

# 8<sup>TH</sup> ASIAN BIOLOGICS AND BIOSIMILARS CONGRESS

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## Theodor Bilharz Research Institute therapeutic products and health tools

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### Therapeutic products

**Research and Development for production of high efficacy recombinant Human Growth Hormone.** (rhGH) is approved for the treatment of multiple human diseases resulting from hGH deficiency. rhGH has been produced in a system for production of recombinant proteins using E. coli and pTXB1 expression system, a single band at 22 kDa. The purified protein identity was verified using mass spectrometry (A).

**Construction of plasmid vector for protein expression in prokaryotic cells Called (pTBRI),** Innovative plasmid allows the user to cloning and expression of genes to be the first step in the production of therapeutic proteins. (B)

**Research and Development for production of high efficacy recombinant human IFN- $\alpha$ 2b** conjugated with multiply branched high molecular weight PEG polymer for treatment of HCV infected patients. The developed production process included feed batch fermentation, purification, solubilization and refolding of protein to its native 3ry structure and purification followed by Pegylation of the purified protein and purification of monopegylated IFN- $\alpha$ 2b.

**New formulation of praziquantel using nanotechnology** to achieve greater availability and higher efficiency against schistosomiasis

### Health tools

**A new design of intubating laryngeal mask airway (I-LMA)** in cases of difficult intubation. It contains a bundle of tubes with multiple holes in their walls to permit gas flow freely. (C)

**A device for anesthesia using distilled-water injector to get rid of carbon dioxide,** physically to be added as an alternative to the caustic soda lime used in regular anesthesia devices. (D)

**Manufacturing of vertical-flow strip nano-chip kit with graphine nanoparticles** and evaluating its role as a simple, rapid, low-cost, sensitive, specific, and user-friendly diagnostic tool for diagnosis of multiple parasitic diseases (e.g. schistosomiasis, fascioliasis, filariasis and malaria) in one kit. (E)

**A program for the diagnosis of parasites through the Internet based definition and diagnosis of parasites** using a different website supported all forms and types of parasites diagnosis. It assists all medical, scientific and educational frameworks in the diagnosis of parasites.

### Biography

The currently established TICO office early 2015 sponsored by the Academy of Scientific Research and Technology, Egypt at Theodor Bilharz Research Institute (TBRI), Is meant to support all innovative research activities with more inclusion into international research programs and involvement with industry. Our TICO office supports different activities including research support, Intellectual property rights management and technology transfer. We are determined to avoid bureaucracies that find innovation difficult or tend to see innovative possibilities particularly radical ones as disruptive and try to suppress. We aim to pay attention to views of users, frontline and managers to provide a stock of new ideas and identify needs and alternative possibilities. We are open to collaboration, national and international, aiming to broaden our networking activities, we encourage you explore our website, share us our activities involving workshops, and enhancing collaborative research and networking.

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