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Innovative Medicines Initiative

CPTR Mission, Structure & Goals for Innovation

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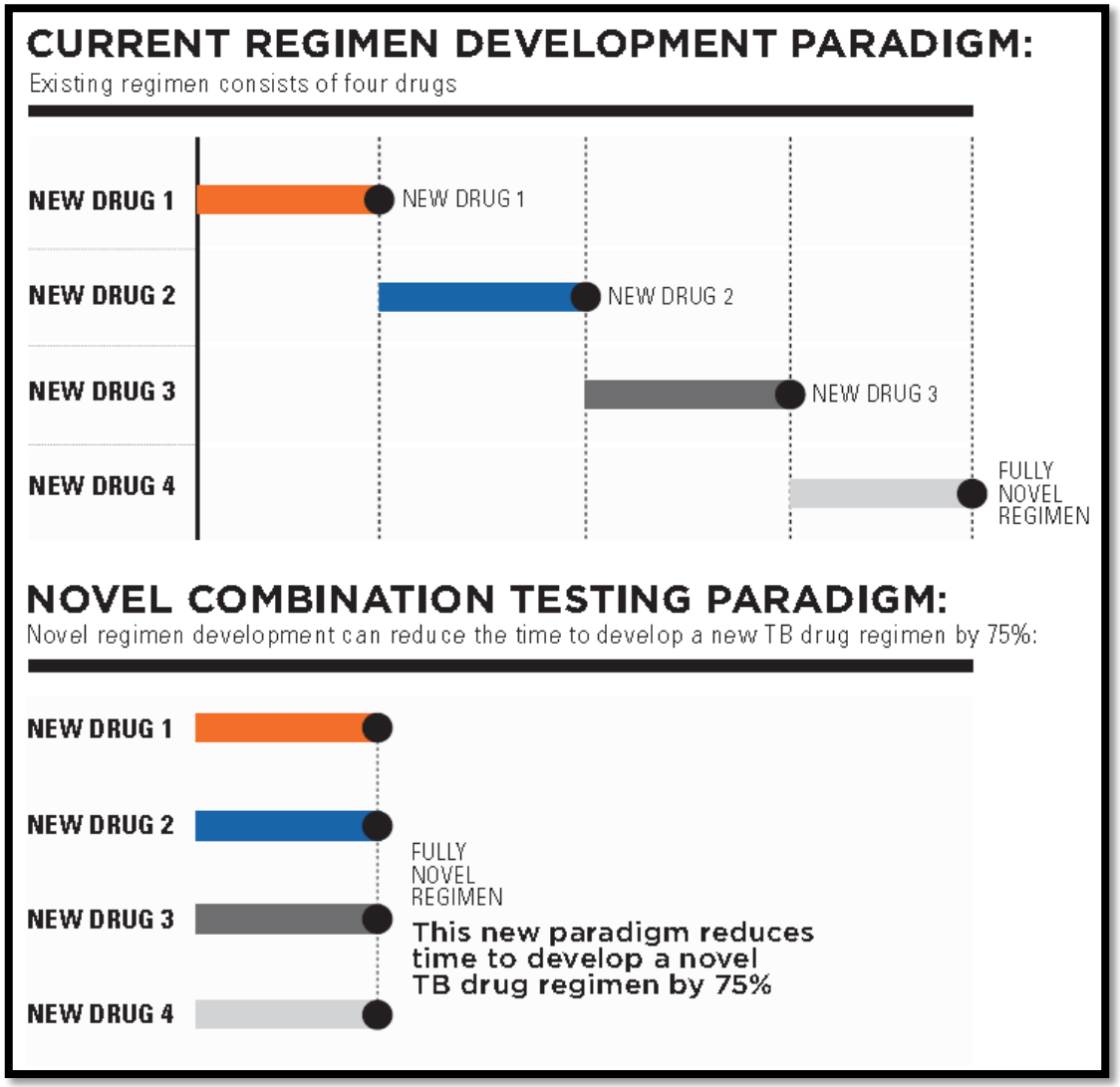
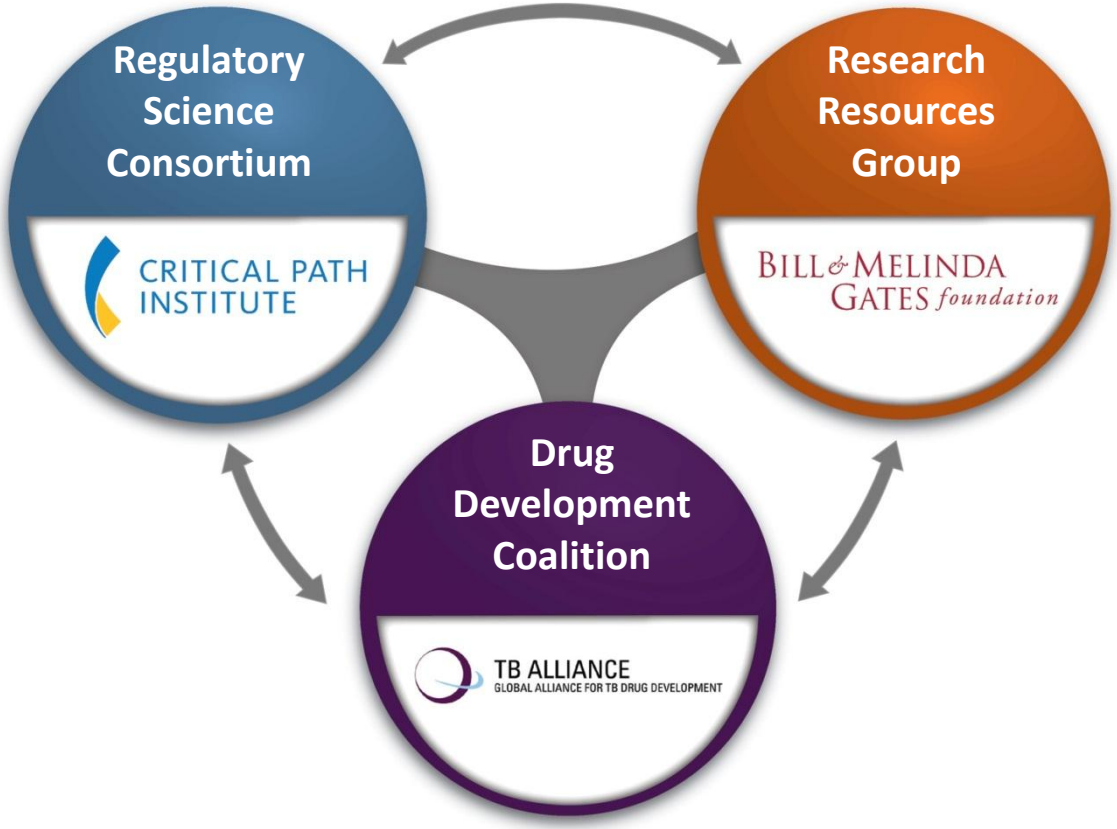
Executive Director
Critical Path to TB Drug Regimens

The Challenge



CPTR Mission and Model



Accelerate the development of new, safe, and highly effective regimens for TB by *enabling early testing* of drug combinations.

CPTR Members and Partners

Government/Regulatory participants

CDC
FDA
EUROPEAN MEDICINES AGENCY
World Health Organization
imi Innovative Medicines Initiative
National Institutes of Health
National Institute of Allergy and Infectious Diseases
DAIDS RSC Regulatory Support Center

Industry members

AstraZeneca
SANOFI
Pfizer
VERTEX THE SCIENCE of POSSIBILITY
Celgene GLOBAL HEALTH
Cepheid A better way.
gsk GlaxoSmithKline
Otsuka
Johnson & Johnson
tibotec

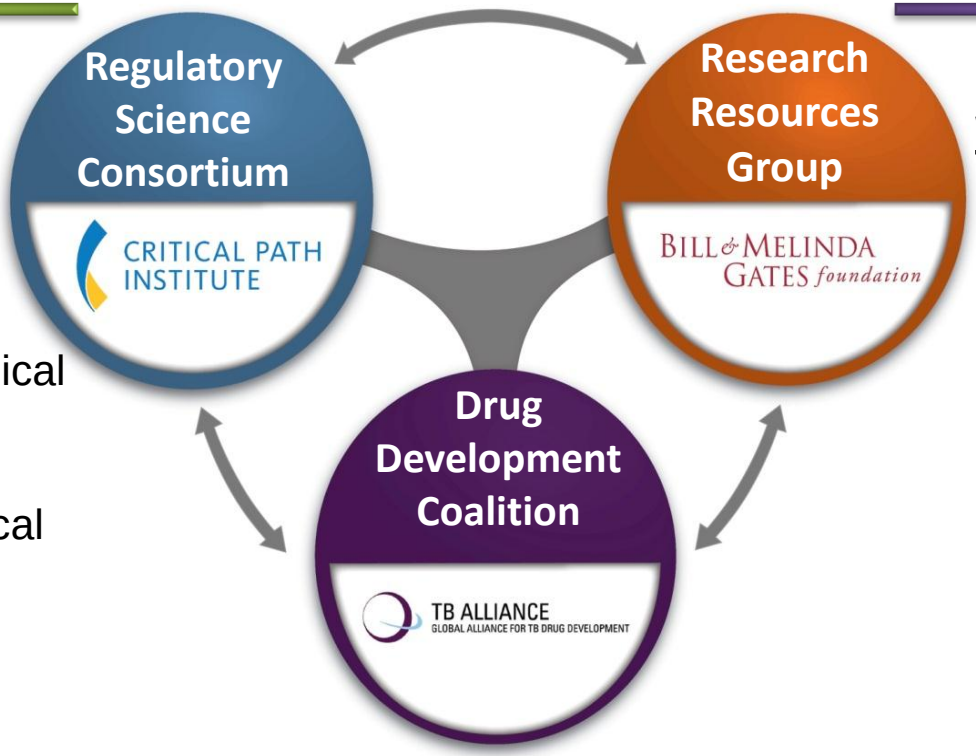
Non-profit research members

TB ALLIANCE GLOBAL ALLIANCE FOR TB DRUG DEVELOPMENT
BILL & MELINDA GATES foundation
TAG Treatment Action Group
REAGAN - UDALL FOUNDATION FOR THE Food and Drug Administration
EDCTP
Stop TB Partnership

CPTR Workgroups and Focus

Workgroups:

- Data Standards & Integration
- Biomarkers & Clinical Endpoints
- Preclinical & Clinical Sciences
- Translational Pharmacology (Modeling & Simulation)
- Health Authorities Submission



Workgroups:

- Clinical Trials Infrastructure
- Global Regulatory Pathways
- Stakeholder & Community Engagement
- Access & Appropriate Use

CPTR Scientific and Regulatory Innovations

Regulatory Science Consortium

Opportunities for collaboration to complement, enhance and/or accelerate our collective efforts

Regulatory Science Consortium

Role in Enabling & Accelerating the Process:

- Identify tools/methods that can bring the most value
- Reach scientific consensus by sharing expertise, information, data
- Collaborate with regulators on DDT development & use
- Proceed with regulatory authorities when appropriate

Alignment on tools and data sharing to support their advancement will accelerate our success

Data Standards and Integration

Key Accomplishments

- **Launched CDISC TB Data Standard v1.0**
  - Available for use on CDISC website
  - Being implemented in bedaquiline Phase III study design
- **TB Data Repository Launched for Data Set Remapping**
- **Clinical Trial Data Acquisition in Progress:**
  - Industry, CDC, & NIAID

Future Milestones

- **Enable Modeling with Aggregated Data**
  - Potential to add additional terminology as needed (e.g., pediatrics)
  - Data team to support data acquisition, remapping and modeling effort as needed

Biomarkers and Clinical Endpoints

Key Accomplishments

- **Liquid Culture Proposed to FDA as a Predictive or Prognostic Biomarker for Clinical Outcome**
  - Letter of Intent submitted to FDA
- **FDA Division of Anti-Infective Products (DAIP)**
  - Review Team in Place
  - In process of first review

Future Milestones

- **Respond to FDA DAIP Review Team Comments**
- **Submit to EMA**
- **Evaluate Next Generation Endpoints**
  - e.g., Imaging biomarkers, molecular markers, etc.

Preclinical and Clinical Sciences

Key Accomplishments

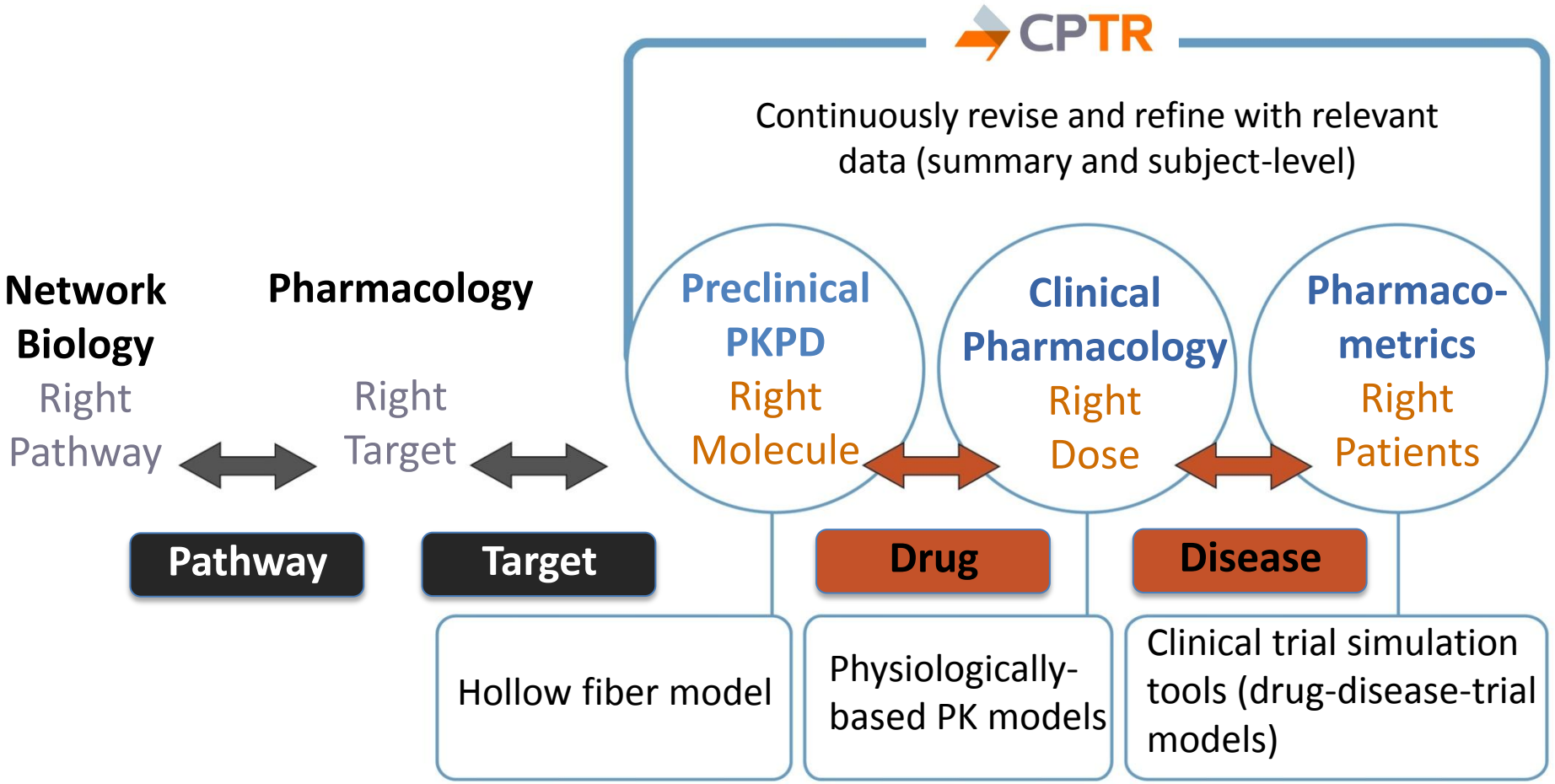
- Gap Analysis of *in vitro* & *in vivo* Preclinical Efficacy Models
- Evaluated & Selected Combination Partners
- Initiated Discussions with Regulatory Agencies Regarding *in vitro* Hollow Fiber Model System
- Agreement to Partner on Data/Method Review

Future Milestones

- Progress Discussion with Regulatory Agencies & Define Next Steps for the Hollow Fiber Model System
- Develop Data & Model Inventory and Analysis
- Report Strengths & Gaps with in vivo Models & Develop Research Objectives and Critical Path Studies
- Clinical Sciences Arm to Launch CV/QTc Subteam

Modeling and Simulation Workgroup

Vision: More efficient translation between each stage of drug development



Global Regulatory Pathways

Key Accomplishments

- **Developing Pathways for Global Regulatory Efforts**
- **Provided FDA Bedaquiline Advisory Committee Meeting Materials (Accelerated Approval) to High Burden Countries NRAs**

Future Milestones

- **Sharing Data From Key TB Clinical Trials with NRAs**
  - Address Gaps in Regulatory Review Processes
- **Develop a Joint/Parallel Regulatory Review Process for TB Drug Marketing Applications**
  - WHO and NRA's in high burden countries
  - Major opportunity to strengthen the review process for TB drugs

Opportunities for CPTR and PreDiCT-TB

For today

- **Panel views on key issues facing the TB field and views on what they have heard**
- **Understand how both efforts align to meet those needs or identify gaps to consider**

For tomorrow

MOU in place

- **Engage in detailed discussion on our scientific and regulatory goals**
- **Develop strategic path forward for partnership**
  - Data, cross-talk, gaps etc.

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efpia

Questions for panel

Are there opportunities that you see for synergy / leveraging the outputs of both efforts?

Are there critical gaps that are not being addressed by either effort that would inform such a plan?

Data sharing will be key to many deliverables described today as it prevents duplication, encourages collaboration, and could accelerate the TB drug development process. However, this process remains challenging. Could the panel comment on how they might advise us to leverage this process more effectively?

Questions for panel

The advancement in science described today could inform a more globally harmonized regulatory pathway for the development of novel TB regimens now that we have pathways in place for single TB drug registration. It has been suggested that consortia/PPPs such as IMI and C-Path can help accelerate a pathway for regimen development/regulatory approval via putting forth proposed development plans which would outline the stages of work to be completed from an initial/limited approval through to a full approval.

- Does the panel support this concept?
- Does the Panel have any advice to offer as to how we can make the maximum impact from the work outlined in the presentations and use that work to help inform a development pathway/regulatory pathway that would achieve this goal?

Thank you!


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GLOBAL ALLIANCE FOR TB DRUG DEVELOPMENT


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TB Drug Regimens