Needs of Neglected Patients
Focus on India & Asia

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Control of Neglected Tropical Diseases

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**Figure 1.** The 10 Leading Causes of Life-Years Lost to Disability and Premature Death.
All Neglected Diseases need news tools to support elimination

**Large-scale interventions**
- Lymphatic filariasis
- Leprroty
- Onchocerciasis
- Schistosomiasis
- Helminthiasis
- Trachoma
- Yaws

**Case management and development of new tools**
- Human African trypanosomiasis
- Chagas disease
- Buruli ulcer
- Leishmaniasis
- Dengue

- Rapid impact interventions
- Improvement of access and development of innovative tools to support elimination

Focused interventions with existing tools and development of new tools to support elimination

Neglected Diseases:
- primarily affect developing countries
- lie outside the world market

Global Diseases

Most Neglected Diseases

Neglected Diseases

World pharmaceutical market
$837 bn in 2009*

*Source: IMS Health, 20.04.2010
A Fatal Imbalance

Tropical diseases (including malaria) and tuberculosis account for:

- 12% of the global disease burden
- Only 1.3% of new drugs developed

(1975-2004)

Tropical diseases: 18 new drugs (incl. 8 for malaria)

Tuberculosis: 3 new drugs

98.7%
1,535 new drugs for other diseases

1.3%
21 new drugs for neglected diseases

Source: Chirac P, Torreele E. Lancet. 2006 May 12; 1560-1561.
Countries Burdened with Neglected Tropical Diseases

WHO, 2010
Chagas Disease

- 100 million at risk in Latin America
  - Kills more people in region than malaria
  - Patient number growing in non-endemic, developed countries
- Transmitted by ‘kissing bug’, blood transfusion, organ transplantation, as congenitally or orally
- Majority of patients undiagnosed until late stage
- Needs:
  - An affordable, age-adapted, safe, and efficacious paediatric strength
  - A new drug for early chronic stage
Human African Trypanosomiasis or Sleeping Sickness

- 60 million at risk in sub-Saharan Africa
- Transmitted by the tsetse fly
- Difficult to diagnose; many patients go undiagnosed until late stage of disease
- Fatal if untreated
- Needs:
  - A safe, effective, and practical stage 2 treatment
  - A simple stage 1 treatment
Visceral Leishmaniasis (VL)

- 200 million at risk worldwide (in 70 countries)
- Transmitted by the sandflies
- Symptoms: prolonged fever, enlarged spleen & liver, substantial weight of loss, progressive anemia
- Fatal if untreated
- Current drugs: antimonials, Amphotericin B, AmBisome®, miltefosine, paromomycin

Needs:
- oral, safe, effective, low-cost and short-course treatment
## Neglected Diseases in the South-East Asia Region and India

<table>
<thead>
<tr>
<th>Diseases</th>
<th>South East Asia</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visceral leishmaniasis</td>
<td>60% of all cases worldwide are in Bangladesh, India and Nepal</td>
<td>17,000 cases</td>
</tr>
<tr>
<td>Lymphatic Filariasis</td>
<td>66% of all cases worldwide</td>
<td>240 millions received preventive treatment</td>
</tr>
<tr>
<td>Leprosy</td>
<td>67% of all cases worldwide</td>
<td>On the way to eradication</td>
</tr>
<tr>
<td>Yaws</td>
<td>7,000 new cases each year</td>
<td>Eradicated</td>
</tr>
<tr>
<td>Dengue</td>
<td>190,000 cases reported in 2010</td>
<td>9,400 cases reported in 2010</td>
</tr>
<tr>
<td>Malaria</td>
<td>8.5% of all cases worldwide</td>
<td>52.8% of the cases reported in SEA</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>35% of all cases worldwide</td>
<td>1.2 – 2.4 million cases</td>
</tr>
</tbody>
</table>
Reported Malaria Cases & Deaths in India (1995-2009)

Source: NVBDCP
Visceral Leishmaniasis in India

Increase in cases due to better surveillance & diagnosis. Major inputs provided for elimination by 2010.
Among the most neglected...

- Poorest of the poor
- Living in remote areas
- Socioeconomic burden on family and community
- Marginalised & voiceless patients
Neglected Diseases: Current Treatment Limitations

We Need Safe, Effective, Easy-to-Use Drugs

Ineffective (resistance)
Toxic
Expensive
Painful when delivered
Difficult to use
Not registered in endemic regions
Restricted by patents

Melarsoprol
Eflornithine
Responding to the Needs of Patients Suffering from Neglected Diseases…

- Malaria
- Visceral Leishmaniasis (VL)
- Sleeping Sickness (HAT)
- Chagas Disease