

# THE NATIONAL MEDAL OF SCIENCE 2004

### PRESIDENT'S COMMITTEE ON THE NATIONAL MEDAL OF SCIENCE

NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22230

April 28, 2003

# Dear Colleague:

It is with great pleasure that I introduce the nomination packet for the 2004 National Medal of Science, the Nation's highest honor for scientists and engineers presented annually by the President of the United States.

The Medal was established by the 86th Congress in 1959 as a Presidential Award to be given to individuals "deserving of special recognition by reason of their outstanding contributions to knowledge in the physical, biological, mathematical, or engineering sciences." And in 1980 Congress expanded this recognition to include the social and behavioral sciences.

Since its establishment, the Medal has been awarded to 401 distinguished scientists and engineers whose careers spanned decades of research and development. The nomination procedures and guidelines, as well as instructions for submitting an electronic nomination, renomination, or support letter, are detailed in this brochure. Questions concerning the procedures or requests for additional nomination forms should be directed to the Committee's Program Manager, Mrs. Susan E. Fannoney (703-292-8096).

There are numerous younger American scientists and engineers, many of them women and minorities, now reaching the point where their contributions are worthy of recognition. Your efforts to identify worthy nominees for the Medal in this public recognition of outstanding contributions are critical to its success. On behalf of the President's Committee on the National Medal of Science, I want to thank you in advance for those efforts.

Sincerely,

Rita R. Colwell Director



# 2004 National Medal of Science

## **Contents**

Selection Criteria Nomination Procedures Narrative Statement (**new instructions**) Letter of Support Electronic Submissions

Nomination Form

List of National Medal Recipients

Program Contact

Privacy Act and Public Burden Statements

#### I. CRITERIA

The Committee has established the following guidelines for selection of candidates.

- The total impact of an individual's work on the present state of physical, biological, mathematical, engineering or social and behavioral sciences is to be the principal criterion.
- Achievements of an unusually significant nature in relation to the potential effects of such achievements on the development of scientific thought.
- Unusually distinguished service in the general advancement of science and engineering, when accompanied by substantial contributions to the content of science at some time.
- Recognition by peers within the scientific community.
- Contributions to innovation and industry.
- Influence on education through publications, students, etc.
- Must be a U.S. citizen or permanent resident who has applied for citizenship.

#### II NOMINATION PROCEDURES AND DEADLINE FOR SUBMISSION

Nominations must be postmarked by June 30, 2003.

- Nominations remain active for **four years**, including the year of nomination. After that time, candidates must be renominated with a new nomination package for them to be considered by the Committee.
- If the enclosed form or a facsimile is used, it must be single spaced typewritten using a font no smaller than 12 characters per inch.
- Additional information on active nominations may be submitted via a letter or an updated nomination form submitted to the committee by the established deadline.

#### III. NARRATIVE STATEMENT – NOMINATION FORM

- It is important that the narrative statement address the selection criteria in Section I and include a description of the nominee's qualifications that is informative to a non-specialist.
- The most successful nominators explain the work clearly, place it in context, and underscore
  its importance in a relatively jargon-free manner. Nominators should aim to communicate
  with a variety of scientific experts in fields as diverse as biology, engineering, mathematics,
  sociology, etc.

#### IV. LETTERS OF SUPPORT FOR NOMINATIONS

Letters of support must be postmarked by June 30, 2003.

- Nominators are responsible for securing three letters supporting the candidate.
- Letters should only be mailed, faxed, or sent electronically using the below form (see Section V). Email does not protect confidentiality and should not be used for this purpose.
- Letters may accompany the nomination form or be sent separately to

Mrs. Susan E. Fannoney, Program Manager National Medal of Science Committee National Science Foundation 4201 Wilson Blvd, Rm 1220 Arlington, VA 22230

# V. ELECTRONIC SUBMISSION OF NOMINATIONS AND LETTERS OF SUPPORT

Nominations and letters of support may be submitted electronically via the Internet. Using a browser such as Netscape or MS Internet Explorer, access the electronic nomination system at location:

http://www.fastlane.nsf.gov/fastlane.jsp

or access PDF at:

http://www.nsf.gov/nsb/awards/nms/medal.htm

#### VI. ADDITIONAL INFORMATION

For further information concerning nominations, the Program Manager for the National Medal of Science can be reached by email, phone, fax or at the address previously listed under Section IV, above.

Email: nms@nsf.gov Phone: (703) 292-8096 Fax: (703) 292-9008

The National Science Foundation administers the National Medal of Science on behalf of the President of the United States.

Form Approved OMB NO. 3145-0035

# Privileged Information

NOMINATION FOR NATIONAL MEDAL OF SCIENCE		
Nominee_	Nominator	
Name:	Name:	
Address:	Address:	
Telephone:	Telephone:	
Biographical Data:		
Date and place of birth:		
If naturalized citizen, please check box:		
2. Education:		
2 Desitions Hold.		
3. Positions Held:		
4. Honors:		

Nominee:	Privileged Information
Proposed Citation (limit to 1-2 sentences)	
Narrative statement (limited to this space) describing nominee's qualifications as describing	cribed in Section III.

List of pertinent publications (limit to this page)

References: (identify 3 individuals not from the nominee's home institution who will provide letters of support). References <b>must be requested by the nominator</b> and can be sent electronically through http://www.fastlane.nsf.gov/fastlane.jsp.	
Name:	Name:
Title:	Title:
Address:	Address:
Talankana	Talankana
Telephone:	Telephone:
Name: Title: Address:	The information requested on this nomination form and the letters of support is solicited under the authority of the National Science Foundation Act of 1950, as amended, and will be used and disclosed to reviewers and the White House in connection with the selection of qualified applicants. See Privacy Act/Public Burden statement on last page of this solicitation brochure.
Telephone:	
Nominator's Signature	Date
Mail to:  Program Manager National Medal of Science Committee National Science Foundation 4201 Wilson Blvd, Rm 1220 Arlington, VA 22230	

# NATIONAL MEDAL OF SCIENCE RECIPIENTS 1962-2001

Detailed information concerning the 401 recipients is located at www.nsf.gov/nsb/awards/nms/recipients.cfm

2001

Andreas Acrivos, City College of the City University of New York,

Francisco J. Ayala, University of California, Irvine

George F. Bass, Texas A&M University

Mario Capecchi, University of Utah School of Medicine

Marvin L. Cohen, University of California, Berkeley

Ernest R. Davidson, University of Washington

Raymond Davis, University of Pennsylvania

Ann M. Graybiel, Massachusetts Institute of Technology

Charles D. Keeling, Scripps Institution of Oceanography, University of California, San Diego

Gene Likens, Institute of Ecosystem Studies

Victor McKusick, Johns Hopkins University School of Medicine

C. R. Rao, Pennsylvania State University

Gabor A. Somorjai, University of California, Berkeley

Elias M. Stein, Princeton University

Harold Varmus, Memorial Sloan-Kettering Cancer Center

2000

Nancy C. Andreasen, University of Iowa College of Medicine

John D. Baldeschwieler, California Institute of Technology

Gary Becker, The University of Chicago

Yuan-Cheng B. Fung, University of California, San Diego

Ralph F. Hirschmann, University of Pennsylvania

Willis E. Lamb, Optical Sciences Center, University of Arizona

Jeremiah P. Ostriker, Princeton University

Peter H. Raven, Missouri Botanical Garden and Washington University in St. Louis

John Griggs Thompson, University of Florida

Karen K. Uhlenbeck, University of Texas at Austin

Gilbert F. White, Institute of Behavioral Science, University of Colorado

Carl R. Woese, University of Illinois at Urbana-Champaign

1999

David Baltimore, California Institute of Technology

Felix E. Browder, Rutgers University, Piscataway, and The University of Chicago

Ronald R. Coifman, Yale University

James W. Cronin, The Enrico Fermi Institute, The University Of Chicago

Jared Diamond, University of California Medical School, Los Angeles

Leo P. Kadanoff, The James Franck Institute, The University of Chicago

Lynn Margulis, University of Massachusetts, Amherst

Stuart A. Rice, The James Franck Institute, The University of Chicago

John Ross, Stanford University

Susan Solomon, National Oceanic and Atmospheric Administration, Boulder

Robert M. Solow, Massachusetts Institute of Technology

Kenneth N. Stevens, Massachusetts Institute of Technology

1998

Bruce N. Ames, University of California, Berkeley

Don L. Anderson, California Institute of Technology

John N. Bahcall, Institute for Advanced Study

John W. Cahn, National Institute of Standards & Technology

Cathleen Synge Morawetz, Courant Institute of Mathematical Sciences

Janet D. Rowley, The University of Chicago

Eli Ruckenstein, State University of New York at Buffalo

George M. Whitesides, Harvard University

William Julius Wilson, Harvard University

1997

William K. Estes, Harvard University

Darleane C. Hoffman, University of California, Berkeley

Harold S. Johnston, University of California, Berkeley

Marshall N. Rosenbluth, University of California, San Diego

Martin Schwarzschild\*, Princeton University

James D. Watson, Cold Spring Harbor Laboratory

Robert A. Weinberg, Massachusetts Institute of Technology

George W. Wetherill, Carnegie Institution of Washington

Shing-Tung Yau, Harvard University

Note: Institutions listed are those with which the recipients were affiliated at the time of the Award.

<sup>\*</sup>Awarded Posthumously

#### 1996

Wallace S. Broecker, Lamont-Doherty Earth Observatory

Norman Davidson, California Institute of Technology

James L. Flanagan, Rutgers University

Richard M. Karp, University of Washington

Kumar N. Patel, University of California, Los Angeles

Ruth Patrick, Academy of Natural Sciences

Paul A. Samuelson, Massachusetts Institute of Technology

Stephen Smale, University of California, Berkeley

#### 1995

Thomas R. Cech, University of Colorado

Hans G. Dehmelt, University of Washington

Peter Goldreich, California Institute of Technology

Hermann A. Haus, Massachusetts Institute of Technology

Isabella L. Karle, Naval Research Laboratory

Louis Nirenberg, New York University

Alexander Rich, Massachusetts Institute of Technology

Roger N. Shepard, Stanford University

#### 1994

Ray W. Clough, University of California, Berkeley

John Cocke, IBM T.J. Watson Research Center

Thomas Eisner, Cornell University

George S. Hammond, Allied-Signal Corp.

Robert K. Merton, Columbia University

Elizabeth F. Neufeld, UCLA School of Medicine

Albert W. Overhauser, Purdue University

Frank Press, National Academy of Sciences

#### 1993

Alfred Y. Cho, AT&T Bell Laboratories

Donald J. Cram, University of California, Los Angeles

Val L. Fitch, Princeton University

Norman Hackerman, The Robert A. Welch Foundation

Martin D. Kruskal, Rutgers University

Daniel Nathans, Johns Hopkins University School of Medicine

Vera C. Rubin, Carnegie Institution of Washington

Salome G. Waelsch, Albert Einstein College of Medicine

#### 1992

Eleanor J. Gibson, Cornell University

Allen Newell, Carnegie Mellon University

Calvin F. Quate, Stanford University

Eugene M. Shoemaker, U.S. Geological Survey

Howard E. Simmons, Jr., E.I. du Pont de Nemours

Maxine F. Singer, Carnegie Institution of Washington

Howard M. Temin, University of Wisconsin

John Roy Whinnery, University of California, Berkeley

#### 1991

Mary Ellen Avery, Harvard Medical School

Ronald Breslow, Columbia University

Alberto P. Calderon, The University of Chicago

Gertrude B. Elion, Burroughs Wellcome Company

George Heilmeier, Bellcore

Dudley R. Herschbach, Harvard University

G. Evelyn Hutchinson\*, Yale University

Elvin A. Kabat, Columbia University

Robert W. Kates, Brown University

Luna B. Leopold, University of California, Berkeley

Salvador E. Luria\*, Massachusetts Institute of Technology

Paul A. Marks, Memorial Sloan-Kettering Cancer Center

George A. Miller, Princeton University

Arthur L. Schawlow, Stanford University

Glenn T. Seaborg, University of California, Berkeley

Folke K. Skoog, University of Wisconsin

H. Guyford Stever, Washington D.C.

Edward C. Stone, California Institute of Technology

Steven Weinberg, University of Texas at Austin

Paul C. Zamecnik, Worcester Foundation for Experimental Biology

#### 1990

Baruj Benacerraf, Harvard Medical School

Elkan R. Blout, Harvard School of Public Health

Herbert W. Boyer, University of California, San Francisco

George F. Carrier, Harvard University

Allan M. Cormack, Tufts University

Mildred S. Dresselhaus, Massachusetts Institute of Technology

Karl Folkers, University of Texas at Austin

Nick Holonyak, Jr., University of Illinois

Leonid Hurwicz, University of Minnesota

Stephen C. Kleene, University of Wisconsin Milton Friedman, Stanford University Daniel E. Koshland, Jr., University of California, Berkeley Ralph E. Gomory, IBM Corporation Edward B. Lewis, California Institute of Technology Willis M. Hawkins, Lockheed Corporation Maurice R. Hilleman, Merck Institute for Therapeutic Research John McCarthy, Stanford University Edwin M. McMillan, University of California, Berkeley George W. Housner, California Institute of Technology David G. Nathan, Harvard Medical School Eric R. Kandel, Columbia University Robert V. Pound, Harvard University Joseph B. Keller, Stanford University Roger R.D. Revelle, Harvard University Walter Kohn, University of California, Santa Barbara John D. Roberts, California Institute of Technology Norman F. Ramsey, Harvard University Patrick Suppes, Stanford University Jack Steinberger, European Center for Nuclear Research (CERN) E. Donnall Thomas, Fred Hutchinson Cancer Research Center Rosalyn S. Yalow, Veteran's Administration Hospital, Brooklyn, NY 1989 1987 Arnold O. Beckman, California Institute of Technology Philip H. Abelson, American Association for the Advancement of Science Richard B. Bernstein, University of California, Los Angeles Anne Anastasi, Fordham University Melvin Calvin, University of California, Berkeley Robert B. Bird, University of Wisconsin Harry George Drickamer, University of Illinois Raoul Bott, Harvard University Katherine Esau, University of California, Santa Barbara Michael E. DeBakey, Baylor College of Medicine Herbert E. Grier, CER Corporation Theodor O. Diener, U.S. Department of Agriculture Viktor Hamburger, Washington University Harry Eagle, Albert Einstein College of Medicine Michael H. Freedman, University of California, San Diego Samuel Karlin, Stanford University Philip Leder, Harvard University Medical School William S. Johnson, Stanford University Joshua Lederberg, Rockefeller University Har Gobind Khorana, Massachusetts Institute of Technology Paul C. Lauterbur, University of Illinois Saunders Mac Lane, The University of Chicago Rudolph A. Marcus, California Institute of Technology Rita Levi-Montalcini, Italian National Research Council Harden M. McConnell, Stanford University George E. Pake, Xerox Corporation Eugene N. Parker, The University of Chicago H. Bolton Seed, University of California, Berkeley Robert P. Sharp, California Institute of Technology George J. Stigler, The University of Chicago Donald C. Spencer, Princeton University Walter H. Stockmayer, Dartmouth College Roger W. Sperry, California Institute of Technology Max Tishler, Wesleyan University Henry M. Stommel, Woods Hole Oceanographic Institution James A. Van Allen, University of Iowa Harland G. Wood, Case Western Reserve University Ernst Weber, Polytechnic Institute of New York 1988 1986 William O. Baker, AT&T Bell Laboratories Solomon J. Buchsbaum, Bell Telephone Laboratories Konrad E. Bloch, Harvard University Stanley Cohen, Vanderbilt University D. Allan Bromley, Yale University Horace R. Crane, University of Michigan Michael S. Brown and Joseph L. Goldstein, University of Texas Southwestern Herman Feshbach, Massachusetts Institute of Technology Medical Center Harry B. Gray, California Institute of Technology Paul (Ching-Wu) Chu, University of Houston Donald A. Henderson, Johns Hopkins University Stanley N. Cohen, Stanford University School of Medicine Robert Hofstadter, Stanford University

Peter D. Lax, New York University

Yuan Tseh Lee, University of California, Berkeley

Elias J. Corey, Harvard University

Daniel C. Drucker, University of Florida

Hans Wolfgang Liepmann, California Institute of Technology

T.Y. Lin, TYLin International

Carl S. Marvel, University of Arizona

Vernon B. Mountcastle, Johns Hopkins University

Bernard M. Oliver, National Aeronautics and Space Administration

George Emil Palade, Yale University

Herbert A. Simon, Carnegie Mellon University

Joan A. Steitz, Yale University

Frank H. Westheimer, Harvard University

Chen Ning Yang, State University of New York at Stony Brook

Antoni Zygmund, The University of Chicago

#### 1985

No Awards given.

#### 1984

No Awards given.

#### 1983

Howard L. Bachrach, U.S. Department of Agriculture

Paul Berg, Stanford University

Margaret Burbidge, University of California, San Diego

Maurice Goldhaber, Brookhaven National Laboratory

Herman H. Goldstine, Institute for Advanced Study

William R. Hewlett, Hewlett-Packard Company

Roald Hoffman, Cornell University

Helmut E. Landsberg, University of Maryland at College Park

George M. Low\*, Rensselaer Polytechnic Institute

Walter H. Munk, University of California, San Diego

George C. Pimentel, University of California, Berkeley

Frederick Reines, University of California, Irvine

Wendell L. Roelofs, Cornell University

Bruno B. Rossi, Massachusetts Institute of Technology

Berta Scharrer, Albert Einstein College of Medicine

J. Robert Schrieffer, University of Pennsylvania

Isadore M. Singer, University of California, Berkeley

John G. Trump\*, Massachusetts Institute of Technology

Richard N. Zare, Stanford University

#### 1982

Philip W. Anderson, Bell Telephone Laboratories

Seymour Benzer, California Institute of Technology

Glenn W. Burton, U.S. Department of Agriculture

Mildred Cohn, University of Pennsylvania School of Medicine

F. Albert Cotton, Texas A&M University

Edward H. Heinemann, General Dynamics Corp.

Donald L. Katz, University of Michigan

Yoichiro Nambu, The University of Chicago

Marshall H. Stone, University of Massachusetts at Amherst

Gilbert Stork, Columbia University

Edward Teller, Stanford University

Charles H. Townes, University of California, Berkeley

#### 1981

Philip Handler, National Academy of Sciences

#### 1980

No Awards given.

#### 1979

Robert H. Burris, University of Wisconsin

Elizabeth C. Crosby, University of Michigan

Joseph L. Doob, University of Illinois

Richard P. Feynman, California Institute of Technology

Donald E. Knuth, Stanford University

Arthur Kornberg, Stanford University School of Medicine

Emmett N. Leith, University of Michigan

Herman F. Mark, Polytechnic Institute of Brooklyn

Raymond D. Mindlin, Columbia University

Robert N. Noyce, Intel Corporation

Severo Ochoa, New York University

Earl R. Parker, University of California, Berkeley

Edward M. Purcell, Harvard University

Simon Ramo, TRW Inc.

John H. Sinfelt, ESSO Research and Engineering Company

Layman Spitzer, Jr., Princeton University

Earl Reece Stadtman, National Institutes of Health

George Ledyard Stebbins, University of California, Davis

Paul A. Weiss, Rockefeller University

Victor F. Weisskopf, Massachusetts Institute of Technology

1978

No Awards given.

1977

No Awards given.

1976

Morris Cohen, Massachusetts Institute of Technology

Kurt Otto Friedrichs, New York University

Peter C. Goldmark, Goldmark Communications Corp.

Samuel A. Goudsmit, University of Nevada

Roger C.L. Guillemin, Salk Institute of Biological Studies

Herbert S. Gutowsky, University of Illinois

Erwin W. Mueller\*, Pennsylvania State University

Keith Roberts Porter

Efraim Racker, Cornell University

Frederick D. Rossini, Rice University

Verner E. Suomi, University of Wisconsin

Henry Taube, Stanford University

George F. Uhlenbeck, Rockefeller University

Hassler Whitney, Institute for Advanced Study

Edward O. Wilson, Harvard University

1975

John W. Backus, IBM San Jose Research Laboratory

Manson Benedict, Massachusetts Institute of Technology

Hans A. Bethe, Cornell University

Shiing-shen Chern, University of California, Berkeley

George B. Dantzig, Stanford University

Hallowell Davis, Washington University

Paul Gyorgy\*, University of Pennsylvania

Sterling Brown Hendricks, U.S. Department of Agriculture, Beltsville, MD

Joseph O. Hirschfelder, University of Wisconsin

William H. Pickering, California Institute of Technology

Lewis H. Sarett, Merck, Sharp & Dohme Research Labs

Frederick E. Terman, Stanford University

Orville Alvin Vogel, Washington State University

Wernher Von Braun, National Aeronautics and Space Administration

E. Bright Wilson, Jr., Harvard University

Chien-Shiung Wu, Columbia University

1974

Nicolaas Bloembergen, Harvard University

Britton Chance, University of Pennsylvania

Erwin Chargaff, Columbia University

Paul John Flory, Stanford University

William Alfred Fowler, California Institute of Technology

Kurt Godel, Institute for Advanced Study

Rudolf Kompfner, Stanford University

James Van Gundia Neel, University of Michigan Medical School

Linus Carl Pauling, Stanford University

Ralph Brazelton Peck, University of Illinois

Kenneth Sanborn Pitzer, University of California, Berkeley

James Augustine Shannon, Rockefeller University

Abel Wolman, Johns Hopkins University

1973

Daniel I. Arnon, University of California, Berkeley

Carl Djerassi, Stanford University

Harold E. Edgerton, Massachusetts Institute of Technology

William Maurice Ewing, University of Texas Medical Branch

Arie Jan Haagen-Smit, California Institute of Technology

Vladimir Haensel, Universal Oil Products Co.

Frederick Seitz, Rockefeller University

Earl W. Sutherland, Jr., University of Miami

John Wilder Tukey, Princeton University

Richard T. Whitcomb, National Aeronautics and Space Administration

Robert Rathbun Wilson, Fermi National Accelerator Laboratory

1972

No Awards given.

1971

No Awards given.

1970

Richard D. Brauer, Harvard University

Robert H. Dicke, Princeton University

Barbara McClintock, Carnegie Institution of Washington

George E. Mueller, General Dynamics Corp.

Albert B. Sabin, Weizmann Institute of Science

Allan R. Sandage, California Institute of Technology

John C. Slater, University of Florida

John A. Wheeler, Princeton University

Saul Winstein\*, University of California, Los Angeles

#### 1969

Herbert C. Brown, Purdue University

William Feller\*, Princeton University

Robert J. Huebner, National Cancer Institute

Jack St. Clair Kilby, Texas Instruments

Ernst Mayr, Harvard University

Wolfgang K.H. Panofsky, Stanford University

#### 1968

H. Albert Barker, University of California, Berkeley

Paul D. Bartlett, Harvard University

Bernard B. Brodie, National Institute of Health

Detlev W. Bronk, Rockefeller University

J. Presper Eckert, Jr., Sperry Rand Corporation

Herbert Friedman, Naval Research Laboratory

Jay L. Lush, Iowa State University

Nathan M. Newmark, University of Illinois

Jerzy Neyman, University of California, Berkeley

Lars Onsager, Yale University

B. Frederick Skinner, Harvard University

Eugene P. Wigner, Princeton University

#### 1967

Jesse W. Beams, University of Virginia

Francis Birch, Harvard University

Gregory Breit, Yale University

Paul J. Cohen, Stanford University

Kenneth S. Cole, National Institute of Health

Louis P. Hammett, Columbia University

Harry F. Harlow, University of Wisconsin

Michael Heidelberger, New York University

George B. Kistiakowsky, Harvard University

Edwin H. Land, Polaroid Corporation

Igor I. Sikorsky, United Aircraft Corporation

Alfred H. Sturtevant, California Institute of Technology

#### 1966

Jacob A.B. Bjerknes, University of California, Los Angeles

Subrahmanyan Chandrasekhar, The University of Chicago

Henry Eyring, University of Utah

Edward F. Knipling, U.S. Department of Agriculture

Fritz A. Lipmann, Rockefeller University

John W. Milnor, Princeton University

William C. Rose, University of Illinois

Claude E. Shannon, Massachusetts Institute of Technology

John H. Van Vleck, Harvard University

Sewall Wright, University of Wisconsin

Vladimir K. Zworykin, RCA

#### 1965

John Bardeen, University of Illinois

Peter J.W. Debye, Cornell University

Hugh L. Dryden\*, National Aeronautics and Space Administration

Clarence L. Johnson, Lockheed Aircraft Corporation

Leon M. Lederman, Columbia University

Warren K. Lewis, Massachusetts Institute of Technology

Francis P. Rous, Rockefeller University

William W. Rubey, University of California, Berkeley

George G. Simpson, Harvard University

Donald D. Van Slyke, Brookhaven National Laboratory

Oscar Zariski, Harvard University

#### 1964

Roger Adams, University of Illinois

Othmar H. Ammann, Ammann & Whitney

Theodosius Dobzhansky, Rockefeller University

Charles S. Draper, Massachusetts Institute of Technology

Solomon Lefschetz, Princeton University

Neal Elgar Miller, Yale University

H. Marston Morse, Institute for Advanced Study

Marshall W. Nirenberg, National Institutes of Health

Julian Schwinger, Harvard University

Harold C. Urey, University of California, San Diego

Robert B. Woodward, Harvard University

#### 1963

Luis W. Alvarez, University of California, Berkeley

Vannevar Bush, Carnegie Institution of Washington

John Robinson Pierce, Bell Telephone Laboratories

Cornelius Barnardus Van Niel, Stanford University

Norbert Wiener, Massachusetts Institute of Technology

#### 1962

Theodore Von Karman, California Institute of Technology

#### PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on the application materials is solicited under the authority of the National Science Foundation Act of 1950, as amended. It will be used in connection with the selection of qualified applicants and may be disclosed to qualified reviewers and staff assistants, and to other government agencies as part of the review process; to government contractors as necessary to complete assigned work; and to another Federal agency, court or party in a court or Federal administrative proceeding if the government is a party. Notice of the decision may be given to nominators, and disclosure may be made of awardees' names, home institutions, and field of study for public information/affairs purposes including press releases. Biographical and background information from publicly available sources may also be used for this purpose. See Systems of Records, NSF-12, "Fellowships and Other Awards," 63 Federal Register 265 (January 5, 1998). Submission of the information is voluntary; however, failure to provide full and complete information may reduce the possibility of receiving an award.

The public reporting burden for this collection of information is estimated to average 15 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to:

Suzanne Plimpton Reports Clearance Officer Information Dissemination Branch, DAS National Science Foundation Arlington, VA 22230

Requests for publications should be addressed to:

NSF Publication Clearinghouse P.O. Box 218 Jessup, MD 20794-0218 Phone: 301-947-2722

Fax: None

Email: pubs@nsf.gov

The National Science Foundation has TDD (Telephonic Device for the Deaf) capability, which enables individuals with hearing impairment to communicate with the Foundation about NSF programs, employment, or general information. To access NSF TDD dial (703) 292-5090; for FIRS, 1-800-877-8339.

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