

How to overcome the gap between basic research and clinical trials?

Barraviera B (1)

(1) Editor-in chief of *The Journal of Venomous Animals and Toxins including Tropical Diseases*, Center for the Study of Venoms and Venomous Animals (CEVAP), São Paulo State University (UNESP – Univ Estadual Paulista), Botucatu, São Paulo State, Brazil.

Animal toxins are a major source of highly selective and efficient bioactive molecules that have led to the development of several new drugs. The broad biodiversity of venomous animals in Brazil is widely known, but the public research community dedicated to drug discovery and development, namely universities and research centers, has so far been confined to experimental laboratories, working in an isolated and fragmented fashion. As a result, basic research findings are published but rarely move forward.

The entire process of bringing a new medicine to the market includes discovery, preclinical research (*in vivo* and *in vitro*), clinical trials, and launch. This expensive and lengthy process takes about 10-15 years.

The creation of a Center for Bioprospecting and Clinical Trials would be a way to overcome the existing gap between basic research and clinical research. It would be an innovative project dedicated to prospecting bioactive molecules, conducting preclinical and clinical trials, culminating with technology transfer to both public and private sites, as well as accelerating the production of previously identified drug candidates currently at more advanced developmental stages, such as the snake venom-derived fibrin sealant developed by CEVAP.

Furthermore, the construction of pilot laboratories should be encouraged for the production of molecules in preclinical tests, particularly those against neglected tropical diseases. Only with this type of investment it

would be possible to perform clinical trials from phase I and ease the pain for people who suffer from those problems.

Finally, this is an idea ahead of its time (1). Such joint actions would have a direct impact on health systems throughout the globe, principally in those of tropical countries, where, in short periods of time, the new drugs would be distributed to save lives and reduce the current hospital burden.

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CONFLICTS OF INTEREST

There is no conflict.

CORRESPONDENCE TO

BENEDITO BARRAVIERA, CEVAP-UNESP, Caixa Postal 577, Fazenda Experimental Lageado, Rua José Barbosa de Barros, 1780, 18610-307, Botucatu, SP, Brasil. Phone: +55 3814 5446. Email: bbviera@jvat.org.br.

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