National Institute of Allergy and Infectious Diseases

Update

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10 NEW AIDS DRUG DISCOVERY GROUPS AWARDED

The National Institute of Allergy and Infectious Diseases (NIAID) has awarded $6.4 million for 10 new National Cooperative Drug Discovery Groups for AIDS (NCDDG-AIDS) bringing to 28 the total number of groups funded. "The Drug Discovery Groups have already shown extraordinary promise in providing a firm scientific framework for targeted drug discovery for AIDS. Expanding the program will ensure continued contributions to expedite discovery of drugs effective against AIDS," said Dr. Anthony S. Fauci, NIAID Director.

The NCDDG-AIDS program began in 1986 with five research groups, and added 13 groups in 1987. Each group is funded for 3 or 5 years. NCDDG-AIDS funding for fiscal year 1988 was $18.2 million. Each group is composed of three to seven senior scientists from academia, industry, or government, who are experts from diverse scientific disciplines. Members of each group apply their research skills toward the discovery, creation, and development of new and better therapies for AIDS.

Three drugs have already been discovered and developed through the program. A genetically engineered form of soluble CD4 (the human cell surface receptor to which the AIDS virus attaches to gain entry to a cell) was developed by the NCDDG directed by Dr. Richard A. Fisher, of Biogen, Inc,. Biogen's CD4 entered clinical trials earlier this year. Two potentially promising drugs, D4T and AZDU, are expected to enter clinical trials in early 1989. Both were discovered by the NCDDG headed by Dr. Andre J. Nahmias, Emory University, Atlanta. D4T, a nucleoside analog similar to AZT, is being developed by Bristol-Myers, headquartered in New York City. AZDU (also called CS-87), another nucleoside analog, is being developed by Triton Biosciences, of Alameda, California. Many other drugs are in earlier stages of preclinical evaluation and testing.

Each Drug Discovery Group has independently chosen a rational drug design strategy and is also doing random drug screening. Because of their independent approaches, directions taken by the groups are extremely diverse. Some groups focus on deciphering the AIDS virus structure and mechanisms of replication to design drugs that interfere with the building of new viral particles. Other groups test the ability of natural substances--such as from trees or marine organisms--to suppress the AIDS virus or to stimulate the immune system. Still others make chemical compounds synthetically that may stop the virus or stimulate the body's defenses to fight the infection. Projects underway also include:

- o targeting drugs to infected cells
- o developing immunotherapies to boost a faltering immune system
- o designing new biochemical pre-screening assays useful in early stages of drug screening to identify potentially important compounds, and
- o developing and utilizing animal models to test drugs against AIDS.

These different approaches all seek ways to prevent the AIDS virus from causing disease.

The principal investigator of each NCDDG determines the composition of his or her group, which in turn determines its own research objectives and maintains all patent rights to the therapies developed. NIAID assists or facilitates---but does not direct--efforts when appropriate and provides a formalized framework for collaboration. NIAID also facilitates the progress of drugs into clinical trials in human volunteers. NIAID supports 45 AIDS Clinical Trials Units (including 13 pediatric units) around the country.

Because of the early success of the NCDDG-AIDS Program in bringing together investigators from diverse fields in productive collaborations, a similar program to find new or improved therapies to treat the opportunistic infections associated with AIDS will be launched early in 1989.

Following is a list of the NCDDG principal investigators and institutions **(new groups are highlighted)**:

o Donald Armstrong, M.D., Memorial Sloan-Kettering Cancer Center, New York, New York
o Dani Bolognesi, Ph.D., Duke University Medical Center, Durham, North Carolina
o David W. Boykin, Ph.D., Georgia State University, Atlanta, Georgia
o Stephen R. Byrn, Ph.D., Purdue University, West Lafayette, Indiana
o Michael A. Chirigos, Ph.D., U.S. Army Medical Research and Development Command, Fort Detrick, Maryland
o Miles W. Cloyd, Ph.D., University of Texas Medical Branch, Galveston, Texas
o John C. Drach, Ph.D., University of Michigan, Ann Arbor, Michigan
o Edgar G. Engleman, M.D., Stanford University School of Medicine, Stanford, California
o John W. Erickson, Ph.D., Abbott Laboratories, Abbott Park, Illinois
o Richard A. Fisher, Ph.D., Biogen, Inc., Cambridge, Massachusetts
o Jeffrey I. Gordon, M.D., Washington University, St. Louis, Missouri
o William A. Haseltine, M.D., Dana-Farber Cancer Institute, Boston, Massachusetts
o Ming-Chu Hsu, Ph.D., Hoffmann-La Roche Inc., Nutley, New Jersey
o A. Ganju-Krishan, Ph.D., University of Miami School of Medicine, Miami, Florida
o Ti Li Loo, Ph.D., The George Washington University School of Medicine, Washington, D.C.
o Tak W. Mak, Ph.D., Ontario Cancer Institute, Toronto, Ontario, Canada
o Garland R. Marshall, Ph.D., Washington University, St. Louis, Missouri
o Andre J. Nahmias, M.D., Emory University School of Medicine, Atlanta, Georgia
o Meihan Nonoyama, Ph.D., Showa University Research Institute for Biomedicine, St. Petersburg, Florida
o Ellis L. Reinherz, M.D., Dana-Farber Cancer Institute, Boston, Massachusetts
o David K. Rekosh, Ph.D., State University of New York at Buffalo School of Medicine, Buffalo, New York
o Michael G. Rossman, Ph.D., Purdue University, West Lafayette, Indiana
o Roy T. Steigbigel, M.D., State University of New York School of Medicine at Stony Brook, Stony Brook, New York
o Joseph G. Turcotte, Ph.D., University of Rhode Island, Kingston, Rhode Island
o Harold E. Varmus, M.D., University of California at San Francisco, San Francisco, California
o Richard J. Whitley, M.D., University of Alabama at Birmingham School of Medicine, Birmingham, Alabama
o John A. Zaia, M.D., City of Hope National Medical Center, Duarte, California
o Paul C. Zamecnik, M.D., Worcester Foundation for Experimental Biology, Shrewsbury, Massachusetts

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