



## Discovery

## Early Development

## Late Development

LEAD IDENTIFICATION	LEAD OPTIMIZATION	PRECLINICAL DEVELOPMENT	PHASE 1	PHASE 2A	PHASE 2B	PHASE 3
ATP Synthesis Inhibitors <i>Calibr</i>	Mycobacterial Gyrase Inhibitors <i>GSK</i>	TBA-354		NC-003	NC-002	REMox-TB
Energy Metabolism Inhibitors <i>AZ/University of Penn</i>	THPP Series <i>GSK</i>	Preclinical Regimen Development <i>JHU, UIC</i>		Bedaquiline/ Clofazimine/ Pyrazinamide	PA-824/ Moxifloxacin/ Pyrazinamide (PaMZ)	Moxifloxacin/ Isoniazid/ Rifampin/ Pyrazinamide <i>Bayer, MRC, UCL</i>
Whole-Cell Hit-to-Lead Program <i>AZ</i>	Spiro Series <i>GSK</i>			PA-824/ Bedaquiline/ Clofazimine/ Pyrazinamide		Moxifloxacin/ Rifampin/ Isoniazid/ Ethambutol <i>Bayer, MRC, UCL</i>
Whole-Cell Hit-to-Lead Program <i>Sanofi</i>	Pyrazinamide Analogs <i>Yonsei University</i>			PA-824/ Bedaquiline/ Clofazimine		
Whole-Cell Hit-to-Lead Program <i>NITD</i>	Diarylquinolines <i>Janssen/University of Auckland/UIC</i>			PA-824/ Bedaquiline/ Pyrazinamide		
Whole-Cell Hit-to-Lead Program <i>GSK</i>	Riminophenazines <i>IMM/BTTTRI</i>					
RNA Polymerase Inhibitors <i>Rutgers University</i>	DprE Inhibitors <i>Calibr</i>					
	Cyclopeptides <i>Sanofi</i>					
	Macrolides <i>Sanofi</i>					
	Novel Structural Series <i>NITD</i>					

### TB Alliance R&D Partners:

AstraZeneca (AZ)  
 Bayer Healthcare AG (Bayer)  
 Beijing Tuberculosis and Thoracic Tumor  
 Research Institute  
 Calibr  
 GlaxoSmithKline (GSK)  
 Institute of Materia Medica (IMM)  
 Janssen (Johnson & Johnson)  
 Johns Hopkins University (JHU)  
 Medical Research Council (MRC)  
 Novartis Institute for Tropical Diseases (NITD)

New York Medical College  
 Rutgers University  
 Sanofi  
 Stellenbosch University  
 University College London (UCL)  
 University of Auckland  
 University of Illinois at Chicago (UIC)  
 University of Pennsylvania School of  
 Medicine  
 Yonsei University