

Tropical Disease Research in the 90's

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The UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR) was established in 1975 with two interdependent objectives: 1) To develop new methods of preventing, diagnosing and treating selected tropical diseases, by methods that would be applicable, acceptable and affordable by developing countries, require minimal skills or supervision and be readily integrated into the health services of these countries; 2) To strengthen—through training in biomedical and social sciences and through support to institutions—the capacity of disease endemic countries to undertake the research required to develop these new and improved disease technologies.

TDR's activities are targeted towards six disease groups: malaria, schistosomiasis, filariasis (including onchocerciasis), the trypanosomiasis (African sleeping sickness and chagas disease), the leishmaniasis and leprosy.

TDR's activities span a broad range from basic or strategic research on the target diseases, the parasites and vectors, to operational or health systems research (applied field research) aimed at learning how disease control products can be utilized most effectively and efficiently. Between these two is product development, the process of transforming basic scientific knowledge into usable disease control products, including pre-clinical and clinical evaluations of these products, to the stage of registration or other form of licensing for utilization. Considerable emphasis has been placed on basic research, to improve knowledge about fundamental aspects of the diseases, such as incidence, parasite metabolism and mechanisms of immunity, vector life cycles and distribution and resistance of the disease organisms to drugs. From these efforts, as well as from general advances in biomedical research, came ideas for new vaccines, drugs, diagnostics and vector control methods—TDR's "products".

Many potential products supported by TDR are ready to move from primarily laboratory-based research to intensive development prior to large-scale field trials in the disease endemic countries. Because of the high cost and complexity of product development, TDR cannot undertake the simultaneous development of all or even most of the potential products which have emerged from the basic research activities. Clear priorities must be established and the development of the selected high priority products pursued on an urgent basis.

In the next decade, therefore, TDR's effectiveness will depend on achieving the right balance between its efforts in basic research, product development and applied field research. This includes the need to accelerate product development in priority areas and the need to capitalise rapidly on research breakthroughs in research areas such as molecular genetics and immunology.