

ANDI Center of Excellence on antitrepatodal R& D Theodor Bilharz Research Institute (TBRI) ,EGYPT

*Center Director
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Objectives

Spearhead biomedical research

- ✓ **Achieve lead health products for treatment of NPD's specifically trematodal diseases**
- ✓ **Evaluation of newly introduced drugs against local trematodal parasite strains/species**



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Added value of designation as CoE/Achievements

- Publications in peer reviewed effective journals is the conventional approach to be introduced to the scientific community
- Envisioned among a critical mass of CoE “network of expertise” enhances your chances for future regional and international collaborative research :
- ✓ Increases vision of center and chances for international funding
- ✓ Avails all information regarding human power , facilities and equipments
- ✓ Implementation of a variety of complementary research activities
- ✓ Identified skills across the continent helps establishment of training and fellowships program ensuring build up or leverage of capacities
- ✓ Ensure sustained funding



Achievements/Collaborative Research

- SIDA sponsored project “**Development of new compounds with effect on schistosomiasis (bilharzia)**”. Sponsored by SIDA, 2009-2011.
 - **Seif el-Din SH, El-Lakkany NM, Mohamed MA, Hamed MM, Sterner O, Botros SS**. Potential effect of the medicinal plants *Calotropisprocera*, *Ficuselastica* and *Zingiberofficinale* against *Schistosoma mansoni* in mice. *Pharm Biol.*, 2013;52(2):144-150.
 - **William S, Saad, AM, Abdo AM, El-Refaey LA, Sabra AA, Ternner O, Botros S**. Potential Antischistosomal Activites of Some Egyptian Native plants using *Schistosoma mansoni* Worm killing . *Global Journal of Pharmacology* 2014;8(2): 237-244.
- Beneficiary of FP7–Health-2013 Innovation calls; one of the most competitive research programs. TBRI, in collaboration with European consortium involving universities and industry, is currently conducting an innovation project targeting neglected infectious diseases “**Parasite-specific cyclic nucleotide phosphodiesterase inhibitors to target Neglected Parasitic Diseases**”.
- In line with ANDI business plan “coordination between research and business sector” we are currently Establishing a technology Innovation Commercialization Office sponsored by Academy of Scientific Research and Technology, Egypt to promote TBRI effective engagement in research, innovation and technology transfer activities in addition to supporting the development of local IP policy and the implementation of innovation related activities to inform and interface with the appropriate bodies.



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key partnerships

- Under funding scheme FP7-CP-FP , Collaborative research project Parasite-specific cyclic nucleotide research phosphodiesterase inhibitors to target neglected parasitic diseases, TBRI, ANDI CoE on antitrepatodal R&D is partnering with 9 EU institutions: VU University Amsterdam, University of Glasgow, UK, IOTA Pharmaceuticals Ltd, UK, University of Kent, UK, Fraunhofer Institute, Hamburg, Germany ;De, Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain , University of Antwerp, Belgium , Oswaldo Cruz Institute, Brasil and TI Pharma
 - Delivering several PDE inhibitors as drug candidates
 - Establish a generic PDE drug discovery platform

- Through Swiss Academy for Medical Sciences & Velux Foundatio, successful partnership with “Swiss Tropical Institute , Basel”.
 - “ Safety &efficacy of oral artemether against Fasciola spp infections in Egyptian patients”.

- Organic Chemistry department, Lund University, Sweden
 - Plants were thought as a suitable source for candidates of therapeutically effective antischistosomal drugs “*Calotropis (C.)procera*, Ficus (F.) *elastica* and Zingiber (Z.) *officinale*”

- Successful partnerships with Pisa University, Europe for Business , Academy of Scientific Research and Technology, Egypt in a capacity building EU sponsored FP 7 project
 - Reinforce research and cooperative capacities of Theodor Bilharz research institute



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Challenges

- Availability of sustained funding
- A plan to improve the level of technical equipments by providing home care facilities for sustained maintenance.
- The need to build up capacity in areas with gaps.
- Material transfer across borders in Africa.
- Availability of bio banks.
- Availability of a repository of knowledge and tools for better make use of natural products in the discovery of health products.
- Build up capacities of IP Management and TT.



Way forward

- To achieve an effective building block “critical mass of expertise and resources” for health innovation, further classification of CoE is needed to effectively link/network centers with common interest but with skills in different research disciplines .
- Effective mobility program between centers with proven capacities to leverage available capacities and to scale up available resources
- Capacity building program (Specific and horizontal issues) by fostering exchange visits, training, coaching and execution of collaborative research projects
- Effective funding plan that could consider contribution in kind or in cash
- Alternative medicine as an affordable health tool should be considered as an expected ANDI outcome regarding discovery, development and delivery of health products .

