National Institute of Allergy and Infectious Diseases, NIH

Volume 3

Intramural Research
Infectious Disease

Vassil St. Georgiev

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Volume 3

Intramural Research

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Humana Press
The huge biomedical research enterprise that today is the National Institutes of Health traces its roots to 1887 and a small bacteriology lab on Staten Island. As they had been for centuries, infectious diseases were still the scourge of public health, and this lab marked the federal government’s first efforts to study contagious diseases, hygiene, and public health. By the end of the 1930s, the lab had become the National Institute of Health and had relocated about 10 miles from the White House to Bethesda, Maryland. Since then, NIH has grown and been shaped by new health threats and new opportunities to address them. Today, NIH’s 27 institutes, organized around threats (infections, cancer), opportunities (genomics), and anatomy (heart, lung, blood) conduct and support research in every area of biomedicine. In addition to Bethesda, many of these institutes have government laboratories in other regions of the USA and around the world.

These volumes represent the work of investigators in one of NIH’s largest institutes, the National Institute of Allergy and Infectious Diseases (NIAID). As the infectious diseases institute, we claim that very first NIH lab as our own. Dr. Joseph Kinyoun directed the lab, then called the Hygienic Laboratory, from 1887 to 1899. His research in bacteriology was the cornerstone for the NIAID programs today.

While the vast majority of NIAID’s funding is used to support extramural research, approximately 10% of the budget supports NIAID’s own scientists, the heirs of Dr. Kinyoun and so many others whose research informs our work today. Today NIAID’s intramural researchers conduct basic, translational, and clinical research covering a broad spectrum of immunology, allergy, and infectious diseases. Many NIAID researchers study the causative agents, vectors, and pathogenesis of infectious diseases in human and animal hosts. Our immunologists’ interests range from the basic mechanisms of immune cell signaling to antigen processing and vaccine development. NIAID clinician-researchers study AIDS, primary immune deficiencies, asthma and allergy, and many other diseases.

The accomplishments of NIAID researchers are numerous. For example, they discovered the Lyme disease bacterium, the Norwalk virus responsible for epidemic gastrointestinal disease, and the immunoregulatory cytokine, IL-4. They developed vaccines for hepatitis A and E and rotavirus, and are currently conducting more than 20 vaccine clinical trials. They defined the autoimmune lymphoproliferative syndrome and discovered its underlying genetic basis, discovered the mutations responsible for Job’s syndrome, and developed therapeutic strategies for severe combined immunodeficiency and chronic granulomatous disease. And for 25 years, NIAID researchers have made many important discoveries that have elucidated the pathogenesis of AIDS.

Over the years, NIAID scientists have increasingly focused on research that takes advantage of the special attributes of the NIH intramural program. Most important among these is the stable, long-term funding that allows us to tackle the most difficult problems—for example, how to eradicate HIV from the body, safely deliver a therapeutic gene, or develop a malaria vaccine.

I am honored to lead the men and women whose work is represented here. And I know that the intractable problems of today will yield to their discoveries of tomorrow.

June 19, 2009

Kathryn C. Zoon
Director, NAID Division of International Research

Foreword
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