

Preface

For more than 50 years, as part of the National Institutes of Health, the mission of the National Institute of Allergy and Infectious Diseases (NIAID) has been to conduct and support basic and applied research to better understand, treat, and prevent infectious, immunologic, and allergic diseases with the ultimate goal of improving the health of individuals in the United States and around the world.

In recent years, NIAID has responded to new challenges including emerging and re-emerging infectious diseases, potential bioterrorism threats, and an increase in pediatric asthma prevalence. A cornerstone of NIAID-supported research also continues to be the discovery and improvement of vaccines focused on an array of infectious diseases with global public health importance.

As part of its mission to foster biomedical discovery and to reduce the burden of human disease, NIH and NIAID in particular, are committed to encouraging the accelerated translation of biomedical discoveries into effective clinical care and public health practice throughout the world. In pursuit of this goal and its disease-specific scientific objectives, NIAID seeks to broaden research opportunities and collaborations involving scientists and institutions outside the United States.

During 2006, special emphasis was given to fostering scientific collaboration between U.S. researchers and investigators in Central and Eastern Europe, the Baltic Region, Russia, Ukraine, and other newly independent states that were formerly part of the Soviet Union. Although the countries of Central and Eastern Europe have strong traditions in biomedical research, scientists from this region have been less successful than their Western European colleagues in competing for NIAID funding and in forming partnerships with U.S. scientists. To help address this situation, NIAID convened a research conference in Opatija, Croatia (June 24–30, 2006) so that U.S. and European scientists could explore shared research interests with a focus on microbiology and infectious diseases, HIV/AIDS, and basic and clinical immunology.

In the field of microbiology and infectious diseases, major presentations at the conference focused on recent research developments in emerging and re-emerging infections (anthrax and other potential biological weapons, vector-borne infections, tuberculosis, and influenza). A number of presentations discussed ongoing research targeting the development of infectious disease prophylactics and therapeutics.

One of the most serious problems worldwide that confronts efforts to control and treat infectious diseases is the increasing resistance of some pathogens to the current armamentarium of drugs. Microorganisms belonging to all four classes of infectious agents (bacteria, viruses, parasites, and fungi) have developed resistance to previously effective chemotherapeutics, thereby becoming serious threats to individual well-being and international public health. One striking example of drug resistance is the emergence of extensively drug-resistant tuberculosis. Several conference presentations were therefore focused on drug resistance.

HIV/AIDS also remains a major infectious disease research priority and it was well addressed during the conference. Since the start of the HIV/AIDS pandemic in the early 1980s, nearly 20 million people worldwide have died of the disease. According to an estimate issued by the Joint United Nations Programme on HIV/AIDS (UNAIDS) by the end of 2003, about 38 million adults and children were living with HIV/AIDS and in many countries overall prevalence still is rising. Although much progress has been made in the treatment of AIDS and in understanding effective strategies to prevent HIV transmission, research is urgently needed on vaccines, microbicides, therapeutic agents, behavioral prevention strategies, and the management of HIV-related co-morbidities.

NIAID-funded research in basic and clinical immunology has led to significant discoveries that have guided the effective treatment of a host of immunological conditions. For example, “tolerance induction” research has enabled the selective blocking of inappropriate or destructive immune responses while leaving protective immune responses intact. Major presentations at

the conference discussed various topics in immunomodulation, autoimmunity, infections and immunity, and vaccine development.

Finally, two sessions at the research conference were designed to inform participants about NIAID's research funding mechanisms and the NIH application process.

With more than 100 participants, the 2006 NIAID Research Conference in Croatia clearly demonstrated NIAID's commitment to a cutting-edge scientific exchange to help generate more research cooperation. Following the meeting, numerous research collaborations have been explored and numerous joint research applications have been prepared and submitted.

NIAID is pleased to have supported this important and unusual meeting and it welcomes publication of the important scientific findings presented there. The future of science lies in cooperation across national borders. Therefore, it is particularly rewarding to see research partnerships grow between scientists from countries previously characterized by a lack of communication and mutual understanding. With a strong research base, talented investigators in the United States and abroad, and the availability of powerful new research tools, NIAID will continue to support scientists in the forefront of basic and applied infectious and immune-mediated disease research.

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