

Recent Trends in Tropical Medicine Research at NIAID/NIH (USA)

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As we near the New Millennium, Tropical Medicine faces new opportunities and challenges. In the USA, there is a growing appreciation that Global Health affects everyone, that infectious diseases are “emerging and re-emerging”, and that the US is a leader in science and technology with global leadership responsibilities. This presentation will be divided into three parts: 1) identifying major challenges facing tropical medicine; 2) a discussion of general strategies which NIAID is developing to meet these challenges; and 3) a description of changes in the NIAID International Collaboration in Infectious Disease Research (ICIDR) designed to meet these challenges and take full advantage of scientific opportunities in a responsible fashion.

The challenges are created by the fact that the revolutions in immunology, molecular biology, and information systems have created a situation in which investment in basic sciences is paying dividends in the development of unprecedented numbers of new or improved diagnostic test, drugs, and vaccine candidates for infectious diseases. When industrialized and developing countries share infectious disease problems (e.g. acute respiratory infections, enteric infections), the industrialized countries invest heavily in research while developing countries bear the greater burden of disease. When a disease occurs predominately or exclusively in a developing country, industrialized countries often do not invest heavily in research and the endemic countries have limited resources and capacity to carry out research to develop treatment or prevention products for their unique disease conditions.

To overcome these problems, NIAID is developing a strategy to: 1) promote linkages between industrialized research institutions and counterparts in developing countries; 2) promoting collaboration which takes a broad, long-term perspective rather than focusing on the immediate research proposal; 3) involve scientists from developing countries in the basic research and discovery process leading to the discovery of new drugs and vaccines; 4) involving scientists from industrialized countries in field and community-based research; 5) promoting global partnerships and networks to work together on specific pathogens; 6) enhance the capacity of developing countries to carry out independent research on their priority endemic infectious diseases; and 7) generate support from development and lending agencies

and industry to develop, license, and produce regional diagnostic tests, drugs, and vaccines.

Over the years, NIAID, has developed programs which link US biomedical research institutions with partners in developing or resource poor countries to carry out collaborative research in tropical infectious diseases (ICIDR Program; HIV/AIDS (HIVNET Program); tuberculosis (Tuberculosis Research Center); and, most recently, Emerging and Re-Emerging Infectious Diseases. The presentation will use the recent modifications in the ICIDR Program to illustrate attempts to implement this strategy and tie the ICIDR participants into a concerted effort to identify new and re-emerging infectious diseases and mount a rapid response by the research community to new or unexpected public health problems.