G Ruhago, C Emerson, S Modi (United States of America, Tanzania, United Rep.)

PD-676-13 Universal HIV test and treat does not translate into higher CD4 counts and ART in Malawian adults with smear-positive pulmonary TB
A D McCalmum, I Sheha, M Champions, G Band, G R Davies, S H Khoo, H C Mwandumba, D J Sloan (Malawi, United Kingdom)

PD-677-13 Keeping mothers and babies alive: integrating TB case finding in prevention of mother to child transmission of HIV settings in Kenya
R Muinde, K Muthoka, E Nganga, A Wairia, P Wekesa (Kenya)

PD-678-13 Compliance with the national Xpert® MTB/RIF diagnostic algorithm in South Africa: evidence from routine TB data (ETR.Net)
H Mahua, J Perlman, H Kim, J Sibanda, T Heller, A Adelekan, N Ismail, S Dlamini (South Africa)

PD-679-13 Lessons learned from diagnostic work-up of TB in a high HIV prevalence South African setting
S Gati, R Chetty, D Wilson, J Achkar (United States of America, South Africa)

PD-680-13 Intensified case finding for TB and isoniazid preventive therapy uptake among HIV patients in Kilifi, Kenya
C Obonyo, G Anaya, G Githongo, L Kai, L Katana, J Nkatha, D Sanga, J Yi (Kenya)

PD-681-13 Acceptability of a comprehensive clinic-based intervention to increase healthcare provider prescription of isoniazid preventive therapy in South Africa
B Jarrett, J Kabasia, M Sekwele, N Mpungose, K Motsholeng, J Golub, N Martinson, C Hannahan (United States of America, South Africa)

PD-682-13 Improving isoniazid preventive therapy uptake among people living with HIV in ART facilities in Nigeria: continuous quality improvement approach
I Saliu, E Iru, L Igwe, C Eze, J Oliver, S Ainté, A Olukolu, A Nwanda (Nigeria, United States of America)

20. HIV-TB services: how can we do better?

Chair: Katharina Kranzer (United Kingdom)

PD-673-13 Operational issues in HIV-screening among TB patients in Central India: qualitative insights from healthcare providers and patients
M Biswas, T Nale, A Kharate (India)

PD-674-13 An improvement in identification of presumptive TB cases enhanced improved coverage of HIV testing and detection
B G Belaineh, M Llauzi, I Dambe, H Kanyerere, B Bouchut, K Mbendera, B Nindi, J Mpungose (Malawi)

PD-675-13 High HIV-TB burden but suboptimal HIV services uptake for paediatric TB patients in public health facilities in Tanzania
B Ngeno, W Kohi, B Ngowi, S Pals, G Munuo, G Ruhago, C Emerson, S Modi (United States of America, Tanzania, United Rep.)

PD-676-13 Universal HIV test and treat does not translate into higher CD4 counts and ART in Malawian adults with smear-positive pulmonary TB
A D McCalmum, I Sheha, M Champions, G Band, G R Davies, S H Khoo, H C Mwandumba, D J Sloan (Malawi, United Kingdom)

PD-677-13 Keeping mothers and babies alive: integrating TB case finding in prevention of mother to child transmission of HIV settings in Kenya
R Muinde, K Muthoka, E Nganga, A Wairia, P Wekesa (Kenya)

PD-678-13 Compliance with the national Xpert® MTB/RIF diagnostic algorithm in South Africa: evidence from routine TB data (ETR.Net)
H Mahua, J Perlman, H Kim, J Sibanda, T Heller, A Adelekan, N Ismail, S Dlamini (South Africa)

PD-679-13 Lessons learned from diagnostic work-up of TB in a high HIV prevalence South African setting
S Gati, R Chetty, D Wilson, J Achkar (United States of America, South Africa)

PD-680-13 Intensified case finding for TB and isoniazid preventive therapy uptake among HIV patients in Kilifi, Kenya
C Obonyo, G Anaya, G Githongo, L Kai, L Katana, J Nkatha, D Sanga, J Yi (Kenya)

PD-681-13 Acceptability of a comprehensive clinic-based intervention to increase healthcare provider prescription of isoniazid preventive therapy in South Africa
B Jarrett, J Kabasia, M Sekwele, N Mpungose, K Motsholeng, J Golub, N Martinson, C Hannahan (United States of America, South Africa)

PD-682-13 Improving isoniazid preventive therapy uptake among people living with HIV in ART facilities in Nigeria: continuous quality improvement approach
I Saliu, E Iru, L Igwe, C Eze, J Oliver, S Ainté, A Olukolu, A Nwanda (Nigeria, United States of America)
21. Maximising results but minimising harm – adverse events in MDR-TB treatment

Chair: Robert Horsburgh (United States of America)

<table>
<thead>
<tr>
<th>Poster</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-683-13</td>
<td>Structural and behavioural correlates of aminoglycoside hearing loss among HIV-positive and HIV-negative patients in Swaziland S M Haumba, T Maja (Swaziland, South Africa)</td>
</tr>
<tr>
<td>PD-684-13</td>
<td>Risk for baseline hearing loss among new drug-resistant tuberculosis patients in South Africa H Hong, C Budhathoki, J Farley (United States of America)</td>
</tr>
<tr>
<td>PD-685-13</td>
<td>Drug-induced hypothyroidism during treatment for multidrug-resistant tuberculosis in Swaziland S Blankley, K Keus, M Verdeccia, D Yambe, E Casas, C Sonoko (Swaziland, Netherlands, United Kingdom)</td>
</tr>
<tr>
<td>PD-688-13</td>
<td>Implementation of Active Drug Safety Monitoring (aDSM) for monitoring adverse events in DR-TB treatment with bedaquiline in the Republic of Tajikistan A Rajabzoda, M Makhmudova, A Soliev, S Ziyoyeva, O Bobohejaev (Tajikistan)</td>
</tr>
<tr>
<td>PD-689-13</td>
<td>Adverse drug reactions of chemotherapy with bedaquiline and linezolid in patient with drug-resistant tuberculosis T Belyaeva, I Chemochaeva, E Istonima, T Potepe, T Suprun, A Starshinova, Y Pablonsky (Russian Federation)</td>
</tr>
<tr>
<td>PD-690-13</td>
<td>Ensuring active drug-safety monitoring and management (aDSM) for patients on bedaquiline and delamanid containing regimens in Georgia N Lomtadze, N Adamashvili, N Kiria, Z Avaliani (Georgia)</td>
</tr>
<tr>
<td>PD-691-13</td>
<td>Management of QT prolongation and cardiac toxicity of new TB drugs in Europe: a cross-sectional TBnet survey L Guglielmetti, S Tiberi, M Burman, H Kunst, G Bothamley, C Lange, TBnet (France, United Kingdom, Germany, Sweden)</td>
</tr>
<tr>
<td>PD-692-13</td>
<td>Adverse event profile of a DRTB infection treatment cohort: experience from the Indus Hospital TB programme S Siddiqui, J Fuad, M Jaswal, A Malik, Z Barry, H Hussain, M Becerra, F Amanullah (Pakistan, United States of America)</td>
</tr>
</tbody>
</table>

22. Using technology to advance drug-resistant TB care

Chair: Einar Heldal (Norway)

<table>
<thead>
<tr>
<th>Poster</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-693-13</td>
<td>Electronic reporting of adverse effects of second-line anti-tuberculosis drugs in Nigeria O Emmanuel, M Ochigbo, J Kyue, A Lawanson, M Gidado, P Suarez, B Assefa, V Babawale (Nigeria, United States of America, Ethiopia)</td>
</tr>
<tr>
<td>PD-694-13</td>
<td>Effectiveness of mHealth technologies in the management of DR-TB DOTS at community level in Bangladesh S E Imtiaz, O Cordon, P Danu, N Arefin, C Welch (Bangladesh, United States of America)</td>
</tr>
<tr>
<td>PD-695-13</td>
<td>Advancing MDR-TB research through the multi-national TB Portals Programme and online database platform A Rosenthal, A Gabrielian, K Wollenberg, E Engle, M Harris, J Taaffe, D Hart, M Tartakovksy (United States of America)</td>
</tr>
<tr>
<td>PD-696-13</td>
<td>Kyrgyzstan’s approach to tackle DR-TB through early warning system for expedited uptake of new medicines J Tunkatarova, A Kadyrov, M Sulaimanov, A Momunova, J van Rest, M Kavtaradze (Kyrgyz Republic, Netherlands, Switzerland)</td>
</tr>
<tr>
<td>PD-698-13</td>
<td>A quantification and early warning system, QuanTB, helps to avoid TB medicines stock-outs in Uzbekistan I Butabekov, M Tilyashayev, N Paripova, I Linderko, V Soboldiev, V Mirskhulava, M Kavtaradze, A Salakaia (Uzbekistan, United States of America, Georgia, Switzerland)</td>
</tr>
<tr>
<td>PD-700-13</td>
<td>Lessons learned from the design, development, and deployment of End TB electronic medical records for MDR-TB across 16 countries C Hevison, S Arnauot, A Habib, M Rich, U Khan, J Mbabazi, H Huerga, M Mcguire (France, United States of America, United Arab Emirates)</td>
</tr>
<tr>
<td>PD-701-13</td>
<td>Impact of implementing an early warning system to improve TB medicine procurement in Ethiopia D Damtew, S Abdultiber, B Ayele, K Sintayehu, E Kassaye, L Fekadu, A N Kasi-Nsubuga, S Mwatawala (Ethiopia, Switzerland, Tanzania, United Rep.)</td>
</tr>
</tbody>
</table>
23. Extrapulmonary TB, vitamin D, treatment outcomes and Aspergillus

Chair: Kevin Schwartzman (Canada)

PD-702-13  High burden of genital TB among women with infertility in India: need for an intensified approach
S Naik, A Chandranwale, S Joshi, V Mave, G Dhumal, A Deluca, A Gupta, R Bollinger (India, United States of America)

PD-703-13  Age-stratified tuberculosis treatment outcomes in Zimbabwe. Are we paying attention to the most vulnerable patients?
R T Ncube, A Daniels, V Saria, S Satyanarayana, S Bergkvist, V Das, J Das, M Pai (United States of America, India, Canada)

PD-704-13  A 13 year trend of tuberculosis treatment outcome among patients attending health facilities in Harari regional state, Harar, Ethiopia
E G Kassaye, K M Hailu, A A Hassen, M I Mume, Z T Kidanemariam, D Fisseha, E Kinkenberg (Ethiopia, Netherlands)

PD-705-13  Tuberculosis care across urban India’s private health sector: a two-city, cross-sectional study
A Kwan, B Daniels, V Saria, S Satyanarayana, S Bergkvist, V Das, J Das, M Pai (United States of America, India, Canada)

PD-706-13  Prevalence and risk factors of chronic pulmonary aspergillosis in patients with post-tubercular sequelae in India
R Singla, R S Rathore, R Singhal, V P Myneedu, P Sethi (India)

PD-708-13  Tuberculosis pericardica su asociación con tuberculosis diseminada conlleva alta mortalidad.
L Escobedo, L Pech, A Iñarra, S Aguilar, L Velazquez, B Vargas, E Ramirez (Mexico)

PD-709-13  Role of medical thoracoscopy in the management of multiloculated empyema
K K Sumalani (Pakistan)

PD-710-13  Bronchopleural complications after surgery in patients with pulmonary tuberculosis
O Nematov, N Parpiyeva, M Tillyashaykhov, D Giller, S Mayusupov (Uzbekistan, Russian Federation)

PD-711-13  Comparative analysis of laparoscopic exploration of pelvic tuberculosis and pathological examination
J Zhu, Q Ni, Z Lv (China)

PD-712-13  Using serous fluid drainage flocky precipitate (SFDFP) as testing sample for diagnosing tuberculous serositis
L Xuhui, Z Aimei, X Lu, Z Yoo, L Shuihua, S Yuanlin, L Shangun (China)

24. Los medicamentos correctos en la dosis adecuada en el momento adecuado – TB drugs: use them right

Chair: Paolo Denti (South Africa)

PD-713-13  Assessment of the quality of anti-tuberculosis medicines in Almaty, Kazakhstan, 2014
D Nabirova, G Schmid, R Yusuova, M Kantarbayeva, S Ismailov, D Moffett, R Jahnke, P Nuorti (Kazakhstan, Finland, Tajikistan, Germany)

PD-714-13  Efficacy and safety of parenteral anti-tuberculosis therapy of patients with TB meningitis in comparison with standard treatment
M Kuzhko, M Gumeniuk, D Butov, T Tlustova, T Syprysian, O Denysov (Ukraine)

PD-715-13  A study to compare efficacy of high dose rifampicin with standard dose rifampicin in tuberculous meningitis
A Basavaraj, A Avhad, D Kadam (India)

PD-716-13  Intravenous application of rifampicin and ethambutol in patients with TB treatment failure and impaired suction function of the small intestine
M Kuzhko, M Gumeniuk, L Todoriko, D Butov, T Tlustova (Ukraine)

PD-717-13  Discontinuation of pyrazinamide in patients treated for MDR-TB in a clinical trial in Lima, Peru
B Martel, S Leon, C Pinedo, D Vargas, L Lecca, C Mitnick, R Horsburgh (Peru, United States of America)

PD-718-13  Adaptation of GPP guidelines for TB vaccine research: a participatory approach
A Schley, A Van der Westhuizen, K C Croucher (South Africa, United States of America)

PD-719-13  A pharmacokinetic study of super-boosted lopinavir/ritonavir in combination with rifampin in HIV-1-infected patients with tuberculosis
C Boulanger, A Cuel, C Peloquin, None (United States of America, Brazil)

PD-720-13  Daily 800 mg vs. 600 mg efavirenz in HIV patients treating tuberculosis with a rifampicin-based regimen: a randomised controlled trial
M Xavier, A Trajman, C Schmaltz, F Sant’Anna, I Maia, D Hadad, E de Brasil, V Rolla (Brazil, Canada)

PD-721-13  Right drugs for the right treatment of tuberculosis in private sector: unchecked issue
I Farooq, R Taralekar, S Vijayan, R Gandhi, V Oswal, R Chopra, J Thakker, M Panchal (India)

PD-722-13  Active screening for hepatotoxicity: identifying time periods for targeted monitoring in tuberculosis patients
M Milstein, J Coit, G Velasquez, E Osso, D V Vasquez, E S Garavito, G Davies, C Mitnick (United States of America, Peru, United Kingdom)
25. Lungs matter – recent developments in adult lung health

Chair: Thomas Matte (United States of America)

PD-723-13 Pulmonary hypertension in stable COPD patients and its effect on exercise capacity using the six minute walk test
S Purohit, V Joshee (India)

PD-724-13 Metabolic biomarkers for the opportunite diagnosis of COPD in vulnerable population
M Rodriguez Aguilar, A S Ramirez Garcia, L Diaz de Leon-Martinez, E Van-Brussel, A Gomez Gomez, L Carrizales Yanez, R Flores Ramirez (Mexico)

PD-725-13 Perception of asthma control among in an out-patient clinic at Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia
T H Gebremariam, C B Sherman, N W Schluger (Ethiopia, United States of America)

PD-726-13 Knowledge and attitudes of health professionals on bronchial asthma in Niamey
M M Assou Neimo, A Cagara Issoufou Madougou, M Dan Aouta (Niger)

PD-727-13 Respiratory function among workers in a vegetable oil mill in Benin
M Adjibimey, S Ade, V Hinson, P Ayelo, A Adjiboss, O Adjibode, V Dossougbete (Benin)

PD-728-13 Chronic obstructive pulmonary disease among the elderly in an urban community of South India
R C Chauhan, A J Purty, N S Chauhan, Z Singh (India)

PD-729-13 Household air pollution and pneumonia among low income children in Malawi adults: a case-control study
H Jary, S Aston, A Hn, E Giorgi, N Kalata, I Peterson, S Gordon, K Mertimer (United Kingdom, Malawi)

26. Private sector engagement in TB care: lessons learned from low-income countries

Chair: Nicola Zetola (Botswana)

PD-731-13 Private sector effectiveness in treating TB patients: a document review of the Kabul urban DOTS experience
S M Sayedi, A Hamim, M K Rashidi, G Qader, H Faqiyar, E Darwish, L Manzoor, P Suarez (Afghanistan, United States of America)

PD-732-13 PPM and -mandatory notification of TB cases under the Revised National Tuberculosis Programme (RNTCP) in Himachal Pradesh
O Kumar (India)

PD-733-13 Public-private mix as an indispensable strategy to ENDB: six years project experience in Ethiopia
A Gebrehiwot, M Dadow, A Kassa (Ethiopia)

PD-734-13 Can we engage large private hospitals to increase TB notifications from private sector in India?
N Solanki, S Nagre, A Pathak, S Waiker, B Pandya, V Ghule, S Chada (India)

PD-735-13 Effects of engaging public and private health facilities in TB case finding in Afghanistan: urban DOTS implementation experiences
A Hamim, S M Sayedi, N M Samadi, E Darwish, L Manzoor, M Shefa, M K Rashidi, P Q Suarez (Afghanistan, United States of America)

PD-736-13 Alianza programa tuberculosis de la juridicción sanitaria VII y consultorios de Farmacias Similares Fundación BEST
C G Sanchez Oropeza (Mexico)

PD-737-13 A public-private mix intervention to enhance tuberculosis case finding in resource constrained industrial setting in Himachal, India
A Kumar Singh (India)

PD-738-13 Urban TB control in Bandung, Indonesia: exploring the potential contribution of private practitioners to finding the missing cases
D Pramulya, F Damanik, E Ramadhinie, P H Kusuma, A Surya, W Waworuntu, B Sonata, A Gebhard (Indonesia)

PD-739-13 “The Missing Million” TB patients in India: understanding enabling modes of reporting TB cases by the private sector
G Kumar, S Nath, K Sagili (India)

PD-740-13 Outcomes of engaging a gynaecological hospital in TB case notification and fertility status of women in Kabul city, Afghanistan
E Darwish, G Q Qader, M K Rashidi, S M Sayedi, H Faqiyar, A Hamim, L Manzoor, H Sazgar (Afghanistan)

27. TB across key populations

Chair: Alice Christensen (Tanzania, United Rep.)

PD-741-13 How can we increase the access of migrants to TB diagnosis and treatment in Kazakhstan?
B Babamuraov, Z Ismailov, M Sianozova, A Trusov, Z Zhandauletova, P Zhazibekova, I Yuzkayeva (Kazakhstan, United States of America)

PD-742-13 Underlying social determinants of tuberculosis risk in UK-born adults of white ethnic background in England: a nationwide community-based case-control study
P Nguidop-Djomo, L C Rodrigues, P G Smith, I Abubakar, P Manghani (United Kingdom)
### 28. Using media campaigns to raise awareness in tobacco control and to counter tobacco industry

**Chair: Gan Quan (China)**

<table>
<thead>
<tr>
<th>Poster Number</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-751-13</td>
<td>Anticipating and countering tobacco industry arguments against tobacco control through measures at population level campaigns</td>
<td>Nandita Murukutla (United States of America)</td>
</tr>
<tr>
<td>PD-752-13</td>
<td>An evidence based public campaign against waterpipe / hookah smoking in Turkey</td>
<td>M P T Durgut (Turkey)</td>
</tr>
<tr>
<td>PD-753-13</td>
<td>Communication on health: the creation of a bulletin on tobacco industry strategies</td>
<td>F Vargas (Brazil)</td>
</tr>
<tr>
<td>PD-754-13</td>
<td>#ReelVsReal: social media campaign to combat glamorous depiction of tobacco use in films and TV programmes in India</td>
<td>P Puri, V Malik, D Svenson, S Hamil, N Singh Negi, S Mullin, N Murukutla (United States of America)</td>
</tr>
<tr>
<td>PD-755-13</td>
<td>Efficiencies in achieving impact with at-risk audience segments through a anti-tobacco mass media campaign in India, Vietnam, Indonesia and Mexico</td>
<td>N Singh Negi, N Murukutla, S Wang, R Perl, S Hamil, T Turk, T Carroll, S Mullin (United States of America)</td>
</tr>
<tr>
<td>PD-757-13</td>
<td>Evaluation of first smokeless tobacco campaign in Myanmar</td>
<td>N Singh Negi, T Sein, T Caroll, S Mullin, N Murukutla, I van de Braak (United States of America, Myanmar)</td>
</tr>
</tbody>
</table>

### 29. Latent TB infection: The last frontier

**Chair: Mark Hatherill (South Africa)**

<table>
<thead>
<tr>
<th>Poster Number</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-758-13</td>
<td>Modelling latent TB infection control on TB transmission and elimination in Europe</td>
<td>S de Vlas, S Verver, J Vanhommerig, J Hontelez, M Monk Noordegraaf, M J van der Werf, J H Richardus, Country Collaborators Netherlands, Portugal, Spain, Czech Republic (Netherlands, Sweden)</td>
</tr>
<tr>
<td>PD-759-13</td>
<td>Low prevalence of tuberculosis skin test boosting among community residents in a high tuberculosis burden setting</td>
<td>J Sekandi, S Nalwango, R Kakaare, R Kizza Nkwata, L Martinez, C Whalen, N Kiwanuka (United States of America, Uganda)</td>
</tr>
<tr>
<td>PD-760-13</td>
<td>Measuring the prevalence of latent TB infection in Ca Mau province</td>
<td>P T B Nguyen, T M Duong, T A Nguyen, N V Nguyen, C Chen, V Cardenas, G J Fox, G B Marks (Viet Narm, Australia, United States of America)</td>
</tr>
<tr>
<td>PD-761-13</td>
<td>Missed opportunities for TB prevention: the TB care continuum in adult primary care clinics at Denver health, an urban safety-net health system</td>
<td>K Aiona, T Filardo, R Belknap, M Haas (United States of America)</td>
</tr>
<tr>
<td>PD-762-13</td>
<td>A case study in Ghana of the cascade of LTBI care</td>
<td>J Obeng Baah, K Kusi Ayegyem, E D Frimpong, A Bwitiwum-Nyarko, F Bonsu, F Fregonese, O Oxlade, D Menjes (Ghana, Canada)</td>
</tr>
<tr>
<td>PD-765-13</td>
<td>Closing the loop in child contact management: IPT completion outcomes in Western Kenya</td>
<td>D Szokwaro, J A Amisi, P Owiti, N Buza, P Chege, E J Carter (United States of America, Kenya)</td>
</tr>
<tr>
<td>PD-766-13</td>
<td>Treatment of presumed drug-resistant TB infection in household contacts in a high-burden setting</td>
<td>H Hussain, F Amanullah, A Malik, S Siddiqui, M Jaswal, I Ahmed, N Salahuddin, M Becerra (Pakistan, United States of America)</td>
</tr>
<tr>
<td>PD-767-13</td>
<td>Surveillance of severe adverse events on once-weekly rifapentine plus high-dose isoniazid for latent tuberculosis infection treatment in Taiwan, 2016</td>
<td>P-H Lee, P H Lee, M-J Lu, Y-C Huang, S-N Kao, S-H Huang, Y-F Huang (Taiwan)</td>
</tr>
</tbody>
</table>
### 30. Elevating knowledge in the field: an essential tool

**Chair: Riitta Dlodlo (Zimbabwe)**

<table>
<thead>
<tr>
<th>Poster ID</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-768-13</td>
<td>Knowledge about and preparedness for tuberculosis management among health-care and social workers in refugee accommodations in Cologne, Germany</td>
<td>B Büchler, F Neuhammer, N Funke, B Horstmann, M Bosbach, A Bunte (Germany)</td>
</tr>
<tr>
<td>PD-769-13</td>
<td>Scaled-up implementation and attrition risk evidenced in a TB guideline e-learning course for frontline staff of the Peruvian National Tuberculosis Programme</td>
<td>L F Peralta, L Otton, C Ugarte-Gil, K Castillo, V A Alarcón, J Ríos-Vidal, E Gotuzzo (Peru)</td>
</tr>
<tr>
<td>PD-770-13</td>
<td>Innovative approaches to cascade nutrition in tuberculosis knowledge among healthcare workers in limited resource settings</td>
<td>M Okoth, B Ulo, M Mangut, S Karanja (Kenya)</td>
</tr>
<tr>
<td>PD-772-13</td>
<td>Reactivating TB services through training and mentoring in Mazabuka and Kafue Districts, Zambia</td>
<td>L Zulu, T Chisanga, A Chiwala, L Lwatula, L Aladesanmi, D Chisanga Chanda, L Oseni, S Dubé (Zambia, United States of America)</td>
</tr>
<tr>
<td>PD-773-13</td>
<td>Designing evaluation studies to optimally inform policy: factors to consider when making resource allocation decisions for health worker training programme</td>
<td>S Wu, H Legido-Quigley, R Coker, M Khan (Singapore, United Kingdom, Thailand)</td>
</tr>
<tr>
<td>PD-774-13</td>
<td>Awareness and education on tuberculosis prevention and control through the school health programme in Kenya</td>
<td>E Kimani, J Mwangi, S Misoi, M Ndiritu (Kenya)</td>
</tr>
<tr>
<td>PD-775-13</td>
<td>TB education intervention in school children plays a vital role in detection of presumptive TB cases in a South Indian district</td>
<td>C K K R Gali, S Kant, A Anantham, S Chadha (India)</td>
</tr>
<tr>
<td>PD-776-13</td>
<td>From one to many: the multiplier effect of a school-based TB health education programme</td>
<td>K Myint Hane, S Htut Aung, T Turk, Z Myint, K Zarli Aye (Myanmar, Australia)</td>
</tr>
<tr>
<td>PD-777-13</td>
<td>Building in-country technical capacity on TIME modelling through face-to-face training</td>
<td>M Lalli, H Bassam, D Pedrazzoli, R White, R Houben (United Kingdom)</td>
</tr>
<tr>
<td>PD-778-13</td>
<td>Patterns of poly-tobacco use among adults of the Southern California Children’s Health Study: latent class analysis approach based on cigarette consumption in adolescence</td>
<td>K Gallegos-Carrillo, R McConnell, R Urman, J Barrington-Trimis (United States of America, Mexico)</td>
</tr>
<tr>
<td>PD-779-13</td>
<td>The art of vaping business around schools in the city of Mandaluyong, Metro Manila, Philippines</td>
<td>M L Alzona, J Lagahit, M Palmones (Philippines)</td>
</tr>
<tr>
<td>PD-780-13</td>
<td>Susceptibility to smoking and determinants among medical students: a representative nationwide study in China</td>
<td>T Yang (China)</td>
</tr>
<tr>
<td>PD-781-13</td>
<td>Strategic implementation of tobacco-free school policy in the settings of constraints in the state of Delhi, India</td>
<td>S Aroor (India)</td>
</tr>
<tr>
<td>PD-782-13</td>
<td>Prohibition of cigarette selling within 100m of schools in metro Manila, Philippines: after 15 years</td>
<td>J Lagahit, M Palmones (Philippines)</td>
</tr>
</tbody>
</table>

### 31. Protecting youth from the harms of tobacco use

**Chair: Xiaolin Wei (Canada)**

<table>
<thead>
<tr>
<th>Poster ID</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-778-13</td>
<td>Linking digital health to programmatic activities using the patient pathway: a promising approach</td>
<td>K van Kalmbroth, J van Rest, N Kalmsvaart, H Qawasmeh (Netherlands)</td>
</tr>
<tr>
<td>PD-779-13</td>
<td>Anybody out there? Reach of SMS messages sent to household TB contacts in Kampala, Uganda</td>
<td>A J Meyer, D Babine, D Mark, M Armstrong-Hough, I Ayakaka, A Katamba, J E Haberer, J L Davis (United States of America, Uganda)</td>
</tr>
<tr>
<td>PD-780-13</td>
<td>Video observed treatment for tuberculosis patients in Belarus</td>
<td>A Skrahina, D Falzon, V Rusovich, M Dara, H Sinkou, A Story, V Granov, H Hurevich (Belarus, Switzerland, Denmark, United Kingdom)</td>
</tr>
<tr>
<td>PD-781-13</td>
<td>99 DOTS: an innovative, low-cost TB treatment adherence monitoring system in India</td>
<td>S Achanta, J Jaju, M Parmar, S A Nair, S Khaparde, D Gupta, B Vadera, R Rao (India)</td>
</tr>
</tbody>
</table>
33. Supply-side issues in tobacco control: production and industry

**Chair:** Anne Jones (Australia)

**PD-788-13**
Delivering twice daily delamanid: the video-DOT experience of the Armenian National Tuberculosis Programme
N Khachatryan, P Blasco, A Grigoryan, A Hayrapetyan, O Kirakosyan, C Hewisom (Armenia, France)

**PD-789-13**
Technical validation of DataToCare® software to implement electronic medical records and improve the management of patients with tuberculosis in Rwanda
J D Umazimpaka, A Ghouti, J C Ngabonziza, J Vanvelselm, X Morelle, E André (Rwanda, Belgium)

**PD-790-13**
Utility and benefit of automated medication reporting in tuberculosis surveillance and patient-centred care
P W Chu, S H Huang, J S Wang, S L Yang, Y F Huang (Taiwan)

**PD-791-13**
The online TB surveillance dashboard: an innovative tool for monitoring the TB epidemic in South Africa
A Nanno, C Ichekwau, S Candy, N A Ismail (South Africa, Nigeria)

**PD-792-13**
eRX: improving tuberculosis diagnosis using a mobile health application
R Yataco, J Peinado, I Lecca, M Brunette, M Alcantara, B Liu, Y Cao (Pero, United States of America)

**PD-793-13**
Mobile technology use improves tuberculosis treatment outcomes in Kabul city
S M Sayedi, A Hamim, M K Rashidi, G Qader, L Manzoor, H Fajjar, P Suarez, E Darwish (Afghanistan, United States of America)

**Poster Discussion Session 12:45 – 13:45 Poster Area**

34. What you see is what you get: understanding TB in children

**Chair:** Karen Du Preez (South Africa)

**PD-801-13**
Nutritional indicators and food insecurity in children at risk of TB, Lima, Peru
C Morán, K T Tafur, M J Mendoza, J M Coit, S R Leon, M F Franke (Peru, United States of America)

**PD-802-13**
Predictors of clinico-radiological outcome in children with probable intrathoracic tuberculosis
A Mukherjee, V Singh, R Lodha, S K Kabra (India)

**PD-803-13**
Under-diagnosis of drug-resistant childhood TB compared to drug susceptible counterparts in three large regions of Ethiopia
N Hinny, B Ayale, Y Molla, D Habte, D Jerene, M Abraha, Y K Haile, P Suarez (Ethiopia, United States of America)

**PD-804-13**
XDR-TB and pre-XDR TB among children in Kyiv, Ukraine
R Padilla, Y Sheremeta, N Rybak, S Chiang, M Bachmaha, T Flanigan, O Alban, V Petrenko (United States of America, Ukraine)

**PD-805-13**
Prevalence of vitamin D deficiency among Indian children with tuberculosis and age-and sex-matched healthy controls
S Dixit, J Jubulis, S Jain, N Gupte, V Mave, A Gupta, R Bollinger, A Kinikar (India, United States of America)

**PD-806-13**
Detection of respiratory viruses in South African children with suspected pulmonary TB
D M van der Zalm, E Walters, A M Demers, M Claassen, G van Zyl, A Hessel (South Africa)

**PD-807-13**
Correlation between gaps in childhood TB case notification and infant mortality rate in different states of India
N Arora, J Tonsing, K Ayyagari (India)

**PD-808-13**
Role of two paediatric hospitals in tuberculosis case detection and treatment in Kabul, Afghanistan
H Faqiary, S M Sayedi, A Hamim, G Qader, M K Rashidi, E Darwish, L Manzoor, P Suarez (Afghanistan, United States of America)

**PD-809-13**
Interim report on the use of a short, simplified regimen for the treatment of children with multidrug-resistant tuberculosis in Karakalpakstan, Uzbekistan
D M Lister, T Abdurashit, J M D Cajeiro, J A Saddon, M Tillashkikh, N Parpieva, J Achar, P Du Cros (Uzbekistan, United Kingdom)

**PD-810-13**
Contribution des enfants dans la lutte contre la tuberculose au Sénégal: l’approche «enfants pour enfants»
E M Dioukhane (Senegal)
35. Double trouble: the impact of diabetes and TB

Chair: Anthony D Harries (United Kingdom)

PD-811-13 Is diabetes mellitus an independent risk factor for multidrug-resistant tuberculosis? a meta-analysis
J He, Q Liu (China)

PD-812-13 Limitations and challenges of implementing tuberculosis screening in diabetes mellitus care in Bangladesh
Z Siddique, P Daru, M Hossain, R Haq, M Melesea, O Cordon (Bangladesh, United States of America)

PD-813-13 Diabetic screening of tuberculosis patients under the RNTCP in coordination with NPCDCS in Punjab State, India
N Kumar Sharma, P Agarwal (India)

PD-814-13 Outcomes of screening diabetic patients for tuberculosis in Afghanistan, 2016: a cross-sectional study
G Qader, M K Rashidi, A B Maseed, A Hamim, L Manzoor, H Akhgar, P G Suarez (Afghanistan, United States of America)

PD-815-13 Association between diabetes mellitus and active TB systematic review and meta-analysis
R H Al-Rifai, F Pearson, J Critchley, S Abu Raddad (United Arab Emirates, Qatar, United Kingdom, United States of America)

PD-816-13 Tuberculosis screening among diabetes mellitus patients attending the outpatient clinic of Insein General Hospital
T M Khaing (Myanmar)

PD-817-13 Latent tuberculosis infection and recently diagnosed diabetes mellitus at a large urban hospital in the Southeastern United States
M J Magee, I S Haw, A D Salindri, J T Alese, M M Barron, G A Amore, A Akingbade, G E Umpierrez (United States of America)

PD-818-13 Outcomes of screening diabetic patients for tuberculosis in Afghanistan, 2016: a cross-sectional study
N Kumar Sharma, P Agarwal (India)

36. Cost benefit analysis in TB investments; or people and products

Chair: Evaline Kibuchi (Kenya)

PD-819-13 How much does it cost to engage civil society in interlinking the private sector with the national programme?
M Rout, B Prasad (India)

PD-820-13 Beyond symbolic engagement: tuberculosis and the First Nations Health Authority of British Columbia
I Wolf (Canada)

PD-821-13 The role of TB field promoters in TB response in three regions of Namibia: Oshana, Oshikoto and Kavango
F Katuta, F Mavhunga, T Dsegaye, S Neti, S Dakebou, E Ahmed (Namibia, United States of America)

PD-822-13 A comprehensive TB care package for elderly TB patients to reduce economic burden and improve treatment adherence
S Cheng, H Fan, J Liu, W Lan, L Bai, L Oiu, Y Yuan, J Wu (China)

PD-823-13 Role and impact of engaging key stakeholders in community TB outreaches; lessons from southwest Nigeria
N Chukwueme, V Adegpaju, C Ogudebe, T Odusote, A Ihesigbo, F Soyinka, M Gidado (Nigeria, Netherlands)

PD-824-13 Beyond project Axshya …… TB patients restored security through vocational training and welfare measures in Uttarakhnd
D R Mishra, S Mohanty, S Pandugaran, S Chaddha (India)

PD-825-13 What role can non-governmental organizations play to sustain the ENGAGE TB approach: experience from a mapping exercise in Vihiga County, Kenya
A Kikanga, G Okoko, P Nagide, T Abongo (Kenya)

PD-826-13 Community engagement for TB care and control: experience from a hilly state in India
D R Mishra, S Mohanty, S Pandugaran, S Chaddha (India)

37. Xpert implementation: realities in the field

Chair: Robert Makombe (South Africa)

PD-827-13 Using GxAlert report to troubleshoot the problems encountered in remote GeneXpert® laboratories
E Mengesha, G Ayana, S Shewaga, E Alemu, G Aga, A Bedru, T Ssegaye, E Yaregai (Ethiopia)

PD-828-13 Impact of rapid expansion of cartridge based nucleic acid testing on the diagnosis of drug-resistant TB cases in India
J Jaju, S Achanta, S A Nair, M Parmar, R Ramachandran, M Ghedia, V S Salhotra, S Khaparde (India)

PD-829-13 Chronic GeneXpert maintenance challenges in Bangladesh
S T Hossain, M Kamal, P Modak, H Hussain, O Cordon, V Begum, C Welch (Bangladesh, United States of America)

PD-830-13 Assessment for 9 countries supported by the KNCV Tuberculosis Foundation of Xpert® MTB/RIF spare parts, modules and warranty coverage
J N Scholten, V Anisimova, P de Haas, M Kimerling, M Gidado, K van Weezenbeek (Netherlands)

PD-831-13 Impact of Xpert® MTB/RIF on treatment initiation and outcomes of TB and MDR-TB patients in Vladimir TB Dispensary, Russia, 2012
38. Solution to laboratory implementation challenges

Chair: Harry Hausler (South Africa)

- **PD-836-13** Improved usage of Xpert® MTB/RIF technology for TB diagnosis in Kampala
  M Edward, L Deus, K Ruth, N Abduonor, S Dejene, P Suarez, K Samuel, B Raymond (Uganda, United States of America)

- **PD-837-13** Evaluation of OMNigen® SPUTUM reagent for long-term transportation of samples for Xpert testing in a high TB-HIV burden setting
  P Diriiriza, C Ssuuna, D Nyehangane, E Gryzbowski, M Casenghi, M Bonnet, C Langendorf, E Ardizzoni (Uganda, France, Belgium)

- **PD-838-13** Effect of increased user fees in accessing new TB diagnostic services in the East Africa PHLN supported project sites: experience from Tanzania
  E Sandi, S Mlimanga, G Kimaro, E Ngadaya, R Shemtandulo, N Mgina (Tanzania, United Rep.)

- **PD-839-13** TB viability microscopy optimisation
  S Datta, K Alvarado, T Valencia, E Ramos, C Aparicio, M Tovar, R Montoya, C Evans (United Kingdom, Peru)

- **PD-840-13** Relationship of clinical diagnosis with final Xpert report in patients at Nuevo Hospital Civil, Guadalajara, Mexico
  L Portillo-Gómez, P Aciscnio-Esparza, E Sosa-Iglesias, L Frías-Flores, Velarte-Rivera (Mexico)

- **PD-841-13** Programmatic impact of new tuberculosis diagnostics in resource-poor-settings: what is the added performance characteristic value over microscopy?
  M C Muvungi, T Nzeiyimana, J C S Ngabonziza, Y Mucyo, P Magambi, M Gasana (Rwanda)

- **PD-842-13** Comparison of randomised blinded rechecking for fluorescence light-emitting diode and Ziehl-Neelsen microscopy in three regions of Ethiopia
  G Ayana, G Tibiso, D Habte, J Seid, J Jerene, Y Kassie, K Melkieneh, P Suarez (Ethiopia, United States of America)

- **PD-843-13** Two years after the roll-out of Xpert® MTB/RIF in Brazil: reported errors
  K B Andrade, A D P Lobo, D M Pelissari, P B Oliveira, F D Costa, R D S Junior, A C Brito, S B Codenotti (Brazil)

- **PD-844-13** Innovations in Kyrgyzstan: TB sputum transport solutions
  A Trusov, A Niyazov, M Perlovskyi (United States of America, Kyrgyz Republic)

- **PD-845-13** Outcome of intensified case finding for tuberculosis case detection in Munuki and Kator primary healthcare centres
  E Beko, M Lodu, A Assefa, A Wani, G Puni (South Sudan, Republic of, Ethiopia)

- **PD-846-13** Yield of repeated intensified case finding among HIV-infected adults in Uganda
  J Park, F Semitela, L Asege, S Mwebe, J Katende, M Nakaye, A Cattamanchi, C Yoon (United States of America, Uganda)

- **PD-847-13** Strengthening efforts in contact-screening of drug-resistant TB patients will cut the chain of transmission in children
  T Nale, M Biswas, S Dhawan, A Kharaat (India)

- **PD-848-13** Assessing routine screening of paediatric contacts of adults with tuberculosis disease, Tanzania
  S Modl, B Ngemo, B Ngowi, C Emerson, S Pals, G Munuo, W Kahi (United States of America, Tanzania, United Rep.)

- **PD-849-13** Yield of intensified TB case finding among HIV patients at Yunnan AIDS Care Center, Kunming, China
  X Li, X Yang, H Liu, Y Zhang, L Li, A Innes, K Wang, J Monedero (China, Thailand, France)

- **PD-850-13** Contribution of community health volunteers in TB case finding in Kenya
  E W Maimu, B Ulo, F Ngari, H Kiruno, D Mohlegi, T Kiptai, J Ong'aanga, E Masini, Community engagement (Kenya)

- **PD-851-13** Does improving facility-community linkage help in finding cases in the community? Documenting efforts in areas with low case notification
  C Rwamisidu, F Ngari, H Ulo, M Mangui, T Kiptai, A Munene, J Sekello (Kenya)

- **PD-852-13** Active TB Case Finding (ACF) on door-to-door basis increased TB case notification, shortened diagnostic delay and put patients on early treatment in Rajinangao district, Chhattisgarh
  G Mallick, M Deshpande, S Chaudhry (India)

- **PD-853-13** Innovative strategies towards improving TB case detection amidst economic recession: Zamfara State Experience, North Western, Nigeria

- **PD-854-13** Working together to end TB through active case finding in Swaziland: ‘The SDG aspiration of leaving no-one behind’
  J Sibanda, K Shumba, T Mkhabela, D Fundi, T Dlamini (South Africa, Swaziland)

39. Searching high searching low: case finding strategies

Chair: Tefera Agizew (Botswana)

- **PD-845-13** Outcome of intensified case finding for tuberculosis case detection in Munuki and Kator primary healthcare centres
  E Beko, M Lodu, A Assefa, A Wani, G Puni (South Sudan, Republic of, Ethiopia)

- **PD-846-13** Yield of repeated intensified case finding among HIV-infected adults in Uganda
  J Park, F Semitela, L Asege, S Mwebe, J Katende, M Nakaye, A Cattamanchi, C Yoon (United States of America, Uganda)

- **PD-847-13** Strengthening efforts in contact-screening of drug-resistant TB patients will cut the chain of transmission in children
  T Nale, M Biswas, S Dhawan, A Kharaat (India)

- **PD-848-13** Assessing routine screening of paediatric contacts of adults with tuberculosis disease, Tanzania
  S Modl, B Ngemo, B Ngowi, C Emerson, S Pals, G Munuo, W Kahi (United States of America, Tanzania, United Rep.)

- **PD-849-13** Yield of intensified TB case finding among HIV patients at Yunnan AIDS Care Center, Kunming, China
  X Li, X Yang, H Liu, Y Zhang, L Li, A Innes, K Wang, J Monedero (China, Thailand, France)

- **PD-850-13** Contribution of community health volunteers in TB case finding in Kenya
  E W Maimu, B Ulo, F Ngari, H Kiruno, D Mohlegi, T Kiptai, J Ong’aangaa, E Masini, Community engagement (Kenya)

- **PD-851-13** Does improving facility-community linkage help in finding cases in the community? Documenting efforts in areas with low case notification
  C Rwamisidu, F Ngari, H Ulo, M Mangui, T Kiptai, A Munene, J Sekello (Kenya)

- **PD-852-13** Active TB Case Finding (ACF) on door-to-door basis increased TB case notification, shortened diagnostic delay and put patients on early treatment in Rajinangao district, Chhattisgarh
  G Mallick, M Deshpande, S Chaudhry (India)

- **PD-853-13** Innovative strategies towards improving TB case detection amidst economic recession: Zamfara State Experience, North Western, Nigeria

- **PD-854-13** Working together to end TB through active case finding in Swaziland: ‘The SDG aspiration of leaving no-one behind’
  J Sibanda, K Shumba, T Mkhabela, D Fundi, T Dlamini (South Africa, Swaziland)
40. Advocacy, communication and social mobilisation for TB elimination; involving gender, children, peer educators, and civil society organisations

**Chair:** Ingrid Schoeman (South Africa)

**PD-855-13** Can engagement of rural healthcare providers in under-served areas of India make a difference in TB care and control?
A Trivedi, S Kumar, V Sharma, F Augustine (India)

**PD-856-13** Assessing point of sale violations in Delhi for strategic advocacy on TAPS ban
B Mukhopadhyay (India)

**PD-857-13** Gender disparities in timely access to tuberculosis treatment in Viet Nam and Malawi
K Horton, T Sumner, R Houben, L Corbett, R White (United Kingdom, Malawi)

**PD-858-13** Indonesia peer educator programme: from patient to champion
E Varella, B Hermawan, T Misbah, D Wulan, A Zamilla, B Setiyaning, Y E Yuzwar, A Surya (Indonesia)

**PD-859-13** Intensified outreach activities through Prachar Rath on PULSE TB: KHOJ-JANCH-NIDAAN-ABHIYAAN 2016 logo to reach out to the missing-one-million-TB-cases of India succeeded in Korba District, Chhattisgarh
G Mallick, R P S Paikra, M Deshpande, S Mohanty, S Chadha (India)

**PD-860-13** Political leadership in TB control: learning from the Zimbabwe experience
P Magaya, A Nyambo, C Zishiri, C Sandy, R Ncube, K Ndlou (Zimbabwe)

**PD-861-13** Public Interest Litigation as a tool for advancement of tobacco control, particularly ban on Gutka
B Mukhopadhyay (India)

**PD-862-13** Peer-support services for XDR-TB patients in group S drug treatment and adherence facilitation
C Constantin (Romania)

**PD-863-13** Establishing a community engagement programme: a product development partnership experience
K Croucher, A van der Westhuizen, S Hlatjwako, G Robertson (South Africa)
ENCUENTRO
FRIDAY 13 OCTOBER
**Antecedentes:** La tuberculosis (TB) es un padecimiento transmisible que es evitable a través de intervenciones de prevención primaria. Estrategias como la abogacía, comunicación y movilización social, que fortalezcan la detección oportuna y la adherencia terapéutica, y reduzcan el estigma asociado a la enfermedad.

**Intervención:** En el período Agosto - Diciembre de 2016, se reclutó a 13 promotores de salud que fueron asignados a localidades prioritarias de la Jurisdicción Sanitaria de Ciudad Obregón, Sonora, México, mediante concertación de acuerdos de colaboración específica, se establecieron 53 alianzas solidarias con empresas públicas, privadas y de la sociedad civil para fortalecer las actividades del programa contra la TB y acelerar hacia la eliminación.

**Resultados:** La detección de sintomáticos respiratorios aumentó 65 percent respecto al año 2015, y se incrementó en 67 percent la identificación de casos nuevos de TB respecto al año previo. También se observó un incremento de 68 percent en la detección, en Ciudad Obregón, Sonora, México, mientras la tasa de hospitalización disminuyó 6 percent. Los promotores también incrementaron las acciones de sensibilización y difusión, pues el volumen de pláticas informativas creció 16 veces respecto al año previo, brindando mensajes educativos a 22,513 personas

**Conclusiones:** El recurso humano es necesario para ejecutar las acciones del programa. Los promotores de salud incrementan alianzas con diferentes sectores de la sociedad, lo que contribuye positivamente a fortalecer el capital social para hacer frente a la Tb.

Es importante que la población en general esté informada sobre los signos y síntomas de la tuberculosis pulmonar y la forma tan sencilla de diagnosticarla y tratarla gratuitamente. La mayoría de los médicos no piensan en tuberculosis, por lo que la sensibilización debe ser permanente a través de alianzas con los sectores público, privado y sociedad civil.

---

**Healthcare provided to presumptive and TB patients in Iraqi crisis area (internally displaced population, refugees and returnees)**

The national TB control programme in Iraq has an important and leading role in fighting against TB in the country. Iraq faces many recent challenges, mostly related to the country's fragile security status. The national TB control programme has also faced many challenges in fighting TB during this period. For this reason, the Iraqi national TB control programme created a new strategy and standard operating procedures to help fight TB.

The programme started to work in collaboration with civil society, such as the Iraqi anti-TB association, and delivered care for the internally displaced population, refugees and returnees to areas liberated from ISIS, and also delivered care to those people still in area captured by ISIS. The programme engaged the community, including students, in delivering care and to get benefit from SMS programme to communicate with patients in a crisis area. The programme collaborated with many organisation such as WHO, UNDP and IOM to achieve the goal (united together to end TB).

---

**Power of community engagement in research and beyond: myth or reality?**

Community engagement (CE) aims to empower communities to contribute to improving TB policies, through community participation in research. The STREAM study has been developing CE strategies to establish a sustainable and effective culture of community participation in health policies by means of engagement in its research. Community Advisory Boards (CABs) have been established in many STREAM sites and CE-Officers (CE-Off) were appointed, with the goal of improving transparency of research information and facilitating communication of the needs/perspectives of communities and key-affected populations.
This multi-country panel brings to discussion the issues raised out of the experiences of STREAM CABs in Georgia, Moldova and Mongolia. It will gather representatives (CAB coordinators and CE-Offs) from each site, each of whom will focus on a theme based on their challenges and accomplishments.

Three short rounds of questions will be triggered by study-related researchers to the sites' representatives. Activists and researchers will engage in a rapid debate after each round of questions.

The first round poses specific questions to the CE-Offs on communication, exchange of information and building reliable/trustful partnerships among different sectors: communities, academia, governments.

The second round will address the perspectives of both CAB Coordinators and CE-Officers on the means for effective change in TB policies, out of the CE activities by STREAM CABs.

The final round will focus on sustainability of CE on a medium, long run. CAB coordinators will respond according to their experiences and themes proposed.

A deliverable from the session will be shared at the end of the Union conference. It will be comprised of recommendations arising from the debates, which will be presented and agreed with all participants by the end of the panel discussion.

**Coordinator:** Jessica Nan (United States of America) **Coordinator:** Ezio Tavora (Brazil) **Chair:** Blessina Amulya Kumar (India) **Chair:** Erica Lessem (United States of America)

**Speakers:** Enkhjin Bolormaa (Mongolia), Bazra Tsogt (Mongolia), Oxana Runcsheanu (Moldova), Svetlana Doltu (Moldova), David Jiqia (Georgia), Mariana Buziaushvili (Georgia)

**ENCUENTRO: ART DISPLAY** 12.15 – 12.45 FORO EXPO GUADALAJARA

**Meet the Artist: More than a decade of ideas, promoting the fight against tuberculosis in Mexico**

TB is a public health problem that has preoccupied not only health institutions but the community as a whole, including patients and their families. For this reason, for more than a decade, the National Programme for the Fight against Tuberculosis has compiled and protected the dissemination work of several states.

Approximately 200 unique pieces, made by different artists and scientific minds are part of this collection to create a message, and to raise community awareness of the symptoms, causes, treatment and cure of TB.

These pieces of art are showcased in conventions, business meetings, health fairs, World TB Day celebrations, among others, as an invitation to accelerating toward elimination and making Mexico free of TB.

**Coordinator:** Martha Angelica Garcia Aviles (Mexico) **Coordinator:** Luisa Eugenia Loaiza Berman (Mexico)

**ENCUENTRO: SYMPOSIUM** 12.30 – 14.00 ENCUENTRO SESSION ROOM

**Using video-supported interventions to improve TB medication adherence**

Video-support for TB treatment is one concept included in the 2015 WHO/ERS digital health target product profiles.

This symposium will outline how synchronous and asynchronous video observed therapy (VOT) and artificial intelligence via smartphones can support people prescribed medication for active TB, latent TB infection and associated comorbidities. The presentations will describe how the evidence base has rapidly advanced from small feasibility studies to RCTs, and is informing health policy. The global proliferation of affordable smartphones and tablet computers, coupled with expanded internet coverage, is also making it feasible to obtain data on programmatic implementation in diverse settings.

**Chair:** Richard S Garfein (United States of America) **Chair:** Alistair Story (United Kingdom)

**Speakers:**
- Richard S Garfein (United States of America) - Collecting data to assess the performance of video-supported TB therapy: useful lessons
- Alistair Story (United Kingdom) - Experience in the UK and the RCT in London
- Fatima Muñoz (Mexico) - VOT in patients with HIV-associated TB in Tijuana, Mexico
- Alexia Skrahina (Bolarus) - VOT: from pilot to programmatic scale-up
- Dennis Falzon (Switzerland) - Using a target product profile (TPP) to develop the technology and its evidence base for video-supported TB therapy
Intervención comunitaria en la atención de personas con TB-VIH en contexto de vulnerabilidad

Las situación que viven las personas afectadas por las dos enfermedades y que viven en contexto de vulnerabilidad, entre quienes se clasifican los habitantes de la Calle, las personas con coinfección TB-VIH, LGBTI, farmacodependientes, todos en su mayoría sin red de apoyo, hicieron que un equipo de instituciones y líderes de la sociedad civil de ambas enfermedades, unieran esfuerzos para diseñar e implementar estrategias que les permitiera lograr generar adherencia al tratamiento de TB y de VIH.

Estrategias centradas en: sensibilización, acompañamiento de las personas afectadas, gestión para: buscar albergues donde reciban y atiendan a los pacientes, buscar apoyo económico, brindar apoyo psicosocial, disminuir acceso a los tratamientos y gestión a la adherencia, auxilio de transporte, orientación a la ruta de atención y disminuir el riesgo de pérdida de los pacientes.

Los resultados obtenidos durante la implementación de este piloto en Colombia el cual inicio en mayo del 2015 ha permitido, pese a las difíciles condiciones de la población intervenida, abordar a aproximadamente 20 pacientes con TB-VIH y TB-MDR, quienes han recibido el apoyo de equipo mediante las diferentes intervenciones de más de 8 meses en promedio, factor determinante para lograr la mejora de los pacientes.

Así mismo, este trabajo ha dejado un sin número de aprendizajes entre los que se pueden mencionar: reconocer la vulnerabilidad, respetar la dignidad humana, identificar como el contacto personal se constituye en una herramienta efectiva para el manejo del paciente, la necesidad de tener un trato humanizado, la voluntad política y administrativa, la intervención y el acompañamiento constante del profesional del área social o psicosocial.

Hacerte la prueba, es elegir la vida: modelo de servicios para diagnóstico de VIH con enfoque intercultural y derechos humanos

Ante la grave afectación del VIH a la comunidad, a pesar de los avances técnicos y estimándose en miles de personas que viven con esta enfermedad y desconocen su condición, se pone de manifiesto la necesidad prioritaria de servicios para diagnóstico de VIH con enfoque en derechos humanos, género e interculturalidad; que basados en los estándares internacionales permitan a las personas acceder a un diagnóstico confiable, seguro, oportuno y gratuito.

Se prioriza el acompañamiento que genere criterios suficientes para tomar las decisiones convenientes para el cuidado de su salud, brindando a toda persona que por diferentes circunstancias esté o haya estado más expuesta al virus, las intervenciones preventivas necesarias, que incluyan: información, entrega de insumos de prevención y acceso a la prueba rápida, todo lo anterior acorde a las condiciones sociales, culturales y económicas, favoreciendo así la conexión a los servicios de salud especializados para que la persona inicie su tratamiento.

Esta estrategia se considera el escalón inicial en la reducción de la transmisión del VIH, por lo que se convierte en un referente obligado en salud.
The burden of TB in children is more severe than expected (10-20 percent of the total), due to the difficulty of its diagnosis, a situation that is aggravated by social conditions of poverty and inequity; families with poor knowledge of the disease, living in communities with deficient and limited health services.

Most of the times there is a close adult with active TB as a source of infection. The symptoms of TB in children are confused with other common diseases, so the diagnosis often goes unnoticed, therefore babies and young children are at high risk of developing severe forms of TB and even death.

There is no accurate and universally accepted test for the diagnosis of infancy tuberculosis. There are no data on multidrug-resistant TB burden and TB-HIV comorbidity in children. Nonetheless, it is encouraging that child TB now occupies an important plane of world attention to be taken out of the shadows.

The Ibero-American Network for Infantile Tuberculosis is an initiative to unite wills and joint efforts of scientists and other interested people of the region, given the urgent need to investigate and develop better options for the diagnosis, treatment and control of childhood TB. In the short term, this should give the necessary evidence to inspire actions and strategies to respond to the challenges of reducing the disease incidence, mortality and prevent childhood suffering due to TB.

Cure rates for drug-resistant TB (DR-TB) remain abysmal at 50 percent and 26 percent for MDR-TB and XDR-TB, respectively. This session will cover the latest implementation research, evidence, and arguments for essential improvements to DR-TB treatment that can help to reach more people and improve treatment outcomes.

This includes: reducing the burden on people with TB through decentralised, ambulatory care, and use of shorter and optimised regimens including use of new classes of drugs. Also we will review the best practices for ensuring procurement of quality affordable medicines and finally, discuss the need for a paradigm shift in how medicines are developed that can result in a pan-TB regimen.

We will also review the findings from MSF and Stop TB Partnership’s latest Out of Step 2017 report. The report surveys DR-TB treatment policies and practices in 30 countries, and exposes areas where countries are “out of step” with WHO recommendations for TB and DR-TB management.

Chair: Adriana Verónica Rodríguez Salguero (Mexico)
Speaker: Adriana Verónica Rodríguez Salguero (Mexico), Maria Dolores Navarro Soto (Mexico)

Chair: Malintzin Negrete Pimienta (Mexico)
Speaker: Malintzin Negrete Pimienta (Mexico)

Chair: Adriana Verónica Rodríguez Salguero (Mexico)
Speaker: Adriana Verónica Rodríguez Salguero (Mexico), Maria Dolores Navarro Soto (Mexico)

Chair: Malintzin Negrete Pimienta (Mexico)
Speaker: Malintzin Negrete Pimienta (Mexico)

Chair: Malintzin Negrete Pimienta (Mexico)
Speaker: Malintzin Negrete Pimienta (Mexico)

Chair: Gladys Abreu Suarez (Cuba)
Speaker: Gladys Abreu Suarez (Cuba), Edilberto Gonzalez Ochoa (Cuba), Yaxsier De Armas Rodriguez (Cuba), Jacobus H de Waar (Venezuela), Paula Andrea Duque (Colombia), Larissa Otero (Peru), Eduardo Briones de la Blanca (Spain), Napoleon Gonzalez Saldaña (Mexico), Arturo Plascencia Hernandez (Mexico)

Chair: Sharonann Lynch (United States of America)
Speaker: Jay Achar (United Kingdom), Catherine Hewison (France), Christophe Perrin (France), Sharonann Lynch (Switzerland)
Bike ride lead by BICINEMA an NGO that promotes bicycle as a sustainable transportation and links the bicycle to cultural activities. Leave from Foro Expo to corredor Chapultepec in a rodada of bicycles for about 40 - 50 minutes and come back to Foro Expo. This activity will provide a nice ride where participants will be able to see more of Guadalajara. (The ride will go no fast than 15 km /hour). At Encuentro we will have a registration counter for the delegates that would like to participate on the rodada

---

**Film screening - BICINEMA**

A projection of short films that were presented at the International Bike Film of Guadalajara will be shown. BICINEMA is an NGO that promotes bicycle as a sustainable transportation and links the bicycle to cultural activities such as the Cinema. They have brought to Guadalajara, The International Bike film since 2010. During this activity, BICINEMA will also provide popcorn and tea for participants.
SATURDAY
14 OCTOBER
PLENARY SESSION

PLENARY SESSION 03. 09.00 – 10.00 PLENARY HALL

Accelerating lung health over the life course

Chairs: Dr E Jane Carter, past-President, International Union Against Tuberculosis and Lung Disease (United States of America), Dr Héctor Raúl Pérez Gómez General Manager, Civil Hospitals (Mexico)

Time for a quality revolution in tuberculosis care
Prof Madhukar Pai, Canada Research Chair in Epidemiology & Global Health, Director, McGill Global Health Programs, Associate Director, McGill International TB Centre (Canada)

Minimally invasive autopsy: The rebirth of post-mortem methods for mortality surveillance in poor countries
Dr Quique Bassat, Barcelona Institute for Global Health (Spain)

Diagnostics challenges and best practices
Dr Catharina Boehme, Executive Director, Foundation for Innovative New Diagnostics (Switzerland)

Addressing the needs of TB patients
Mr Enrique Delgado, TB Project Latam-Spain, (Panama)

Aceleración de la salud pulmonar en el transcurso de la vida

President: Dra. E Jane Carter, ex Presidenta, Unión Internacional Contra la Tuberculosis y Enfermedades Respiratorias (Estados Unidos de América), Dr. Héctor Raúl Pérez Gómez, Gerente General, Hospitales Civiles (México)

Es el momento para una revolución cualitativa en el cuidado de la tuberculosis
Prof. Madhukar Pai, Jefe de Investigación en Epidemiología y Salud Global en Canadá, Director, McGill Global Health Programs, Director Adjunto, McGill International TB Centre (Canadá)

Autopsia mínimamente invasiva: El renacimiento de los métodos post-mortem para la vigilancia de la mortalidad en países pobres
Dr. Quique Bassat, Instituto de Salud Global de Barcelona (España)

Desafíos y mejores prácticas de diagnóstico
Dra. Catharina Boehme, Directora General, Foundation for Innovative New Diagnostics (Suiza)

Responder a las necesidades de los pacientes con TB
Sr. Enrique Delgado, Proyecto TB Am. Lat.-España, (Panamá)

Prof Madhukar Pai, MD, PhD is a Canada Research Chair in Epidemiology and Global Health at McGill University, Montreal. He is the Director of McGill Global Health Programs, and Associate Director of the McGill International TB Centre.

Madhu Pai did his medical training and community medicine residency in Vellore, India. He completed his PhD in epidemiology at UC Berkeley, and a postdoctoral fellowship at the UCSF.

Professor Pai serves as a Consultant to the Bill & Melinda Gates Foundation. He serves on the STAG-TB committee of WHO; Scientific Advisory Committee of FIND; and Access Advisory Committee of TB Alliance.

Professor Pai’s research is mainly focused on improving the diagnosis and treatment of TB in high-burden countries. His research is supported by grant funding from the Gates Foundation, Grand Challenges Canada, and Canadian Institutes of Health Research. He has more than 300 publications. He is recipient of the Union Scientific Prize, Chanchlani Global Health Research Award, Haile T. Debas Prize, and David Johnston Faculty and Staff Award.

Dr Quique Bassat
Dr. Bassat is a paediatrician, with special interest in infectious disease epidemiology and public health.

Dr. Bassat has led multicentre antimalarial drug studies that were decisive for the clinical development of new antimalarial drugs, and he has explored the burden, trends and characterisation of malaria in children admitted to hospital, and the overlapping symptomatology between malaria and other common infectious diseases.

In recent years, he has focussed on describing the epidemiology and control of Yaws in Papua New Guinea, and he has conducted work on the description of the epidemiology and etiology of respiratory infections in Mozambique and Morocco.

Currently, his main project is related to the validation and implementation of Minimally Invasive Autopsy (MIA) tools for the post-mortem investigation of causes of death in the developing world.
Dr. Catharina Boehme

Dr. Catharina Boehme is the Chief Executive Officer of FIND, an international non-profit organisation that drives the development and delivery of diagnostic tests for diseases of poverty. Under Catharina’s leadership, 10 new diagnostic tools have been introduced over the last three years, for sleeping sickness, malaria and TB. She has expanded FIND’s scope to include outbreak preparedness, hepatitis elimination, antimicrobial resistance, and she is passionate about closing the diagnostic gap in TB.

Catharina holds an MD from Ludwig Maximilians University in Munich and Heidelberg University, Germany, as well as diplomas in Public Health and Management. She is the Chair of the New Diagnostics Working Group of the Stop TB Partnership and serves on several Public Health Advisory Committees (WHO TB STAG; EU Horizon 2020 De; Australian Innovation Exchange Programme). She has more than 100 publications.

Prior to joining FIND in 2005 with a focus on clinical trials and laboratory strengthening, she worked for the Department of Infectious and Tropical Diseases in Munich and established a TB diagnostic research unit at Mbeya Medical Research Programme in Tanzania.

Enrique Delgado

Enrique Delgado holds an undergraduate degree in Economics and a Master in Finance. A promising career in telecommunications and electronics saw him travelling extensively in the Latin American region. It ended when he contracted TB in 2009. His seven-year treatment journey took him to four countries and included a lobectomy (removal of one lobe of the lung), and two relapses before being cured of drug-resistant TB.

Enrique has since turned his experience with TB, and his awareness of the inadequacy of how the disease is treated, into a quest for better care and treatment of patients and survivors, as well as a cure for the disease. He is engaged with civil organisations in three countries, advocating for better healthcare systems, patients’ rights, and better medicines. He also encourages other survivors to tell their stories and support the cause for better treatment.

Enrique has participated in several international TB conferences as a speaker and advisor, supporting national TB programmes and making contact with parliamentarians to involve them in the situation and the reality of TB. Recently Enrique has collaborated with two renowned physicians to publish an article in the IJLTD as a clinical case, Resilience and extensively drug-resistant tuberculosis: the unlikely ally.

---

**Rapporteur Session**

**Co-chairs:** Stacie C Stender, Chair of Coordinating Committee of Scientific Activities. Keren Middelkoop, Programme Secretary, HIV Section.

Members of the Scientific Programme Committee will report on the highlights of the scientific outcomes presented in the abstract driven sessions during the conference.

---

**Sesión de ponentes**

**President:** Stacie C Stender, Keren Middelkoop, Comité Coordinador de Actividades Científicas (Sudáfrica)

Los miembros del Comité para el Programa Científico informarán sobre los aspectos destacados de los resultados científicos difundidos en las sesiones de presentación de resúmenes durante la conferencia.
Closing Ceremony

The local conference legacy – Accelerating Progress in Mexico
Hon. Dr. Elías Octavio Iniguez, Member of Parliament (Mexico)

Accelarating progress for regional change
Ms Carolina Moran, Internal Monitor, Socios en Salud, and TB survivor (Peru)

Looking ahead
Dr Jeremiah Chakaya Muhwa, President of The Union (Kenya)
Mr Jose Luis Castro, Executive Director of The Union (France)

Welcome to The Hague
Hon Ms Margriet Leemhuis, Ambassador of the Netherlands in Mexico (Netherlands)
Dr Kitty van Weezenbeek, Executive Director of KNCV Tuberculosis Foundation (Netherlands)

Ceremonia de cierre

El legado local – qué le aportó la conferencia a México
Dr. Elías Octavio Iniguez, miembro del Parlamento (México)

Acelerar el progreso para el cambio regional
Sra. Carolina Moran, Monitora Interna, Socios en Salud, y sobreviviente de TB (Perú)

Mirar hacia el futuro
Dr. Jeremiah Chakaya Muhwa, Presidente de La Unión (Kenia)
Sr. José Luis Castro, Director General de La Unión (Francia)

Bienvenida a La Haya
Hon. Sra. Margriet Leemhuis, Embajadora de los Países Bajos en México (Países Bajos)
Dra. Kitty van Weezenbeek, Directora General de KNCV Tuberculosis Foundation (Países Bajos)

Dr. Elías Octavio Iniguez

Originally from Yahualica de González Gallo, Elias is a medical surgeon from the University Center of Health Sciences of the University of Guadalajara, Jalisco. In 2004, he began his political career by participating as an alternate candidate for the Municipal Presidency of Yahualica and, in 2007, he was elected for the position.

In 2012, he was elected as local legislator for District III with the highest number of votes in the region. He was then appointed as the President of the Hygiene and Public Health Committee in the Jalisco State Congress As local legislator he managed projects related to medical initiatives in the areas of mental health, diabetes, obesity, renal diseases and organ donation, among others.

In 2015, he was elected as national representative at the Deputies’ Chamber and appointed president of the Health Committee. He represents the National Action Party, which is currently opposition to the Presidential party.
Ambassador Margriet Leemhuis has worked for the Netherlands Foreign Affairs Service since 1989. After a first placement in Santiago de Chile, she served during the Dutch chairmanship in 1991 as second secretary of Minister Hans van den Broek. Subsequent placements in the Netherlands include the office Central America and detachment at the staff direction Cultural Policy of the Ministry of Education, Culture and Sciences. She finished her education at Ecole Nationale d’Administration (ENA) in Paris in 1995 and afterwards took up her duties at the Dutch Permanent Representation to the OECD. Since 2016 Leemhuis has been the Netherlands Ambassador in Mexico, also accredited to Belize.

Kitty van Wezenbeek is Executive Director of KNCV Tuberculosis Foundation. She started her career as a provincial tuberculosis (TB) officer in the Netherlands. Her 34-year “TB career” is characterized by a mix of different TB-related national and international positions, including leading positions at the World Health Organization (WHO) headquarters in Geneva, and the WHO Western Pacific Regional Office.

During her career she held chair positions of several influential global working groups such as the Global Green Light Committee and the global Stop TB Partnership Working Group on multidrug-resistant tuberculosis. Kitty delivered technical assistance to more than 25 countries worldwide and contributed to more than 40 publications in peer-reviewed scientific journals. Over the years she has served on various expert panels and global guideline committees. In her capacity as Executive Director, she combines managerial and technical responsibilities.

Carolina Morán is a Peruvian nurse with experience in TB research, she graduated in 2010 from National University of San Marcos. Morán’s inspiration to fight TB started when her best childhood friend died in 2008. She began reading and became actively involved in working to fight TB. She started working with Socied Salud in 2010, while she studied for a Master’s in Public Health at Cayetano Heredia University. In 2015, she became involved with advocacy as a TB CAB member, where she came to understand more about this fragmented TB treatment system across the world. She is aware that good intentions, knowledge and willpower are not enough to eradicate this disease. For this reason, research must involve community knowledge, and strengthen their advocacy capacity based on evidence. This is the way to achieve the objectives of organisations, countries and public entities to end tuberculosis.

Dr Jeremiah Chakaya Muhwa is the President of The Union. He has been a leader in TB control throughout his career, in his home country of Kenya and on the global stage. He has led the National TB Control Programme as its head from 2003 to 2006 and continues to act as a technical expert. In Kenya he also acts as the technical advisor and director of the Kenya Association Against TB and Lung Disease.

On an international stage, Dr Chakaya has been active in both the Stop TB partnership and at the WHO. He has served three terms as the chair of the DOTS Expansion Working Group of the STOP TB Partnership, as well as chair of STAG TB at WHO. Dr Chakaya has taken up a teaching, research and clinical position at the school of medicine Kenyatta University after many years of work with the Kenya Medical Research Institute.

Throughout this body of work, Dr Chakaya has never forgotten about the patient; he remains a practicing clinician to this day, translating his scientific knowledge into direct patient care, leading by example for the next generation of African public health professionals.

Jose Luis Castro was appointed Executive Director of The Union in 2014. He is also the President and Chief Executive Officer of Vital Strategies, a Union affiliate based in the New York City, which unites The Union North America and World Lung Foundation.

Under Mr. Castro’s leadership and vision, The Union has expanded its global portfolio of projects and forged new strategic partnerships, including with the Global Fund, USAID, DFID, and Bloomberg Philanthropies. In 2014, Mr. Castro co-founded the Global TB Caucus, an international network of over 2,300 parliamentarians from more than 132 countries, with the Rt. Hon. Nick Herbert MP, of the UK, to accelerate progress against the tuberculosis epidemic. This revolutionary initiative remains one of the world’s largest political networks dedicated to advancing a global health priority.

Before joining The Union, Mr Castro advised WHO and the Government of India on the implementation of the Revised National TB Control Programme and served as Director of Operations for New York City’s Bureau of TB Control during the 1990s MDR-TB crisis. The programme he helped build is still used for tuberculosis control in New York City. He holds a Masters of Public Administration degree from the University of Pennsylvania.

He is also the chair of the NCD Alliance steering group and is a member of the American Association for the Advancement of Science and American Society for Training and Development. In recognition of his achievements, he was awarded an honorary doctorate in 2005 from Pace University.
MEET THE EXPERT SESSIONS

At these sessions, experts will meet with small groups of participants to discuss, face to face, the challenges and opportunities presented by working to promote lung health. These sessions are free of charge for registered participants only and can hold a maximum of 50 people. Please register for the ‘Meet the expert’ sessions at the conference registration desk. Participation will be on a first-come, first-served basis.

05. Industry interference with public health: Article 5.3, alcohol, food and pharma industries

Speaker: Jeff Collin (UK)

Interference from the tobacco industry has long been recognised as the principal challenge to the development of effective tobacco control policies. Consequently, FCTC Article 5.3 seeks to exclude the industry from the policy process and identifies a fundamental conflict between industry interests and public health goals. Yet other producers of other unhealthy commodities, notably alcohol, and ultra-processed food, are still widely seen as potential partners in health initiatives. This presentation examines strategic and structural similarities and differences across tobacco, alcohol and ultra-processed food industries, and considers implications for health governance in the context of the SDGs.

06. TB and immigrant populations

Poonam Dhavan (Switzerland)
49. Quality of TB drugs – evidence and policy action

The pharmacokinetics of anti-TB drugs have a significant impact on the effectiveness of treatment regimens. Rifampicin remains one of the most important drugs in the treatment of drug-sensitive TB and has been used increasingly in fixed-dose combinations (FDCs). Despite the convenience of FDCs and their potential to improve patient adherence, recent studies indicate that the bioavailability of rifampicin may be reduced in FDCs. The objective of this session is to review evidence on factors affecting quality and bioavailability of rifampicin and to identify strategies for effective utilisation of quality assured drugs within NTPs.

Co-chairs: Yogan Pillay (South Africa), Neeraj Kak (United States of America)

1. Quality concerns about rifampicin within anti-TB fixed dose combinations: a summary of the evidence – Neeraj Kak (United States of America)
2. Strategies for ensuring the quality of FDCs in National TB Programmes – Tamar Gabunia (Georgia)
3. Addressing factors lowering the bioavailability of rifampicin in FDCs and non-FDCs in southern Africa countries – Brenda Waning (Switzerland)
4. Evidence gaps and research agenda for monitoring rifampicin bioavailability and pharmacokinetics – Giorgio Roscigno (Switzerland)
5. New approach for routine monitoring of anti-TB drugs through bioavailability and pharmacokinetics studies – Helen McIlleron (South Africa)
6. Discussion

50. Depression: a neglected co-morbidity impeding End TB Strategy

The purpose of this symposium is to address the burden and impact of major depressive disorder (depression) on TB outcomes and the essential role it plays in the Global End TB Strategy. Three groundbreaking studies explore how depression-related immunosuppression may increase risk for TB reactivation, whereas another longitudinal study demonstrates how untreated depression is associated with increased mortality, treatment default, disability and poorer quality of life.

Co-chairs: Adam Karpati (United States of America), Jamhoih Tonsing (India)

1. Depression and the End TB Strategy – Annika Sweetland (United States of America)
2. Depression and risk of TB: a nationwide population-based cohort study – Kyung-Hyun Oh (Korea, Republic of)
3. Impact of untreated depression on TB treatment outcomes, disability and quality of life in Ethiopia: a cohort study – Fentie Ambaw (Ethiopia)
4. Intrinsic relations between immune system and nervous system may be associated with major depressive disorder in pulmonary TB – To be confirmed
5. Relation between the glutamatergic pathway and inflammatory processes during pulmonary TB and its association with major depression disorders – To be confirmed
6. Discussion

51. La enfermedad pulmonar obstructiva crónica en México

La EPOC ocupa los primeros cinco lugares de morbilidad y mortalidad en el mundo y su prevalencia en personas mayores de 40 años de edad es más del 10 percent. A pesar de la complejidad para medir su prevalencia, se puede afirmar que en muchos países desarrollados está aumentando, que es mayor en fumadores que en exfumadores, en individuos de más de 40 años de edad y es mayor en hombres que en mujeres; sin embargo, el perfil etario va cambiando, actualmente los datos muestran que el 70 percent de los pacientes son menores de 65 años.

Presidentes: José Rogelio Pérez Padilla (México), Rafael Hernández (México)

1. Manejo de la EPOC en el Primer Nivel de Atención – Rafael Hernández Zenteno (México)
2. Daños a la Salud por EPOC en México – Robert Camargo (México)
3. EPOC y comorbilidades – Rosaura Benitez Pérez (México)
4. Deshabituación tabaquica como prevención de la EPOC – Justino Regalada Pineda (México)
5. Discusión
52. Implementing and sustaining the appropriate biosafety in TB laboratories: ZN smears through to drug susceptibility testing (DST) cultures

Despite significant investments in infrastructure upgrades, particularly at reference laboratory levels, many countries still have unsafe working environments (microscopy/GeneXpert to culture and DST). Adequate operation and maintenance of biosafety equipment (BSCs, centrifuges, HVAC systems) and provision of personal protective equipment (PPE) such as respirators, gloves, etc is lacking. Best practices are essential, yet they are not well understood. Administrative, environmental and PPE must be in place to ensure worker safety and quality diagnostic results. This session will highlight effective approaches to solving issues faced by laboratories and demonstrate synergy of biosafety with infection control in the process of achieving quality and accreditation.

Co-chairs: Alaine Umubyeyi Nyaruhirira (South Africa), Paul Jensen (United States of America)

1. How does biologic management relate to the implementation of biosafety – Christopher Gilpin (Switzerland)
2. How do we balance risk, biosafety and sustainability? – Paul Jensen (United States of America)
4. Facility projects and the feasibility of successful risk management – Jeff Serle (United States of America)
5. Design considerations, operation and maintenance of biosafety level three (BSL3) laboratories – the South African experience – Zibusiso Muziwandile Masuku (South Africa)
6. Discussion

53. Reducing catastrophic costs for people with TB through patient-centred care

Catastrophic costs associated with TB are to be eliminated in two and a half years according to the End TB Strategy. However many components of TB care, especially multidrug-resistant TB (MDR-TB) treatment, add to the costs. Bending the cost curve and treatment burden downward for people with TB is a priority. This includes strategies to lower toxicity drugs, decentralise models of care, shorten treatment regimens and other interventions to reduce catastrophic and out-of-pocket costs of treatment for patients. We look at the impact of different interventions in different contexts and analyse the barriers to bringing about change.

Co-chairs: Mario Raviglione (Switzerland), Alexandra Volgina (Ukraine)

1. Personal experience and a call to end catastrophic TB costs in Kenya – Paul Moses (Kenya)
2. Interventions to reduce catastrophic and out-of-pocket costs of TB diagnosis and treatment – Diana Weil (Switzerland)
3. Improving drug-resistant TB care and reducing burden on patients in South Africa – Norbert Ndjeka (South Africa)
4. Ambulatory treatment of drug-resistant TB in Armenia – Karapet Davtyan (Armenia)
5. Bending the cost curves for patients: shorter regimens, lower toxic drugs and same-day ambulatory care of drug-resistant TB – Jay Achar (United Kingdom)
6. Discussion

54. Quantifying gaps in paediatric TB diagnosis and treatment

An estimated one million children developed TB in 2015, but over 60 per cent were undiagnosed or unreported to health systems. Substantially improving the diagnosis and treatment of paediatric TB requires an understanding of where the largest gaps exist and the impact that can be expected from different interventions. However there is a general dearth of high-quality paediatric TB data to inform these assessments. This session discusses current efforts to quantify the gaps that exist in the diagnosis and treatment of childhood TB at the global and country levels.

Co-chairs: Courtney Yuen (United States of America), Helen E. Jenkins (United States of America)

1. Considerations when applying a care cascade model to evaluate child TB care – Karen Du Preez (South Africa)
2. Estimated burden of adolescent TB in the 30 high-burden TB countries – Silvia Chiang (United States of America)
3. Measuring the consequences of untreated childhood TB and MDR-TB – Helen E. Jenkins (United States of America)
4. Findings of a national inventory study of child TB in Pakistan – To be confirmed
5. Missed diagnoses and post-diagnosis treatment delays in paediatric TB: observations from Peru – Molly Franke (United States of America)
6. Discussion
55. Post-exposure management of households exposed to drug-resistant TB: lessons from the field

Each year half a million people develop multidrug-resistant TB (MDR-TB). To control this evolving disaster individuals will need to be identified who have both a. TB disease and who propagate the epidemic and b. asymptomatic infection who are at high risk of future TB disease progression. One of the most effective strategies for identifying both groups is to screen, treat and follow individuals who live with those diagnosed with MDR-TB. To date this rarely happens. This symposium will present the experiences of post-exposure management in a number of field settings.

Chair: James Seddon (United States of America)

1. Effectiveness of regimens for the treatment of drug-resistant TB infection: results from a meta-analysis in household contacts – Sundari Mase (United States of America)
2. Post-exposure management of household contacts of MDR-TB in Tajikistan – Jatinder Singh (Tajikistan)
3. Yield of a pilot post-exposure intervention in drug-resistant TB households in Karachi – Hamidah Hussain (Pakistan)
4. The ACTG IMPACT PHOENIx feasibility study: implications for country programmes – Amita Gupta (United States of America)
5. Discussion

56. Epidemiología de la tuberculosis en las Américas

La evolución de la Tuberculosis en las Américas ha tenido diversos alcances de acuerdo a la carga de la enfermedad en los distintos países, así como en el seguimiento de indicadores clave para el control de esta. En este simposium se presentan los alcances sobre la enfermedad en dos países de alta carga y dos de baja carga de la enfermedad así como sus desafíos hacia la eliminación.

Presidentes: Mirtha Del Granado (Estados Unidos de América), Miguel Salazar (México)

1. Desafíos hacia la eliminación de la TB en El Salvador – Julio Garay (El Salvador)
2. Alcances y desafíos para el control de la tuberculosis en México – Martín Castellanos (México)
3. Avances y retos para el control de la tuberculosis en Perú – César Bonilla (Perú)
4. El control de la tuberculosis en Costa Rica – Mata Saidy (Costa Rica)
5. Discusión

57. Nursing interventions for support of patients with multidrug-resistant TB

The implementation of patient-centred care is an integral part of the World Health Organization’s End TB Strategy. Nurses play an important role in patient support and holistic patient-centred care for TB and MDR-TB patients. The objective of this session is to share experiences on the implementation of patient support and patient-centred care in various settings.

Chair: Carrie Tudor (Switzerland)

1. Pilot job aide to assist nurses in assessing and addressing side effects among patients on treatment for drug-resistant TB – Ann Raftery (United States of America)
2. Assessing MDR-TB patients for depression and nursing interventions to support them: experiences from Russia – Tatiana Fedotkina (Russian Federation)
4. Association between TB-related stigma and medication adherence among TB patients in China: the role of nurses in reducing stigma towards patients – To be confirmed
5. An essential patient care package for drug-resistant TB – D’Arcy Richardson (United States of America)
6. Discussion
59. Using knowledge from pharmacokinetics and pharmacodynamics (PK-PD) studies to adapt TB treatment

The presentations will highlight how the most recent knowledge of PK-PD medicines used in TB treatment regimens - particularly second-line agents for drug-resistant strains - can be used to improve clinical care. The symposium will provide the participants with an opportunity to discuss this with key experts in the field and also to follow how the World Health Organization intends to update its implementation material following a technical workshop on the subject convened by the WHO Global TB Programme in April 2017.

**Co-chairs:** Radojka Savic (United States of America), Dennis Falzon (Switzerland)

1. Interpreting PK-PD data in TB care – Tawanda Gumbo (United States of America)
2. PK-PD of TB treatment in children – Helen McIlerson (South Africa)
3. Modelling of PK-PD data on TB medicines to fill in knowledge gaps – Radojka Savic (United States of America)
4. Therapeutic drug monitoring to help optimise TB treatment: when, where, how, which? – Jan-Willem Alffenaar (Netherlands)
5. Using PK-PD data to shape TB drug development – Geraint Davies (United Kingdom)
6. Discussion

60. Preparación y respuesta ante una pandemia de influenza en México

El objetivo de la Preparación del Sistema de Salud de México para una Gripe Pandémica, es mejorar los procesos de preparación y respuesta así como fortalecer la protección frente a la gripe pandémica mejorando el sistema nacional de vigilancia y respuesta a la gripe, la atención médica y las medidas preventivas como la vacunación y la educación al personal de salud y población general. Con el objetivo de disponer de un sistema justo y transparente, equitativo, eficiente y eficaz en el acceso a las diferentes estrategias que ayuden a hacer frente a un problema de salud de esta magnitud.

**Presidentes:** Jorge Salas Hernández (México), Justino Regalado Pineda (México)

1. Vigilancia Epidemiológica de la Influenza – Robert Camargo (México)
2. Preparación y Respuesta ante una nueva pandemia de influenza – Alejandro López Samano (México)
3. Beneficios de la implementación de la vacuna de la influenza en México – Jesús Felipe González Roldán (México)
4. Atención Médica ante una pandemia de influenza – Justino Regalado Pineda (México)
5. Discusión

61. Ethical considerations in TB and migration

Migration is a social determinant of health with important associations with TB infection and disease. In the realm of migration health, ethical issues can be significant but often overlooked in both national and local contexts. Ethical considerations cannot be neglected in providing TB prevention, treatment and care for various migrant populations.

This symposium will present updated World Health Organization ethical guidelines for TB and migration and will highlight ethical issues that commonly emerge, using specific migration health contexts. The session will seek to reinforce one of the key principles of the End TB Strategy namely, human rights, ethics and equity.

**Co-chairs:** Poonam Dhavan (Switzerland), Justin Denholm (Australia)

2. Migration to a low-incidence TB setting: ethical challenges and experiences from Australia – Justin Denholm (Australia)
3. Providing TB services in resource-constrained migration-affected settings: experiences and ethical challenges from Mexico – Ivett Reyes (Mexico)
4. Finding the right data on migrants and mobile populations as a key population in TB: ethical considerations – Colleen Daniels (Switzerland)
5. At the intersection of TB and migration: globalisation versus equity – Deliana García (United States of America)
6. Discussion
62. Prospects for elimination of multidrug-resistant TB

There have been recent successes to control and eliminate multidrug-resistant TB (MDR-TB) but important barriers remain. Scientific progress has included improved regimens and a wider availability of rapid drug-resistance testing, but these advances have not been uniformly rolled out. Elimination will not only require better treatment, but also active case finding, interruption of transmission and increased investment. The feasibility and challenges of these key areas will each be addressed by speakers with expertise in field studies and programmatic implementation.

Co-chairs: Robert Horsburgh (United States of America), Graania Brigden (Switzerland)

1. MDR-TB treatment in the high-resource setting: cure is possible – Christoph Lange (Germany)
2. The role of policy adoption and implementation for elimination of MDR-TB – Isaac Chikwanha (Switzerland)
3. Accessing MDR-TB exposed households: the PHOENIX MDR-TB feasibility study – Gavin Churchyard (South Africa)
4. Manufacturing XDR through MDR-TB treatment – Ekaterina Kurbatova (United States of America)
5. Elimination of MDR-TB: what will it cost? – Emily Kendall (United States of America)
6. Discussion

63. Situación epidemiológica y control de la tuberculosis infantil en América Latina

La población infantil representa una lata vulnerabilidad para el desarrollo de tuberculosis, pero sobre todo con serios desafíos para los países de América Latina en cuanto a su detección oportuna, diagnóstico y tratamiento adecuado.

Presidente: Lucia Alvarez (México)

1. TB extrapulmonar en pediatría – Greta Muñoz (Ecuador)
2. Diagnóstico y tratamiento de la tuberculosis en niños...logros y desafíos – Magnolia Arango (Colombia)
3. TB farmacorresistente en niños – Hernan Del Castillo (Perú)
4. Tratamiento de la TB latente en niños contactos de casos de TB sensible y resistente – Francisco Mestanza (Perú)
5. Discusión
17. Advancing laboratory diagnostics for greatest impact

Co-chairs: Tom Boyles (South Africa), Jaime Robledo (Colombia)

10.30  OA-201-14  Modeling the clinical impact of the Xpert® MTB/RIF Ultra cartridge for diagnosis of pulmonary tuberculosis
E A Kendall, S G Schumacher, C M Denkinger, D W Dowdy (United States of America, Switzerland)

10.40  OA-202-14  Evaluation of WHO-endorsed rapid diagnostic tests for potential application as surveillance tool for rifampicin-resistant tuberculosis transmission
K C S Ng, C J Meehan, G Torrea, L Goeminne, M Diels, L Rigouts, B C de Jong, E Andre (Belgium)

10.50  OA-203-14  Development and preliminary evaluation of an innovative serological test for rapid detection of active tuberculosis
P-A Rubbo, A Pisoni, G Blaire, S Delshadi, E Tuuillon (France)

11.00  OA-204-14  Evaluation of an MDR-TB assay for detection of M. tuberculosis and rifampicin and isoniazid resistance on the BD MAX™ System
M Porter, A Anderson, K Andrews, K Bryan-McNeal, K Hamlet, C Zhang, C Whiteford (United States of America)

11.10  OA-205-14  Ability of genotypic methods to diagnose the level of isoniazid resistance among multidrug-resistant clinical isolates of M. tuberculosis
F Brosier, N Veziris, V Jarlier, J Robert, W Sougakoff, A Aubry, French National Reference Center for Mycobacteria (France)

11.20  OA-206-14  Bm2Dx: the tuberculosis biomarker database
S Yerlikaya, E MacLean, T Broger (Switzerland, Canada)

11.30  OA-207-14  M. tuberculosis-specific T-cells profile strongly identifies subjects with active disease
A Gruss, N Trías, A Brugnini, M Contrera, S Cataldi, Z Arteta, S Grille, D Lens (Uruguay)

10.30  OA-208-14  Introduction of a systematic TB contact investigation model with facility-level self-performance monitoring in Malawi
G Nyirenda, L Mlauzi, R Chang, C Stillson, L Berman, K Mbendera, A Gunda (Malawi, United States of America)

10.40  OA-209-14  Evaluation of nurses’ knowledge of TB and MDR-TB before and after training
C Tudor, H Zhao, K Mdolo, R Fosa, N Serebrennikova, J Magambe, H Chiomba, J Munaka (Switzerland, China, South Africa, Lesotho, Russia, Ukraine, Georgia)

10.50  OA-210-14  Training and involvement of ‘Slum Community Volunteers’ in urban TB control: intervention to overcome slum TB in West Bengal
P Bhattacharya, Project Aschaya, West BENG (India)

11.00  OA-211-14  Role of medical colleges in achieving End TB Strategy in India: recent achievements and future prospects
V Rodawat, B Vadera, D Gupta, S Khaparde, J Prasad (India)

11.10  OA-212-14  Blended learning for capacity building of healthcare workers in TB-HIV: results of a comparative study in Ethiopia
T Anteneh, D Habte, N Hing, M Gelbo, Y Kassie, A Aklilu, D Jerene, P Suarez (Ethiopia, United States of America)

11.20  OA-213-14  Education for active case finding of tuberculosis in prisons: lessons learnt
D Sanchez, L Arroyave, L Lopez, D Marin, M Posada, Z Ruwda (Colombia, Brazil)

11.30  OA-214-14  A survey of the tuberculosis workforce in the country of Georgia
D Graciaa, M Machaidze, M Kipiani, M Buzashvili, Z Avulian, R Kemper (United States of America, Georgia)

11.40  OA-215-14  Evaluation of training programmes to improve human resource capacity for HIV, malaria and TB control: systematic review of methods and outcomes
S Wu, J Roychowdhury, M Khan (Singapore, United Kingdom)

14.00  OA-216-14  Evaluation of high-dose rifapentine plus clofazimine in the first-line regimen for tuberculosis in the mouse model of chemotherapy
V Saini, N Ammerman, S Jain, E Nuermberger, J Grosset (United States of America)

14.10  OA-217-14  Bioequivalence of dissolved versus whole bedaquiline tablets: implications for dosing in children
J du Bois, E Svensson, R Kitshoff, A H C Hesseling, V de Rijger, A H Diacon, A Garcia-Prats (South Africa, Sweden)

18. Training healthcare workers

Co-chairs: Linette McElroy Hawkes (Canada), Bruce Struminger (United States of America)

10.30  OA-208-14  Introduction of a systematic TB contact investigation model with facility-level self-performance monitoring in Malawi
G Nyirenda, L Mlauzi, R Chang, C Stillson, L Berman, K Mbendera, A Gunda (Malawi, United States of America)

10.40  OA-209-14  Evaluation of nurses’ knowledge of TB and MDR-TB before and after training
C Tudor, H Zhao, K Mdolo, R Fosa, N Serebrennikova, J Magambe, H Chiomba, J Munaka (Switzerland, China, South Africa, Lesotho, Russia, Ukrainian Federation, Uganda, Malawi, Zambia)

10.50  OA-210-14  Training and involvement of ‘Slum Community Volunteers’ in urban TB control: intervention to overcome slum TB in West Bengal
P Bhattacharya, Project Aschaya, West BENG (India)

11.00  OA-211-14  Role of medical colleges in achieving End TB Strategy in India: recent achievements and future prospects
V Rodawat, B Vadera, D Gupta, S Khaparde, J Prasad (India)

11.10  OA-212-14  Blended learning for capacity building of healthcare workers in TB-HIV: results of a comparative study in Ethiopia
T Anteneh, D Habte, N Hing, M Gelbo, Y Kassie, A Aklilu, D Jerene, P Suarez (Ethiopia, United States of America)

11.20  OA-213-14  Education for active case finding of tuberculosis in prisons: lessons learnt
D Sanchez, L Arroyave, L Lopez, D Marin, M Posada, Z Ruwda (Colombia, Brazil)

11.30  OA-214-14  A survey of the tuberculosis workforce in the country of Georgia
D Graciaa, M Machaidze, M Kipiani, M Buzashvili, Z Avulian, R Kemper (United States of America, Georgia)

11.40  OA-215-14  Evaluation of training programmes to improve human resource capacity for HIV, malaria and TB control: systematic review of methods and outcomes
S Wu, J Roychowdhury, M Khan (Singapore, United Kingdom)

19. More TB drugs, less rock and roll! Quizás algún mariachi

Co-chairs: Lynette Mabote (South Africa), Patrick Phillips (United States of America)

14.00  OA-216-14  Evaluation of high-dose rifapentine plus clofazimine in the first-line regimen for tuberculosis in the mouse model of chemotherapy
V Saini, N Ammerman, S Jain, E Nuermberger, J Grosset (United States of America)

14.10  OA-217-14  Bioequivalence of dissolved versus whole bedaquiline tablets: implications for dosing in children
J du Bois, E Svensson, R Kitshoff, A H C Hesseling, V de Rijger, A H Diacon, A Garcia-Prats (South Africa, Sweden)
14.20 OA-218-14 Vitamin C modulates the efficacy of anti-tuberculosis drugs in vitro
K Sikri, J Tyagi (India)

14.30 OA-219-14 RNA sequencing and inhibition of efflux pump genes involved in second-line drug resistance in *M. tuberculosis*
L Malinga, M van der Walt, A Stoltz, B Fourie (South Africa)

14.40 OA-220-14 Tuberculosis clinical trials and safety halts: evaluating for bias in effect estimates
M B Milstein, G E Velásquez, J M Coit, J Jiménez, K Tintaya, E M Osso, G R Davies, C D Mitnick (United States of America, Peru, United Kingdom)

14.50 OA-221-14 Effectiveness and safety of shortened anti-tuberculosis therapy with *Mycobacterium vaccae* in never-treated sputum smear negative pulmonary tuberculosis patients: a randomised controlled trial
Y Xia, S Cheng, L Zhou, E Liu, Y Zhao, L Bai, W Lu, L Ms.zhou (China)

15.00 OA-222-14 Final analysis of a study providing early access to bedaquiline (BDQ, TMC207) for (pre) XDR *M. tuberculosis*
I Vasilyeva, A Mariandyshev, B Kazennyy, E Davidavičienė, C Liu, N Lounis, S Reim, TMC207TBC3001 (Russian Federation, Lithuania, United States of America, Belgium, Portugal)

15.10 OA-223-14 Low total tuberculosis drug activity correlates to low plasma concentrations of rifampicin
K Niward, L Ek Blom, L Davies Forsman, J Bruchfeld, T Schön, E Chryssanthou, J Paues (Sweden)
**SHORT ORAL ABSTRACT SESSIONS**

**14. TB care: who pays, how much, and to what end?**

**Co-chairs: Carol Nawina (Zambia), Lucica Ditiu (Switzerland)**

<table>
<thead>
<tr>
<th>Time</th>
<th>SOA-435-14</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.30</td>
<td>SOA-435-14</td>
<td>How affordable is TB care? Findings from a nationwide TB patient cost survey in Ghana</td>
<td>D Pedrazzoli, J Bozghi, F Bonsu, R White, A Sioka, D Boccia, R Houben (United Kingdom, Ghana, Switzerland)</td>
</tr>
<tr>
<td>10.36</td>
<td>SOA-436-14</td>
<td>Feedback from TB-affected households receiving a socio-economic intervention in Peruvian shantytowns: acceptability of social versus economic support according to poverty level</td>
<td>T Wingfield, M Tovar, M Sanders, S Datta, D Huff, R Montoya, J J Lewis, C Evans (United Kingdom, Sweden, Peru)</td>
</tr>
<tr>
<td>10.42</td>
<td>SOA-437-14</td>
<td>Socio-economic scenarios of tuberculosis in Brazil</td>
<td>D M Pelissari, M S Rocha, P B Oliveira, S B Codenotti, K B Andrade, C O Dantas, M G Jacobs, D Arakaki, Tuberculosis Epidemiology Study Group (Brazil)</td>
</tr>
<tr>
<td>10.48</td>
<td>SOA-438-14</td>
<td>A cross-sectional study to analyse patient costs during extra-pulmonary tuberculosis diagnosis and treatment</td>
<td>H Miyenea, S Hossain, M Rifat, A Al-Sakkaf, A Imam, A Debnath, S Arefin, T Dorji, extrapulmonary Tb patients (Bangladesh)</td>
</tr>
<tr>
<td>10.54</td>
<td>SOA-439-14</td>
<td>Analysing clinical and cost data for effective use of domestic resources for TB: the case of Ukraine</td>
<td>A Katsaga, O Zues, S Dynchenko (Canada, United States of America, Ukraine)</td>
</tr>
<tr>
<td>11.00</td>
<td>SOA-440-14</td>
<td>TB pay-for-performance programme under universal health insurance versus conventional DOTS programme for patient-centred care in Taiwan</td>
<td>C-Y Lee, S-L Yang, M-C Yang, S-H Cheng (Taiwan)</td>
</tr>
<tr>
<td>11.06</td>
<td>SOA-441-14</td>
<td>Pre and post-diagnosis costs of tuberculosis to patients on DOTS in districts of Southwest Ethiopia: a longitudinal study</td>
<td>A Asres, D Jenee, W Deressa (Ethiopia)</td>
</tr>
<tr>
<td>11.12</td>
<td>SOA-442-14</td>
<td>Cost-effectiveness analysis of pulmonary tuberculosis case finding strategies among high-risk communities in Kampala, Uganda</td>
<td>A Sababungera, S Kisaka, J Sekandi (Uganda, United States of America)</td>
</tr>
<tr>
<td>11.18</td>
<td>SOA-443-14</td>
<td>Cost-effectiveness of including determine TB-LAM test to diagnose tuberculosis in HIV-positive symptomatic patients</td>
<td>N Yakhelef, M Audibert, F Varaine, J Sitone, M Bonnet, H Huerga (France, Kenya)</td>
</tr>
<tr>
<td>11.24</td>
<td>SOA-444-14</td>
<td>Promotion and operation for upfront GeneXpert testing of suspected paediatric tuberculosis patients in India – cost analysis in the health systems perspective</td>
<td>S Huddart, S Khaparde, N Raizada, V S Sailntra, R Rao, C Denkinger, S Sarin, H Sohn (Canada, India, Switzerland, United States of America)</td>
</tr>
<tr>
<td>11.30</td>
<td>SOA-445-14</td>
<td>Estimation of resource constraints in the scale-up of intensified case finding in South Africa</td>
<td>F Bozzani, G Gerner, M Mudzengi, T Summer, P Hipper, V Cardenas, R White, A Vassal (United Kingdom, South Africa)</td>
</tr>
</tbody>
</table>

**14. Cuidados de la tuberculosis: ¿quién paga, cuánto y para qué fines?**

**Copresidentes: Carol Nawina (Zambia), Lucica Ditiu (Suiza)**

<table>
<thead>
<tr>
<th>Time</th>
<th>SOA-435-14</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.30</td>
<td>SOA-435-14</td>
<td>¿Qué tan abordables son los cuidados para la tuberculosis? Resultados de una investigación a nivel nacional sobre el coste de la atención a pacientes con tuberculosis en Ghana</td>
<td>D Pedrazzoli, J Bozghi, F Bonsu, R White, A Sioka, D Boccia, R Houben (Reino Unido, Ghana, Suiza)</td>
</tr>
<tr>
<td>10.36</td>
<td>SOA-436-14</td>
<td>Información obtenida de familias afectadas por tuberculosis que reciben una ayuda socioeconómica que viven en “ciudades miseria” en el Perú: aceptabilidad de la ayuda social frente a la financiera, de acuerdo con el nivel de pobreza</td>
<td>T Wingfield, M Tovar, M Sanders, S Datta, D Huff, R Montoya, J J Lewis, C Evans (Reino Unido, Suecia, Perú)</td>
</tr>
<tr>
<td>10.42</td>
<td>SOA-437-14</td>
<td>Escenarios socioeconómicos de la tuberculosis en Brasil</td>
<td>D M Pelissari, M S Rocha, P B Oliveira, S B Codenotti, K B Andrade, C O Dantas, M G Jacobs, D Arakaki, Tuberculosis Epidemiology Study Group (Brasil)</td>
</tr>
<tr>
<td>10.48</td>
<td>SOA-438-14</td>
<td>Un estudio transversal que analiza los costos a nivel de paciente durante el diagnóstico y tratamiento de la tuberculosis extrapulmonar</td>
<td>H Miyenea, S Hossain, M Rifat, A Al-Sakkaf, A Imam, A Debnath, S Arefin, T Dorji, extrapulmonary Tb patients (Bangladesh)</td>
</tr>
<tr>
<td>10.54</td>
<td>SOA-439-14</td>
<td>Utilidad del análisis de datos clínicos y económicos para un uso racional de los recursos nacionales destinados a la tuberculosis: el caso de Ucrania</td>
<td>A Katsaga, O Zues, S Dynchenko (Canadá, Estados Unidos de América, Ucrania)</td>
</tr>
<tr>
<td>11.00</td>
<td>SOA-440-14</td>
<td>Programa para tuberculosis de pago por eficacia de los medicamentos, bajo el esquema de la seguridad social universal en comparación con un programa convencional de tipo DOTS en los cuidados centrados en el paciente en Taiwán</td>
<td>C-Y Lee, S-L Yang, M-C Yang, S-H Cheng (Taiwán)</td>
</tr>
<tr>
<td>11.06</td>
<td>SOA-441-14</td>
<td>Costos previos y posteriores al diagnóstico de la tuberculosis que pagan los pacientes de DOTS en los distritos del sureste de Etiopía: un estudio longitudinal</td>
<td>A Asres, D Jerene, W Deressa (Etiopía)</td>
</tr>
</tbody>
</table>
15. Tobacco cessation and integration in TB control

Co-chairs: Chris Bullen (New Zealand), Huan Shitong (China)

14.12 SOA-447-14 High prevalence and nicotine dependence among TB patients who are smokeless tobacco users compared to smokers
O M Bera, S Kamble (India)

14.18 SOA-448-14 Use of Tobacco Dependence Screener to diagnose smokeless tobacco dependence in India
A L Visyagasar, K Siddiqui, M Kanaan (United Kingdom)

14.24 SOA-449-14 Effectiveness of a brief counseling and behavioural intervention for tobacco cessation in primary care
R Panda, D Persai, S Mahapatra, Tobacco users (India)

14.36 SOA-450-14 Tobacco cessation counselling and treatment adherence among tobacco consuming TB patients in Kalburgi (Gulburga) District, Karnataka
C K K R Gali, A Anantham, S Kant, S Chadha (India)

14.42 SOA-451-14 What price and non-price factors are crucial to elicit a quit response among bidi smokers?
M B Aghi, A Pandey, P Lal, R J Singh, G K Tripathi, R Sharma (India)

16. TB laboratory services: lessons from the field

Co-chairs: E Jane Carter (United States of America), Alaine Umubyeyi Nyaruhirira (South Africa)

14.00 SOA-452-14 Attaining universal access to DST for tuberculosis patients in Uganda: experience from Kampala city on optimal utilisation of Xpert® MTB/RIF
A Burua, S Kasozi, S Turyahabwe, E Birabwa, D Lukoye, R Byaruhanga, P Suanez (Uganda, United States of America)

14.06 SOA-453-14 Digitalisation of microscopy centres in Andhra Pradesh (AP), India: E-Lab Register
S Achanta, J Peravali Carel, J Jaju, S A Nair, R R Tekumalla (India)

14.12 SOA-454-14 Deployment of 185 GeneXpert machines in a resource-limited setting; summary of the implementation
D Egbule, A Owolala, A Ikpeazu, H Bello, T Panda, A Adeyemoje, T Ashi-Sulaiman, I Huitema (Nigeria)
Clinical impact of the Xpert® MTB/RIF assay among sputum smear-negative multidrug-resistant tuberculosis patients in Georgia
M Kipiani, M Dziazishvili, L Darchia, N Tabagari, G Avaliani, V Mirtskhalava, H M Blumberg, R R Kempker (Georgia, United States of America)

Cost analysis of field application of a novel sample transport and decontamination reagent in Ethiopia and Peru
R P Tampi, J Condori, A Kebede, B Tsesema, C A Ugarté-Gil, J Collantes, R Song, H Sohn (United States of America, Peru, Ethiopia, Switzerland)

Experiencia del uso del portatil MDS® para el diagnóstico de TB y TB-MDR en la sierra y selva central de Junín, Perú
J Coronel, O Orellana, E Meza, A Mendoza, R Gilman, D Moore (Peru, United States of America, United Kingdom)

Increasing access to TB services through government-led clinical mentorship in Kafue district, Zambia
L M Zulu, A Banda Chirwa, D C Chanda, J Mwanza, L Aladesanmi, N Kasonka, T Chisanga, S Kelbert (Zambia, United States of America)

Cold chain vehicle specimen transportation system for TB culture improved quality of laboratory service in Ethiopia
G Tibesso, G Ayana, M Melese, D Habte, N Hiny, S Tsegaye, D Jerene, P Suarez (Ethiopia, United States of America)

Evaluation of a panel in support of validation and quality control of the Xpert® MTB/RIF test
A Alfaro-López, C Bäcker, C A Vázquez-Chacón, A B Armoy-Vargas, C Barrón-Rivero (Mexico)

Field evaluation of OMNigene SPUTUM reagent in Kyrgyzstan for the detection of M. tuberculosis
J Robinson, K Takeva, T Chichkin, R Adilbekova, A Kadyrov, G Kalmambetova, S Sungkawasee, D Wayya (Thailand, Kyrgyz Republic)

TB in healthcare workers

An innovative approach to TB surveillance among healthcare workers: results from a pilot project in Nigeria
B Odume, D Onwuchekwu, E Onu, I Saliu, C Elochukwu, A Olutola, N Chukwurah (Nigeria)

Prevalence of and risk factors for latent tuberculosis infection among healthcare workers in Viet Nam, 2014
B Nguyen, M Pearson, C Fukuda, H Truong, S Pals, S Whitehead, A Finlay, N Nguyen (Viet Nam, United States of America, Thailand)

Outcomes and incidence of tuberculosis among healthcare workers in two refugee camp facilities in Kenya: a retrospective cohort study
J Limo, V Kimathi, D Mutua (Kenya)

Interferon-gamma release assay positivity among healthcare workers in Lima, Peru
D Tierney, K Tintaya, J Aliaga, S Hurwitz, C Mitnick, E Nardell (United States of America, Peru)

Results of la evaluación de casos de tuberculosis pulmonar en trabajadores de la salud en México del 2013 al 2015
J Sulca (Mexico)

Latent tuberculosis infection and TB disease among healthcare workers in Thailand, 2014
T Tasaneeyapan, C Fukuda, S Piriyapongsawong, A Kamphukwil, B Phetsuksiri, A Finlay, C Namwat, M Pearson (Thailand, Viet Nam, United States of America)

Systematic TB screening for HCWs in Tanzania: implications for policy and TB care and prevention
W Mbawala, J Minde, C Laurent, M Urasa (Tanzania, United Rep.)

High rates of exposure to tuberculosis patients among HIV-infected healthcare workers in Botswana
S Shin, C Modongo, N Zebulo, Q Wang, T Phologolo, M Kestler, A Ho-Foster (United States of America, Botswana, Canada)

Evaluation of plasma cluster technology in tuberculosis hospital
N Tukvadze, N Lomtadze, M Kipiani, N Bablishvili, L Darchia, N Kiria, Z Avaliani (Georgia)

Active tuberculosis case finding among healthcare workers in Mbarara region, Tanzania
M Kod, F Mturoko, A Buku, B Masanja, R Mbatia (Tanzania, United Rep.)

Xpert rifampicin-susceptible tuberculosis: findings from an integrated TB-HIV surveillance system in South Africa
N Ismail, V Quan, J Mwansa-Kambafwila, A Nanoo, H Said, L Erasmus (South Africa)

Pulmonary impairment and its determinants in TB patients in Maputo, Mozambique
C Khosa, N Bhali, I Massango, K Azam, F Riess, E Saathoff, M Hoelscher, A Rachow (Mozambique, Germany)

Beneficial effects of BCG vaccination in outcomes for patients diagnosed with TB: observational study using the Enhanced Tuberculosis surveillance system, 2009—2015
S Abbott, H Christensen, M K Lalor, M Ramsay, E Brooks-Pollock, A Ho-Foster (United Kingdom)

Examining factors driving performance of tuberculosis control programme in Enugu State, Nigeria: a case-based health systems analysis
D Ogbuabor, O Chukwugwo, I Okorkonwko (Nigeria)

Xpert rifampicin-susceptible tuberculosis: findings from an integrated TB-HIV surveillance system in South Africa
N Ismail, V Quan, J Mwansa-Kambafwila, A Nanoo, H Said, L Erasmus (South Africa)

Pulmonary impairment and its determinants in TB patients in Maputo, Mozambique
C Khosa, N Bhali, I Massango, K Azam, F Riess, E Saathoff, M Hoelscher, A Rachow (Mozambique, Germany)

Beneficial effects of BCG vaccination in outcomes for patients diagnosed with TB: observational study using the Enhanced Tuberculosis surveillance system, 2009—2015
S Abbott, H Christensen, M K Lalor, M Ramsay, E Brooks-Pollock, A Ho-Foster (United Kingdom)

Examining factors driving performance of tuberculosis control programme in Enugu State, Nigeria: a case-based health systems analysis
D Ogbuabor, O Chukwugwo, I Okorkonwko (Nigeria)
14.24  SOA-476-14  Tablet-based TB symptom screening pilot at a hospital out-patient department and polyclinic in Johannesburg, South Africa: challenges and cost
R Gajee, K Schnippel, N Mthupha, P Murangandi, M Masithulela (South Africa)

14.30  SOA-477-14  Relapse with standard 6-month tuberculosis therapy: an individual patient data meta-analysis
K Romanowski, R Balshaw, A Benedetti, J Campbell, F Ahmad Khan, J Johnston (Canada)

14.36  SOA-478-14  TB implementation cascades: from better analysis to improved efficiency
C Benedikt, N Fraser, N Cheikh, M Görgens, D Wilson (United States of America)

14.42  SOA-479-14  Comparative analysis of the ethambutol (EH) – rifampicin (RH) switch on treatment outcomes of tuberculosis patients in Mulago National Referral Hospital
D Kimuli, D Lukoye, D J Sama, N S Kirirabwa, S Adakun, E Birabwa, S Pedro, R Byaruhanga (Uganda, United States of America)

14.48  SOA-480-14  The diagnostic accuracy of unadjusted CRP compared to CRP adjusted for hematocrit for active TB among patients in the END TB study
Z S Mwebe, C Yoon, L Asege, M Nakaye, J Katende, A Andama, F Semitala, A Cattamanchi (Uganda, United States of America)

14.54  SOA-481-14  Sedimentation rate and suPAR in relation to disease activity and mortality in patients with active tuberculosis – a comparison between two inflammatory biomarkers
H Schulman, K Niward, E Abate, J Idh, J Paués, O Stendahl, T Schön (Sweden, Ethiopia)
POSTER DISCUSSION SESSIONS

41. Detect, report and treat: an echo from Suriname to South Africa

Chair: Zohar Mor (Israel)

D Stijnberg, E Commiesie, W Schrooten (Suriname, Belgium)

PD-865-14  Pre-treatment loss to follow-up patients, Chongwe district, Zambia, 2016
V Mhungwe, S Kobayashi, M Ota, S Oguri, S Kato, C Misiska, M Phiri, Z Mtonga (Zambia, Japan)

PD-866-14  Impact of DOTS implementation on TB treatment outcome in Suriname, 2010—2015
E Commiesie, D Stijnberg (Suriname)

PD-867-14  Culture of mycobacteria for diagnosis of tuberculosis retreatment cases in Brazil
A Coelho de Brito, F D Costa, R Souza Junior, P B Oliveira, A D P Lobo, D Pelissari, L A Nascimento Junior, K B Andrade (Brazil)

PD-868-14  TB among elderly patients reported in Kenya in 2015
D Nyangahu, R Kiplimo, R Muthee (Kenya)

PD-869-14  The effect of Bolsa Familia Programme on the tuberculosis cure rate in Brazil: a propensity score matched analysis
D J Carter, R Daniel, A W Torres, M Sanchez, P Bartholomay, M L Barreto, L C Rodrigues, D Boccia (United Kingdom, Brazil)

PD-871-14  Transition to web and case based reporting system under India’s RNTCP: is data quality assured in cohort reporting?
S Dapkekar, K B Tumane, Y Bagde, S Kamble (India)

A Nanoo, L Blows, H Koornhof, N A Ismail (South Africa)


PD-874-14  Resultados de cohortes de tratamiento en pacientes con tuberculosis resistente a fármacos en México, 2010—2013
N Saavedra, J Magaña, M Castellanos, M García (Mexico)

PD-875-14  Successful adoption of the shorter MDR-TB regimen for accelerated national scale-up In Swaziland
D Vambe, T Dlamini, S Dlamini-Nqeketo, A Shabangu, T Hlophe, K Keus, S Masuku (Swaziland)

POSTER DISCUSSION SESSION 12.45 – 13.45 POSTER AREA

42. You can’t treat what you don’t diagnose: considerations in MDR-TB diagnosis and molecular epidemiology

Chair: Catharina Boehme (Switzerland)

PD-874-14  Prevalence of discordance between phenotypic and genotypic testing for rifampicin resistance: a clinical dilemma
N Ruswa, A Beukes, F Mavhunga, P Campbell, E Shipiki, N Forster (Namibia, United States of America)

PD-875-14  Eligibility assessment for shortened MDR-TB treatment with commercially-available rapid molecular tests
L Guglielmetti, W Sougakoff, T Maitre, F Brossier, V Jarlier, J Robert, N Veziris, A Aubry (France)

PD-876-14  Universalisation of rapid MDR-TB testing is associated with decreased mortality
M Tovar, S Datta, M Saunders, T Wingfield, T Valencia, R Montoya, A Valencia, C Evans, Innovation For Health and Development (Peru, United Kingdom)

PD-877-14  The effects of Xpert® MTB/RIF testing and GxAlert on RR/MDR-TB diagnosis and linkage to care in Mozambique
C Mutaquiha, J Beste, I Manhiça, B Jose, M Faria, J Cowan, B Wagenaar, J Cowan (Mozambique, United States of America, Switzerland)

PD-878-14  The correlation of genotypic resistance with phenotypic drug resistance for guiding treatment decisions
N Ciobanu, D Chesov, S Alexandru, E Noroc, E Romancenco, I Tinti, C Lange, V Crudu (Moldova, Germany)

PD-879-14  Deciphering the physiological state of drug-resistant M. tuberculosis strains
C Pule, G Louw, J Mouton, R Warren, S Sampson (South Africa)

PD-880-14  Whole genome sequencing analysis of drug resistance-conferring mutations and lineages/sublineages of M. tuberculosis circulating in Hanoi, Viet Nam
N T L Hang, M Hijikata, S Maeda, P H Thuong, N P Hoang, N V Hung, I Matsuishi, N Keicho (Viet Nam, Japan)

POSTER DISCUSSION SESSION 12.45 – 13.45 POSTER AREA

43. Challenges to the implementation of drug-resistant TB treatment on the ground

Chair: Philipp du Cros (United Kingdom)

PD-881-14  Resultados de cohortes de tratamiento en pacientes con tuberculosis resistente a fármacos en México, 2010—2013
N Saavedra, J Magaña, M Castellanos, M García (Mexico)

PD-882-14  Successful adoption of the shorter MDR-TB regimen for accelerated national scale-up In Swaziland
D Vambe, T Dlamini, S Dlamini-Nqeketo, A Shabangu, T Hlophe, K Keus, S Masuku (Swaziland)
### POSTER DISCUSSION SESSION 12.45 – 13.45 POSTER AREA

#### 44. TB drugs, and rock ‘n’ roll – updates on our understanding of TB drugs

**Chair: Jeffrey Hafkin** (United States of America)

<table>
<thead>
<tr>
<th>Poster ID</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-890-14</td>
<td>Single nucleotide polymorphisms predict fluoroquinolone effectiveness against M. tuberculosis</td>
<td>M Seifert, E Capparelli, T C Rodwell (United States of America)</td>
</tr>
<tr>
<td>PD-891-14</td>
<td>Accelerating access to delamanid for rifampicin-resistant tuberculosis in Khayelitsha, South Africa</td>
<td>J Hughes, L Trivino Duran, C Fourie, V Mudaly, A Reuter, G Fettazine, V Coa, J Furin (South Africa, United States of America)</td>
</tr>
<tr>
<td>PD-892-14</td>
<td>Linezolid dosing for treatment of pulmonary multidrug-resistant tuberculosis: a meta-analysis of existing data</td>
<td>B Singh, D Cocker, H Ryan, D J Skan (United Kingdom)</td>
</tr>
<tr>
<td>PD-893-14</td>
<td>Threats to affordable quality second-line TB drugs in Eastern Europe/Central Asia as the Global Fund shifts to national procurement</td>
<td>K Akerfeldt, S Lynch, A Ismayilov, C Perrin, I Chikwanha (United Kingdom, United States of America, Kyrgyz Republic, France, Switzerland)</td>
</tr>
<tr>
<td>PD-894-14</td>
<td>The impact of pyrazinamide resistance on the treatment outcome of patients with multidrug-resistant tuberculosis in Karakalpakstan, Uzbekistan</td>
<td>J Kuhlin, C Smith, A Khaemraev, Z Tigay, N Parpieva, J Hajek, P du Clos, D Moore (United Kingdom, Uzbekistan, Canada)</td>
</tr>
</tbody>
</table>

### POSTER DISCUSSION SESSION 12.45 – 13.45 POSTER AREA

#### 45. The bug, the host, and points between

**Chair: Lisa Cranmer** (United States of America)

<table>
<thead>
<tr>
<th>Poster ID</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-895-14</td>
<td>Do drug-tolerant phenotypes dominate sputum prior to treatment? Clearance of M tuberculosis DNA suggests not</td>
<td>N Walter, C Moore, C Dide Agossou, W Wondjria, J L Davis (United States of America, Uganda)</td>
</tr>
<tr>
<td>PD-896-14</td>
<td>An approach based on Hidden Markov Models (HMM) to analyse variability of toxin-antitoxin systems in lineages of M. tuberculosis complex</td>
<td>J S Solano, C Pino, J Robledo (Colombia)</td>
</tr>
<tr>
<td>PD-897-14</td>
<td>Methylation of genes regulating vitamin D metabolic pathway and tuberculosis</td>
<td>M Wang, J Wang (China)</td>
</tr>
<tr>
<td>PD-898-14</td>
<td>Association of human cytomegalovirus infection with anti-mycobacterial antibodies and tuberculosis</td>
<td>L Stockdale, S Nash, A Naluoga, L Gibson, R Newton, H Fletcher (United Kingdom, United States of America)</td>
</tr>
<tr>
<td>PD-899-14</td>
<td>Polymorphisms of TLR1 were associated with latent tuberculosis infection and pulmonary tuberculosis</td>
<td>J-O He, M Zhang (China)</td>
</tr>
<tr>
<td>PD-901-14</td>
<td>BCG vaccination promotes early clearance of M. tuberculosis infection by innate immune mechanisms</td>
<td>A Verail, on behalf of Innate Factors in Early Clearance of Mycobacterium Tuberculosis (INFEKT) Investigators (New Zealand)</td>
</tr>
<tr>
<td>PD-902-14</td>
<td>Maximising impact of the TB vaccine pipeline: mathematical modelling to inform target product profiles using China as a case study</td>
<td>R C Harris, T Summer, G M Knight, W Hanekom, R G White (United Kingdom, United States of America)</td>
</tr>
<tr>
<td>PD-903-14</td>
<td>Elevated levels of macrophage migration inhibitory factor in serum of Ghanaian TB patients compared to latently infected and uninfected household contacts</td>
<td>G I Mensah, K K Addo, I B Amanor, S Otieno Addo, I A Fetteh, D Jackson-Sillah, F A Bonsu, R Buacala (Ghana, United Kingdom, United States of America)</td>
</tr>
</tbody>
</table>
46. Knock Knock? Who is there? Household and contact case finding. Know, share, act!

Chair: Paul Nunn (United Kingdom)

PD-905-14 Challenges in household contact screening: lessons from the PPM project in Pakistan
A. Rashid, A. Noor, F. Naeem (Pakistan)

PD-906-14 Household contact non-uptake of tuberculosis clinical evaluation in a high burden district in South Africa
G. Kigozi, C. Heunis, M. Engelbrecht, A. J. van Rensburg, J. M. Uwimana-Nicol, P. Chikobvu, D. Van Rensburg (South Africa)

PD-907-14 Clinical, programmatic and epidemiological significance of wide-scale implementation of tuberculosis contact investigation in Ethiopia
D. Jerene, Z. Gashu, S. Negash, M. Melkineh, H. Hiny, O. Hable, Y. Kebede Haile, P. Suarez (Ethiopia, United States of America)

PD-908-14 Tele-screening as a cost-effective method for improving contact investigation in difficult-to-reach communities
M. Mutanga, I. Mabiku (Namibia)

PD-909-14 Optimising tuberculosis contact investigation in a high burden urban setting: a qualitative study

PD-910-14 Knocking the door-house to house approach for detecting TB cases in the vulnerable populations – a case study from an Indian State
R. Kumar, R. K. Baia (India)

PD-911-14 Rapid reduction of tuberculosis prevalence among adults after three-year implementation of community-wide screening in Ca Mau, Viet Nam
T. A. Nguyen, P. T. B. Nguyen, S. V. Nguyen, N. V. Nguyen, H. B. Nguyen, L. N. Nguyen, G. J. Fox, G. B. Marks (Viet Nam, Australia, Switzerland)

PD-912-14 Indonesia ‘Knock on the Doors’ TB campaign to ‘reach the unreached’ TB patient
W. Warorontu, A. Surya, Y. E. Yuzwar, N. Sulaiman, E. Febrani, A. M. Zaki, A. Yoana, M. Akhtar (Indonesia)

PD-913-14 Community-based active case finding approaches increased tuberculosis case notification in peri-urban areas in Myanmar

PD-914-14 Does active case finding really help to eliminate tuberculosis? Findings from Sun Quality Health Clinics’ TB client registers in Myanmar
Y. K. Aung, S. M. Oo, Z. Kyaw, T. Aung (Myanmar)

PD-915-14 Early experiences of the acceptability and palatability of a novel child-friendly levofloxacin formulation in young children
S. Purchase, A. Garcia-Prats, P. De Koker, M. Draper, D. Wademan, G. Hoddinott, A. Hesseling (South Africa)

PD-916-14 Effect of gastric aspirate pH on recovery of M. tuberculosis
R. Odero, E. Seko, S. Lee, K. McCarthy, W. Mchemberu, E. Click, R. Song, K. Cain (Kenya, United States of America)

PD-917-14 Progressive uptake of newer diagnostics by healthcare providers through advocacy strategies in India
N. Raza, S. Khaparde, B. Sarin, V. S. Sathotha, R. Rao, A. Kaira, C. Bohme, C. Denkinger (India, Switzerland)

PD-918-14 Caracterización de pacientes con tuberculosis infantil tratados con medicamentos de segunda línea, Lima, Perú
J. E. Villarreal Polomino, C. A. Mendoza Ticona (Peru)

PD-919-14 Delays and barriers to early treatment initiation for childhood tuberculosis in India
C. Velte, A. Chandanwale, S. Khadse, R. Kulkarni, D. Kadam, G. Dhumal, R. C. Bellinger, A. Deluca (India, United States of America)


PD-921-14 ‘Probable’ paediatric TB with no clinical diagnosis: factors associated with lack of clinical diagnosis

PD-922-14 Stability of anti-tuberculosis drugs in paediatric-friendly formulations
B. Butler, M. Skoff, N. Nuel, C. Tison, J. Furin, S. Nachman (United States of America)

PD-923-14 Comparative yield of TB in children and adults among presumptive tuberculosis patients who underwent Xpert testing in Ethiopia
N. Hiruy, G. Dott, A. Alem, A. Bedru, D. Hable, Y. K. Haile, D. Jerene, P. Suarez (Ethiopia, United States of America)

PD-924-14 Does the determine-TB LAM test have potential value in tuberculosis diagnosis among severely malnourished children?
B. Schramm, L. Flevaud, P. Uwirague, R. C. Nyangany, A. Abdoubara, S. Sounna, C. Ferreyra, H. Huerga (France, Spain, Niger)
48. Looking after little lungs: updates in child lung health

Chair: Laura Olbrich (Germany)

PD-925-14 Perceptions of social functioning among HIV-infected children assessed for chronic lung disease and their caregivers in Malawi
S Modi, K Mirkovic, S Lloyd, D Singer, H Alexander, Malawi Chronic Lung Disease in HIV-Infected Youth Investigation Team (United States of America, Malawi)

PD-926-14 How to introduce pulse oximetry into secondary level hospitals in Nigeria: mixed methods evaluation of a field trial

PD-927-14 Knowledge and practices of school teachers regarding asthma among primary school children in selected schools of Bangalore South
U Singh (India)

PD-928-14 Pneumonia risk stratification scores for children in low-resource settings: a systematic literature review
K V Deardorff, E D McCollum, A S Ginsburg (United States of America)

49. TB and co-morbidity: where are we?

Chair: Yan Lin (China)

PD-934-14 Post-tuberculosis lung function impairment
B Adamou Dodo, P-Y Eric Walter, Y-F Christelle Fallone, K Christopher (Cameroon)

PD-935-14 The impact of cancer development on the risk of mycobacterial disease in patients with rheumatoid arthritis: a nationwide cohort study in Taiwan
W-J Su, S-W Pan, Y-F Yen, Y-R Hou, P-H Chuang, J-Y Feng (Taiwan)

PD-936-14 Multimorbidity of cardiovascular risk factors among South African patients with drug-resistant tuberculosis
E Whitehouse, N Perrin, J Farley (United States of America)

PD-937-14 Chronic airflow obstruction after successful treatment of multidrug-resistant tuberculosis in Lima, Perú
A Byrne, B Marais, C Mitnick, F Garden, L Lecca, C Contreras, Y Yauri, G Marks (Australia, Peru, United States of America)

PD-938-14 Prevalence of co-infection with Streptococcus pneumoniae among patients with suspected pulmonary tuberculosis
M Nimesh, D Joon, M Varma-Basil, D Saluja (India)

PD-939-14 Analysis of anti-tuberculosis drug resistance in high-risk groups
L Fu, G F Deng, P Z Zhang (China)

PD-940-14 Burden and presentation of depression among newly diagnosed individuals with tuberculosis in primary care settings in Ethiopia
F A Getahun, R Mayston, C Hanlon, A Alem (Ethiopia, United Kingdom)

PD-941-14 Prevalence of major depressive disorder among patients with suspected pulmonary tuberculosis treated at a primary health centre in metropolitan Rio de Janeiro, Brazil
K Silva, A C C Carvalho, P S Martins, J R França, M Cavalcanti, M A Oquendo, A Sweetland, A Crittiski (Brazil, United States of America)

50. Latent TB infection: testing and perceptions

Chair: Michael Kimerling (Netherlands)

PD-942-14 Estimating the optimal induration cut-off point from tuberculin skin testing through mixture modeling: analysis of two high-risk populations in sub-Saharan Africa
H Weidu, L Martinez, C Whalen (United States of America)

PD-943-14 Concordance of the tuberculin skin test and QUANTiferon® assays in recent skin test converters: results from a longitudinal study in sub-Saharan Africa
M E Castellanos, S Kimunda, T Quach, L Martinez, S Chakraburty, S Zalwango, N Kiwanuka, C C Whalen (United States of America, Uganda)
Discordances between TST and IGRA to detect latent tuberculosis infection in paediatric contacts of drug-resistant tuberculosis patients
N Melikyan, M Bastard, A Hayrapetyan, A Khachatryan, A Ullumyan, F Varaine, M Bonnet, H Huerga (Armenia, France)

A new for skin test reagent that can efficiently diagnose LTBI
J Pu (China)

Immunological features in children of different ages with latent tuberculosis infection and tuberculosis
S Ananiev, A Sharshinova, Y Ovchinnikova, I Dougalik (Russian Federation)

Knowledge, perceptions and practices of physicians and nurses about tuberculosis transmission and prevention in three Brazilian capitals
J Ramos, M F Wackoff, M D F Militão Albuquerque, M Cordeiro-Santos, P Hill, D Menzies, A Trajman, ACT4 study group (Brazil, New Zealand, Canada)

Methods for estimating LTBI prevalence in foreign-born persons age five and older in local U S jurisdictions
J Collins, A Board, W Migala, H Blumberg, D Katz, C Ho, Tuberculosis Epidemiologic Studies Consortium (United States of America)

POSTER DISCUSSION SESSION 12.45 – 13.45 POSTER AREA

51. Human rights and ethics

Chair: Abdulai Sesay (Sierra Leone)

Gender differences in healthcare providers’ management of persons with pulmonary TB symptoms and disease: standardised patient study
S Sayananayana, D Daniels, A Kwan, V Sarita, R Das, V Das, J Das, M Pai (Canada, United States of America, India)

T W Steen, T M Arnesen (Norway)

Law and tuberculosis at cross roads
B Prasad, S Nayak, L Das, S Mohanty (India)

Inclusive human experience from TB and HIV for overcoming these stigmatising health conditions
D Kundo, S Chadha (India)

Are female TB patients being neglected in tribal India?
S Saruk, V Ghule, S Srivastava, A Tandon, S Chadha (India)

Empowering TB patients on their rights and responsibilities
S Mohanty, S Pandurangan, S Chadha (India)

Tuberculosis patients got their political rights in Panchayat elections under local self-governance after 52 years in Odisha, India
S K Nayak, V H Ghule, S Chadha, S Mohanty, R Dayal, R R Pathak, M Biswas, O Prakash (India)

Experience with ethics committee to seek approval for recruiting people with TB and bio-specimen collection and storage for research projects
S Dhawan, S Rathore, S Mannan, K Rade, P Dasaradhi, A Khanna, P Malhotra, A Mohmmed (India)

Gender differences in the outcomes of an economic support intervention to improve tuberculosis treatment, Nigeria
K N Ukwa, I Abubu, M Gidado, O Onazi, D C Oshi (Nigeria, Jamaica)

POSTER DISCUSSION SESSION 12.45 – 13.45 POSTER AREA

52. Sustainable role of civil society organisations and communities in TB diagnosis, care and control

Chair: Wim Vandevelde (South Africa)

Private sector notifications increase by 123 percent within a year with civil society support and administrative initiatives in Jharkhand, India
S K Nayak, S Chadha, R K Beck, R Dayal, R R Pathak, S Mohanty, B M Prasad, O Prakash (India)

Communicating linkages between lung health issues and sustainable development is integral to Agenda 2030
R K Dwivedi, S Shukla, B Ramakant (India)

Community health volunteers’ contribution in improving TB case notification rate through household contact investigation: Amref Global Fund TB project in Kenya
S K Nyako, B Ulo, M Mangui, T Kipta, M Mangui, J Oyoonyo, A Rono (Kenya)

Bridging the gap between the community and health services: taking the services to the doorsteps of the community
S Pandurangan, S Mohanty, S Chadha (India)

The Barcelona Tuberculosis Photovoice Project: understanding the lived experience of TB through photography
G Armstrong, M Montes, N Forcada, E Delgado, M Ros, J Evonu, J P Millet (Spain)

Carrot and stick approach in engaging pharmacists in TB care and control: experiences from PRATAM Project, India
V Panibatla (India)

Innovando la atención de las enfermedades respiratorias en el primer nivel de atención: un modelo con enfoque preventivo
R Camargo Ángeles, M A García Álvarez, A Reyes Herrera, M Castellanos Joya, Programa Nacional de Enfermedades Respiratorias (Mexico)

Application of the ENGAGE-TB approach in Côte d’Ivoire
L T Yapi Irie, E S Kambou, S Salier, C Zé, M Coulibaly Offia (Côte D’Ivoire, India)

Model of civil society engagement to improve TB-HIV collaboration at TB clinic
Y Gunawan, S Aditya, I Hermiyanti, H Diamto, N Sulaiman, E Hastuti, T Nisa (Indonesia)
### 53. Nursing care to improve patient care

**Chair:** Lisa True *(United States of America)*

<table>
<thead>
<tr>
<th>Poster Number</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-969-14</td>
<td>Comprehensive nursing care for people affected by drug-resistant tuberculosis receiving bedaquiline treatment in Peru</td>
<td>L Cruzado, S Perea, E Osso, M Rich, J Seung, C Contreras, L Lecca <em>(Peru, United States of America)</em></td>
</tr>
<tr>
<td>PD-970-14</td>
<td>Effect of family centred extended nursing on psychology in multidrug resistant tuberculosis patients</td>
<td>X M Zhou, C X Deng, X T Zhang, Y J Dai <em>(China)</em></td>
</tr>
<tr>
<td>PD-971-14</td>
<td>Patient-centred counseling and impact on TB awareness among TB-inpatients at Xinhjiang Chest Hospital, China</td>
<td>X Yi, Y Yang, Y Deng, H An, Q Chen, W Chen, Z Xu, G Meng <em>(China)</em></td>
</tr>
<tr>
<td>PD-972-14</td>
<td>Impact of stigma on quality of life in MDR-TB patients</td>
<td>E Khasanova <em>(Russian Federation)</em></td>
</tr>
<tr>
<td>PD-973-14</td>
<td>Patient support groups as a means of improving quality and retention in DR-TB care</td>
<td>V Ibeziako, R Oke, K Durowade, A Agbaje, E Iwu, M Omozuafon, P Dakum <em>(Nigeria)</em></td>
</tr>
<tr>
<td>PD-974-14</td>
<td>Patient-centred ‘single-window services’ model of care for TB-HIV: a case study from India</td>
<td>R Deshmukh, K S Sachdeva, R Ramachandran, S Nicole, A Shah, R Munje <em>(India)</em></td>
</tr>
<tr>
<td>PD-975-14</td>
<td>The Aasha Kiosks, an innovative model for increasing access to TB information and service: experience from India</td>
<td>S S Nayak, G Mallick, S Mohanty, S Pandurangan, P Sharma, P Agarwal <em>(India)</em></td>
</tr>
<tr>
<td>PD-976-14</td>
<td>Patient delays in TB care seeking in a complex emergency situation: the experience of Somalia</td>
<td>S Murithi, V Rucagura, W Mukhwa <em>(Kenya)</em></td>
</tr>
<tr>
<td>PD-977-14</td>
<td>Gridlock from diagnosis to treatment of multidrug-resistant tuberculosis in Tanzania: patient perspectives from focus group discussions</td>
<td>S Mpagama, A Chongolo, J Lyimo, R Kisonga, S Heysell, M Ezekiel <em>(Tanzania, United Rep., United States of America)</em></td>
</tr>
<tr>
<td>PD-978-14</td>
<td>Pathways to anti-tuberculosis treatment initiation among cases on directly observed treatment short course in districts of Southwestern Ethiopia: a cross-sectional study</td>
<td>A Asnes, D Jerene, W Desessa <em>(Ethiopia)</em></td>
</tr>
<tr>
<td>PD-979-14</td>
<td>Informal timing and patient-friendly flexi-DOT effective in increasing treatment adherence of tuberculosis patients and generating awareness in among communities in five urban centres in Chhattisgarh</td>
<td>G Mallick, M Deshpande, S Mohanty, S Chatha <em>(India)</em></td>
</tr>
</tbody>
</table>

### 54. Vulnerable populations: homeless to migrants

**Chair:** E Jane Carter *(United States of America)*

<table>
<thead>
<tr>
<th>Poster Number</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD-980-14</td>
<td>Role of trained community volunteers in TB active case finding among key affected populations in eight states of India</td>
<td>S Mukhopadhyay, B Samuel, M Jose, B Bish, S Cornellius, A Victor, D Cherian, G Karapetyan, D Livingstone <em>(India, United States of America)</em></td>
</tr>
<tr>
<td>PD-981-14</td>
<td>TB diagnosis and treatment in homeless populations in Brazil</td>
<td>M Rocha, R Pinheiro, D Pelissari, P Batholomay, D Khuleis, K Andrade, D Arakaki-Sanchez <em>(Brazil)</em></td>
</tr>
<tr>
<td>PD-983-14</td>
<td>Búsqueda de casos de tuberculosis en personas privadas de la libertad en México</td>
<td>A Saldaña, M Castellanos <em>(Mexico)</em></td>
</tr>
<tr>
<td>PD-984-14</td>
<td>Expanding TB diagnosis and community-based tuberculosis management: addressing vulnerable ethnic populations and tea garden workers in Bangladesh</td>
<td>M S Farid, Z Siddique, P Daru, M Jacob, V Begum <em>(Bangladesh)</em></td>
</tr>
<tr>
<td>PD-985-14</td>
<td>Contribution of active contact screening to TB case detection in Urban DOTS supported provinces in Afghanistan</td>
<td>A Hamim, S M Sayed, G Q Oader, M Melese, L Manzoor, N Ahmadzada, M K Rashidi, P G Suares <em>(Afghanistan, United States of America)</em></td>
</tr>
<tr>
<td>PD-986-14</td>
<td>Targeting active case finding towards vulnerable populations to improve tuberculosis case notification in Northern Uganda</td>
<td>M Muhire, E Karamagi, H Kisamba, F Mugabe, M Rahimzai <em>(Uganda, United States of America)</em></td>
</tr>
<tr>
<td>PD-987-14</td>
<td>Increasing TB disease awareness, diagnostic and linkage to care into harm reduction programme in Georgia</td>
<td>M Gogia, G Tamar, K Stvilia <em>(Georgia)</em></td>
</tr>
<tr>
<td>PD-988-14</td>
<td>Evidence-based community engagement to accelerate TB case finding among migrant communities: Thailand's experiences</td>
<td>N W Phyo <em>(Thailand)</em></td>
</tr>
<tr>
<td>PD-989-14</td>
<td>M. tuberculosis causante de enfermedad activa en pueblos indígenas de Colombia, 2009—2016</td>
<td>D Puerto, L Erazo, C Llerena Polo, A Zabaleta, G Puerto Castro <em>(Colombia)</em></td>
</tr>
</tbody>
</table>
55. Expert use of Xpert: developing the evidence base

**Chair:** Alaine Umubyeyi Nyaruhirira (South Africa)

**PD-990-14** Role of Xpert® MTB/RIF assay for diagnosis of bacteriologically confirmed TB cases: National TB Prevalence Survey 2015-2016, Bangladesh  
V Begum, S Rahman, I Law, M Rahman, M A Hannan, S M M Kamal, R Haq (Bangladesh, Switzerland)

**PD-991-14** Category-wide burden of DR-TB diagnosed through Xpert® MTB/RIF: experience from Bangladesh  
S Hossain, A Tafsina, P Motak, H Hussain, P Daru, M Melese, C Welch, V Begum (Bangladesh, United States of America)

**PD-993-14** Diagnostic value of Xpert® MTB/RIF in urinary tuberculosis in an HIV-negative population  
Y Chen, G-R Wang, X-H Liu, L Fu, G-X Chen, X Liang, Y-H Liu, Y Zhang (China)

**PD-994-14** Performance of GeneXpert® MTB/RIF in the detection of TB-TB/RR in Kinshasa, DRC  
S Hossain, A Tafsina, P Modak, H Hussain, P Daru, M Melese, C Welch, V Begum (Bangladesh, United States of America)

**PD-995-14** Trend analysis of Xpert EDA results for facilities enrolled in the CDC-supported EDA programme in Zambia  
L Mulenga, T Machawi (Zambia)

**PD-996-14** Xpert® MTB/RIF assay testing in the diagnosis of patients with tuberculosis; experience under programmatic conditions in Tanzania  
E Ngadyae, G Kimaro, E S Sandi, H Kimambo, R Shemtandulo, J L Lema, B M Malewo, G Mfinanga (Tanzania, United Rep.)

**PD-997-14** The epidemiological impact of universal access to quality tuberculosis care: a simulation study  
P Kasaei, H Sohn, E A Kendall, G B Gomez, A Vassall, M Pai, D W Dowdy (United States of America, United Kingdom, Canada)

**PD-998-14** Sensitisation for clinicians followed by weekly service monitoring contributes to improved uptake of Xpert in Tigray Region, Ethiopia  
T Berhe, E Kelem, E Michael, M Abraha, N Thairnarot, A Gebremedhin, H Haregot, D Jerene (Ethiopia)

**PD-999-14** Accuracy of different Xpert® MTB/RIF implementation strategies in programmatic settings at regional referral hospitals in Uganda: evidence for country wide roll-out  
W Muttamba, W Ssengooba, B Kirenga, A Katamba, M Joloba (Uganda)

**PD-1000-14** Better reporting format of time indicators for improving patient-centred care: case studies from Nigeria and Viet Nam  
H Le, N V Nguyen, H B Nguyen, T V Duong, P N Tran (Viet Nam)

**PD-1001-14** ‘Cover your Cough’ pantomime had high media coverage  
Özkara, D Cakmak, S M Mutlu, A akıh Hakan, E Kabasakal (Turkey)

**PD-1002-14** Good habits start young: ‘Cover Your Cough’ -school intervention programme in Yangon, Myanmar  
K Myit Hane, S Htu Aung, S Thu Aung, S Dar, K Zarli Aye (Myanmar)

**PD-1003-14** Use of the FAST model to prevent transfer of anti-tuberculosis drug resistance in two hospitals in Russia  
A C Miller, V Livchits, F Ahmad Khan, S Atwood, Y Kononenko, S Kornienko, V Vasilyeva, S Keshavjee (United States of America, Russian Federation, Canada)

**PD-1004-14** M. tuberculosis transmission from a non-citizen migrant to Israeli citizens during nursing home outbreak  
Z Mor, N Nuss, M Savion, I Nissani, M Lidi, S Maneshcu, R Sheffer (Israel)

**PD-1005-14** Car screens for TB protection: smoke screens or infective barriers?  
E van Brakel, M Mitchell, M Hughes, J Ellis, L van der Merwe, A H Diaco (South Africa)

**PD-1006-14** Household contact screening of newly diagnosed sputum smear-positive tuberculosis patients at Kabula Dispensary, Bungoma County  
M Magomere, S Lodi (Kenya)

**PD-1007-14** Outcomes of tuberculosis infection control measures in public health facilities in Afghanistan: a document review  
G G Qader, D A Safi, M R Rashidi, N Ahmadzada, H Akhgar, S M Sayedi, A B Maseed, N A Zahid (Afghanistan)

**PD-1008-14** Firefighting in MDR-TB control: assessment of infection control status of households in Southern Ethiopia  
D Assefa, S Tsegaye, K Delele, E Klinkenberg, M Meis, T Grim, F Ahera (Ethiopia, Netherlands)
# 57. MICs, MAC, and immunity

**Chair: Tom Boyles** *(South Africa)*

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PD-1009-14</strong> Towards a TB biomarkers database: a systematic review of biomarkers for active tuberculosis diagnosis</td>
<td>E MacLean, T Broger, S Yerlikaya, M Pai <em>(Canada, Switzerland)</em></td>
</tr>
<tr>
<td><strong>PD-1010-14</strong> Gestión en vigilancia a la resistencia de medicamentos antituberculosos en 8 ciudades de Colombia, 2014 – 2016</td>
<td>C Llerena Polo, J I Victoria Escarría, A Valbuena Arias <em>(Colombia)</em></td>
</tr>
<tr>
<td><strong>PD-1011-14</strong> Serum biomarkers in children and adolescents: a tool for differential diagnosis of latent and active TB?</td>
<td>C Schmidt, K Lovero, F Carvalho, A P Quintanilha, A C Barros, C Sant Anna, I Riley, C Araújo <em>(Brazil, United States of America)</em></td>
</tr>
<tr>
<td><strong>PD-1012-14</strong> Evaluation of TrueLab for rapid, simple and cost effective detection of M. tuberculosis in EPTB specimens</td>
<td>C Nikam, C Rodrigues <em>(India)</em></td>
</tr>
<tr>
<td><strong>PD-1014-14</strong> Minimum inhibitory concentrations of TB drugs</td>
<td>M Barnard <em>(South Africa)</em></td>
</tr>
<tr>
<td><strong>PD-1015-14</strong> Qualitative characteristics of drug susceptibility of Mycobacterium avium-intracellulare complex (MAIC)</td>
<td>M Makarova, NTM Study Group <em>(Russian Federation)</em></td>
</tr>
<tr>
<td><strong>PD-1016-14</strong> Resistance patterns of Rifampicin resistant strains of <em>M. tuberculosis</em> isolated in Tajikistan</td>
<td>M Joncevska, A Radzabov, O Kabirov, Z Maksumova, G Kasymova <em>(Tajikistan)</em></td>
</tr>
<tr>
<td><strong>PD-1017-14</strong> The reliability of PZA and other drug susceptibility testing against MTB in Japan</td>
<td>A Takaki, H Yamada, A Aono, K Chikamatsu, Y Igarashi, Y Murase, K Sakashita, S Mitarai <em>(Japan)</em></td>
</tr>
</tbody>
</table>
ENCUENTRO
SATURDAY 14 OCTOBER
Patient-centred care is becoming an oft-discussed term. Is it merely a term? Or does it hold relevance for a patient? Is it being practiced? What does it entail for a patient to receive care centred around him/her?

The dichotomy in making patient-centred care a reality is the increasing dependence on technology for diagnosis and treatment. Technology affords opportunity for greater accuracy in diagnosis; it also however distances the patient from the doctor. Gradually the patient becomes a mere disease, an organ and an object of specialisation.

The reality of patient-centred care is far removed from this situation. A patient is far more than being an organ or a disease. S/he is in fact, often a complex, unique combination of factors that need customised care. TB+Diabetes+Hypertension - how is this handled? If the doctor depends on technology alone, patient-centred care is severely compromised.

Thus it is important for partnerships to be created between patients and their doctors in order to ensure customised treatment for each patient. It requires that the doctor has complete information of all conditions that the patient is being treated for and works along with the patient equipping him/her with treatment literacy for each disease, its complications and side-effects and how to manage them.

It is imperative for doctors to draw patients into conversations vital to their (patient) well-being. It is important to adopt a ‘family physician’ approach which also has integrated technology into the process. It is important that each patient is an advocate for him/herself. And that doctors LISTEN to voices and not just stethoscopes.

The session is intended for a fish-bowl format in order to enable a vibrant and inclusive discussion.

**ENCUENTRO: NETWORKING ACTIVITY 08.15 - 08.45 ENCUENTRO SESSION ROOM**

**Patient-centred care – What does it mean? Should patients be mere recipients? How can it be made a reality?**

Coordinator: Bharathi Ghanashyam (India)  Coordinator: Archana Trivedi (India)
Speaker: Bharathi Ghanashyam (India)  Archana Trivedi (India)

**ENCUENTRO: PANEL DISCUSSION 09.00 - 10.00 ENCUENTRO SESSION ROOM**

**Plenary Broadcast**

Live transmission from the plenary hall into the Encuentro session room

**ENCUENTRO: ART DISPLAY 10.00 - 10.20 FORO EXPO GUADALAJARA**

**Meet the Artist: Campaña Hazla de Tos por aire limpio**

Es una presentación del material gráfico para sensibilizar y provocar que la sociedad exija su derecho a un aire limpio. La campaña “Hazla de Tos” se llevó acabo del año 2012 al 2015 por la BICIRED (www.bicired.org) logrando la actualización de las normas de medición del aire, para estén más cercanas a lo recomendado por la Organización Mundial de la Salud (OMS).

La BICIRED es una red nacional, plural, horizontal y sin fines de lucro, de organizaciones y colectivos ciudadanos locales y nacionales que trabajan en beneficio de la movilidad en bicicleta en las vialidades urbanas del país.

Chair: Yeriel Salcedo Torres (Mexico)

**ENCUENTRO: TESTIMONIALS 10.15 - 11.15 ENCUENTRO SESSION ROOM**

**Salud en Fibrosis Quística**

Queremos dar a conocer que somos una Asociación que se formó hace más de 18 años por iniciativa de Jesús Rafael Martínez Marroquín paciente con Fibrosis Quística quien invitó a un grupo de padres de familia con hijos que padecían esta enfermedad, de esta manera se formó la ASOCIACION REGIOMONTANA DE FIBROSIS QUISTICA, A.C. para así dar apoyo a estos pacientes y sus familias por medio de consultas médicas, estudios de laboratorio, medicamentos y lo que soliciten los médicos especialistas que los atienden.

También queremos hacer de su conocimiento que se formó la ALIANZA PARA TRATAMIENTO DE LA FIBROSIS QUISTICA EN LA REPUBLICA MEXICANA,A.C., con la cual nos ayudaríamos a tener mayor cobertura para conseguir nuevos antibióticos para los pacientes con Fibrosis Quística.

Esta ALIANZA está integrada por la Asociación de Guadalajara, Jalisco; León , Guanajuato; Morelos, y Nuevo León.

Coordinator: Silvia Cristina Marroquín Benavides (Mexico)
Speaker: Silvia Cristina Marroquín Benavides (Mexico)
Las vacunas son el medio más común para inmunizar a una persona contra una infección. Las vacunas han logrado erradicar exitosamente enfermedades en ciertas áreas. Las vacunas funcionan administrando a una persona una sustancia que contiene partes muy pequeñas o una forma debilitada de un agente infeccioso, como un virus o bacteria. Suele hacerse a través de una inyección. Quienes padecen una enfermedad pulmonar, corren un mayor riesgo de desarrollar infecciones en las vías respiratorias y es importante que se protejan en el mayor grado posible, recibiendo las vacunas que les recomiende su profesional sanitario.

Los temas que vamos a tratar en esta sesión son:
- Epidemiología de las infecciones respiratorias altas y bajas
- Influenza AH1N1 en 2009 en el OPD HCG
- Inmunoprevención neumocócica y para influenza
- Neumonia neumocócica

Coordinator: María del Rayo Morfín Otero (Mexico) Chair: Marina de Jesús Kasten Monges (Mexico)
Speaker: Angel Israel Nuño Bonales (Mexico), Esteban González Díaz (Mexico), Marina de Jesús Kasten Monges (Mexico)

Los besos más dulces saben a sal

Somos una organización que se fundó desde el año 2001, nuestra causa son los pacientes con fibrosis quística para su mejoramiento de calidad de vida y ayudar a encontrar la cura. El tema de los besos más dulces saben a sal, hace alegoría a una condición física de estos pacientes.

En este panel queremos dar a conocer ¿Qué es la fibrosis quística?, ¿Cómo se trata en México? y ¿Qué esperanza hay para los pacientes?

Coordinator: Ludivina Calderón (Mexico)
Speaker: Héctor Hernán Ruiz (Mexico), Ludivina Calderón (Mexico), Vanesa Moran (Mexico), Mario Cervantes (Mexico)

Meet the Artist: TB + cartel + prevention = Mexico free of tuberculosis, Semblance of the transformation of the cartel in Mexico

For a long time, the poster was one of the most popular tools for communication. The poster in Mexico has helped the fight against TB and it has helped some communities to learn about the symptoms of TB, to identify the places to go for a treatment, to look for new cases and to save lives.
Since the 90s, poster competitions have been held in schools and communities have run their own contests in alliances with mayors, the municipalities and health practitioners. The winners of these competitions are awarded with goods for their households.
The collection is composed by 50 lithographs posters of 90 * 60 on recycled materials, crafts and photographs. We are bringing a sample of this great national collection to raise awareness and accelerating toward elimination.

Coordinator: Martha Angelica García Aviles (Mexico) Coordinator: Maria Alejandra Chaparro Anzuaces (Mexico)

MEET THE EXPERT SESSION 12.45 – 13.45 ENCUENTRO SESSION ROOM

Encuentro Meet the expert session

Experts on treatment of consumption and damage associated with tobacco use, the role of non-governmental organisations
This session will explore the international scope of the damage associated with tobacco use, sharing the experience of 34 years in non-governmental organisations. Looking at the different profiles of health personnel, as well as the challenges, areas of opportunity and challenges in development.

Coordinator: Maria Elma Correa Acevedo (Mexico) Chair: Maria Angelica Ocampo Ocampo (Mexico)
Speakers: Maria Angelica Ocampo Ocampo (Mexico), Maria Elma Correa Acevedo (Mexico), Catalina Casillas Suarez (Mexico)
There is little known about the intersection of TB and reproductive health. Please join us for an interactive jeopardy game that focuses on learning more about this little known subject. In order to decrease morbidity and mortality of mothers and their children from TB we need to learn and advocate for changes in our health system and approaches. This game will help inform individuals of key facts so they can become advocates. Hosts will lead teams to answer quiz questions. Everyone will get a chance to learn and receive a prize!

**Coordinators:** Alice Christensen (Tanzania, United Rep.) Silvia Kelbert (Tanzania, United Rep.) **Chair:** Jyoti Mathad (United States of America)

---

**ENCUENTRO: SYMPOSIUM 14.00 – 15.30 ENCUENTRO SESSION ROOM**

**Women, Tobacco and Cancer in Mexico**

There is an increasing incidence of women who begin to smoke at very early age in Mexico and in Latin America. There is enough scientific evidence showing that the growth of health determinants, such as alcohol and tobacco use, obesity and sedentary lifestyle have been detrimental to women’s health. Among these, tobacco is a particular worry: for the last twenty years, smoking has been steadily increasing among girls and adolescents in Mexico.

Smoking is associated to many chronic diseases, among them cancer. As tobacco consumption increases its attributable mortality and morbidity also increases in both men and women. Lung cancer, a malignant tumor closely linked to tobacco smoking, has increased in women; not only is active smoking a well-established cause of lung cancer in women, but there are many studies which document that exposure to environmental tobacco smoke increases the risk of lung cancer in nonsmoking women.

In addition, women who smoke have markedly increased risk of cancers of the mouth and pharynx, esophagus, larynx, bladder, pancreas and kidney. Risk of cervical cancer, independently of human papilloma virus infection, has been show to increase in smokers. There are also data suggesting increased risks of acute myeloid leukemia and breast cancer.

Therefore there is an urgent need to prevent initiation of smoking in young girls and quitting in adult smokers. Women who quit smoking experience marked reductions in disease and cancer risks.

**Coordinators:** Guadalupe Ponciano-Rodriguez (Mexico) Francisco Ochoa Carrillo (Mexico) **Chair:** Mayra Galindo (Mexico)

**Speakers:** Guadalupe Ponciano-Rodriguez (Mexico), Francisco Ochoa Carrillo (Mexico), Erick Ochoa (Mexico)

---

**ENCUENTRO: PANEL DISCUSSION 15.30 – 16.00 FORO EXPO GUADALAJARA**

**Batangas provincial multi-sectoral alliance building synergies to end TB battle in Batangas province (Philippines)**

**Intervention or Response:** With USAID/Philippines technical assistance, the Province of Batangas with a population of 2,710,816 located in Southern Philippines, organised a multi-sectoral alliance to help in monitoring and the implementation of a TB programme. The initiative consisted of engaging institution and advocacy programmes to support the control of TB; providing guidance on the cause, transmission, control, prevention and cure; formulating a strategic plan for the organisational structure of the Provincial Multisectoral Alliance (PMSA).

**Results and Lesson Learned:** The creation of the Provincial Multisectoral Alliance helped increase the number of local government units with policies in support of TB Programme from 18 percent (6/34) in 2012 to 74 percent (25/34) in 2016, the number of certified and accredited DOTS facilities from 9 percent (3/34) in 2013 to 94 percent (32/34) in 2016 and referrals from private and public partners from 14 percent (965/6,831) in 2013 to 55 percent (4231/7,637) in 2016. From 2013 after a year PMSA was created, the province case detection rate consistently surpassed the National Target of 90 percent. The Department of Education, a PMSA member tested 500 school children for TB and helped enroll 30 found positive for the disease and 35 school teachers were enrolled for treatment. The Municipal and Provincial Jail has arranged with DOTS facilities for the diagnosis of 30 percent (46/1500).

**Coordinators:** Rosalie Masangkay (Philippines) Rosvilinda Ozaeta (Philippines) **Speaker:** Rosalie Masangkay (Philippines)
The first international conference on tuberculosis was held in 1867, well before the cause of TB was discovered by Prof Robert Koch in 1882. The Union traces its origins to these gatherings of experts from around the world who were determined to collaborate and find a common solution to “the White Plague” – tuberculosis. The International Union Against Tuberculosis was formed by 31 national lung associations at the first meeting after World War I, held in Paris in 1920. This is known as the Constitutional Conference.
SUBGROUP 1

Stacie C Stender, Chair
C N Paramasivan, TB Section Chair
Stella Van Beers, Bacteriology and Immunology Sub-Section Chair
Carrie Tudor, NAPs Sub-Section Chair
Adrian Muwonge, Zoonotic TB Sub-Section Chair
Jean-William Fitting, Adult and Child Lung Health Section Chair
Jeroen Van Gorkom, HIV Section Chair
Kamran Siddiqi, Tobacco Control Section Chair
Riitta Diolo, Director, Department of TB and HIV
Gan Guan, Director, Department of Tobacco Control
Ajay Kumar, Director, Department of Research
Paula I Fujiwara, Scientific Director

SUBGROUP 2

Stacie C Stender, Chair
Wendy Wobeser, TB Section Programme Secretary
Alaine Nyaruhirira Umubyeyi, Bacteriology and Immunology Sub-Section Programme Secretary
Linette McElroy Hawkes, Nurses and Allied Professionals Sub-Section Programme Secretary
Alejandro Perera-Ortiz, Zoonotic TB Sub-Section Programme Secretary
James Seddon, Adult and Child Lung Health Section Programme Secretary
Keren Middelkoop, HIV Section Programme Secretary
Omara Dogar, Tobacco Control Section Programme Secretary
Mercy Annapoorni, Civil Society Representative
Riitta Diolo, Institute Representative
Paula I Fujiwara, Scientific Director
Nomampondo Barnabas, Civil Society Liaison Officer

COORDINATING COMMITTEE OF SCIENTIFIC ACTIVITIES

TUBERCULOSIS SECTION

Chair:
CN Paramasivan
(Switzerland)

Vice Chair:
Paul Nunn (United Kingdom)

Programme Secretary:
Wendy Wobeser (Canada)

Secretary:
Anete Trajman (Brazil)

Working Groups

TB control in prisons:
Masoud Dara (Denmark)

TB and migration:
Gilles Cesari (Switzerland)

Poonam Dhavan (Philippines)

TB Infection Control:
Nil Hanson Nortey (Ghana)

Ejio Iwuoha (Nigeria)

Dylan Tierney (USA)

Global Indigenous

Stop TB Initiative:
Anne Fanning (Canada)

TB and Mental Health:
Annka Sweetland (USA)

Adam Karpati (USA)

Drug-resistant TB:
C. Robert Horsburgh, Jr. (USA),

Arnaud Tribucq (France),

Chen-Yuan Chiang (Taiwan)

TB and ethics:
Justin Denholm (Australia)

Ian Harper (UK)

Diego Silva (Canada)

TUBERCULOSIS SUB-SECTIONS

BACTERIOLOGY AND IMMUNOLOGY

Chair:
Stella van Beers (Netherlands)

Programme Secretary:
Alaine Nyaruhirira (South Africa)

ZOONOTIC TB

Chair:
Adrian Muwonge (Uganda)

Programme Secretary:
Alejandro Perera Ortiz (Mexico)

NURSES AND ALLIED PROFESSIONALS (NAPs)

Chair:
Carrie Tudor (USA)

Programme Secretary:
Linette McElroy (Canada)

ADULT AND CHILD LUNG HEALTH SECTION

Chair:
Jean-William Fitting (Switzerland)

Vice Chair:
Andrew Steenhoff (USA)

Programme Secretary:
James Seddon (USA)

Secretary:
Lisa Cranmer (UK)

Working Groups

Asthma management in low- and middle income countries:

Jean-William Fitting (Switzerland)

Karen Bissell (New Zealand)

Maternal-child TB:
Surbhi Modi (USA)

Adrie Bekker (South Africa)

Lisa Cranmer (USA)

Air pollution and lung health:

Neil Schluger (USA)

Thomas Matte (USA)

HIV SECTION

Chair:
Jeroen Van Gorkom (Netherlands)

Vice Chair:
Amy Bloom (USA)

Programme Secretary:
Keren Middelkoop (South Africa)

Secretary:
Katharina Kranzer (UK)

TOBACCO CONTROL SECTION

Chair:
Kamran Siddiqi (UK)

Vice Chair:
Mira Aghi (India)

Programme Secretary:
Omara Dogar (Uganda)

Secretary:
Sarwat Shah (UK)

Working Groups

Countering Tobacco Industry interference in public health policies:

Anne Jones (Australia)

Matthew Allen (New Zealand)

Getting research into tobacco control policy at regional and country level:

Md. Akramul Islam (Bangladesh)

TB, HIV and Tobacco:

Thomas E. Novotny (USA)

Kamran Siddiqi (UK)

MPOWER research:

Sonu Goel (India)

Kamran Siddiqi (UK)

Mira Aghi (India)

Pranay Lal (India)

UNION COMMUNITY ADVISORY PANEL (UCAP)

Wim Vandevelde, Peter Ng’ola, Kazeiva Indira Askarbekovny, Mercy Annapoorni, Stacie Atender, Carol Nawina Nyrienda, Nomampondo Barnabas, Blessina Kumar, Ingrid Schoeman, Mohamed Awad Tag Eldin, Chaudhary Nawaz, Austin Obiefuna

SCIENTIFIC SECTIONS, SUB-SECTIONS AND WORKING GROUPS

Creating Global Awareness of Zoonotic TB:

Francisco Olea-Popelka (USA),

Alejandro Perera (Mexico),

Adrian Muwonge (Uganda)

Countering Tobacco Industry interference in public health policies:

Anne Jones (Australia)

Getting research into tobacco control policy at regional and country level:

Md. Akramul Islam (Bangladesh)

TB, HIV and Tobacco:

Thomas E. Novotny (USA)

Kamran Siddiqi (UK)

MPOWER research:

Sonu Goel (India)

Kamran Siddiqi (UK)

Mira Aghi (India)

Pranay Lal (India)
The Union World Conference on Lung Health is grateful to the many supporters, sponsors and partners that have helped to deliver the conference for our delegates, participants and members.

Special thanks goes to those supporters that provided the critical funding for simultaneous interpretation this year: Janssen Pharmaceutica, STOP TB, Vital Strategies and the World Health Organization.

Deep thanks also goes to those that provided funding to support local and international scholarships: Boehringer Ingelheim, US Centers for Disease Control and Prevention, JATA, Secretary of Health of Mexico, Silanes, the World Health Organization.

Finally we thank those that expand our outreach through providing space in their prestigious publications: American Thoracic Society, European Respiratory Society, Karger, The Lancet and the Latin American Society of the Thorax.

We look forward to continuing our mutually beneficial collaboration with them.

SPONSORS

BD  Cepheid  Johnson & Johnson  Sanofi  Qiagen  Silanes

SUPPORTERS

AMI Estudiantil  National Geographic  Secretaria de Salud Federal  Secretaria de Salud Jalisco  Oficina de Convenciones y Visitantes de Guadalajara  Universidad de Guadalajara — Centro Universitario de Ciencias de la Salud

Hospitales Civiles de Guadalajara  ALAT  Sociedad Mexicana de Neurología y Cirugía de Tórax AC  Discovery Learning Alliance  Bicinema  Universidad de Guadalajara

TECH INNOVATION ZONE

Lifebox  qure.ai  Shoebox Audiology  sureAdhere  Unima
The Union would like to express its gratitude and thanks to all reviewers for their contribution in reviewing the abstracts submitted for presentations at the conference.

<table>
<thead>
<tr>
<th>Achuthan Nair S (India)</th>
<th>Dheda K (South Africa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ackers M (Viet Nam)</td>
<td>Dholakia Y (India)</td>
</tr>
<tr>
<td>Ade S (Benin)</td>
<td>Dhoria S (India)</td>
</tr>
<tr>
<td>Aghi M (India)</td>
<td>Diacon A (South Africa)</td>
</tr>
<tr>
<td>Ahmad Khan F (Canada)</td>
<td>Diamini S (South Africa)</td>
</tr>
<tr>
<td>Ahmedov S (United States)</td>
<td>Dobler C (Australia)</td>
</tr>
<tr>
<td>Ahuja S (United States)</td>
<td>Dogar O (United Kingdom)</td>
</tr>
<tr>
<td>Ait-Khaled N (Algeria)</td>
<td>Dooley K (United States)</td>
</tr>
<tr>
<td>Albert N (Germany)</td>
<td>Dore S (Italy)</td>
</tr>
<tr>
<td>Alexander H (United States)</td>
<td>Dowdy D (United States)</td>
</tr>
<tr>
<td>Alffenaar J-W (Netherlands)</td>
<td>Drain P (United States)</td>
</tr>
<tr>
<td>Amaechi C (Nigeria)</td>
<td>du Cros P (United Kingdom)</td>
</tr>
<tr>
<td>Ame-Adjei J (Ghana)</td>
<td>Duarte R (Portugal)</td>
</tr>
<tr>
<td>Amos A (United Kingdom)</td>
<td>Dubaniewicz A (Poland)</td>
</tr>
<tr>
<td>Anderson C (United Kingdom)</td>
<td>El Sahly H (United States)</td>
</tr>
<tr>
<td>Anderson L (Switzerland)</td>
<td>Emerson C (United States)</td>
</tr>
<tr>
<td>Andre E (Belgium)</td>
<td>Enane L (United States)</td>
</tr>
<tr>
<td>Andreu N (United Kingdom)</td>
<td>Evans J (South Africa)</td>
</tr>
<tr>
<td>Andrews J (United States)</td>
<td>Evans T (United States)</td>
</tr>
<tr>
<td>Angra P (United States)</td>
<td>Fair E (United States)</td>
</tr>
<tr>
<td>Anisimova V (Netherlands)</td>
<td>Falentin-Valencia R (Mexico)</td>
</tr>
<tr>
<td>Annapoorni Thiruthuvadoss M (India)</td>
<td>Falzon D (France)</td>
</tr>
<tr>
<td>Apriliawati L (Indonesia)</td>
<td>Fennier L (Switzerland)</td>
</tr>
<tr>
<td>Arcencio R (Brazil)</td>
<td>Ferrand R (Zimbabwe)</td>
</tr>
<tr>
<td>Aridzoni E (Belgium)</td>
<td>Fiekert K (Netherlands)</td>
</tr>
<tr>
<td>Armitige L (United States)</td>
<td>Field S (Canada)</td>
</tr>
<tr>
<td>Arora J (India)</td>
<td>Fielding K (United Kingdom)</td>
</tr>
<tr>
<td>Aslam F (Pakistan)</td>
<td>Finlay A (United States)</td>
</tr>
<tr>
<td>Atre S (India)</td>
<td>Firth J (United States)</td>
</tr>
<tr>
<td>Auer C (Switzerland)</td>
<td>Fisher D (Canada)</td>
</tr>
<tr>
<td>Aull S (United States)</td>
<td>Fisher-Hoch S (United States)</td>
</tr>
<tr>
<td>Bak H (Mali)</td>
<td>Fitting J-W (Switzerland)</td>
</tr>
<tr>
<td>Baker B (United States)</td>
<td>Fluegge K (United States)</td>
</tr>
<tr>
<td>Balcells ME (Chile)</td>
<td>Fox G (Australia)</td>
</tr>
<tr>
<td>Balcha T (Ethiopia)</td>
<td>Franke M (United States)</td>
</tr>
<tr>
<td>Bam TS (Singapore)</td>
<td>Friedland G (United States)</td>
</tr>
<tr>
<td>Bamrah Morris S (United States)</td>
<td>Friedman L (United States)</td>
</tr>
<tr>
<td>Bao J (United States)</td>
<td>Frigati L (South Africa)</td>
</tr>
<tr>
<td>Beanland R (France)</td>
<td>Fujiiwara P (United States)</td>
</tr>
<tr>
<td>Bekker A (South Africa)</td>
<td>Furin J (United States)</td>
</tr>
<tr>
<td>Berezhnova I (United Arab Emirates)</td>
<td>Gadowksi LB (United States)</td>
</tr>
<tr>
<td>Bhatt K (United States)</td>
<td>Gagnidze L (Thailand)</td>
</tr>
<tr>
<td>Bhavaraju R (United States)</td>
<td>Gao Q (China)</td>
</tr>
<tr>
<td>Bloom A (United States)</td>
<td>Garcia-Marcos L (Spain)</td>
</tr>
<tr>
<td>Blumberg HM (United States)</td>
<td>Garcia-Prats A (South Africa)</td>
</tr>
<tr>
<td>Boechat N (Brazil)</td>
<td>Garfein R (United States)</td>
</tr>
<tr>
<td>Bofta J (South Africa)</td>
<td>Garone DB (Zimbabwe)</td>
</tr>
<tr>
<td>Boillot F (France)</td>
<td>Geiter L (United States)</td>
</tr>
<tr>
<td>Bollag U (Switzerland)</td>
<td>Geldenhuyse H (South Africa)</td>
</tr>
<tr>
<td>bonnet m (Uganda)</td>
<td>Gemechu D (Ethiopia)</td>
</tr>
<tr>
<td>Boulahal F (Algeria)</td>
<td>Girardi E (Italy)</td>
</tr>
<tr>
<td>Boyles T (South Africa)</td>
<td>Goel S (India)</td>
</tr>
<tr>
<td>Brandt L (Namibia)</td>
<td>Goletti D (Italy)</td>
</tr>
<tr>
<td>Brassard P (Canada)</td>
<td>Goul J (United States)</td>
</tr>
<tr>
<td>Brunello MEF (Brazil)</td>
<td>Goulubkov A (United States)</td>
</tr>
<tr>
<td>Name</td>
<td>Country</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Gomez G</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Goswami N</td>
<td>United States</td>
</tr>
<tr>
<td>Graham S</td>
<td>Australia</td>
</tr>
<tr>
<td>Grant A</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Grant I</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Griffith D</td>
<td>United States</td>
</tr>
<tr>
<td>Gunneberg C</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Gunther G</td>
<td>Namibia</td>
</tr>
<tr>
<td>Gupta-Wright A</td>
<td>Malawi</td>
</tr>
<tr>
<td>Gutierrez-Pabello JA</td>
<td>Mexico</td>
</tr>
<tr>
<td>Haldar P</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Hamutcu Ersu R</td>
<td>Turkey</td>
</tr>
<tr>
<td>Hanif E</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Hanrahan C</td>
<td>United States</td>
</tr>
<tr>
<td>Haouichat H</td>
<td>Algeria</td>
</tr>
<tr>
<td>Harries A</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Hasan R</td>
<td>Pakistan</td>
</tr>
<tr>
<td>Heldal E</td>
<td>Norway</td>
</tr>
<tr>
<td>Hepple P</td>
<td>Denmark</td>
</tr>
<tr>
<td>Hermans S</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Hervert LP</td>
<td>Mexico</td>
</tr>
<tr>
<td>Hirsch-Moverman Y</td>
<td>United States</td>
</tr>
<tr>
<td>Ho C</td>
<td>United States</td>
</tr>
<tr>
<td>Holland D</td>
<td>United States</td>
</tr>
<tr>
<td>Holm LL</td>
<td>Denmark</td>
</tr>
<tr>
<td>Holohan M</td>
<td>United States</td>
</tr>
<tr>
<td>Horne D</td>
<td>United States</td>
</tr>
<tr>
<td>Horsburgh R</td>
<td>United States</td>
</tr>
<tr>
<td>Hossain S</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>Hosseinipour M</td>
<td>Malawi</td>
</tr>
<tr>
<td>Houben R</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Hovhannesyan A</td>
<td>Armenia</td>
</tr>
<tr>
<td>Howard A</td>
<td>United States</td>
</tr>
<tr>
<td>Husson R</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Ibraim E</td>
<td>Romania</td>
</tr>
<tr>
<td>Inghammar M</td>
<td>Sweden</td>
</tr>
<tr>
<td>Irani V</td>
<td>United States</td>
</tr>
<tr>
<td>Isaakidis P</td>
<td>India</td>
</tr>
<tr>
<td>Izzo A</td>
<td>United States</td>
</tr>
<tr>
<td>Jackson C</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Jackson-Morris A</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Jamieson F</td>
<td>Canada</td>
</tr>
<tr>
<td>Jarlier V</td>
<td>France</td>
</tr>
<tr>
<td>Jarvis D</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Jebeniani R</td>
<td>Tunisia</td>
</tr>
<tr>
<td>Jefferson C</td>
<td>United States</td>
</tr>
<tr>
<td>Jenkins H</td>
<td>United States</td>
</tr>
<tr>
<td>Jensen P</td>
<td>United States</td>
</tr>
<tr>
<td>Jerene D</td>
<td>Ethiopia</td>
</tr>
<tr>
<td>Jiao W-W</td>
<td>China</td>
</tr>
<tr>
<td>JOEL M</td>
<td>Nigeria</td>
</tr>
<tr>
<td>JOHNSTON J</td>
<td>Canada</td>
</tr>
<tr>
<td>Jones A</td>
<td>Australia</td>
</tr>
<tr>
<td>Jones S</td>
<td>United States</td>
</tr>
<tr>
<td>Joshi B</td>
<td>India</td>
</tr>
<tr>
<td>Jou R</td>
<td>Taiwan, Republic of China</td>
</tr>
<tr>
<td>Kabali C</td>
<td>Canada</td>
</tr>
<tr>
<td>Kabir Z</td>
<td>Ireland</td>
</tr>
<tr>
<td>Kaheny G</td>
<td>Zambia</td>
</tr>
<tr>
<td>Kaila IS</td>
<td>South Africa</td>
</tr>
<tr>
<td>Kambili C</td>
<td>United States</td>
</tr>
<tr>
<td>Karadag B</td>
<td>Turkey</td>
</tr>
<tr>
<td>Kato S</td>
<td>Japan</td>
</tr>
<tr>
<td>Kawatsu L</td>
<td>Japan</td>
</tr>
<tr>
<td>Kazembe P</td>
<td>Malawi</td>
</tr>
<tr>
<td>Kempker R</td>
<td>United States</td>
</tr>
<tr>
<td>Kendall B</td>
<td>United States</td>
</tr>
<tr>
<td>Khan A</td>
<td>United States</td>
</tr>
<tr>
<td>Khan P</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Kim H</td>
<td>Korea, Republic of</td>
</tr>
<tr>
<td>Kim SJ</td>
<td>Korea, Republic of</td>
</tr>
<tr>
<td>King M</td>
<td>Canada</td>
</tr>
<tr>
<td>Kirenga B</td>
<td>Uganda</td>
</tr>
<tr>
<td>Klinkevich E</td>
<td>Ethiopia</td>
</tr>
<tr>
<td>Ködmön C</td>
<td>Sweden</td>
</tr>
<tr>
<td>Kolbe J</td>
<td>New Zealand</td>
</tr>
<tr>
<td>Korobitsyn A</td>
<td>France</td>
</tr>
<tr>
<td>Koura KG</td>
<td>France</td>
</tr>
<tr>
<td>Kowada A</td>
<td>Japan</td>
</tr>
<tr>
<td>Kranzer K</td>
<td>Germany</td>
</tr>
<tr>
<td>Kuban C</td>
<td>Cameroon</td>
</tr>
<tr>
<td>Kumar A</td>
<td>India</td>
</tr>
<tr>
<td>Kumar B</td>
<td>India</td>
</tr>
<tr>
<td>Kumar P</td>
<td>United States</td>
</tr>
<tr>
<td>Kurbatova K</td>
<td>United States</td>
</tr>
<tr>
<td>Kwon Y-S</td>
<td>Korea, Republic of</td>
</tr>
<tr>
<td>Larouze B</td>
<td>Brazil</td>
</tr>
<tr>
<td>Latif E</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Lauzardo M</td>
<td>United States</td>
</tr>
<tr>
<td>Leiman I</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Lenaerts A</td>
<td>United States</td>
</tr>
<tr>
<td>Leonard M</td>
<td>United States</td>
</tr>
<tr>
<td>Lessells R</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Lewis J</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Li Q</td>
<td>China</td>
</tr>
<tr>
<td>Liliebaek T</td>
<td>Denmark</td>
</tr>
<tr>
<td>Lin H-H</td>
<td>Taiwan, Republic of China</td>
</tr>
<tr>
<td>Lindsay R</td>
<td>United States</td>
</tr>
<tr>
<td>Lipke V</td>
<td>United States</td>
</tr>
<tr>
<td>Lisboa Bastos M</td>
<td>Brazil</td>
</tr>
<tr>
<td>Lorent N</td>
<td>Belgium</td>
</tr>
<tr>
<td>Lounis N</td>
<td>Belgium</td>
</tr>
<tr>
<td>Lourenço C</td>
<td>Brazil</td>
</tr>
<tr>
<td>Loveday M</td>
<td>South Africa</td>
</tr>
<tr>
<td>Mabote L</td>
<td>South Africa</td>
</tr>
<tr>
<td>Macharia S</td>
<td>Kenya</td>
</tr>
<tr>
<td>Macias P</td>
<td>United States</td>
</tr>
<tr>
<td>MacPherson P</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Magee M</td>
<td>United States</td>
</tr>
<tr>
<td>Magis-Escarra C</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Magnabosco GT</td>
<td>Brazil</td>
</tr>
<tr>
<td>Makombe R</td>
<td>South Africa</td>
</tr>
<tr>
<td>Malaisamy M</td>
<td>India</td>
</tr>
<tr>
<td>Mandalakas A</td>
<td>United States</td>
</tr>
<tr>
<td>Mangan J</td>
<td>United States</td>
</tr>
<tr>
<td>Marcy O</td>
<td>France</td>
</tr>
<tr>
<td>Marks G</td>
<td>Australia</td>
</tr>
<tr>
<td>Marks S</td>
<td>United States</td>
</tr>
<tr>
<td>Martinson N</td>
<td>South Africa</td>
</tr>
<tr>
<td>Masjedi MR</td>
<td>Iran, Islamic Republic of</td>
</tr>
<tr>
<td>Mason L</td>
<td>United States</td>
</tr>
<tr>
<td>Mathad J</td>
<td>United States</td>
</tr>
<tr>
<td>Mathew T</td>
<td>United States</td>
</tr>
<tr>
<td>Mavhunga F</td>
<td>Namibia</td>
</tr>
<tr>
<td>McCarthy K</td>
<td>United States</td>
</tr>
<tr>
<td>Mdolo K</td>
<td>South Africa</td>
</tr>
<tr>
<td>Merle C</td>
<td>Switzerland</td>
</tr>
<tr>
<td>Mgode G</td>
<td>Tanzania, United Republic of</td>
</tr>
<tr>
<td>Middelkoop K</td>
<td>South Africa</td>
</tr>
<tr>
<td>Miglioni GB</td>
<td>Italy</td>
</tr>
<tr>
<td>Mihalea H</td>
<td>Thailand</td>
</tr>
<tr>
<td>Miotto P</td>
<td>Italy</td>
</tr>
<tr>
<td>Mira RR</td>
<td>Philippines</td>
</tr>
<tr>
<td>Mirzayev F</td>
<td>Switzerland</td>
</tr>
<tr>
<td>Mitarai S</td>
<td>Japan</td>
</tr>
<tr>
<td>Mitnick C</td>
<td>United States</td>
</tr>
<tr>
<td>Modi S</td>
<td>United States</td>
</tr>
<tr>
<td>Moganerdj K</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Mohanthy K</td>
<td>India</td>
</tr>
<tr>
<td>Moitra S</td>
<td>India</td>
</tr>
<tr>
<td>Molinaro M</td>
<td>Mexico</td>
</tr>
<tr>
<td>Moonan P</td>
<td>India</td>
</tr>
<tr>
<td>Moor D</td>
<td>United States</td>
</tr>
<tr>
<td>Mor Z</td>
<td>Israel</td>
</tr>
<tr>
<td>Msselati P</td>
<td>France</td>
</tr>
<tr>
<td>Muliwa Chakaya J</td>
<td>Kenya</td>
</tr>
<tr>
<td>Mukadi YD</td>
<td>United States</td>
</tr>
<tr>
<td>Mulder C</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Mulhoz L</td>
<td>Spain</td>
</tr>
<tr>
<td>Mwiongwe A</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Muyoyota M</td>
<td>Zambia</td>
</tr>
<tr>
<td>Mwinga A</td>
<td>Zambia</td>
</tr>
<tr>
<td>Nachman S</td>
<td>United States</td>
</tr>
<tr>
<td>Naihui C</td>
<td>China</td>
</tr>
<tr>
<td>Nair D</td>
<td>India</td>
</tr>
<tr>
<td>Namutamba D</td>
<td>Uganda</td>
</tr>
<tr>
<td>Narang R</td>
<td>India</td>
</tr>
<tr>
<td>Nardell E</td>
<td>United States</td>
</tr>
<tr>
<td>Nelson L</td>
<td>United States</td>
</tr>
<tr>
<td>Neuparth N</td>
<td>Portugal</td>
</tr>
<tr>
<td>N’Gola Owiti P</td>
<td>Kenya</td>
</tr>
<tr>
<td>N’Guessan R</td>
<td>Cote d’Ivoire</td>
</tr>
<tr>
<td>Nguyen BH</td>
<td>Viet Nam</td>
</tr>
<tr>
<td>Nienhaus A</td>
<td>Germany</td>
</tr>
<tr>
<td>Nisar YB</td>
<td>Switzerland</td>
</tr>
<tr>
<td>Nisbet M</td>
<td>New Zealand</td>
</tr>
<tr>
<td>Njikho H</td>
<td>Malawi</td>
</tr>
<tr>
<td>Noertjojo K</td>
<td>Canada</td>
</tr>
<tr>
<td>Noeske J</td>
<td>Cameroon</td>
</tr>
<tr>
<td>Nunn A</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>NUNN P</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Nywagi Louis F</td>
<td>South Africa</td>
</tr>
<tr>
<td>O’Donnell M</td>
<td>United States</td>
</tr>
<tr>
<td>Oey E</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Oihkado A</td>
<td>Japan</td>
</tr>
<tr>
<td>Ojukwu MO</td>
<td>Nigeria</td>
</tr>
<tr>
<td>Okada K</td>
<td>Japan</td>
</tr>
<tr>
<td>Oren E</td>
<td>United States</td>
</tr>
<tr>
<td>Ostrowski M</td>
<td>United States</td>
</tr>
<tr>
<td>Owiti P</td>
<td>Kenya</td>
</tr>
<tr>
<td>Oxlade O</td>
<td>Canada</td>
</tr>
<tr>
<td>Padayatchi N</td>
<td>South Africa</td>
</tr>
<tr>
<td>Page-Shipp L</td>
<td>South Africa</td>
</tr>
<tr>
<td>Paolo M</td>
<td>Italy</td>
</tr>
<tr>
<td>Parmar M</td>
<td>India</td>
</tr>
</tbody>
</table>
REVIEWERS ENCUENTRO

Lusiana Aprilawati  
Rachel Beanland  
D Behera  
Robert O Cannon  
Rachael Crockett  
Kathy Fieker  
Daniel Gemechu  
Melody Holt  
Elmira Ibraim  
Angela Jackson-Morris  
MAYOWA JOEL  
John Kolbe  
Juergen Noeske  
Pierre-Yves Norval  
Mark Ojukwu  
Nesri Padayatch  
Laura Podewils  
Mahfuza Rifat Rifat  
Stephanie S. Seidel  
Mandy Slutsker  
Jonathan Stillo  
Pedro Suarez  
Reuben Swamikan  
Nevin Wilson  
Wendy Worthy  
Grace Violette  
Dt. S. N. Misra  
Juergen Noeske  
Pedro Suarez  
Alberto Colorado  
Guilaiane Bernard  
Marina Kasten  
Javier Fuentes  
Jorge Saavedra  
Manuel Sandoval  
Martha Angélica García  
Emily T. Blitz  
Victor M. Bernal  
Arturo Plascencia  
Alejandra Urrea  
Jessica Ayala  
Cintia Dantas

SPEAKERS, CHAIRS AND COORDINATORS

Aland, David  
Andrade, Kleydson Bonfim  
Berhanu, Ribka  
Bettcher, Douglas  
Bi, Lijun  
Boyd, Andrew T.  
Camacho Solis, Rafael  
Castro, Jose Luis  
Chakaya, Jeremiah  
Chakaya, Jeremiah  
Cookson, Susan  
Dheda, Keertan  
Dheda, Keertan  
Ditiu, Lucica  
Farooq, Imran  
Feschenko, Yuriy  
Feschenko, Yuriy  
Gadde, Renuka  
Gadde, Renuka  
Gaida, Razia  
Galev, Aleksandar  
Gao, Lei  
Geiter, Lawrence  
Geiter, Lawrence  
Gumbo, Tawanda  
Gumbo, Tawanda  
Gupta, Rajesh  
Hanna, Debra  
Hyder, Md Khurshid Alam  
Jacon, Philippe  
Jiang, Pu  
Johns, Paula  
Khaparde, Sunil  
Khaparde, Sunil  
Krasnov, Vladimir  
Kruger, James  
Lange, Christoph  
Latif, Ehsan  
Lytvynenko, Natalia  
Mamatjia, Leroi David  
Manesien, Riyadh  
Maus, Courtney  
Mujhazi, Ghada  
Mukadi, Yadiul  
Murray, Megan  
Naidoo, Lenny  
Ndjeka, Norbert  
Nunn, Paul  
Odeh, Nedal  
Phillips, Patrick  
Phillips, Patrick  
Pibello, Alberto  
Porter, Michael  
Prasad, Jagdish  
Prasad, Jagdish  
Qayyum, Saiful  
Qingge, Li  
Rane, Saurabh  
SPEAKERS, CHAIRS AND COORDINATORS

SSS 02.  
SSS 02.  
SSS 02.  
SSS 10.  
SSS 06.  
SSS 06.  
SSS 06.  
SSS 06.  
SSS 07.  
SSS 07.  
SSS 01.  
SSS 09.  
SSS 07.  
SSS 04.  
SSS 05.  
SSS 05.  
SSS 05.  
SSS 05.  
SSS 04.  
SSS 09.  
SSS 04.  
SSS 08.  
SSS 10.  
SSS 06.  
SSS 01.  
SSS 01.  
SSS 07.  
SSS 12.  
SSS 03.  
SSS 08.  
SSS 01.  
SSS 09.  
SSS 03.  
SSS 12.  
SSS 03.  
SSS 11.  
SSS 09.  
SSS 07.  
SSS 05.  
SSS 05.  
SSS 12.  
SSS 04.  
SSS 09.
<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restrepo, Marcos</td>
<td>SSS</td>
<td>08.</td>
</tr>
<tr>
<td>Rusen, I D</td>
<td>SSS</td>
<td>03.</td>
</tr>
<tr>
<td>Rustami, Rovina</td>
<td>SSS</td>
<td>06.</td>
</tr>
<tr>
<td>Salhotra, VS</td>
<td>SSS</td>
<td>09.</td>
</tr>
<tr>
<td>Schlager, Neil</td>
<td>SSS</td>
<td>08.</td>
</tr>
<tr>
<td>Schrafnagel, Dean</td>
<td>SSS</td>
<td>10.</td>
</tr>
<tr>
<td>Sethlare, Leole</td>
<td>SSS</td>
<td>01.</td>
</tr>
<tr>
<td>Shining, Cheng</td>
<td>SSS</td>
<td>04.</td>
</tr>
<tr>
<td>Siddiqi, Salman</td>
<td>SSS</td>
<td>07.</td>
</tr>
<tr>
<td>Squire, S Bertel</td>
<td>SSS</td>
<td>03.</td>
</tr>
<tr>
<td>Tonsing, Jamhoih</td>
<td>SSS</td>
<td>05.</td>
</tr>
<tr>
<td>Wares, Fraser</td>
<td>SSS</td>
<td>09.</td>
</tr>
<tr>
<td>Wei, Sha</td>
<td>SSS</td>
<td>02.</td>
</tr>
<tr>
<td>Wei, Xiaolin</td>
<td>SSS</td>
<td>04.</td>
</tr>
<tr>
<td>Ya Diul, Mukadi</td>
<td>SSS</td>
<td>09.</td>
</tr>
<tr>
<td>Yanlin, Zhao</td>
<td>SSS</td>
<td>04.</td>
</tr>
<tr>
<td>Yongning, Cheng</td>
<td>SSS</td>
<td>04.</td>
</tr>
<tr>
<td>Zhao, Yan-Lin</td>
<td>SSS</td>
<td>04.</td>
</tr>
<tr>
<td>Chaparro Anzures, Maria Alejandra</td>
<td>ENC</td>
<td></td>
</tr>
<tr>
<td>Charalampous, Sismanidis</td>
<td>PGC</td>
<td>02, 04</td>
</tr>
<tr>
<td>Chavan, Deepi</td>
<td>PGC</td>
<td>02, 04</td>
</tr>
<tr>
<td>Chávez Macías, Maria Verónica</td>
<td>ENC</td>
<td></td>
</tr>
<tr>
<td>Checkley, William</td>
<td>SP</td>
<td>16, 10, 19</td>
</tr>
<tr>
<td>Chen, Lisa</td>
<td>SP</td>
<td>14.</td>
</tr>
<tr>
<td>Chiang, Chen-Yuan</td>
<td>MTE, OA 16, 10</td>
<td></td>
</tr>
<tr>
<td>Chiang, Silvia</td>
<td>SP</td>
<td>54, 47</td>
</tr>
<tr>
<td>Chiang, Thomas</td>
<td>WS</td>
<td>02.</td>
</tr>
<tr>
<td>Chikwanha, Isaac</td>
<td>SP</td>
<td>62.</td>
</tr>
<tr>
<td>Chirrime, Ivandra</td>
<td>WS</td>
<td>06.</td>
</tr>
<tr>
<td>Chorna, Yuliya</td>
<td>SP</td>
<td>20, 48</td>
</tr>
<tr>
<td>Christensen, Alice</td>
<td>OA</td>
<td>02, PD 27</td>
</tr>
<tr>
<td>Churchyard, Gavin</td>
<td>SP</td>
<td>62.</td>
</tr>
<tr>
<td>Citro, Brian</td>
<td>WS</td>
<td>08.</td>
</tr>
<tr>
<td>Cobelens, Frank</td>
<td>SP</td>
<td>37.</td>
</tr>
<tr>
<td>Collin, Jeff</td>
<td>MTE</td>
<td>U</td>
</tr>
<tr>
<td>Colorado, Alberto</td>
<td>WS</td>
<td>04.</td>
</tr>
<tr>
<td>Colvin, Charlotte</td>
<td>SP</td>
<td>25.</td>
</tr>
<tr>
<td>Connor, Stephen</td>
<td>SP</td>
<td>35.</td>
</tr>
<tr>
<td>Conradie, Francesca</td>
<td>ENC, MTE, OA 09, 42</td>
<td></td>
</tr>
<tr>
<td>Cornejo, José</td>
<td>SOA</td>
<td>07.</td>
</tr>
<tr>
<td>Cox, Vivian</td>
<td>SOA</td>
<td>01, WS 07, 08</td>
</tr>
<tr>
<td>Craig, Gill</td>
<td>PGC</td>
<td>01.</td>
</tr>
<tr>
<td>Cranmer, Lisa</td>
<td>PD</td>
<td>10, PD 45, 15</td>
</tr>
<tr>
<td>Crespo, Ramon</td>
<td>WS</td>
<td>14.</td>
</tr>
<tr>
<td>Creswell, Jacob</td>
<td>WS</td>
<td>16.</td>
</tr>
<tr>
<td>Crockett, Rachael</td>
<td>ENC</td>
<td>SP 48</td>
</tr>
<tr>
<td>Croucher, Kristin</td>
<td>SP</td>
<td>11.</td>
</tr>
<tr>
<td>Cruz, Andrea</td>
<td>PGC</td>
<td>10, SP 47</td>
</tr>
<tr>
<td>Daffary, Amrita</td>
<td>OA</td>
<td>02, PGC 01, 32</td>
</tr>
<tr>
<td>Daley, Charles</td>
<td>WS</td>
<td>05, 08</td>
</tr>
<tr>
<td>Daniels, Jonathan</td>
<td>PD</td>
<td>15.</td>
</tr>
<tr>
<td>Dann, John</td>
<td>SP</td>
<td>58.</td>
</tr>
<tr>
<td>Davies, Geraint</td>
<td>SOA</td>
<td>03, 59</td>
</tr>
<tr>
<td>Davtyan, Karapet</td>
<td>SP</td>
<td>53.</td>
</tr>
<tr>
<td>De Celis Carrillo, Ruth Araceli</td>
<td>SP</td>
<td></td>
</tr>
<tr>
<td>Dela Rosa-Bala, Alicia</td>
<td>SP</td>
<td>26.</td>
</tr>
<tr>
<td>Del Castillo, Hernan</td>
<td>SP</td>
<td>63.</td>
</tr>
<tr>
<td>Delgado, Enrique</td>
<td>PL</td>
<td>03, SP 48</td>
</tr>
<tr>
<td>Del Granado, Mirtha</td>
<td>SP</td>
<td>17, 28, 56, 47</td>
</tr>
<tr>
<td>del Pino, Sandra</td>
<td>SP</td>
<td>06.</td>
</tr>
<tr>
<td>Denamps, Stephanie</td>
<td></td>
<td>SP 38</td>
</tr>
<tr>
<td>Denholm, Justin</td>
<td></td>
<td>SP 41, SP 61</td>
</tr>
<tr>
<td>Denkinger, Claudia</td>
<td></td>
<td>MTE 04, SOA 01</td>
</tr>
<tr>
<td>Denti, Paolo</td>
<td>PD</td>
<td>24, SP 15, WS 01</td>
</tr>
<tr>
<td>Deshpande, Devyani</td>
<td>SP</td>
<td>39, WS 01</td>
</tr>
<tr>
<td>Detjen, Anne</td>
<td>SP</td>
<td>05, SP 42</td>
</tr>
<tr>
<td>Dhavan, Poonam</td>
<td>MTE</td>
<td>SP 46, SP 61</td>
</tr>
<tr>
<td>Dheda, Keertan</td>
<td>SP</td>
<td>11, 01</td>
</tr>
<tr>
<td>Dias, Monica</td>
<td></td>
<td>SP 01</td>
</tr>
<tr>
<td>Ditiu, Lucica</td>
<td>PL</td>
<td>01, SOA 14, WS 04</td>
</tr>
<tr>
<td>Djibuti, Mamuka</td>
<td></td>
<td>PGC 11</td>
</tr>
<tr>
<td>Dlodio, Riitta</td>
<td>PD</td>
<td>30, PGC 07, SOA 11</td>
</tr>
<tr>
<td>Dogar, Omar</td>
<td>WS</td>
<td>13, PL</td>
</tr>
<tr>
<td>Donald, Peter</td>
<td></td>
<td>WS 15</td>
</tr>
<tr>
<td>Do Valle Bastos, Gustavo</td>
<td></td>
<td>WS 02</td>
</tr>
<tr>
<td>do Valle Bastos, Luis Gustavo</td>
<td></td>
<td>WS 17, WS 14</td>
</tr>
<tr>
<td>du Cros, Philipp</td>
<td></td>
<td>PD 43</td>
</tr>
<tr>
<td>Dunbar, Lorie</td>
<td></td>
<td>SP 34</td>
</tr>
<tr>
<td>Du Preez, Karen</td>
<td>PD</td>
<td>34, PGC 10, SOA 08, SP 54</td>
</tr>
<tr>
<td>El Sony, Asma</td>
<td></td>
<td>SP 10</td>
</tr>
<tr>
<td>Eneogu, Rupert</td>
<td></td>
<td>WS 11</td>
</tr>
<tr>
<td>Engel, Nora</td>
<td></td>
<td>PGC 01</td>
</tr>
<tr>
<td>England, Kathleen</td>
<td></td>
<td>PD 17</td>
</tr>
<tr>
<td>Enwerem, Martin</td>
<td></td>
<td>WS 15</td>
</tr>
<tr>
<td>Esmail, Hanif</td>
<td></td>
<td>SP 23</td>
</tr>
<tr>
<td>Espinosa Gómez, Leonardo</td>
<td></td>
<td>ENC</td>
</tr>
<tr>
<td>Etienne, Carissa F.</td>
<td></td>
<td>PL</td>
</tr>
<tr>
<td>Falzon, Dennis</td>
<td>SP</td>
<td>21, 59, WS 01, WS 10</td>
</tr>
<tr>
<td>Fancourt, Nick</td>
<td></td>
<td>SP 16</td>
</tr>
<tr>
<td>Fanning, Anne</td>
<td></td>
<td>SP 28</td>
</tr>
<tr>
<td>Farsalinos, Konstantinos</td>
<td></td>
<td>SP 03</td>
</tr>
<tr>
<td>Fedotkina, Tatiana</td>
<td></td>
<td>SP 57</td>
</tr>
<tr>
<td>Ferro, Beatriz</td>
<td></td>
<td>SP 39</td>
</tr>
<tr>
<td>Fitting, Jean-William</td>
<td></td>
<td>OA 01</td>
</tr>
<tr>
<td>Forno, Diana Patricia</td>
<td></td>
<td>SP 14</td>
</tr>
<tr>
<td>Fortune, Diana</td>
<td></td>
<td>SP 14</td>
</tr>
<tr>
<td>Franke, Molly</td>
<td>PD</td>
<td>06, SP 12, SP 54</td>
</tr>
<tr>
<td>Frick, Michael</td>
<td>SP</td>
<td>11, SP 23, WS</td>
</tr>
<tr>
<td>Fujiwara, Paula</td>
<td></td>
<td>WS 09</td>
</tr>
<tr>
<td>Furin, Jennifer</td>
<td></td>
<td>PGC 03, WS 15</td>
</tr>
<tr>
<td>Gabunia, Tamar</td>
<td></td>
<td>SP 13, SP 30, SP 49</td>
</tr>
<tr>
<td>Galvis, Ana Maria</td>
<td></td>
<td>SP 05</td>
</tr>
<tr>
<td>Gani, Quan</td>
<td></td>
<td>PD 13, PD 28, SP 03</td>
</tr>
<tr>
<td>Garay, Julio</td>
<td></td>
<td>SP 56</td>
</tr>
<tr>
<td>Garcia, Deliana</td>
<td></td>
<td>SP 61</td>
</tr>
<tr>
<td>Garcia-Basteiro, Alberto</td>
<td></td>
<td>PD 18, SOA 09, SP 37</td>
</tr>
<tr>
<td>Garcia-Prats, Anthony</td>
<td></td>
<td>SP 36</td>
</tr>
<tr>
<td>Garcia Aviles, Martha Angelica</td>
<td>ENC</td>
<td></td>
</tr>
<tr>
<td>Garcia Baena, Ines</td>
<td></td>
<td>SP 33</td>
</tr>
<tr>
<td>Garfein, Richard S</td>
<td></td>
<td>SP 10</td>
</tr>
<tr>
<td>Garfin, Ana Marie Celina</td>
<td></td>
<td>SP 44, WS 02, WS 07</td>
</tr>
<tr>
<td>Garfin, Celina</td>
<td></td>
<td>WS 09</td>
</tr>
<tr>
<td>Garrido, Lara</td>
<td></td>
<td>ENC</td>
</tr>
<tr>
<td>Gaye-Ayrault, Marianne</td>
<td></td>
<td>ENC</td>
</tr>
<tr>
<td>Gebryohannes, Asfawesenen</td>
<td></td>
<td>SP 01</td>
</tr>
<tr>
<td>Gennaro, Marília</td>
<td></td>
<td>SP 09</td>
</tr>
<tr>
<td>Getahun, Haileyesus</td>
<td></td>
<td>SP 42</td>
</tr>
<tr>
<td>Ghanshyam, Bharathi</td>
<td></td>
<td>ENC</td>
</tr>
<tr>
<td>Ghidinelli, Massimo</td>
<td></td>
<td>WS 04</td>
</tr>
<tr>
<td>Ghiuilm, Qader</td>
<td></td>
<td>SP 17</td>
</tr>
<tr>
<td>Name</td>
<td>Code</td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Gilpin, Christopher</td>
<td>PGC 03, SOA 11, SP 52, WS 05</td>
<td></td>
</tr>
<tr>
<td>Ginnard, Janet</td>
<td>SOA 07</td>
<td></td>
</tr>
<tr>
<td>Ginsberg, Ann</td>
<td>SP 40</td>
<td></td>
</tr>
<tr>
<td>Girardi, Guido</td>
<td>SP 34</td>
<td></td>
</tr>
<tr>
<td>GNANASHANMUGAM, Devasena</td>
<td>PD 47</td>
<td></td>
</tr>
<tr>
<td>Gomez, Gabriela</td>
<td>SP 29</td>
<td></td>
</tr>
<tr>
<td>Gonzalez, Norma</td>
<td>SP 47</td>
<td></td>
</tr>
<tr>
<td>Gonzalez Diaz, Esteban</td>
<td>SP, SP</td>
<td></td>
</tr>
<tr>
<td>Gonzalez Roldan, Jesús Felipe</td>
<td>SP 60</td>
<td></td>
</tr>
<tr>
<td>Goosby, Eric</td>
<td>PL 01</td>
<td></td>
</tr>
<tr>
<td>Goosen, Wynand</td>
<td>WS 01</td>
<td></td>
</tr>
<tr>
<td>Gopali, Ram Sharan</td>
<td>WS 11</td>
<td></td>
</tr>
<tr>
<td>Gorodema, Wonder</td>
<td>WS 17</td>
<td></td>
</tr>
<tr>
<td>Graham, Hamish</td>
<td>SP 16</td>
<td></td>
</tr>
<tr>
<td>Greaves, Lorraine</td>
<td>PL 02</td>
<td></td>
</tr>
<tr>
<td>Griffith, David</td>
<td>SP</td>
<td></td>
</tr>
<tr>
<td>Grigg, Jonathan</td>
<td>SP 10</td>
<td></td>
</tr>
<tr>
<td>Gumbo, Tawanda</td>
<td>SP 39, SP 59, WS 01</td>
<td></td>
</tr>
<tr>
<td>Gupta, Amita</td>
<td>MTE, SP 55</td>
<td></td>
</tr>
<tr>
<td>Haberer, Jessica</td>
<td>WS 10</td>
<td></td>
</tr>
<tr>
<td>Habte, Dereje</td>
<td>PGC 11</td>
<td></td>
</tr>
<tr>
<td>Hafkin, Jeffrey</td>
<td>PD 44, SP 36</td>
<td></td>
</tr>
<tr>
<td>Hamilton, Carol</td>
<td>SP 02</td>
<td></td>
</tr>
<tr>
<td>Hanna, Debra</td>
<td>SP 31, WS 01</td>
<td></td>
</tr>
<tr>
<td>Hanson, Christy</td>
<td>SP 44, WS 04</td>
<td></td>
</tr>
<tr>
<td>Hanso-Nortey, Nii Nortey</td>
<td>OA 12, PGC 05, SOA 17</td>
<td></td>
</tr>
<tr>
<td>Harries, Anthony D</td>
<td>OA 04, PD 35, WS 03</td>
<td></td>
</tr>
<tr>
<td>Hatherill, Mark</td>
<td>PD 29</td>
<td></td>
</tr>
<tr>
<td>Haumba, Samson Malwa</td>
<td>SP 13</td>
<td></td>
</tr>
<tr>
<td>Hausler, Harry</td>
<td>PD 38, SOA 05</td>
<td></td>
</tr>
<tr>
<td>Hazangwe, Patrick</td>
<td>PGC 07</td>
<td></td>
</tr>
<tr>
<td>Heldal, Einar</td>
<td>PD 22, PGC 07, SP 07</td>
<td></td>
</tr>
<tr>
<td>Hernández, Rafael</td>
<td>SP 51</td>
<td></td>
</tr>
<tr>
<td>Hernandez, Rosario</td>
<td>ENC</td>
<td></td>
</tr>
<tr>
<td>Hernandez-Pando, Rogelio</td>
<td>SP 15</td>
<td></td>
</tr>
<tr>
<td>Hernández Zenteno, Rafael</td>
<td>SP 51</td>
<td></td>
</tr>
<tr>
<td>Herrera, Rosa</td>
<td>SP 09</td>
<td></td>
</tr>
<tr>
<td>Hesseling, Anneka</td>
<td>SP 15, SP 36</td>
<td></td>
</tr>
<tr>
<td>Heus, Marleen</td>
<td>SP 45</td>
<td></td>
</tr>
<tr>
<td>Hewison, Catherine</td>
<td>SP</td>
<td></td>
</tr>
<tr>
<td>Hind, Sitti</td>
<td>WS 07</td>
<td></td>
</tr>
<tr>
<td>Hirsch-Moverman, Yael</td>
<td>PGC 10, SP 22</td>
<td></td>
</tr>
<tr>
<td>Hoa, Nguyen</td>
<td>SP 58</td>
<td></td>
</tr>
<tr>
<td>Horsburgh, Robert</td>
<td>PD 21, SOA 12, SP 62, WS 08</td>
<td></td>
</tr>
<tr>
<td>Houben, Rein</td>
<td>PGC 04</td>
<td></td>
</tr>
<tr>
<td>Howard, Andrea</td>
<td>SP 42</td>
<td></td>
</tr>
<tr>
<td>Hughes, Jennifer</td>
<td>SP 35</td>
<td></td>
</tr>
<tr>
<td>Hugo Herrera, Victor</td>
<td>SP 08</td>
<td></td>
</tr>
<tr>
<td>Hussain, Hamidah</td>
<td>SP 22, SP 55</td>
<td></td>
</tr>
<tr>
<td>Iglesias, Roberto</td>
<td>SP 08</td>
<td></td>
</tr>
<tr>
<td>Iho, Wusee</td>
<td>ENC</td>
<td></td>
</tr>
<tr>
<td>Iniguez, Elias Octavio</td>
<td>SP 48, PL</td>
<td></td>
</tr>
<tr>
<td>Innes, Anh</td>
<td>WS 07</td>
<td></td>
</tr>
<tr>
<td>Irina, Liverko</td>
<td>WS 02</td>
<td></td>
</tr>
<tr>
<td>Islam, Akramul</td>
<td>SP 01</td>
<td></td>
</tr>
<tr>
<td>Iwouha, Ejiro</td>
<td>PGC 05</td>
<td></td>
</tr>
<tr>
<td>Jaramillo, Ernesto</td>
<td>PGC 03, WS 06</td>
<td></td>
</tr>
<tr>
<td>Jassim AlMossawi, Hala</td>
<td>SP 13</td>
<td></td>
</tr>
</tbody>
</table>

### Biological Safety Level 1 to 3 laboratories:
- Biological safety engineered - protect personnel and environment.
- Environmental control systems - protect sample integrity.
- Solar energy solutions - reduce reagent loss and equipment maintenance.
- Portability and mobility - reduce deployment risk.

### Labornatoires de niveau de sécurité biologique 1 à 3:
- Sécurité biologique conçue - protéger le personnel et l'environnement.
- Systèmes de contrôle de l'environnement - protègent l'intégrité de l'échantillon.
- Solutions d'énergie solaire - réduisent les pertes de réactifs et la maintenance de l'équipement.
- Portabilité et la mobilité - réduisent les risques de déploiement.
<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecca, Leonid</td>
<td>SP 47</td>
</tr>
<tr>
<td>Lee, Cynthia C</td>
<td>WS</td>
</tr>
<tr>
<td>Leemhuis, Margriet</td>
<td>PL</td>
</tr>
<tr>
<td>Lessein, Erica</td>
<td>SP 04, WS 14</td>
</tr>
<tr>
<td>Lester, Richard</td>
<td>WS 10</td>
</tr>
<tr>
<td>Lewinson, David</td>
<td>SP 23</td>
</tr>
<tr>
<td>Leyet, Romero</td>
<td>WS 15</td>
</tr>
<tr>
<td>Lienhardt, Christian</td>
<td>SP 23</td>
</tr>
<tr>
<td>Limpin, Maricar</td>
<td>SP 26</td>
</tr>
<tr>
<td>Lin, Yan</td>
<td>PD 49</td>
</tr>
<tr>
<td>Littlechild, Wilton</td>
<td>SP 06, PL 01</td>
</tr>
<tr>
<td>Loaiza Berman, Luisa Eugenia</td>
<td>ENC</td>
</tr>
<tr>
<td>Lomtadze, Nino</td>
<td>SP 12, WS 07</td>
</tr>
<tr>
<td>López Samano, Alejandro</td>
<td>SP 60</td>
</tr>
<tr>
<td>Lozano Kasten, Felipe De Jesús</td>
<td>SP 24</td>
</tr>
<tr>
<td>Lynch, Sharonann</td>
<td>ENC</td>
</tr>
<tr>
<td>Macgregor, Matthew</td>
<td>WS 04</td>
</tr>
<tr>
<td>Madhugiri Venkatachalaiah, Ajay Kumar</td>
<td>WS 03</td>
</tr>
<tr>
<td>Mahamba, Vishnu</td>
<td>SP 25</td>
</tr>
<tr>
<td>Maharaj, Bhavna</td>
<td>SP 32</td>
</tr>
<tr>
<td>Makombe, Robert</td>
<td>PD 37</td>
</tr>
<tr>
<td>Malar, James</td>
<td>SP 61</td>
</tr>
<tr>
<td>Mamo, Godana</td>
<td>PGC 07</td>
</tr>
<tr>
<td>Mandalakas, Anna</td>
<td>PGC 10, SP 05, SP 46</td>
</tr>
<tr>
<td>Martin, Joya</td>
<td>SP 17</td>
</tr>
<tr>
<td>Maruta, Talkmore</td>
<td>WS 06</td>
</tr>
<tr>
<td>Mase, Sundari</td>
<td>PGC 03, SP 55</td>
</tr>
<tr>
<td>Masimba, Dube</td>
<td>WS 02</td>
</tr>
<tr>
<td>Masini, Enos</td>
<td>PGC 07, SP 58</td>
</tr>
<tr>
<td>Mathad, Jyoti</td>
<td>SP 02, SP 15</td>
</tr>
<tr>
<td>Matji, Refiile</td>
<td>SP 21</td>
</tr>
<tr>
<td>Matte, Thomas</td>
<td>ENC, PD 25</td>
</tr>
<tr>
<td>Matu, Martin</td>
<td>WS 06</td>
</tr>
<tr>
<td>Mauricio Hernandez Sarmiento, Jose</td>
<td>SP 06</td>
</tr>
<tr>
<td>McCollum, Eric D.</td>
<td>SP 16</td>
</tr>
<tr>
<td>McElroy Hawkes, Linette</td>
<td>OA 18, PL</td>
</tr>
<tr>
<td>McIlwain, Helen</td>
<td>SP 49, SP 59, WS 01</td>
</tr>
<tr>
<td>McKenna, Lindsay</td>
<td>WS</td>
</tr>
<tr>
<td>McQuaid, Fran</td>
<td>PGC 04, SP 29</td>
</tr>
<tr>
<td>Medel, Brenda</td>
<td>SP 28</td>
</tr>
<tr>
<td>Melese, Mufukun</td>
<td>PGC 11</td>
</tr>
<tr>
<td>Mendoza, Alberto</td>
<td>SP 07</td>
</tr>
<tr>
<td>Menzies, Nicolas A</td>
<td>SP 29</td>
</tr>
<tr>
<td>Mergenthaler, Christina</td>
<td>WS 16</td>
</tr>
<tr>
<td>Mestanza, Francisco</td>
<td>SP 63</td>
</tr>
<tr>
<td>Middelkoop, Keren</td>
<td>SOA 10, PL</td>
</tr>
<tr>
<td>Miglior, Giovanni Battista</td>
<td>WS 10</td>
</tr>
<tr>
<td>Miller, Thaddeus</td>
<td>SP 43</td>
</tr>
<tr>
<td>Mirzayev, Fuad</td>
<td>WS 08</td>
</tr>
<tr>
<td>Mitchell, Ellen MH</td>
<td>SP 25</td>
</tr>
<tr>
<td>Mkumbo, Juliane Marko</td>
<td>WS 02</td>
</tr>
<tr>
<td>Mlauzi, Lamcy</td>
<td>SP 45</td>
</tr>
<tr>
<td>Milion, Nqobile</td>
<td>PGC 07</td>
</tr>
<tr>
<td>Mingmane, Shadrack</td>
<td>WS 15</td>
</tr>
<tr>
<td>Mochizuki, Yumiko</td>
<td>SP 03</td>
</tr>
<tr>
<td>Modongo, Chawangwa</td>
<td>SOA 04</td>
</tr>
<tr>
<td>Moke, Renid</td>
<td>SP 04</td>
</tr>
<tr>
<td>Molinari, Mirta</td>
<td>SP 34</td>
</tr>
<tr>
<td>Monedero, Ignacio</td>
<td>PGC 03, SOA 18, SP 13</td>
</tr>
<tr>
<td>Moonan, Patrick</td>
<td>SP 39, SP 27</td>
</tr>
<tr>
<td>Mor, Zohar</td>
<td>OA 04, PD 41</td>
</tr>
<tr>
<td>Moran, Alexander</td>
<td>SP 21</td>
</tr>
<tr>
<td>Morán, Carolina</td>
<td>PL</td>
</tr>
<tr>
<td>Mordi, Dumebi</td>
<td>WS 07</td>
</tr>
<tr>
<td>Morfin Otero, María del Rayo</td>
<td>SP</td>
</tr>
<tr>
<td>Mortimer, Kevin</td>
<td>SP 16, SP 19</td>
</tr>
<tr>
<td>Moser, Kathleen</td>
<td>SP 05, SP 46, SP 27</td>
</tr>
<tr>
<td>Moses, Paul</td>
<td>SP 53</td>
</tr>
<tr>
<td>Mphalele, Matsie</td>
<td>PGC 05</td>
</tr>
<tr>
<td>Mukadi, Yadiul</td>
<td>WS 07</td>
</tr>
<tr>
<td>Mulera, Sarah</td>
<td>SP 11, SP 23</td>
</tr>
<tr>
<td>Mullerpattan, Jai</td>
<td>SP 04</td>
</tr>
<tr>
<td>Muñoz, Antonia</td>
<td>SP 28</td>
</tr>
<tr>
<td>Muñoz, Fatima</td>
<td>SP</td>
</tr>
<tr>
<td>Muñoz, Greta</td>
<td>SP 63</td>
</tr>
<tr>
<td>Muthoka, Richard</td>
<td>WS 14</td>
</tr>
<tr>
<td>Mziwandelile Masuku, Zibusiso</td>
<td>SP 52</td>
</tr>
<tr>
<td>Mvusi, Lindiwe</td>
<td>PGC 02, SP 30</td>
</tr>
<tr>
<td>Myers, Matthew</td>
<td>PL 02</td>
</tr>
<tr>
<td>Nagy, Virginia</td>
<td>SP 25</td>
</tr>
<tr>
<td>Naidoo, Pren</td>
<td>SP 44</td>
</tr>
<tr>
<td>Naimov, Safar</td>
<td>WS 12</td>
</tr>
<tr>
<td>Nan, Jessica</td>
<td>ENC</td>
</tr>
<tr>
<td>Nardell, Edward</td>
<td>PGC 05, SP 30</td>
</tr>
<tr>
<td>Narro Robles, José</td>
<td>PL</td>
</tr>
<tr>
<td>Navarro, Catalina</td>
<td>SP 57</td>
</tr>
<tr>
<td>Navarro Soto, Maria Dolores</td>
<td>ENC</td>
</tr>
<tr>
<td>Nawina, Carol</td>
<td>SOA 14</td>
</tr>
<tr>
<td>Ncube, Ronald Thulani</td>
<td>PD 56, PGC 07</td>
</tr>
<tr>
<td>Ndjeka, Norbert</td>
<td>SP 53, WS 15</td>
</tr>
<tr>
<td>Negrete Pimienta, Malintzin</td>
<td>ENC</td>
</tr>
<tr>
<td>Ngabonziza S, J. Claude</td>
<td>SP 38</td>
</tr>
<tr>
<td>Ngari, Faith</td>
<td>SP 44</td>
</tr>
<tr>
<td>Nguyen, Linh</td>
<td>WS 05</td>
</tr>
<tr>
<td>Nhug, Viet</td>
<td>SP 35</td>
</tr>
<tr>
<td>Nichols, Kameko</td>
<td>SP 38</td>
</tr>
<tr>
<td>Nishikiori, Nobu</td>
<td>SP 33</td>
</tr>
<tr>
<td>Niwagaba, Nicholas</td>
<td>ENC</td>
</tr>
<tr>
<td>Nuernberger, Eric</td>
<td>WS 01</td>
</tr>
<tr>
<td>Nunn, Paul</td>
<td>PD 46, PGC 02</td>
</tr>
<tr>
<td>Nulío Bonales, Angel Israel</td>
<td>SP</td>
</tr>
<tr>
<td>Obiefuna, Austin</td>
<td>OA 07</td>
</tr>
<tr>
<td>Obregón, George</td>
<td>SP 07</td>
</tr>
<tr>
<td>Ochieng, Caroline</td>
<td>SP 19</td>
</tr>
<tr>
<td>Ochoa, David</td>
<td>ENC</td>
</tr>
<tr>
<td>Oey, Liesbeth</td>
<td>SP 45</td>
</tr>
<tr>
<td>Ogoro, Jeremiah</td>
<td>SP 18</td>
</tr>
<tr>
<td>Oh, Kyung-Hyun</td>
<td>SP 50</td>
</tr>
<tr>
<td>Ohkado, Akihiro</td>
<td>WS 09</td>
</tr>
<tr>
<td>Okada, Kosuke</td>
<td>WS 09</td>
</tr>
<tr>
<td>Olbrich, Laura</td>
<td>PD 48</td>
</tr>
<tr>
<td>Olea-Popelka, Francisco</td>
<td>PD 02</td>
</tr>
<tr>
<td>Oliver, Matthew</td>
<td>SP 48</td>
</tr>
<tr>
<td>Orejel, Ivonne</td>
<td>WS 11</td>
</tr>
<tr>
<td>Osberg, Mike</td>
<td>SP 44</td>
</tr>
<tr>
<td>Oyar, Patrick</td>
<td>SP 42</td>
</tr>
<tr>
<td>Pai, Madhukar</td>
<td>PGC 02, PL 03, SP 30, SP 32</td>
</tr>
<tr>
<td>Pak, Svetlana</td>
<td>WS 17</td>
</tr>
<tr>
<td>Pakker, Nadine</td>
<td>SP 45</td>
</tr>
<tr>
<td>Paraje, Guillermo</td>
<td>SP 08</td>
</tr>
<tr>
<td>Parascandola, Mark</td>
<td>SP 08, WS 13</td>
</tr>
<tr>
<td>Name</td>
<td>Acronyms or Designations</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Tonsing, Jamhoih</td>
<td>SP 50</td>
</tr>
<tr>
<td>Topcuoglu, Ersin</td>
<td>PGC 11</td>
</tr>
<tr>
<td>Trajman, Anete</td>
<td>PD 08</td>
</tr>
<tr>
<td>Trivedi, Archana</td>
<td>ENC</td>
</tr>
<tr>
<td>Thahandu, Nombojisele</td>
<td>ENC</td>
</tr>
<tr>
<td>Tudor, Carrie</td>
<td>PGC 05, SOA 09, SP 57</td>
</tr>
<tr>
<td>Umubyeyi Nyaruhirira, Alaine</td>
<td>PD 55, SOA 16, SP 38, SP 52</td>
</tr>
<tr>
<td>Vadera, Bhavin</td>
<td>SP 01</td>
</tr>
<tr>
<td>Vambe, Debrah</td>
<td>SP 04</td>
</tr>
<tr>
<td>van den Boom, Martin</td>
<td>SP 20</td>
</tr>
<tr>
<td>van den Hof, Susan</td>
<td>WS 07</td>
</tr>
<tr>
<td>van der Westhuizen, Anja</td>
<td>WS</td>
</tr>
<tr>
<td>Vandevelde, Wim</td>
<td>OA 16, PD 52, SP 24</td>
</tr>
<tr>
<td>van Gemert, Wayne</td>
<td>SP 18, SP 38, WS 08</td>
</tr>
<tr>
<td>Van Gorkom, Jeroen</td>
<td>OA 11</td>
</tr>
<tr>
<td>van Ingen, Jakko</td>
<td>SP 39</td>
</tr>
<tr>
<td>van Kalmthout, Kristian</td>
<td>SP 18, WS 10</td>
</tr>
<tr>
<td>van Rest, Job</td>
<td>WS 17</td>
</tr>
<tr>
<td>Vázquez, Tabaré</td>
<td>PL</td>
</tr>
<tr>
<td>Vaswani, Stephanie</td>
<td>PD 12</td>
</tr>
<tr>
<td>Vaz Nery, Susana</td>
<td>SP 33</td>
</tr>
<tr>
<td>Vekemans, Johan</td>
<td>SP 40</td>
</tr>
<tr>
<td>Velasco, Georgina</td>
<td>ENC</td>
</tr>
<tr>
<td>Velasquez, Loselino</td>
<td>SP 06</td>
</tr>
<tr>
<td>Vijayan, Shibu</td>
<td>PGC 02, SP 58</td>
</tr>
<tr>
<td>Viney, Kerri</td>
<td>SP 17</td>
</tr>
<tr>
<td>Volchenkov, Grigory</td>
<td>OA 12, PGC 05, SP 52</td>
</tr>
<tr>
<td>Volgina, Alexandra</td>
<td>SP 53</td>
</tr>
<tr>
<td>Vynnycky, Emilia</td>
<td>PGC 04</td>
</tr>
<tr>
<td>Wagner, Bradley</td>
<td>OA 15</td>
</tr>
<tr>
<td>Wandwal, Eliud</td>
<td>SP 44, WS 04</td>
</tr>
<tr>
<td>Wang, Shu-Hua</td>
<td>SP 27</td>
</tr>
<tr>
<td>Waning, Brenda</td>
<td>SP 49, SP 24, WS 14</td>
</tr>
<tr>
<td>Wanyonyi, Carolyne</td>
<td>SP 45</td>
</tr>
<tr>
<td>Wares, Fraser</td>
<td>WS 07</td>
</tr>
<tr>
<td>Warren, Mitchell</td>
<td>SP 11</td>
</tr>
<tr>
<td>Wei, Xiaolin</td>
<td>OA 13, PD 31</td>
</tr>
<tr>
<td>Weil, Diana</td>
<td>SP 53</td>
</tr>
<tr>
<td>Welkoff, Philip</td>
<td>PGC 04</td>
</tr>
<tr>
<td>Wells, William</td>
<td>SP 01</td>
</tr>
<tr>
<td>Wendoh, Jerome</td>
<td>SP 15</td>
</tr>
<tr>
<td>Weezenbeek, Kitty van</td>
<td>PL</td>
</tr>
<tr>
<td>White, Richard</td>
<td>PGC 04, SP 40</td>
</tr>
<tr>
<td>Wingfield, Tom</td>
<td>SP 33</td>
</tr>
<tr>
<td>Wobeser, Wendy</td>
<td>OA 06, OA 10, SP 06, PL</td>
</tr>
<tr>
<td>Xu, Caihong</td>
<td>WS 09</td>
</tr>
<tr>
<td>Yadav, Prashant</td>
<td>SP 24</td>
</tr>
<tr>
<td>Yadav, Vipin</td>
<td>WS 12</td>
</tr>
<tr>
<td>Yadon, Zaida</td>
<td>SP 07</td>
</tr>
<tr>
<td>Yassin, Mohammed</td>
<td>WS 14</td>
</tr>
<tr>
<td>Yolanda, Alicia</td>
<td>PL 02</td>
</tr>
<tr>
<td>Yuen, Courtney</td>
<td>SP 22, SP 54</td>
</tr>
<tr>
<td>Zachariah, Rony</td>
<td>WS 03</td>
</tr>
<tr>
<td>Zagorski, Andre</td>
<td>WS 02, WS 07</td>
</tr>
<tr>
<td>Zagorsky, Andre</td>
<td>WS 08</td>
</tr>
<tr>
<td>Zetola, Nicola</td>
<td>PD 26, SOA 10</td>
</tr>
<tr>
<td>Zewdie, Yemisrach</td>
<td>ENC</td>
</tr>
<tr>
<td>Zhiriri, Christopher</td>
<td>PGC 07</td>
</tr>
</tbody>
</table>
ADVANCED THERAPEUTICS WITHIN EVERYONE’S REACH

Celltrion introduced the world’s first mAb biosimilar, Remsima. Marketing approval was granted in the US, EU and 80 other countries, significantly reducing healthcare costs worldwide.

Now, Celltrion will write a new chapter by expanding its pipeline to include chemical medicines focused on Tuberculosis and HIV.

Low-priced, high quality products will be supplied by year-round production in the shortest lead time.

Always by your side,

Celltrion, Your most trusted partner in public health
Stringent Quality Control: As per US/EU standard at cGMP designed facility
Competitive Price: Annual production capacity up to 10 billion tablets (year-round production)
Our flagship products are Tuberculosis and HIV/AIDS medicines

CELLTRION, INC 23 Academy-ro, Yeonsu-gu, Incheon 22014, Republic of Korea
T +82-32-850-3442 F +82-32-850-5057 W www.celltrion.com E Procurement@celltrion.com
In addition, Union members in 141 countries worked to fulfil our common vision of health solutions for the poor.

The Union’s 630 staff and consultants offered technical assistance, provided education and training, and conducted research in 71 countries in 2016.

In addition, Union members in 141 countries worked to fulfil our common vision of health solutions for the poor.
The Union’s vision of health solutions for the poor. In addition, Union members in 141 countries worked to fulfil our common education and training, and conducted research in 71 countries in 2016. The Union’s 630 staff and consultants offered technical assistance, provided global activities.
HOW CAN YOU ACHIEVE

EXPAND YOUR LAB’S TB TESTING POTENTIAL

► **BD MAX™ MDR-TB** from a single specimen and with a single test, one assay with three results - MTB, RIF, INH.

**BD MAX™ System:**

- **Workflow efficiency** for timely patient management"1-3
- **Diagnostic speed and accuracy** to aid in fast, appropriate treatment"2,4,5
- **Testing versatility** for a wide range of patients"6

► **BD BACTEC™ MGIT™ with Second Line Reagents**

- **Gold standard** for MTB ID and drug susceptibility testing
- **Ready to use**, second-line drug reagents

VISIT THE BD BOOTH DURING TB UNION FOR MORE INFO.
START MAXIMIZING YOUR IMPACT. VISIT BD.COM/DS