<table>
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<tr>
<th>Discovery</th>
<th>Lead Identification</th>
<th>Lead Optimization</th>
<th>Preclinical Development</th>
<th>Early Development</th>
<th>Late Development</th>
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<td>ATP Synthesis Inhibitors</td>
<td>Calibr</td>
<td>Macrolides Sanofi</td>
<td>TBA-354</td>
<td>Pharmacokinetics of first-line drugs in children &lt; 5kg IMPAACT</td>
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<td>Ureas Sanofi</td>
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<td>PA-824/ Bedaquiline/ Clofazimine/ Pyrazinamide</td>
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<td>Hit ID Program Shionogi</td>
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**TB Alliance R&D Partners:**

- AstraZeneca (AZ)
- Bayer Healthcare AG (Bayer)
- Beijing Tuberculosis and Thoracic Tumor Research Institute
- Calibr
- Daiichi Sankyo
- GlaxoSmithKline (GSK)
- Institute of Materia Medica (IMM)
- IMPAACT
- Janssen [Johnson & Johnson]
- Johns Hopkins University (JHU)
- Medical Research Council (MRC)
- Novartis Institute for Tropical Diseases (NITD)
- New York Medical College
- Rutgers University
- Sanofi
- Shionogi
- Stellenbosch University
- Takeda Pharmaceuticals
- University College London (UCL)
- University of Auckland
- University of Illinois at Chicago (UIC)
- University of Pennsylvania School of Medicine
- Yonsei University

**2014 Q1**

**Discovery**

**Early Development**

**Late Development**

**Optimized Pediatric Formulations**

- Ethambutol/ Rifampicin/ Pyrazinamide for children > 5kg
- Isoniazid/ Rifampicin for children > 5kg
- Ethambutol for children > 5kg
- Isoniazid for children > 5kg
- Pyrazinamide for children > 5kg