



# **PANEL DISCUSSION ON CAPACITY BUILDING AND ENABLING ENVIRONMENT FOR HEALTH R&D IN AFRICA**

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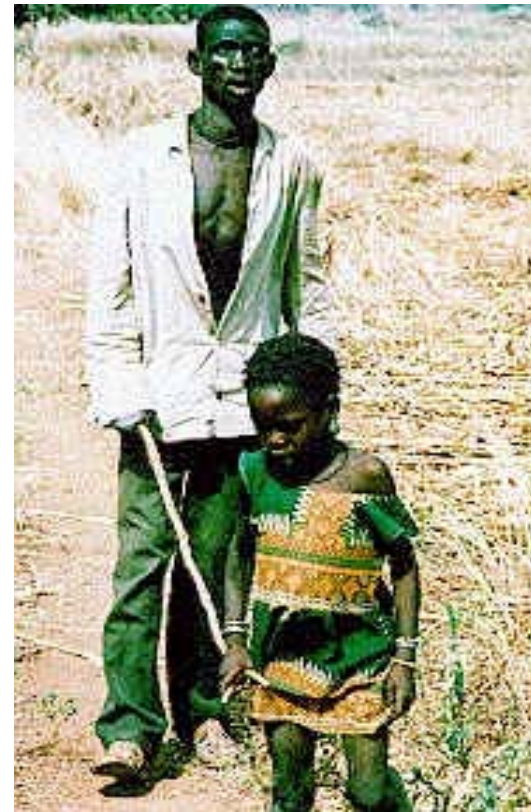
## Experiences to cite as examples of successful partnerships and among key stakeholders in health products R&D

- South-South Partnerships rarer because funding for such schemes also rare
- Could ANDI source for funds and create a project on intra-African mobility grant scheme? – expanding the present Egypt type scheme
- But more COE laboratories need to be updated to meet world class standards – another challenge for ANDI

## Partnerships with Bill and Melinda Gates Foundation macrofilaricide groups

### Partnership Through:

- Macrofilaricide Accelerator Programme (MacDa), UCSF
- New York Blood Centre, USA



## **Partnership with Merck KGaA for Onchocerciasis cure R&D – no cure currently exist**

- Merck KGaA will donate highly potent molecules (up to 10,000) for testing in well-established phenotypic assays and jird model in our laboratories
- Partnership is co-funded by The Wellcome Trust and Merck KGaA
- But this is largely a humanitarian, not-for-profit endeavor
- Partnership facilitated by BVGH/WIPO Re:Search
- ANDI indirectly initiated partnership

## University of British Columbia (UBC) and University of Buea (UB)

- UBC to help with small molecule natural product isolation and characterization for screening at UB, in vitro and in vivo for cure of onchocerciasis;
- UBC and UB to collaboratively further develop molecules to NTD drugs on royalty-free basis; but on royalty basis for use in higher income countries;
- Partnership facilitated by BVGH/WIPO Re:Search

# Other Partnerships through Bio Ventures for Global Health, BVGH (and WIPO Re:Search)

Leading to donation of Analytical HPLC machine, training, by MSD; and donation of expensive HPLC columns/software license by Agilent



## Crucial scientific and institutional skills and wider enabling environmental capacity requirements for health innovations

**Skills:** High-Tech skills are the most crucial

- synthetic and combinatorial chemistry,
  - structure elucidation,
  - LC-MS – preparative and analytical
  - HTP assay development,
  - PK/PD modeling and ADMET,
  - MBA/Entrepreneurship with pharmaceutical and/or biotech science background;
  - Patents filing and management;
  - high level medical equipment maintenance platforms in every country.
- Transferred by post-docs and middle age scientists on sabbaticals, especially on visits to state-of-the-art labs;

## Enabling environment:

- Infrastructure development at universities and research institutes
- investment in especially capital intensive pieces of equipment, such as HPLCs, Mass Spec, NMR
- Large markets to incentivize IP generation and commercialization and pharmaceutical companies to take up IP
- Classical pharmaceutical & Biotech companies dealing with R&D must show their faces – could even be branches of established ones
- **So Question: What can ANDI do to encourage start-ups involving R&D and manufacturing in Africa by established western pharmaceutical giants – to begin with?**



- Governments could initiate companies, initially for humanitarian reasons, since profit generation may not be evident at the beginning
- Market size for effective IP uptake critical and so pan-African product regulatory body badly needed and urgently
- Large markets must be created to compensate for the weakness of low purchasing power

**Maximizing innovative capabilities of the current human capital and long term strategies to create a “science conscious” society and the development of a critical mass of scientists for the continent**

- Post docs and sabbaticals should be swiftly followed by equipment and funding of local laboratories
- Prevent brain drain of highly trained graduates and encourage diaspora return – creation of good jobs through creation of pharmaceutical companies; well-equipped research institutes; expansion of the African pharmaceutical markets
- Local funding of research, providing seed capital or supplementing research grants, or enabling sustainability of laboratories will bring many back or prevent them from leaving

## 5. Incentives for R&D, IP management?

- In the modern world, the major incentive for R&D is IP generation for eventual commercialization.
- However, IP is important only when there is good market
- In Africa, population factor can be exploited – reason why a pan-African “FDA” for a pan-African market of a billion people could be a ground-breaking idea
- For now, the incentives for many, if not most African researchers are the quest to get published, get some medal or prize, get recognized, or get research allowances – not sufficient
- Western model of pharmaceutical IP generation requires very huge investment – thus, \$80,000 needed to cure Hepatitis C – not applicable in Africa
- Therefore, cost of R&D in Africa must be kept low to ensure affordability

**THANK YOU VERY MUCH FOR LISTENING**



**UNIVERSITY OF BUEA  
PICTURES**

