

State of the TB Alliance

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TB ALLIANCE

GLOBAL ALLIANCE FOR TB DRUG DEVELOPMENT

State of the TB Alliance

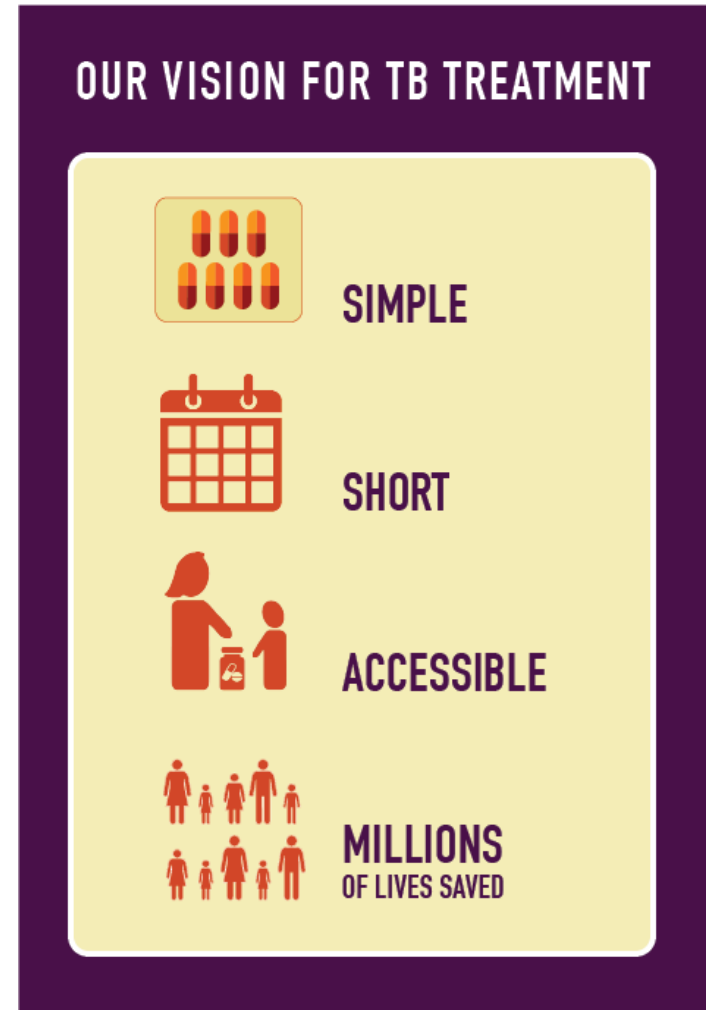
2015 Updates



- Vision and Mission
- Program Updates
 - Discovery and clinical development
 - Pediatrics product introduction
- New Initiatives, Partnerships and Stakeholders

Our Vision: Better TB Medicines for All

- Dedicated to the discovery and development of better, faster and affordable TB drugs that are available to all who need them
- Achieving maximum impact requires:
 - Short, simple regimen that is affordable, available and accessible
 - Universal regimen that is effective in virtually all people with active TB
 - All novel drugs, circumventing challenges of drug resistance





Discovery

Early Development

Late Development

LEAD IDENTIFICATION	LEAD OPTIMIZATION	PRECLINICAL DEVELOPMENT	PHASE 1	PHASE 2A	PHASE 2B	PHASE 3	PHASE 4
Indazoles	Macrolides <i>Sanofi</i>	Preclinical TB Regimen Development <i>JHU</i>	TBA-354	Linezolid Dose-Ranging Study	NC-005	STAND	Optimized Pediatric Formulations
Whole-Cell Hit-to-Lead Program <i>Sanofi</i>	Ureas <i>Sanofi</i>		Pharmacokinetics of first-line drugs in children < 5kg <i>Stellenbosch University</i>		Pretomanid/ Bedaquiline/ Pyrazinamide (BPaZ)		
Whole-Cell Hit-to-Lead Program <i>GSK</i>	Diarylquinolines <i>Janssen/AUCK/UIC</i>				Nix-TB		
RNA Polymerase Inhibitors <i>Rutgers University</i>	DprE1 Inhibitors				Pretomanid/ Bedaquiline/ Linezolid		
Energy Metabolism Inhibitors <i>AUCK/UIC</i>	Mmpl3 Inhibitors						Ethambutol for children > 5kg
Clp-C/PIP2 <i>Schrödinger</i>	InhA Inhibitors						Isoniazid for children > 5kg
POA Prodrugs <i>Yonsei</i>	Cyclopeptides <i>Sanofi</i>						Pyrazinamide for children > 5kg
PEPCK <i>Roche/TAMU</i>	Oxazolidinones <i>IMM</i>						
Hit ID Programs - Daiichi Sankyo Novare	Squaramides						
- OP-BIO - Takeda - Shionogi - Mitsubishi-Danabe - Sumitomo-Dainippon	Pyrimidines <i>GSK</i>						
	PKS-13 <i>Dundee/TAMU</i>						

TB Alliance R&D Partners:

Research Institute (BTTRI)
Calibr
Cornell University
Daiichi Sankyo Novare
GlaxoSmithKline (GSK)
Institute of Materia Medica (IMM)
IMPAACT
Janssen [Johnson & Johnson]
Johns Hopkins University (JHU)
Medical Research Council (MRC) at UCL

OP-BIO
Roche Pharmaceuticals
Rutgers University
Sanofi
Schrödinger
Shionogi
Stellenbosch University
Sumitomo-Dainippon
Takeda Pharmaceuticals
TB Drug Accelerator (TBDA)
Texas A&M University (TAMU)
University College London (UCL)
University of Auckland (AUCK)
University of Dundee (Dundee)
University of Illinois at Chicago (UIC)
University of Pennsylvania School of Medicine (UPenn)

Early-Stage Research: Filling the Pipeline

Optimizing known compound classes

- **TBA-354** Initiated Phase 1 study. First new drug to enter the clinic in six years
- **Oxazolidinone** and **Diarylquinoline** candidates to move into pre-clinical development in 2016

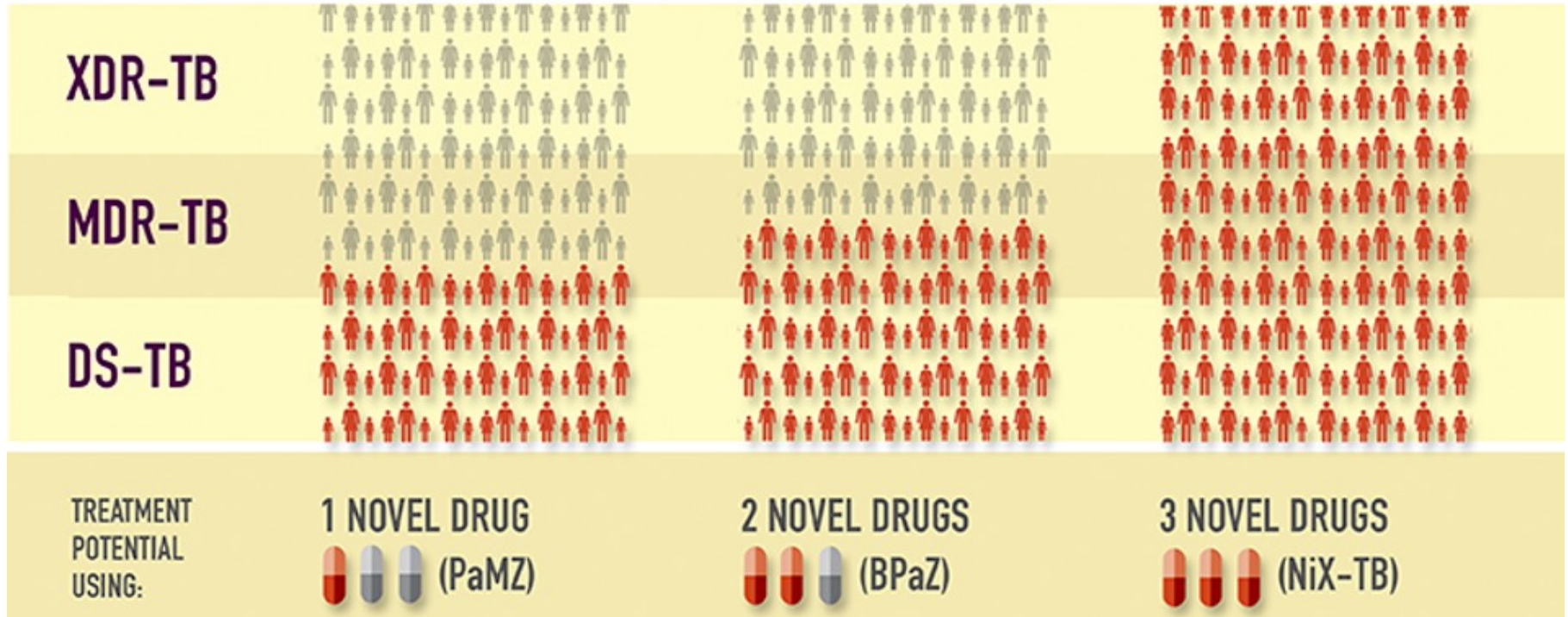
Developing novel classes based on novel targets

- **DprE-1 inhibitor (AZ-7371)** Novel bactericidal compound is approved to move into pre-clinical development
- 2 Lead Optimization and 2 Lead Identification programs initiated

TB Alliance became a full partner in the TB Drug Accelerator Project
MORE new drugs are needed

Progression Toward a Novel Regimen

A fully novel regimen holds potential to treat all forms of TB



Nix-TB Clinical Trial

- Nix-TB is the first clinical trial of an XDR-TB regimen with minimal pre-existing resistance
- Tests the combination of BPaOx as a 6-9 month cure that is all pills, no injections
- Testing safety of linezolid
- More than 25 patients enrolled; First participant with XDR-TB completed six-month study treatment in November
- Regimen could be first “universal” treatment



A 2014 *Lancet* study found nearly half of XDR-TB patients died within a year of diagnosis.

Advancing TB Medicines for Children

Preparing for FDC Introduction

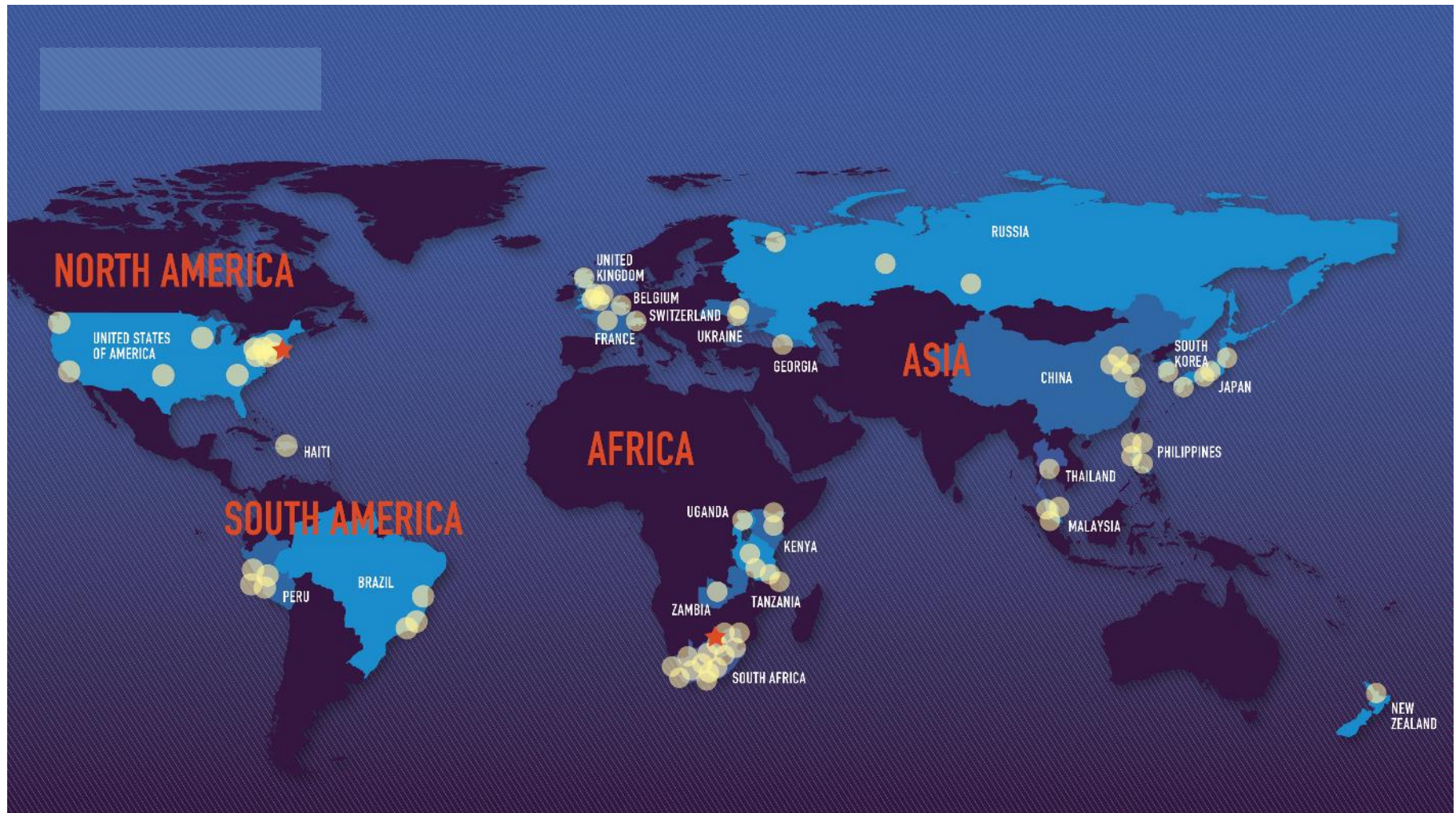


New childhood medicines can improve treatment and save lives

- Now available
- Accurately dosed, quality-assured, child-friendly TB medicines; first time since WHO changed guidelines in 2010
- Affordable treatment; Commitment from two manufacturers
- Working with partners to facilitate uptake and adoption: WHO, UNITAID, USAID, UNICEF, MSH, GDF, Global Fund and others

A Global Network of Partners

Leveraging the best science from around the world



Stakeholder Perception Survey

- Conducted November 2014
- 84% rate their experience with TB Alliance as good or very good
- 78% of respondents rate their experience with TB Alliance as similar to or better than other PDPs; only 8% rate their experience as worse than other PDPs
- 69% rate TB Alliance as effective in developing new drugs that will significantly help to address the pandemic
- 81% rated the importance of TB Alliance being involved along the entire spectrum of TB-related activities as important

Expanding partnerships

TB Alliance saw the development of several exciting partnerships



TB Alliance Supporters



Australian Department of
Foreign Affairs and Trade



Bill & Melinda
Gates Foundation



European
Commission



United States
Food and Drug
Administration



Global Health Innovative Technology Fund

Global Health Innovative
Technology Fund



Indonesia Health
Fund



Irish Aid



National Institute
of Allergy and
Infectious Diseases

US NIAID



UK aid



UNITAID



United States Agency for
International Development

Thank you!



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