



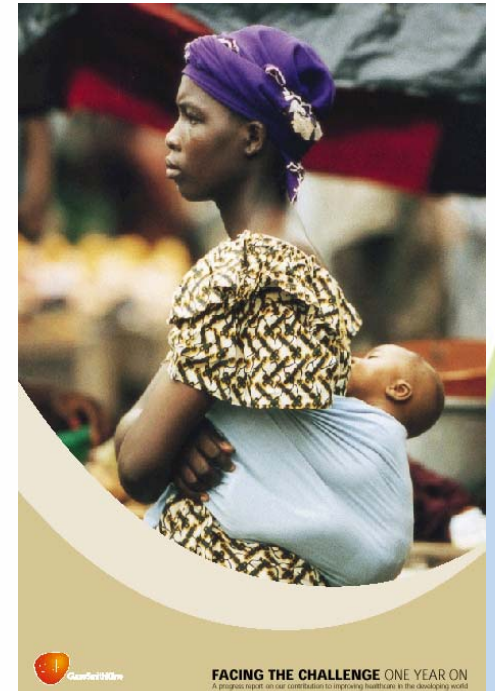
Effective collaboration between Academia and Drug Developers – What Academia can contribute to Pharmaceutical Industry

MSF Symposium. Gaps in TB Drug R&D

**Federico Gómez de las Heras
New York, January 12th 2007**

The GSK DDW R&D Initiative

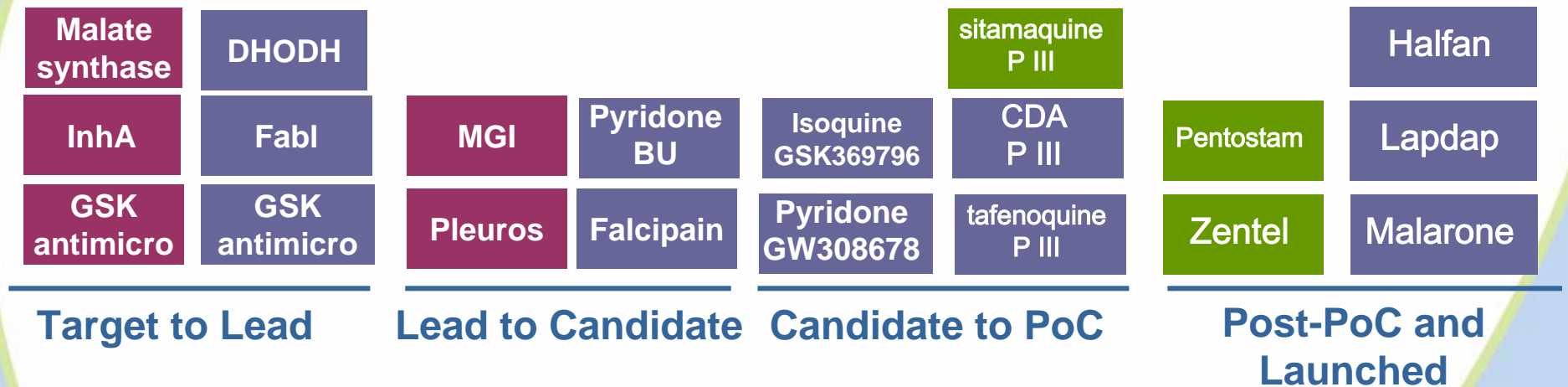
- ▶ Focused on R&D in malaria, TB and other 'most neglected diseases'.
- ▶ Focus on key partnerships.
- ▶ Prioritisation of work based on unmet medical need, not commercial benefit.
- ▶ DDW resources include
 - world-wide DDW development team.
 - dedicated discovery unit, Tres Cantos, Spain



GSK DDW Tres Cantos Group



GSK DDW Drug Discovery Pipeline Portfolio in 2006



Tres Cantos →

Tuberculosis

Malaria

Other DDW Neglected Diseases

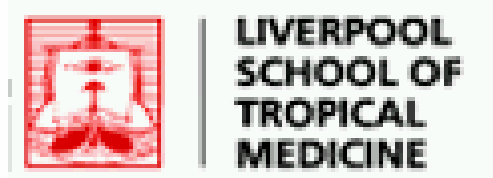
GSK-DDW Drug Discovery Partnerships

Major Partnerships



Medicines for Malaria Venture

Targets and projects



Tools and Know-How



Collaborations between Academia and Pharmaceutical Industry

A two ways Avenue

- In addition to DDW some partners have additional aims, needs and responsibilities.
- Acknowledgement for the contributions of each partner and stakeholder
- The presence of a PPP and/or a funding Foundation may help
 - Trusted partner
 - Disease expertise
 - Facilitator

What Academia can contribute to Pharmaceutical Industry (I) A two ways collaboration

New Scientific knowledge

- Better *in vitro* and *in vivo* drug discovery tools
- Better understanding of M.tb. Biology in persistent and latent stages
- Research tools to understand uptake/efflux of drugs
- Better understanding of the interaction of M.tb. with immune systems
- Crystallography of protein + drug + co-factors

What Academia can contribute to Pharmaceutical Industry (II) A two ways collaboration

Decrease/remove administrative hurdles

- Administrative/legal matters usually do not preclude achievement of an agreement. However, they can slow it
- Differentiation by Academia Technology Transfer Offices between “for profit” and “not for profit” activities of Pharma Industry
- “Not for profit” activities of Pharma are in some ways close to Academic research

Partnerships between Academia and Pharma Industry

Potential Issues

- **Collaboration in early phases of Drug Discovery (T2L):**
 - Transfer of assays usually need further development for HTS
 - Screening and transfer of compounds:
 - Legal. IP associated to collection compounds. Focused sets of compounds
 - Technical: 384 and 1536 well plates are the usual platform for HTS.
- **Lead optimisation (L2C):**
 - A drug is a compound with a unique balance of physico-chemical, biological and drug-like properties. Its discovery requires a very broad multidisciplinary team.
- **Dialog may be facilitated by the set up of Drug Discovery Centres by some Universities (Dundee, Penn, Harvard)**