

DNDi R&D Model: Innovation through Collaboration Instead of Competition

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A New Model for Drug Development

- Non-profit drug research & development (R&D) organization founded in 2003
- Addressing the needs of the most neglected patients
- Harnessing resources from public institutions, private industry and philanthropic entities

7 Founding Partners

- Indian Council for Medical Research (ICMR)
- Kenya Medical Research Institute (KEMRI)
- Malaysian MOH
- Oswaldo Cruz Foundation Brazil
- Medecins Sans Frontieres (MSF)
- Institut Pasteur France
- WHO/TDR (permanent observer)



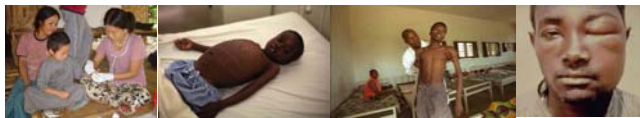
DNDi Vision & Objectives

■ Vision:

- A collaborative, patients' needs-driven, virtual, non-profit drug R&D organisation to develop new treatments against the most neglected communicable diseases

■ Primary Objectives:

- Deliver 6 - 8 new treatments by 2014
- Establish a robust portfolio for new generation of treatments



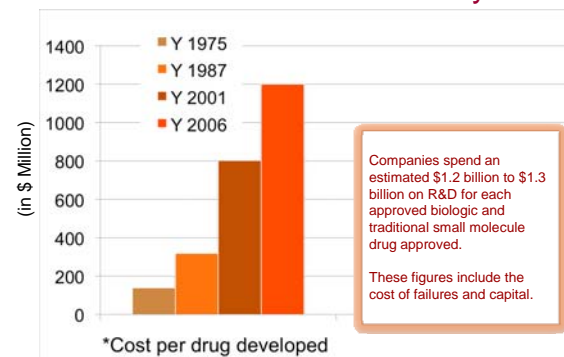
Malaria

Visceral Leishmaniasis (VL)

Sleeping Sickness (HAT)

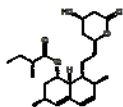
Chagas Disease

Average Cost to Develop One Drug – The Pharmaceutical Industry Data



*Source: PhRMA Pharmaceutical Industry Profiles 2007

High Cost for Drug R&D in Pharmaceutical Industry – Why?



- Use lipid-lowering statin class as an example
- Total statins market in 2009: > \$25 billion

Redundant & Competing

Products:

- Simvastatin
- Atorvastatin
- Pravastatin
- Rosuvastatin
- Fluvastatin
- Lovastatin
- Pitavastatin

High R&D Cost:

- Research:
 - Patentable yet me-too
 - Innovation → imitation
- Development:
 - Large trials
 - Minor differentiation
- Limited benefits to patients beyond initial success

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DNDi Model – Cost-effective Drug R&D through Successful Partnerships

Pharmas Competitive Model:

- Profit orientation – for market exclusivity
- Competition → repetition
- Experiences/knowledge learned individually

DNDi's Collaboration Model:

- Patients' need driven
- Partners offer complementary skills and assets
- Collaboration → synergy
- Experiences/knowledge shared

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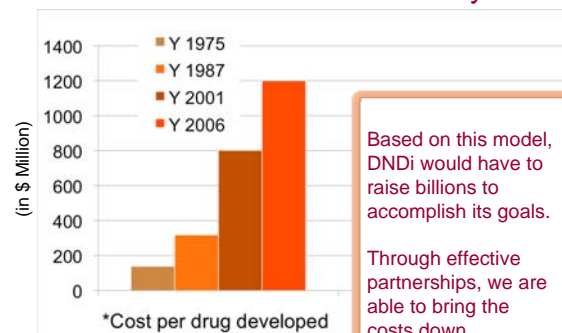
DNDi Model – Cost-effective Drug R&D through Successful Partnerships

DNDi's Collaboration Model:

- At early discovery stage:
 - Compounds come mainly from pharma partners
 - Biological characterizations are conducted at major parasitology research centers
- Clinical trials:
 - Collaborating partners include institutions and experts from disease-endemic countries, health authorities, and regulatory experts, and frequently MSF teams
- Registration and manufacturing:
 - Pharmaceutical partners provide essential capabilities to ensure sustainability

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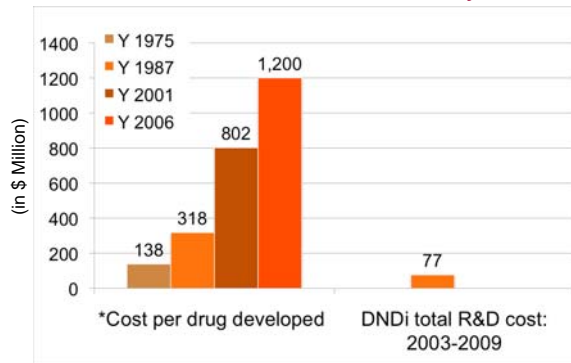
Based on this model, DNDi would have to raise billions to accomplish its goals.

Through effective partnerships, we are able to bring the costs down.

*Source: PhRMA Pharmaceutical Industry Profiles 2007

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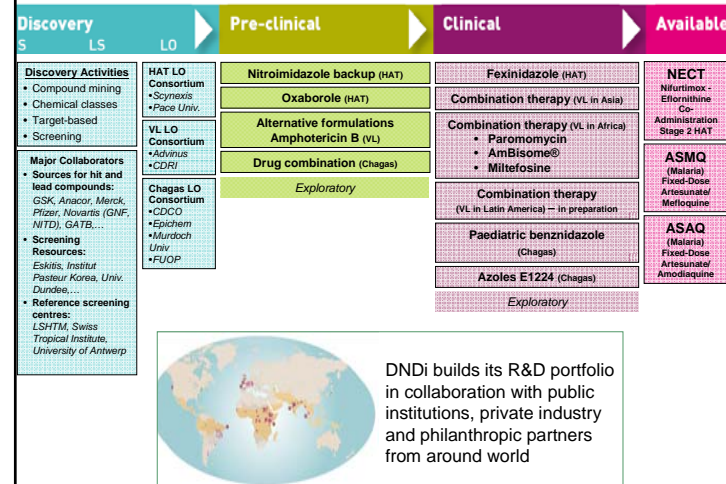
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Project Portfolio – 2010



6-Year Results

- 2 new malaria treatments developed
- 1 new sleeping sickness combination treatment
- Largest pipeline of new drugs and improved treatments for leishmaniasis, Chagas, and sleeping sickness

