

LEGISLATIVE CHRONOLOGY

NOV. 1, 1948

The National
Microbiological
Institute was
established under
authority of section
202 of the Public
Health Service Act,
as implemented by
General Circular No.
55, Organization
Order No. 20, dated
October 8, 1948.

DEC. 29, 1955

NIAID was established (replacing the National Microbiological Institute) under authority of the Omnibus Medical Research Act (Public Law 81-692, 64 Stat. L. 443), as implemented by a Public Health Service Briefing Memorandum of November 4, 1955, from the Surgeon General to the Secretary of Health, Education, and Welfare.

NOV. 4, 1988

NIAID was provided with additional authorities for AIDS research under Title II of the Health Omnibus Programs Extension of 1988 (HOPE legislation) (Public Law 100-607), the first major law to address AIDS research, information, education, and prevention.

AUG. 14, 1991

The Public Health Service Act was amended by Public Law 102-96, the Terry Beirn Community-**Based AIDS** Research Initiative Act of 1991, which reauthorized NIAID's **Community Programs** for Clinical Research on AIDS (CPCRA). CPCRA was renamed in honor of Mr. Beirn (an AIDS activist and congressional staffer who died in 1991) and was reauthorized for an additional 5 years.

JUNE 10, 1993

The Public Health

Service Act was amended by Public Law 103-43, the National Institutes of **Health Revitalization** Act of 1993. This comprehensive legislation required NIAID to include research on tropical diseases in its mission statement and directs the Secretary, U.S. Department of Health and Human Services. to ensure that individuals with expertise in chronic fatigue syndrome or neuromuscular diseases are appointed to appropriate NIH advisory committees.

DEC. 14, 1993

The Preventive **Health Amendments** of 1993 were passed, which included provisions requiring the Director, NIAID, to conduct or support research and research training regarding the cause, early detection, prevention, and treatment of tuberculosis. (The Institute already had authority to conduct such research under its authorities in Title IV, Public Health Service Act.)

NOV. 29, 1999

The fiscal year 2000 Appropriations Act (Public Law 106-113) established the NIH Challenge Grants program to promote ioint ventures between the NIH and the biotechnology, pharmaceutical, and medical device industries. A onetime funding level of \$20 million was provided within the Public Health and **Social Services Emergency Fund.**

OCT. 17, 2000

The Children's Health Act (Public Law 106-310) required the Directors of NIAID and the National Institute of Arthritis and Musculoskeletal and Skin Diseases to expand and intensify the activities of their Institutes with respect to research and related activities concerning juvenile arthritis and related conditions.

NOV. 13, 2000

The Public Health
Improvement Act
(Public Law 106-505)
authorized the NIAID
Director to establish
a program of clinical
research and
training awards for
sexually transmitted
infections.

Previous Directors

Victor H. Haas, M.D., 1948–1957 Justin M. Andrews, Sc.D., 1957–1964 Dorland J. Davis, M.D., D.P.H., 1964–1975 Richard M. Krause, M.D., 1975–1984

TECHNOLOGY TRANSFER

Technology transfer in Federal laboratories facilitates the dissemination of new technologies and research materials developed by Government scientists. This technology transfer fuels further innovation and commercialization by the extramural research and development community, ultimately resulting in an improvement in the public health and an increase in the competitiveness of U.S. industry. Federal legislation mandates and defines the Government's technology transfer activities. The key pieces of legislation are the Federal Technology Transfer Act of 1986 and the National Technology Transfer and Advancement Act of 1995.

The NIAID Office of Technology Development (OTD) accomplishes technology transfer by facilitating the transfer of significant research advances and resources to the broader scientific community and the development of collaborative relationships between NIAID scientists, industry, and academia. NIAID uses various mechanisms to accomplish these ends, including Material Transfer Agreements (MTAs), Cooperative Research and Development Agreements (CRADAs), Materials-CRADAs (M-CRADAs), Confidential Disclosure Agreements (CDAs), Clinical Trial Agreements (CTAs), Drug Screening Agreements (DSAs), and, through the NIH Office of Technology Transfer (OTT), the patenting of inventions and the negotiation of various license agreements.

NIAID scientists report inventions to OTD by submitting Employee Invention Reports (EIRs). The EIRs are reviewed by OTD and, with the assistance of the NIAID Technology Evaluation Advisory Committee (TEAC), are evaluated for the purpose of filing domestic and foreign patent applications. In fiscal year (FY) 2003, TEAC reviewed 27 intramural EIRs and recommended that a patent application be filed on 22 of them. NIAID currently has 342 active U.S. patent properties, including 168 issued patents and 174 pending patent applications.

NIAID had a total of 245 active license agreements in FY 2003 for both patented inventions and biological materials. These licenses generated about \$10.3 million in royalty income, which was first used to pay NIAID inventors their share according to Federal law and NIH policy. The Institute also distributed royalty income to intramural laboratories to support research projects and equipment acquisition that otherwise would not have been accomplished with appropriated funds. The remaining royalties were used to pay OTD's entire operating budget, including patent prosecution fees, OTD staff salaries, associated office expenses, and overhead charged by OTT.

In FY 2003, a total of 192 MTAs, 12 CTAs, 59 CDAs, 5 CRADAs, 14 M-CRADAs, and 21 other agreements, not including the screening agreement related to severe acute respiratory syndrome (SARS) discussed below, were executed and negotiated by OTD. NIAID extramural divisions referred technology transfer issues to OTD on 5 contracts, and OTD NIAID scientists performed research under 33 CRADAs and 40 M-CRADAs in FY 2003. The following table provides a history of NIAID's patent, license, and CRADA activities.

NIAID Technology Transfer Activities

Fiscal Year	Pending Patents	Issued Patents	Licenses in Effect	Active CRADAs
1994	85	65	84	29
1995	96	71	101	31
1996	95	84	120	42
1997	128	91	131	71
1998	154	83	155	95
1999	169	94	195	74
2000	229	100	196	86
2001	194	125	190	93
2002	147	139	197	85
2003	174	168	245	71

Technology Transfer Highlights

OTD supported NIAID's response to SARS by drafting an agreement for use in a collaboration between the NIAID Division of Microbiology and Infectious Diseases (DMID) and the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) to provide resources to screen possible anti-SARS proprietary compounds. This screening agreement has been provided to 190 companies, of which more than 40 requested that the screening agreement be renegotiated by OTD. In addition to this screening agreement, OTD negotiated and completed at least 13 other SARS-related agreements.

In FY 2003, OTD negotiated or facilitated the following public-private partnerships.

Evaluation of Adenoviral Encoding Proteins Associated With SARS (GenVec)

Recombinant adenoviral vectors have been widely investigated in recent years as a gene delivery system for gene therapy and vaccination. Recombinant adenoviral vectors offer a promising strategy for development of a candidate SARS vaccine that could be effective

in humans. Investigators at the Vaccine Research Center (VRC), NIAID, the NIH, and GenVec, Inc. (GenVec) will collaborate to evaluate and develop adenoviral vectors expressing modified SARS genes. The collaboration will evaluate adenovectors for potential application, such as a SARS preventive vaccine. VRC will provide GenVec with several modified SARS genes, and GenVec will construct and produce recombinant adenovectors that express SARS genes, using the GenVec adenovector and cell line system. The overall goal is to provide VRC with advanced vector technologies suitable for rapid advancement toward clinical trial.

Analysis of the Immune Response to Hepatitis C Virus (Innogenetics)

Under this CRADA, investigators in the Hepatitis Viruses Section, Laboratory of Infectious Diseases, Division of Intramural Research at NIAID, and Innogenetics will perform basic and applied studies of the immune response to hepatitis C virus (HCV) in nonhuman primates in order to determine how to modify the host response to HCV for therapeutic and immunoprophylactic benefit.

Use of Quantum Dots for Improved Cellular Classification in Flow Cytometry (Quantum Dot Corporation)

Under this CRADA, investigators in the Immunology and Flow Cytometry Core of NIAID's VRC and Quantum Dot Corporation will aim to adapt quantum dots for use in detailed characterization of the function and types of immune cells that respond to pathogens and vaccines. The quantum dots are semiconductor nanocrystals with unique fluorescent properties that may significantly aid in the identification of specific properties of these cells using flow cytometry.

Oligonucleotide Control Sets for Microarray Applications (Invitrogen Corporation)

The purpose of this CRADA is to develop oligonucleotide sets of standards for use as a universal reference for interpreting and reporting microarray and other expression investigative research tools. The outcome of this project should result in two complementary standard sets that can be used for researchers: (1) oligonucleotide probe sets for use by facilities that produce custom or spotted DNA microarrays, and (2) premixed cocktails of target RNA standards and hybridization controls for researchers who perform the sample labeling and hybridization of

microarrays. It is envisioned that these standards would benefit public health by facilitating the use of microarrays in biomedical research areas, including infectious diseases and genetic research as well as other research fields.

A Study of the Mechanism of Action of the Anti-HIV Compound, PA-457 (Panacos, Inc.)

NIAID and Panacos Pharmaceuticals, Inc., are collaborating under this CRADA to study the HIV inhibitory mechanism of action of Panacos Pharmaceuticals' proprietary compound PA-457. The parties will employ state-of-the-art biochemical and structural biology techniques to carry out their research program.

New CRADAs

During FY 2003, NIAID scientists entered into the following five new CRADAs:

Collaborator

GenVec, Inc.

Investigator

Phillip Gomez III, Ph.D., M.B.A. Vaccine Research Center

Title

Evaluation of Adenoviral Encoding Proteins Associated With SARS

Collaborator

Innogenetics

Investigator

Robert H. Purcell, M.D. Laboratory of Infectious Diseases

Title

Analysis of the Immune Response to Hepatitis C Virus

Collaborator

Invitrogen Corp.

Investigators

Thomas Kindt, Ph.D. Michael Wilson, Ph.D. Research Technologies Branch, Division of Intramural Research

Title

Oligonucleotide Control Sets for Microarray Applications

Panacos, Inc.

Investigator

Eric Freed, Ph.D.

Laboratory of Molecular Microbiology

Title

A Study of the Mechanism of Action of the Anti-HIV Compound, PA-457

Collaborator

Quantum Dot Corp.

Investigator

Mario Roederer, Ph.D. Vaccine Research Center

Title

Use of Quantum Dots for Improved Cellular Classification in Flow Cytometry

CRADAs in Effect, FY 2003

Collaborator

Achillion Pharmaceuticals

Investigator

John Inman, Ph.D.

Laboratory of Immunology

Title

Development of Optimized Inhibitors of Protein Zinc Finger Domains

Collaborator

American Cyanamid

Investigator

Brian Murphy, M.D.

Laboratory of Infectious Diseases

Title

Development of Safe and Effective Live Attenuated Vaccines for Respiratory Syncytial Virus Subgroups A and B and Parainfluenza Viruses Type 1, 2, and 3

Collaborator

Biospace.com

Investigator

Laurence Wolfe, Ph.D.

Office of Technology and Information Systems

Title

Development of an Electronic Procurement System for Commodity Identification, Product and Service Acquisition, and Budget Tracking

Collaborator

Chiron

Investigator

H. Clifford Lane, M.D. Laboratory of Immunoregulation

Title

Research and Development of IL-2 as a Treatment for HIV Infection

Ciphergen Biosystems

Investigators

John Kehrl, M.D.

Tae-Wook Chun, Ph.D.

Laboratory of Immunoregulation

Title

Identification and Characterization of Novel Non-Cytolytic Antiviral Factors Derived From CD8+ T Cells of HIV-Infected Individuals Using the ProteinChip® System

Collaborator

Connaught Technology Corp.

Investigator

Warren Strober, M.D. Laboratory of Clinical Investigation

Title

Development of Vectored Vaccines and Therapeutics for the Prevention and Treatment of AIDS

Collaborator

Crucell

Investigator

Phillip Gomez III, Ph.D., M.B.A. Vaccine Research Center

Title

Development of an Improved Recombinant Adenovirus Vector for Vaccination Against the Ebola Virus

Collaborator

Genetics Institute

Investigator

Ethan Shevach, M.D. Laboratory of Immunology

Title

Analysis of Gene Expression in Immunoregulatory T Cells that Co-Express the CD4 and CD25 Surface Markers

Collaborator

Genetics Institute

Investigators

Stephen Straus, M.D.
Warren Strober, M.D.
Peter Mannon, M.D.
Ivan Fuss, M.D.
Laboratory of Clinical Investigation

Title

A Randomized, Double-Blind, Placebo-Controlled, Dose-Finding, Safety Study of Two Parallel Dose Levels of Subcutaneously Administered Human Monoclonal Antibody to Interleukin-12 (J695) in Patients With Active Crohn's Disease

Collaborator

Genetics Institute

Investigator

Thomas Wynn, Ph.D. Laboratory of Parasitic Disease

Title

Development of IL-13 Antagonism as a Treatment for Fibrosis in Schistosomiasis

GenVec

Investigator

Phillip Gomez III, Ph.D., M.B.A. Vaccine Research Center

Title

Evaluation of Adenoviral Encoding Proteins Associated With SARS

Collaborator

GenVec

Investigator

Phillip Gomez III, Ph.D., M.B.A. Vaccine Research Center

Title

Evaluation of Adenoviral Vectors Encoding HIV-1 Proteins

Collaborator

Glaxo Research & Development

Investigator

Clifton Barry III, Ph.D. Laboratory of Host Defenses

Title

Development of New Drugs for the Treatment of Tuberculosis

Collaborator

GlaxoSmithKline

Investigator

David Klein, Ph.D.

Division of Microbiology and
Infectious Diseases

Title

Adult Pertussis Vaccine

Collaborator

GlaxoSmithKline

Investigators

Holli Hamilton, M.D., M.P.H.Barbara Savarese, R.N.Division of Microbiology and Infectious Diseases

Title

A Double-Blind, Randomized, Controlled Phase III Study to Assess the Prophylactic Efficacy of rgD/Alum/MPL Vaccine in the Prevention of Genital Herpes Disease in Young Sexually Active Women

Collaborator

GlaxoSmithKline

Investigator

Robert H. Purcell, M.D. Laboratory of Infectious Diseases

Title

Hepatitis C Vaccine

Collaborator

GlaxoSmithKline

Investigator

Robert H. Purcell, M.D. Laboratory of Infectious Diseases

Title

Hepatitis E Vaccine

Collaborator

Ichor Medical Systems

Investigator

Phillip Gomez III, Ph.D., M.B.A. Vaccine Research Center

Title

Evaluation of Electroporation-Mediated Delivery of an HIV DNA Vaccine

Innogenetics

Investigator

Robert H. Purcell, M.D.

Laboratory of Infectious Diseases

Title

Analysis of the Immune Response to Hepatitis C Virus

Collaborator

Invitrogen Corp.

Investigators

Thomas Kindt, Ph.D.

Michael Wilson, Ph.D.

Research Technologies Branch,

Division of Intramural Research

Title

Oligonucleotide Control Sets for Microarray Applications

Collaborator

Lederle-Praxis

Biologicals Division

American Cyanamid

Investigator

Peter Collins, Ph.D.

Laboratory of Infectious Diseases

Title

Production of Live Attenuated RSV and PIV Vaccine Viruses From cDNA

Collaborator

Maxygen

Investigator

Louis Miller, M.D.

Laboratory of Parasitic Disease

Title

Novel, Polyspecific Malaria Vaccine Development Based on PfEMP1 Using Molecular BreedingTM Directed Molecular Evolution Technologies

Collaborator

MedImmune Vaccines (formerly Aviron)

Investigator

Ann Ginsberg, M.D., Ph.D.
Division of Microbiology and
Infectious Diseases

Title

Development of a Live Attenuated Cold-Adapted Influenza Vaccine

Collaborator

Merck

Investigator

Gary Nabel, M.D., Ph.D. Vaccine Research Center

Title

Development of an Adenoviral-Based HIV Vaccine

Merck

Investigator

Stephen Straus, M.D. Laboratory of Clinical Investigation

Title

A Double-Blind, Placebo-Controlled Study of the Efficacy of Live Attenuated Oka/Merck Varicella Zoster Vaccine in Reducing the Incidence and/or Severity of Shingles in Adults

Collaborator

Merial

Investigator

José Ribeiro, M.D., Ph.D. Laboratory of Parasitic Disease

Title

Evaluation of DNA Vaccines Encoding Sand Fly Salivary Proteins as Candidates to Control Leishmania Infantum Infection in Dogs

Collaborator

Nexell Therapeutics

Investigators

Harry L. Malech, M.D. Mitchell Horwitz, M.D. Laboratory of Host Defenses

Title

Study of Low Intensity Preparative Regimen Followed by HLA-Matched Transplantation for Chronic Disease

Collaborator

Novartis

Investigator

Marshall Plaut, M.D. Division of Allergy, Immunology, and Transplantation

Title

A Double-Blind, Placebo-Controlled Study of the Efficiency of E25 anti-IgE Reducing Asthma Symptoms in Inner-City Children

Collaborator

Novavax

Investigator

Louis Miller, M.D. Laboratory of Parasitic Disease

Title

Merozoite Surface Protein 1 Expressed in Insect Cells: Process Development, Preclinical and Initial Clinical Evaluation

Collaborator

Osel

Investigator

Edward Berger, Ph.D. Laboratory of Viral Diseases

Title

SCD4-17b Expressed by/on Lactobacillus as an Anti-HIV Topical Microbicide

Panacos

Investigator

Eric Freed, Ph.D. Laboratory of Molecular Microbiology

Title

A Study of the Mechanism of Action of the Anti-HIV Compound, PA-457

Collaborator

Quantum Dot Corporation

Investigator

Mario Roederer, Ph.D. Vaccine Research Center

Title

Use of Quantum Dots for Improved Cellular Classification in Flow Cytometry

Collaborator

Wyeth-Lederle Vaccines, American Home Products

Investigator

Pamela McInnes, Ph.D.
Division of Microbiology and
Infectious Diseases

Title

Preventing Childhood Mortality—An Efficacy Trial of a Pneumococcal Conjugate Vaccine in Upper and Central River Divisions, The Gambia

NIH EXTRAMURAL FUNDING MECHANISMS USED BY NIAID

Fellowship Programs

- F31 Predoctoral Individual National Research Service Award (NRSA)—provides predoctoral individuals with supervised research training in specified health and health-related areas leading toward the research degree (e.g., Ph.D.).
- **F32** Postdoctoral Individual NRSA—provides postdoctoral research training to individuals to broaden their scientific background and extend their potential for research in specified health-related areas.
- F33 NRSA for Senior Fellows—provides opportunities for experienced scientists to make major changes in the direction of their research careers, to broaden their scientific background, or to acquire new research capabilities.
- **F35** Intramural NRSA Individual Postdoctoral Program—supports a postdoctoral trainee in the NIH intramural program.

Research Career Programs

- **K02** Independent Scientist Award—provides support for newly independent scientists who can demonstrate the need for a period of intensive research focus as a means of enhancing their research careers.
- K08 Clinical Investigator Award—provides the opportunity for promising medical scientists (with demonstrated aptitude to develop into independent investigators) or faculty members who will pursue research aspects of categorical areas applicable to the awarding unit, and aids

- in filling the important academic faculty gap in these shortage areas within health professional institutions of the country.
- K22 Career Transition Award—provides support to outstanding newly trained basic or clinical investigators to develop their independent research skills through a two-phase program: an initial period involving an intramural appointment of the NIH and a final period of support at an extramural institution. The award is intended to facilitate the establishment of a record of independent research by the investigator to sustain or promote a successful research career.
- K23 Mentored Patient-Oriented Research
 Career Development Award—provides
 support for the career development of
 investigators who have made a
 commitment to focus their research
 endeavors on patient-oriented research.
 This mechanism provides support for a
 3-year minimum up to a 5-year period of
 supervised study and research for
 clinically trained professionals who have
 the potential to develop into productive
 clinical investigators.
- **K24** Midcareer Investigator Award in Patient-Oriented Research—provides support for experienced clinicians to allow them protected time to devote to patient-oriented research and to act as mentors for beginning clinical investigators.
- **K25** Mentored Quantitative Research Career Development Award—supports junior-faculty-level investigators with quantitative scientific and engineering backgrounds outside of biology or medicine who have the potential to integrate their expertise with biomedicine

and to develop into productive investigators with a period of mentored study and research.

K30 Clinical Research Curriculum Award (CRCA)—awarded to institutions to stimulate the inclusion of high-quality, multidisciplinary didactic training as part of the career development of clinical investigators. This award is intended to support the development of new didactic programs in clinical research at institutions that do not currently offer such programs or in institutions with existing didactic programs in clinical research to support or expand their programs or to improve the quality of instruction.

Research and Development-Related Contracts

N01 Research and Development Contract—
develops or applies new knowledge or
tests, screens, or evaluates a product,
material, device, or component for use by
the scientific community.

Research Program Projects and Centers

P01 Research Program Project—provides a qualified institution, on behalf of a principal investigator, with the support of a broad-based, multidisciplinary, often long-term research program with a particular major objective or theme. A program project involves the organized efforts of groups of investigators who conduct research projects related to the overall program objective. The grant can provide support for the projects and for certain shared resources necessary for the total research effort. Each project grant

is expected to contribute to the overall program objective.

resources and facilities for categorical research by a number of investigators from different disciplines who provide a multidisciplinary approach to a joint research effort or from the same discipline who focus on a common research problem. Although funded independently of the center's component projects or program projects, the core grant relates integratively to them. By providing more accessible resources, this support is expected to ensure greater productivity than that obtained from the separate projects and program projects.

P50 Specialized Center—supports any part of the full range of R&D, from basic to clinical, and may involve ancillary supportive activities, such as protracted patient care necessary to the primary research or R&D effort. The spectrum of activities comprises a multidisciplinary attack on a specific disease entity or biomedical problem area. These grants differ from program project grants in that they are usually developed in response to an announcement of the programmatic needs of an Institute or Division and subsequently receive continuous attention from its staff. Centers also may serve as regional or national resources for special research purposes.

Research Project Grants and Grants Related to Research Projects

R01 Research Project Grant (traditional)—
provides support to an institution
(domestic or foreign) on behalf of a
principal investigator for a discrete

project related to the investigator's interests and competence. Most of the research that the NIH supports is maintained through this funding mechanism. Although rare, such a grant may be awarded directly to an individual.

- R03 Small Grant—provides research support specifically limited in time and amount for studies in categorical program areas. Small grants provide flexibility for initiating studies, which are generally for preliminary short-term projects and are nonrenewable.
- **R09** Scientific Evaluation—provides the chairman of an initial review group funds for operation of the initial review group.
- R13 Conference Grant—provides funding for conferences to coordinate, exchange, and disseminate information related to program interests. In general, such awards are modest and limited to participation with other organizations in the support of conferences rather than as a provision of sole support. Among the costs eligible for support are salaries, equipment rental, travel, consultant services, and supplies. Prospective applicants should inquire in advance concerning possible interest on the part of an Institute.
- R15 Academic Research Enhancement Award (AREA)—provides support to scientists at eligible domestic institutions for small-scale, new, or expanded health-related research projects, such as pilot research projects and feasibility studies; development, testing, and refinement of research techniques; secondary analysis of available data sets; and similar discrete

research projects that demonstrate research capability. This award is directed toward smaller, less-prominent 4-year public and private colleges and universities that provide undergraduate training for a significant number of U.S. research scientists but have not had an adequate share in the growth of the NIH extramural program.

- R18 Research Demonstration and
 Dissemination Project—provides support
 to develop, test, and evaluate healthservice activities and to foster the
 application of existing knowledge for the
 control of categorical diseases.
- **R21** Exploratory/Developmental Grant—used by NIAID for bridge awards. The bridge award provides support for a limited time and amount to investigators to enable them to continue meritorious research and improve the competitiveness of future grant applications.
- **R24** Resource-Related Research Project—supports research projects that will enhance the capability of resources to serve biomedical research.
- **R25** Education Project—provides support to develop or implement a program in education, information, training, technical assistance, coordination, or evaluation.
- R33 Exploratory and Developmental Grants,
 Phase II—provide a second phase of
 support for innovative, exploratory, and
 developmental research begun as an R21
 award. Only R21 awardees are eligible to
 apply for R33 support. Applications are
 accepted only in response to RFAs and
 PAs that specify the R33 mechanism.

R37 Method to Extend Research in Time (MERIT) Award—provides long-term, stable support to investigators who are likely to continue to perform in an outstanding manner and spares them the administrative burdens associated with preparing and submitting research grant applications. An initial 5-year award is accompanied by an opportunity for a 3- to 5-year extension, based on an expedited review of the accomplishments during the initial award period. Investigators may not apply for a MERIT award. NIH staff and advisors base their selection of MERIT award recipients on competing R01 applications, prepared and submitted in accordance with NIH procedures. MERIT awards are awarded to a limited number of selected investigators who have demonstrated superior competence and outstanding productivity during previous research endeavors.

Small Business Funding Opportunities

R41 Small Business Technology Transfer
R42 (STTR) Grants—support cooperative
R&D projects between small business
concerns and research institutions,
limited in time and amount, to establish
the technical merit and feasibility of ideas
that have potential for commercialization.
Awards are made to small business
concerns only.

R43 Small Business Innovation Research
R44 (SBIR) Grants—enable small businesses
possessing technological expertise to
contribute to the R&D mission of the
NIH. Phase I (R43) grants support
projects, limited in time and amount, to
establish the technical merit and

feasibility of R&D ideas that ultimately may lead to commercial products or services. Phase II (R44) grants support indepth development of R&D ideas whose feasibility has been established in phase I and that are likely to result in commercial products or services. The research must be conducted in the United States.

Research Training Programs

T32 Institutional NRSA—enables institutions to grant NRSAs for predoctoral and postdoctoral research training in specified shortage areas to individuals selected by the institutions.

NRSA Short-Term Research Training provides individuals with research training during off-quarters or summer periods to encourage research careers or research in areas of national need.

Cooperative Agreements

Agreement)—provides an assistance relationship between the NIH and a recipient, but with substantial programmatic involvement by the NIH. The NIH assists, supports, or stimulates the recipients and is involved substantially with recipients in conducting projects similar in program content to those for grants, with the NIH playing a "partner" role in the effort.

U19 Research Program (Cooperative Agreement)—supports a research program of multiple projects directed toward a specific major objective, basic theme, or program goal that requires a broad-based, multidisciplinary, and often long-term approach.

- U24 Resource-Related Research Projects/Cooperative Agreements support research projects contributing to improvement of the capability of resources to serve biomedical research.
- **U42** Animal (Mammalian and Nonmammalian) Model and Animal and Biomedical Materials Resource Cooperative Agreements (NCRR) develop and support an animal (mammalian and nonmammalian) model or animal or biological materials resources available to all qualified investigators without regard to the scientific disciplines or disease orientations of their research activities or specifically directed to a categorical program. Nonmammalian resources include nonmammalian vertebrates. invertebrates, cell systems, and nonbiological systems.
- Agreements—support research and development from basic to clinical, including ancillary supportive activities that create a multidisciplinary focus on a disease or a biomedical problem. Centers also may serve as regional or national resources for special research purposes.
- **U56** Exploratory Grants Cooperative
 Agreements—support planning for new programs, expansion or modification of existing resources, and feasibility studies

- for interdisciplinary programs that may lead to specialized or comprehensive centers.
- Program, Phase II, Cooperative
 Agreements (NIAID)—promote joint
 ventures between the NIH and both
 domestic and global entities to facilitate
 rapid biomedical or biotechnology R&D
 for infectious diseases to benefit public
 health; projects should have a
 commercial potential that could not have
 been attained without matching funds.

Interagency and Intra-Agency Agreements

- **Y01** NIH Interagency Agreement—provides a written reimbursable agreement by which a component of the NIH provides a source of funds to another Federal organization outside DHHS to acquire specific products, services, or studies.
- Y02 NIH Intra-agency Agreement—provides a written reimbursable agreement by which a component of the NIH provides funds to another NIH component or to another organization within DHHS to acquire specific products, services, or studies.

ACRONYMS

AACTG Adult AIDS Clinical Trials Group

AADRC Asthma and Allergic Diseases Research Center

ABC Actions for Building Capacity

ACE Autoimmunity Centers of Excellence

ADAMHA Alcohol, Drug Abuse, and Mental Health Administration

ADCC Autoimmune Diseases Coordinating Committee

ADMO Associate Director for Management and Operations

ADV adenoviral vector-based

AfCS Alliance for Cellular Signaling

AIDS acquired immunodeficiency syndrome

AIEDRP Acute HIV Infection and Early Disease Research Program

AIT allergen immunotherapy

ALT alanine aminotransferase

AREA Academic Research Enhancement Award

ART antiretroviral therapy

ASIR Richard M. Asofsky Scholars In Research

ATCC American Type Culture Collection

AVRWG AIDS Vaccine Research Working Group

AZT zidovudine

BAMBU Bacteriology and Mycology Biostatistical Unit

BAMSG Bacteriology and Mycology Study Group

BISC Bioinformatics Integration Support Contract

BSC Board of Scientific Counselors

BSE bovine spongiform encephalopathy or "mad cow" disease

BSL biosafety level

BTEP BioTechnology Engagement Program

CASG Collaborative Antiviral Study Group

CCTAT Cooperative Clinical Trials in Adult Kidney Transplantation

CCTPT Cooperative Clinical Trials in Pediatric Kidney Transplantation

CDA Confidential Disclosure Agreement

CDC Centers for Disease Control and Prevention

CFAR Center for AIDS Research

CIPRA Comprehensive International Program of Research on AIDS

CJD Creutzfeldt-Jakob disease

CMB Contract Management Branch

CMS Centers for Medicare & Medicaid Services

CMV cytomegalovirus

CPCRA Terry Beirn Community Programs for Clinical Research on AIDS

CRADA Cooperative Research and Development Agreement

CRC Cooperative Research Center

CRCA Clinical Research Curriculum Award

CRDF Civilian Research and Development Foundation

CTA Clinical Trial Agreement

cytotoxic T lymphocyte **CWD** chronic wasting disease

CTL

DAIDS Division of Acquired Immunodeficiency Syndrome, NIAID

DAIT Division of Allergy, Immunology, and Transplantation, NIAID

DARPA Defense Advanced Research Projects Agency

DEA Division of Extramural Activities, NIAID

DEN4 dengue virus type 4

DHHS Department of Health and Human Services

DIR Division of Intramural Research, NIAID

DMID Division of Microbiology and Infectious Diseases, NIAID

DNA deoxyribonucleic acid

DoD Department of Defense

DOE Department of Energy

DSA Drug Screening Agreement **ED** emergency department

EF edema factor

EIR Employee Invention Report

ELISA enzyme-linked immunosorbent assay

EPA Environmental Protection Agency

ESPRIT Evaluation of Subcutaneous Proleukin in a Randomized International Trial

ESRD end-stage renal disease

FDA Food and Drug Administration

FIC Fogarty International Center

FOIA Freedom of Information Act

FY fiscal year

GAVI Global Alliance for Vaccines and Immunization

GM-CSF granulocyte-macrophage colony-stimulating factor

GP glycoprotein

GSK GlaxoSmithKline

HAART highly active antiretroviral therapy

HAV hepatitis A virus

HBV hepatitis B virus

HC CRCs Hepatitis C Cooperative Research Centers

HCV hepatitis C virus

HEV hepatitis E virus

HIV human immunodeficiency virus

HIV+ HIV positive

HIVRAD HIV Vaccine Research and Design Program

HLA human leukocyte antigen

HOPE Health Omnibus Programs Extension

HPIV3 human parainfluenza type 3

HPTN HIV Prevention Trials Network

HPV human papillomavirus

HSC hematopoietic stem cell

HSV herpes simplex virus

HVDDT HIV Vaccine Design and Development Teams

HVTN HIV Vaccine Trials Network

ICAC Inner-City Asthma Consortium

ICBG International Cooperative Biodiversity Groups Program

ICDs Institutes, Centers, and Divisions

ICER International Center for Excellence in Research

ICIDR International Collaboration in Infectious Disease Research

ICs Institutes and Centers

ICTDR International Centers for Tropical Disease Research

ICU intensive care unit

IDF Immune Deficiency Foundation

IGIV intravenous immunoglobulin

IHWG International Histocompatibility Working Group

IL-2 interleukin-2 IL-4 interleukin-4

IND investigational new drug

INRO Intramural NIAID Research Opportunities

IOM Institute of Medicine

IPCAVD Integrated Preclinical/Clinical AIDS Vaccine Development Program

IPCP Integrated Preclinical/Clinical Program

IRTA Intramural Research and Training Awardees

ISAAC International Studies of AIDS-Associated Co-infections

IT immunotherapy

ITN Immune Tolerance Network

JDRF Juvenile Diabetes Research Foundation International

JEV Japanese encephalitis virus

KNCV Royal Netherlands TB Association

LF lethal factor

M.tb Mycobacterium tuberculosis

MACS Multicenter AIDS Cohort Study

MADGC Multiple Autoimmune Disease Genetics Consortium

M-CRADA Materials Cooperative Research and Development Agreement

MDR-TB multidrug-resistant tuberculosis

MEP multi-epitope peptide

MERIT Method to Extend Research in Time

MGC Mammalian Gene Collection

MHC major histocompatibility complexMIM Multilateral Initiative on Malaria

MR4 Malaria Research and Reference Reagent Resource

MRI magnetic resonance imaging

MRSA methicillin-resistant Staphylococcus aureus

MRTC Malaria Research and Training Center

MRU Microbiology Research Unit

MS multiple sclerosis

MSG Mycoses Study Group

MSM men who have sex with men
MTA Material Transfer Agreement
MTCT mother-to-child transmission

MVDB Malaria Vaccine Development Branch

NAAIDC National Advisory Allergy and Infectious Diseases Council

NARAC North American Rheumatoid Arthritis Consortium

modified vaccinia Ankara virus

NARSA Network on Antimicrobial Resistance in *Staphylococcus aureus*

NBL National Biocontainment Laboratory

NCDDG-TB National Cooperative Drug Discovery Groups for Tuberculosis

MVA

NCICAS National Cooperative Inner-City Asthma Study

NCRR National Center for Research Resources

NHIS National Health Interview Survey

NHLBI National Heart, Lung, and Blood Institute

NIAID National Institute of Allergy and Infectious Diseases

NICHD National Institute of Child Health and Human Development

NIDA National Institute on Drug Abuse

NIDDK National Institute of Diabetes and Digestive and Kidney Diseases

NIEHS National Institute of Environmental Health Sciences

NIGMS National Institute of General Medical Sciences

NIH National Institutes of Health

NK natural killer [cells]

NMR nuclear magnetic resonance

NNIS National Nosocomial Infections Surveillance

NRSA National Research Service Award

NVP nevirapine

NVPO National Vaccine Program Office

OAS Office of Administrative Services, NIAID

OCPL Office of Communications and Public Liaison, NIAID

OCR Office of Clinical Research, NIAID

OD Office of the Director, NIAID

OE Office of Ethics, NIAID

OFM Office of Financial Management, NIAID

OHRM Office of Human Resources Management, NIAID

OI opportunistic infection

OMNI Office of Management for New Initiatives, NIAID

ONR Office of Naval Research

OPA Office of Policy Analysis, NIAID

OSPRT Office of Special Populations and Research Training, NIAID

OTD Office of Technology Development, NIAID

OTIS Office of Technology Information Systems, NIAID

OTSEP Office of Training and Special Emphasis Programs

OTT Office of Technology Transfer, NIH

PA program announcement

PACTG Pediatric AIDS Clinical Trials Group

PAVE Partnership for HIV/AIDS Vaccine Evaluation

PCR polymerase chain reaction

PFGRC Pathogen Functional Genomics Resource Center

PID pelvic inflammatory disease

PIDR Primary Immunodeficiency Diseases Registry

PIV parainfluenza virus

PMN polymorphonuclear neutrophil

PMPA 9-(2-phosphonylmethoxypropyl)-adenine

PR protease

PRP polyribosylribose phosphate

PrP prion protein

PrP-res abnormal form of prion protein

R&D research and development

RBL Regional Biocontainment Laboratory

RCE Regional Centers of Excellence for Biodefense and Emerging Infectious Diseases

RCMI Research Centers in Minority Institutions

RFA request for application
RIT rush immunotherapy

RML Rocky Mountain Laboratories

RNA ribonucleic acid

rPA recombinant protective antigen vaccineRPAB Referral and Program Analysis Branch

RPG Research Project Grant

RSUM Research Supplements for Underrepresented Minorities

RSV respiratory syncytial virus

RT reverse transcriptase

SAIC Science Applications International Corporation

SARS severe acute respiratory syndrome

SARS-CoV SARS-associated coronavirus

SBIR Small Business Innovation Research

SCID severe combined immunodeficiency disease

SIV simian immunodeficiency virusSLE systemic lupus erythematosus

SLEV St. Louis encephalitis virus

SMART Strategies for Management of Anti-Retroviral Therapies

SNP single nucleotide polymorphisms

SPR Summer Policy Retreat

SRP Scientific Review Program

STD sexually transmitted disease

STI sexually transmitted infection

STTR Small Business Technology Transfer

SVEU Simian Vaccine Evaluation Unit

TAACF Tuberculosis Antimicrobial Acquisition and Coordinating Facility

TB tuberculosis

TBRU Tuberculosis Research Unit

TEAC Technology Evaluation Advisory Committee

TIGR The Institute for Genomic Research

TMP-SMX trimethoprim-sulfamethoxazole

TMRC Tropical Medicine Research Center

TSE transmissible spongiform encephalopathy

USAID U.S. Agency for International Development

USAMRIID U.S. Army Medical Research Institute of Infectious Diseases

USAMRMC U.S. Army Medical Research and Materiel Command

USJCMSP U.S.-Japan Cooperative Medical Science Program

VAP Vaccine Action Program

VDF Vaccine Development Facility

VPP Vaccine Pilot Plant

VRC Dale and Betty Bumpers Vaccine Research Center

VRE vancomycin-resistant enterococci

VTEU Vaccine and Treatment Evaluation Unit

WHO World Health Organization

WIHS Women's Interagency HIV Study

WITS Women and Infants Transmission Study

WNV West Nile virus

WPR Winter Program Review

YFV yellow fever virus

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