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THE WHITE HOUSE
WASHINGTON

MOORE RECIEVED COPIES OF
THE ATTACHED FOR CONGRESSIONAL
LEADERSHIP BREAKFAST MEMO
THEY SUBMITTED TO PRESIDENT.

DF - NOT SUBMITTED

DF

INFORMATIONTHE WHITE HOUSE
WASHINGTON

December 17, 1979

MEMORANDUM FOR: THE PRESIDENT

FROM: HENRY OWEN ¹⁸⁰

SUBJECT: Leadership Breakfast

1. Proposal. In the attached memo, Tony Solomon recommends that you say to the leadership at tomorrow's breakfast that you hope they will press the two appropriations sub-committee chairmen to reconvene the Conference on the Foreign Aid Appropriations Bill. He stresses that a continuing resolution would not meet such pressing needs as Cambodia and the MDBs.

Tony also argues that it would be useful for you to mention to the leadership the need to act promptly on the Multilateral Bank Authorization Bill, which has been approved by the Senate and the House Banking Committee, but has not yet been taken up by the floor in the House.

2. Background. After you wrote Senator Inouye and Congressman Long a while back urging them to reconvene the Conference, they held a meeting to settle the House-Senate differences. This meeting ended in disagreement. We have since pressed the two chairmen to make another attempt. Their staffs met again today. Their chief disagreement relates to the Senate's desire to delete specific development projects; the House objects to this procedure, as a matter of principle. The two bodies also disagree about ISTC (House pro; Senate con); we're trying to work out a compromise with Senator DeConcini.

Even if the Conference reconvenes and reaches agreement, Congressman Long doubts it makes sense to go to the floor with a bill now, because of the anti-foreign sentiment excited by Iran. We're inclined to take a chance; the dangers of postponing action on the bill until January appear even greater.

3. Other Views. IDCA and some parts of State agree with Tony. The Congressional Liaison Office of State believes that it would not be useful to raise this issue with the leadership, arguing that they will not have much influence with Long or Inouye -- and might irritate Long.

4. Recommendation. That you mention at the breakfast, which I understand will be largely devoted to energy, the important role the MDBs play in helping LDCs produce more energy -- and your hope that the foreign aid conference can soon be reconvened and the MDB authorization bill can soon be passed, going out of your way to say how helpful the two appropriations sub-committee chairmen have been in response to your pleas.



THE SECRETARY OF THE TREASURY
WASHINGTON

PRIORITY: DF
For December 18
Congressional Leader-
ship Meeting

December 17, 1979

MEMORANDUM FOR THE PRESIDENT

SUBJECT: Impasse on Legislation for the
Multilateral Development Banks

A major problem has arisen which may make it impossible for the U.S. to meet its obligations to the multilateral development banks during FY 1980. Both the Appropriations and Authorization Bills are stalled in Congress. The Foreign Assistance Appropriations Bill remains in Conference and the Authorization Bill, although approved by the Senate in May and reported by the House Banking Committee in June, has not been taken up on the floor of the House. Unless a maximum effort is made now to secure immediate and final approval of these two bills, the U.S. will not be able to meet its international commitments to the banks, with the result that replenishments of the regional banks cannot go forward, the lending programs will be severely curtailed (IDA and the IDB cannot make any new loans right now), and relations with developing countries and other donors will be adversely affected.

The Foreign Assistance Appropriations Bill, including funding for the banks, has been in Conference since November 1. Despite significant compromises on bank funding levels, we have not been able to move it because of disagreement on the bilateral assistance programs and opposition to the proposed Institute for Scientific and Technological Cooperation (ISTC).

A Continuing Resolution has been passed by both Houses; however, this alternative is wholly unacceptable. The continuing resolution will not enable the U.S. to meet its obligation to the banks because, in the absence of an authorization bill, the United States cannot legally subscribe to additional shares or technically vote in favor of increases or replenishments of resources, although these replenishments have been negotiated on the basis of our pledges. Thus we are prevented from making good on our pledges of new subscriptions or contributions to the Inter-American Development

Bank, the Asian Development Fund and the African Development Fund. As you will recall, you authorized these pledges last year and you personally announced the U.S. pledge to the African Development Fund replenishment when you were in Lagos eighteen months ago.

Failure of the U.S. to meet its obligations means, moreover, that the recently agreed increase in IDB resources can not be implemented and the contributions of other countries to the Asian and the African Development Funds could be blocked.

In addition the Continuing Resolution contains a restrictive amendment relating to Iran which may make it impossible for us to subscribe or contribute to the World Bank, including IDA, and the Asian Development Bank. While the language of the Continuing Resolution which bars assistance to Iran does not specifically refer to indirect assistance, the legislative history makes it clear that the intention of its sponsors was to prohibit the MDBs from using U.S. funds for lending to Iran. Even though Iran is not a member of the Asian Bank and hasn't borrowed from the World Bank since 1975, these banks could not take our funds if we conditioned them by prohibiting their use for a specific member country or a country eligible to be a borrowing member, in this case Iran. It may be possible to make a legal case that the amendment does not apply to the banks since the language does not say "indirect". Such a case would be tenuous, however, and we would only want to consider seriously resorting to it if there were no hope of an appropriations bill for FY 1980.

The most immediate consequence of our failure to get the necessary legislation to subscribe or contribute to the banks would be an immediate cessation of all IDA lending -- approximately \$3.6 billion a year -- which is directed at assisting the poorest people in the most economically deprived countries of the world. We would also lose our veto power over Charter amendments in the World Bank and the Bank Directors might have to cut back the lending program by as much as \$2-\$3 billion. In addition, all three regional banks would be forced to cease or drastically curtail new lending.

Such consequences would have a disastrous impact on the economic and political stability of developing countries throughout the world. This would place an increased burden on the international economic system and would very seriously damage North/South relations. It would have significant repercussions on U.S. interests in the Middle East, the Caribbean and Central America. It would also undermine the credibility of our international commitments.

For these reasons I recommend that you telephone Senator Inouye, Chairman Reuss and Congressman Long and urge them to work for immediate approval of these two pieces of legislation. I also recommend you raise this issue with the Speaker of the House and the Majority Leader of the Senate at the leadership meetings on Tuesday and urge them to use their influence to get these bills passed this week.

Chairman Reuss and the Speaker of the House need to be persuaded to move the authorization bill this week. Senator Inouye and Congressman Long need to be persuaded to conclude the conference and bring the appropriations legislation to the floor. Both the Speaker and the Majority leader need to be persuaded to schedule the conference report and work for its passage this week. The State Department and IDCA agree that you should press this in the leadership meeting.

Attached for your use are talking points on the importance of the banks to the U.S. as well as points on each of the two bills.


Anthony M. Solomon
Acting Secretary

Attachment

cc: Dr. Brzezinski
Mr. McIntyre
Mr. Moore
Ambassador Owen

TALKING POINTS

The Multilateral Development Banks (MDBs)

-- The MDBs are the centerpiece of both U.S. North/South strategy and multilateral efforts to provide and efficiently utilize resources for the developing world.

-- In today's era of global interdependence, the economic health of the developing world impacts significantly on our own economy (e.g., in 1978 the non-oil LDCs purchased 26 percent of U.S. exports).

-- The banks also serve our national security interests by enhancing prospects for economic and political stability.

-- As a result of the burdensharing inherent in MDB operations and the multiplier impact of donor government contributions, the MDBs constitute a cost-effective way of assisting the developing world.

The Appropriations Legislation

-- Failure to have an appropriations bill would have a disastrous impact on the operations of the banks with serious repercussions on the countries of the developing world. It would also impact adversely on our relations with these countries and with other donors with whom burdensharing arrangements were negotiated.

-- Without a U.S. appropriation for the International Development Association (IDA), no further loans could be made to help the world's poorest countries.

-- Other donors have the right to hold back their contributions to the regional development banks if we don't make ours. A

curtailment of regional bank operations would set back current U.S. efforts to strengthen our ties to such critical regions as Central and South America, the Caribbean, and Africa.
(If Asked)

-- A continuing resolution does not allow the U.S. to proceed with our MDB participation, as we lack authorizing legislation for the regional development banks. Moreover, given the restrictive amendment in the continuing resolution, it is unlikely that we could make our contribution to IDA or the World Bank.

-- A delay beyond the end of the current session could lead to a serious disruption of the banks lending programs. It would take a major effort on our part to convince the other donor countries to proceed with their contributions if we don't have the necessary legislation this year.

Authorizing Legislation

-- In the absence of authorizing legislation, the United States would not be able to participate in the replenishments for the Inter-American Bank (IDB), the Asian Development Fund (ADF), and the African Development Fund (AFDF). This would be broadly perceived as a lack of U.S. interest in the banks, would jeopardize the subscriptions of other donors, and damage our relations with many developing countries.

-- (IDB) U.S. participation is required for the replenishment of the Fund for Special Operations (FSO) to become effective. The FSO has about exhausted its commitment authority, and U.S. participation is essential if serious disruption of the lending program is to be avoided.

U.S. participation is already required to activate the IDB capital replenishment.

U.S. failure to support these replenishments would be particularly ironic given our success in negotiating a replenishment package which meets a number of key U.S. goals: increasing lending to the poorest people and countries of Latin America and providing for significantly increased contributions by other donors.

-- (ADB) and (AFDF) A delay in the enactment of the authorizing legislation beyond the end of this year could bring to a halt the replenishments of both the ADB and the AFDF. These replenishments have become effective, and other donors have already contributed their first installments. The United States is one installment behind other donors. The failure of the U.S. to participate by January 1, 1980 could lead to a sharp slowdown in fund availabilities and a serious disruption in next year's lending program. This would call into question our commitment to the development efforts of African and Asian countries at a time when we are making a major effort to strengthen our ties with these regions.

THE WHITE HOUSE
WASHINGTON

HOLD

SBA WILL BE SENDING OVER EITHER TALKING
POINTS FOR CABINET MEETING OR DRAFT
MEMO FROM THE PRES TO SUPPLEMENT THIS
MEMO.

RICK
12/17/79

Held

2555



U.S. SMALL BUSINESS ADMINISTRATION
WASHINGTON, D.C. 20416

OFFICE OF THE ADMINISTRATOR

DEC 12 1978

060825

RL
The President
The White House
Washington, D. C. 20500

Dear Mr. President:

On October 24, 1978, you signed into law an amendment to the Small Business Act known as Public Law 95-507. This Act significantly increased procurement opportunities for small and small disadvantaged businesses by requiring mandatory subcontracting provisions in large Federal procurements.

The Small Business Administration and the Office of Federal Procurement Policy have established regulations and systems to monitor compliance by the various Federal agencies. Implementation delays by some Federal acquisition agencies, however, have exceeded reasonable bounds. These delays have resulted in a substantial number of contracts and acquisition solicitations not containing required subcontracting provisions to assist small and small disadvantaged businesses.

The Comptroller General, in a letter dated October 19, 1979, in response to a congressional inquiry, stated that contracts of the requisite size awarded and acquisition solicitations pending should contain Section 211 of P.L. 95-507 subcontracting program provisions. Accordingly, OFPP by memorandum to the Heads of Departments and Establishments on November 21, 1979, directed that remedial action be taken on outstanding solicitations and already awarded contracts where modification to include the subcontracting provisions is feasible and would lead to a greater utilization of small and small disadvantaged subcontractors.

We are confident that actions taken by CFPP and SBA have moved the government in the direction of overcoming existing problems.

Your mention of implementation delays to Cabinet Officials and commitment not to tolerate future delay would do much to put this potentially significant program on track.

Respectfully,

A. Vernon Weaver
Administrator





U.S. SMALL BUSINESS ADMINISTRATION
WASHINGTON, D.C. 20416

OFFICE OF THE ADMINISTRATOR

DEC 12 1979

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The White House
Washington, D. C. 20500

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Respectfully,

(Signed) Vernon

A. Vernon Weaver
Administrator

12/14/79

THE WHITE HOUSE
WASHINGTON

TO : Phil

FROM: Carolyn Shields

In Judy's absence,
let me say this is one
of those things that
we'll set up a photo
session for if you want
to schedule it — not a
"must-do" thing, though.

FILE

PHIL WISE SAYS WE WILL DO THIS
EVENTUALLY. I'VE TOLD FRANK
PRESS. HE AGREES THAT THE P
DOESN'T NEED TO APPROVE THE
NOMINEES PERSONALLY - FRANK
WILL DO SO IN HIS BEHALF.

NO FURTHER ACTION NEEDED.

RICK
12/17/79

A large, stylized handwritten signature in black ink, consisting of several overlapping loops and lines, positioned to the right of the typed name and date.

THE WHITE HOUSE
WASHINGTON

Frank Press

will do something

? does Press need
to approve ~~the~~
list

*Jody,
What's your
opinion on
this? Phil*

ID 795642

THE WHITE HOUSE
WASHINGTON

DATE: 12 DEC 79

FOR ACTION: FRAN VOORDE

PHIL WISE

INFO ONLY: THE VICE PRESIDENT
JODY POWELL

AL MCDONALD

SUBJECT: PRESS MEMO RE NATIONAL MEDAL OF SCIENCE NOMINATIONS

+++++
+ RESPONSE DUE TO RICK HUTCHESON STAFF SECRETARY (456-7052) +
+ BY: 1200 PM FRIDAY 14 DEC 79 +
+++++

ACTION REQUESTED: YOUR COMMENTS

STAFF RESPONSE: () I CONCUR. () NO COMMENT. () HOLD.

PLEASE NOTE OTHER COMMENTS BELOW:

*The timing should be very flexible - Given
the upcoming needs this is a low priority -
Phil*

THE WHITE HOUSE

WASHINGTON

12 DEC 1979

MEMORANDUM FOR: THE PRESIDENT
FROM : Frank Press **SIGNED**
SUBJECT : National Medal of Science Nominations

Background

The National Medal of Science -- established by Congress in 1959 -- is the highest honor our Nation accords its scientists and engineers. The legislation states that awards are to be made by the President, and that no more than twenty may be given in any one calendar year. Subsequent Executive Orders established a Presidentially-appointed committee to solicit nominations and then make recommendations to the President.

To date, 133 Medals have been awarded by Presidents beginning with John Kennedy. Except for two years during the Nixon Administration, awards have been given annually. You may recall that you made the most recent awards in a ceremony on November 22, 1977. No awards have been made since then because we undertook the reorganization of the selection committee to include a wider spectrum of participants and thereby to reflect philosophies of this Administration.

Nominations

The selection committee solicits nominations very broadly from the science and engineering communities in the United States. The committee has now forwarded its recommendations in the form of a rank-ordered list of twenty persons and has recommended that all receive awards this year.

I find that each of the twenty candidates forwarded by the selection committee has made outstanding contributions that are in the tradition of past recipients of the Medal. Four of the candidates already have received Nobel prizes. I concur in the advice of the selection committee and recommend that all receive awards this year. The slate of twenty nominees is set out for your consideration as TAB A, the report of the selection committee as TAB B, the citation list as TAB C, and a list of previous recipients as TAB D.

Recognition of Innovation

These awards, coming closely after your Innovation Message, offer an excellent opportunity to recognize publicly the importance of innovation

in the science and technology process. Several of the candidates have made noteworthy contributions to innovation. For example, Robert Noyce is considered the inventor of the integrated circuit, which is the cornerstone of modern electronics and computers. Paul Weiss invented techniques that are the basis for the surgical repair of injury to peripheral nerves. John Sinfelt is credited with the invention of new commercial reforming catalysts responsive to the need for higher-octane, no-lead gasoline. And Earl Parker is responsible for the invention of new steels that permit a wide range of safer, more practical structural designs.

Presentation

Since its inception, all medals have been awarded personally by the President in a brief ceremony at the White House. I recommend that you continue this tradition. If you agree with this approach, and the list of twenty nominees, we will schedule a ceremony at an appropriate time in the near future.

ACTION

Approve _____

Other _____

MEDAL OF SCIENCE CANDIDATES

1979

1st priority group: (equal ranking)

Joseph L. Doob
Richard P. Feynman
Robert N. Noyce
Earl R. Stadtman

2nd priority group: (equal ranking)

Elizabeth C. Crosby
Donald E. Knuth
Herman F. Mark
Edward M. Purcell
Victor F. Weisskopf
Paul Alfred Weiss

3rd priority group: (rank-ordered)

Severo Ochoa
John H. Sinfelt
Emmett Norman Leith
Arthur Kornberg
Raymond D. Mindlin
Earl R. Parker
George L. Stebbins
Robert H. Burris
Simon Ramo
Lyman Spitzer, Jr.

PRESIDENT'S COMMITTEE ON THE NATIONAL MEDAL OF SCIENCE
NATIONAL SCIENCE FOUNDATION
WASHINGTON, D. C. 20550

June 28, 1979

The President
The White House
Washington, D.C. 20500

Dear Mr. President:

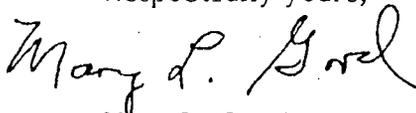
I am writing to transmit for your consideration the Committee's recommendations for the National Medal of Science. As you know, Medals are awarded by the President pursuant to the National Medal of Science Act of 1959. To date 133 Medals have been awarded by Presidents beginning with John Kennedy. The most recent awards were made by you on November 22, 1977.

The Committee met on May 29 to consider candidates for the Medal and following extensive and careful deliberations arrived at the enclosed list of 20 persons. Also enclosed are minutes of the meeting, biographical sketches for the 20 candidates, and proposed award citations. The Committee believes that each of these candidates is highly deserving of a National Medal of Science and that their impressive accomplishments are entirely consistent with the tradition of the Medal. Accordingly, the Committee respectfully urges that you consider making awards to all 20 persons. While this would be the largest single group to receive Medals, the Committee notes that no Medals were awarded last year and therefore believes that a larger than normal number would be appropriate. However, should you choose to recognize a smaller group of our Nation's most outstanding scientists and engineers, the Committee has grouped the list for your convenience.

The Committee also respectfully suggests that you consider announcing new recipients at your earliest convenience. The actual ceremony for presentation of the Medals could be scheduled for next fall.

The Committee recognizes the importance of the National Medal of Science and is pleased to have been of service to you in recommending candidates. We stand ready to be of any additional assistance you may require.

Respectfully yours,



Mary L. Good
Chairman

Enclosures

PRESIDENT'S COMMITTEE ON THE NATIONAL MEDAL OF SCIENCE
NATIONAL SCIENCE FOUNDATION
WASHINGTON, D. C. 20550

Meeting Notes

President's Committee on the National Medal of Science

May 29, 1979

National Science Foundation

Washington, D. C.

Present: Mary Good (Chairman), Dale Compton, Carl Djerassi, Leon Lederman, Calvin Moore, Frank Press, Dorothy Simon, James Wyngaarden, Richard Nicholson (Executive Secretary), Lois Hamaty (Staff Associate).

Dr. Good called the meeting to order at 9:15 AM. She briefly reviewed the agenda for the day noting the need to arrive at a rank-ordered list of nominees. She next distributed to the Committee a letter from Dr. Handler who raised several issues about the selection procedures to be used. Following a lengthy debate, it was agreed that the Committee's central objective was to select what in its judgment would be the best possible list of candidates to forward to the President. However, before discussing individual nominees, there was a general discussion of the criteria for selecting candidates. Issues included the extent to which previous forms of recognition should be a factor; whether a single, major achievement is more important than a long history of contributions; and the possible useful purposes that may be served as a result of receiving a Medal.

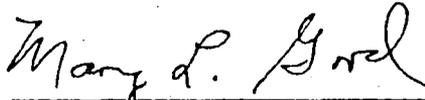
Dr. Good asked a representative from each subcommittee to describe briefly the accomplishments of the nominees brought forward by the subcommittee. After these presentations, Dr. Good asked Committee members individually to list the five persons they felt were most deserving. This produced ten names for whom the Committee unanimously agreed on four as being the top candidates. This procedure was repeated to produce another group of six candidates as the second highest-ranking group. The Committee decided not to attempt rank-ordering within either of the groups of four and six. The first priority group of four candidates and the second priority group of six are each listed alphabetically on the attached list. The same procedures were repeated until the Committee agreed on a final group of ten persons ranked from "11" through "20." The list of the twenty candidates is attached. Following a further consideration of the scientific achievements of each of the candidates, the Committee decided to urge the President to award Medals to all twenty persons. The Committee noted in particular the outstanding character of the group and the fact that Medals had not been awarded last year.

Following selection of the list, Dr. Good asked that each subcommittee representative examine the citations and biographies, modify them appropriately, and then forward them to Dr. Nicholson.

The Committee next discussed the request for an exception to the five-year rule on posthumous awards. The Committee considered the relation of the candidate with respect to those on the attached list, as well as the various unique aspects of the case. Following a lengthy debate it was agreed that the Chairman should draft a separate letter to the President summarizing the Committee's discussion and outlining possible options. Dr. Good stated that a draft of the letter would be circulated to the full Committee.

Dr. Good next introduced the topic of the solicitation process. It was agreed that the solicitation letter should be issued in July with a postmark of October 26 for receipt of nominations. It was further agreed that the solicitation should be broadened to include some additional segments of industry as well as appropriate chairpersons in university departments. Finally, it was agreed that the use of a nominating form should be attempted. The form would request one page of biographical information, one page of justification for award of a Medal, a list of not more than twenty of the most important publications/contributions, and not more than three seconding letters from persons located outside the nominee's home institution familiar with the technical aspects of the nominee's accomplishments. It was further agreed that the solicitation letter should state that in order for prior nominations to remain active renomination via the new form would be required.

The Committee agreed to hold its next meeting at Stanford University on December 20, 1979. There was no other business and the chairman adjourned the meeting at 2:00 PM.



Mary L. Good, Chairman

Attachment

MEDAL OF SCIENCE CANDIDATES

1979

1st priority group: (equal ranking)

Joseph L. Doob
Richard P. Feynman
Robert N. Noyce
Earl R. Stadtman

2nd priority group: (equal ranking)

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Donald E. Knuth
Herman F. Mark
Edward M. Purcell
Victor F. Weisskopf
Paul Alfred Weiss

3rd priority group: (rank-ordered)

Severo Ochoa
John H. Sinfelt
Emmett Norman Leith
Arthur Kornberg
Raymond D. Mindlin
Earl R. Parker
George L. Stebbins
Robert H. Burris
Simon Ramo
Lyman Spitzer, Jr.

CITATIONS

NATIONAL MEDAL OF SCIENCE CANDIDATES

1979

First Priority Group (equal ranking):

JOSEPH L. DOOB

In recognition of his work on probability and mathematical statistics, characterized by novel and fruitful ideas of a general character that opened new fields of study which began to be transplanted abroad and now are acclaimed worldwide.

RICHARD P. FEYNMAN

In recognition of his essential contributions to the quantum theory of radiation and to his illumination of behavior of constituents, constituents of the atom, of the atom nucleus, and of the subnuclear particles.

ROBERT N. NOYCE

For contributions to a variety of semiconductor devices, but especially for the integrated circuit, the cornerstone of modern electronics.

EARL R. STADTMAN

For seminal contributions to understanding of the energy metabolism of anaerobic bacteria and for elucidation of major mechanisms whereby the rates of metabolic processes are finely matched to the requirements of the living cell.

Second priority Group (equal ranking):

ELIZABETH C. CROSBY

For outstanding original contributions to comparative and human neuro-anatomy and for the synthesis and transmission of knowledge of the entire nervous system of the vertebrate phylum.

DONALD E. KNUTH

For his deeply significant research into the mathematical analysis and design of efficient computer algorithms and for his profoundly influential books which have codified the fundamental knowledge at the core of computer programming.

HERMAN F. MARK

For his contributions to polymer chemistry, and his role in the introduction of polymer science as an academic discipline in the United States.

EDWARD M. PURCELL

For contributions to nuclear magnetic resonance in condensed matter and the measurement of interstellar magnetic fields.

VICTOR F. WEISSKOPF

For important contributions to our understanding of nuclear matter and nuclear reactions, and early fundamental contributions to our understanding of elementary particles.

PAUL A. WEISS

For outstanding contributions to cell biology and understanding of the development of the nervous system including the basis for surgical repair of injury to peripheral nerves.

Third Priority Group (rank-ordered):

SEVERO OCHOA

For his important contributions to the development of biochemistry and molecular biology, and his discoveries that led to our present understanding of the reactions of the citric acid cycle and the mechanisms of energy production, the biosynthesis of ribonucleic acid and the genetic code, and the biosynthesis of proteins.

JOHN H. SINFELT

For scientific research on the nature of heterogeneous catalysis by supported metals, leading to the development of new catalyst systems for the production of low lead gasoline and the removal of pollutants from automobile exhaust gases.

EMMETT N. LEITH

For pioneering discoveries and developments in wavefront construction and holography, leading the way in applying these techniques to applications in engineering and science.

ARTHUR KORNBERG

For his accomplishments in providing the conceptual and experimental framework for much of our current understanding of the manner in which DNA, the genetic substance, is replicated.

RAYMOND D. MINDLIN

For fundamental contributions to applied mechanics, including theory and applications in photoelasticity, package cushioning, piezoelectric oscillators, and ultra high frequency vibrations.

EARL R. PARKER

For contributions profoundly influencing and advancing materials engineering through research in flow and fracture, and for his development of new alloys with unusual combinations of strength and toughness.

GEORGE L. STEBBINS, JR.

For his outstanding contributions to the synthesis of an evolutionary theory, particularly as it applies to plants.

ROBERT H. BURRIS

For numerous original contributions leading to an understanding of the physiology and biochemistry of the process of biological nitrogen fixation.

SIMON RAMO

For basic contributions to microwave electronics, and imaginative technical leadership in making large electronic systems available to the country for defense and civilian uses.

LYMAN SPITZER, JR.

For important contributions to the theory of star formation and evolving stellar systems and plasma physics, including use of fusion as a source of energy.

Recipients of the National
Medal of Science

ADAMS, ROGER (1964)
ALVAREZ, LUIS WALTER (1963)
AMMANN, OTHMAR H (1964)
ARNON, DANIEL ISRAEL (1973)

BACKUS, JOHN (1975)
BARDEEN, JOHN (1965)
BARKER, HORACE ALBERT (1968)
BARTLETT, PAUL DOUGHTY (1968)
BEAMS, JESSE WAKEFIELD (1967)
BENEDICT, MANSON (1975)
BETHE, HANS A. (1975)
BIRCH, ALBERT FRANCIS (1967)
BJERKNES, JACOB (1966)
BLOEMBERGEN, NICOLAAS (1974)
BRAUER, RICHARD DAGOBERT (1970)
BREIT, GREGORY (1967)
BRODIE, BERNARD BIGHAM (1968)
BRONK, DETLEV WULF (1968)
BROWN, HERBERT CHARLES (1969)
BUSH, VANNEVAR (1963)

CHANCE, BRITTON (1974)
CHANDRASEKHAR, SUBRAHMANYAN (1966)
CHARGAFF, ERWIN (1974)
CHERN, SHIING-SHEN (1975)
COHEN, MORRIS (1976)
COHEN, PAUL JOSEPH (1967)
COLE, KENNETH STEWART (1967)

DANTZIG, GEORGE BERNARD (1975)
DAVIS, HALLOWELL (1975)
DEBYE, PETER J. W. (1965)
DICKE, ROBERT H. (1970)
DJERASSI, CARL (1973)
DOBZHANSKY, THEODOSIUS (1964)
DRAPER, CHARLES STARK (1964)
DRYDEN, HUGH L (1965)

ECKERT, J PERSPER (1968)
EDGERTON, HAROLD EUGENE (1973)
EWING, WILLIAM MAURICE (1972)
EYRING, HENRY (1966)

FELLER, WILLIAM (1969)
FLORY, PAUL JOHN (1974)
FOWLER, WILLIAM A. (1974)
FRIEDMAN, HERBERT (1968)
FRIEDRICHS, KURT OTTO (1976)

GODEL, KURT (1974)
GOLDMARK, PETER C (1976)
GOUDSMIT, SAMUEL A. (1976)
GUILLEMIN, ROGER (1976)
GUTOWSKY, H. S. (1976)
GYORGY, PAUL (1975)

HAAGEN-SMIT, ARIE JAN (1973)
HAENSEL, VLADIMIR (1973)
HAMMETT, LOUIS PLACK (1967)
HARLOW, HARRY F (1967)
HEIDELBERGER, MICHAEL (1967)
HENDRICKS, STERLING B. (1975)
HIRSCHFELDER, JOSEPH OAKLAND (1975)
HUEBNER, ROBERT JOSEPH (1969)

JOHNSON, CLARENCE LEONARD (1965)

KILBY, JACK S. C. (1969)
KISTIAKOWSKY, GEORGE BOGDAN (1967)
KNIPLING, EDWARD FRED (1966)
KOMPNER, RUDOLF (1974)

LAND, EDWIN HERBERT (1967)
LEDERMAN, LEON MAX (1965)
LEFSCHETZ, SOLOMON (1964)
LEWIS, WARREN KENDALL (1965)
LIPMAN, FRITZ A. (1966)
LUSH, JAY LAURENCE (1968)

MAYR, ERNST (1969)
MCCLINTOCK, BARBARA (1970)
MILLER, NEAL ELGAR (1964)
MILNOR, JOHN WILLARD (1966)
MORSE, HAROLD MARSTON (1964)
MUELLER, ERWIN (1976)
MUELLER, GEORGE E. (1970)

NEEL, JAMES V. (1974)
NEWMARK, NATHAN MORTIMORE (1968)
NEYMAN, JERZY (1968)
NIRENBERG, MARSHALL WARREN (1964)

ONSAGER, LARS (1968)

PANOFSKY, WOLFGANG K.H. (1969)
PAULING, LINUS (1974)
PECK, RALPH BRAZELTON (1974)
PICKERING, WILLIAM H. (1975)
PIERCE, JOHN ROBINSON (1963)
PITZER, K. S. (1974)
PORTER, KEITH ROBERTS (1976)

RACKER, EFRAIM (1976)
ROSE, WILLIAM CUMMING (1966)
ROSSINI, FREDERICK D. (1976)
ROUS, FRANCIS PEYTON (1965)
RUBEY, WILLIAM WALDEN (1965)

SABIN, ALBERT B. (1970)
SANDAGE, ALLAN REX (1970)
SARETT, LEWIS HASTINGS (1975)
SCHWINGER, JULIAN (1964)
SEITZ, FREDERICK (1973)
SHANNON, CLAUDE ELWOOD (1966)
SHANNON, JAMES A. (1974)
SIKORSKY, IGOR I (1967)
SIMPSON, GEORGE GAYLORD (1965)
SKINNER, BURRHUS FREDERIC (1968)
SLATER, JOHN CLARKE (1970)
STURTEVANT, ALFRED HENRY (1967)
SUOMI, VERNER E. (1976)
SUTHERLAND, EARL W., JR. (1973)

TAUBE, HENRY (1976)
TERMAN, FREDERICK EMMONS (1975)
TUKEY, JOHN WILDER (1973)

UHLENBECK, GEORGE E. (1976)
UREY, HAROLD CLAYTON (1964)

VAN NIEL, CORNELIS B (1963)
VAN SLYKE, DONALD D (1965)
VAN VLECK, JOHN HASBROUCK (1966)
VOGEL, ORVILLE ALVIN (1975)
VON BRAUN, WERNER (1975)
VON KARMAN, THEODORE (1962)

WHEELER, JOHN ARCHIBALD (1970)
WHITCOMB, RICHARD TRAVIS (1973)
WHITNEY, HASSLER (1976)
WIENER, NORBERT (1963)
WIGNER, EUGENE PAUL (1968)
WILSON, EDWARD O. (1976)
WILSON, E. BRIGHT (1975)
WILSON, ROBERT RATHBUN (1973)

WINSTEIN, SAUL (1970)
WOLMAN, ABEL (1974)
WOODWARD, ROBERT BURNS (1964)
WRIGHT, SEWALL (1966)
WU, SHIEN-SHIUNG (1975)

ZARISKI, OSCAR (1965)
ZWORYKIN, VLADIMIR KOSMA (1966)

ID 795642

THE WHITE HOUSE

WASHINGTON

DATE: 12 DEC 79

FOR ACTION: FRAN VOORDE

PHIL WISE

afabel

INFO ONLY: THE VICE PRESIDENT

AL McDONALD

JODY POWELL

SUBJECT: PRESS MEMO RE NATIONAL MEDAL OF SCIENCE NOMINATIONS

+++++

+ RESPONSE DJE TO RICK HUTCHESON STAFF SECRETARY (456-7052) +

+ BY: 1200 PM FRIDAY 14 DEC 79 +

+++++

ACTION REQUESTED: YOUR COMMENTS

STAFF RESPONSE: () I CONCUR. () NO COMMENT. () HOLD.

PLEASE NOTE OTHER COMMENTS BELOW:

✓	FOR STAFFING
	FOR INFORMATION
	FROM PRESIDENT'S OUTBOX
	LOG IN/TO PRESIDENT TODAY
	IMMEDIATE TURNAROUND
	NO DEADLINE
	FOR APPROPRIATE HANDLING
	LAST DAY FOR ACTION

	ADMIN CONFID
	CONFIDENTIAL
	SECRET
	EYES ONLY

ACTION
FYI

✓	VICE PRESIDENT
	JORDAN
	CUTLER
✓	DONOVAN
	EIZENSTAT
✓	MCDONALD
	MOORE
✓	POWELL
	WATSON
	WEDDINGTON
	WEXLER
	BRZEZINSKI
	MCINTYRE
	SCHULTZE
	ANDRUS
	ASKEW
	BERGLAND
	BROWN
	CIVILETTI
	DUNCAN
	GOLDSCHMIDT
	HARRIS
	KREPS
	LANDRIEU
	MARSHALL

✓	MILLER
	VANCE
	BUTLER
	CAMPBELL
	H. CARTER
	CLOUGH
	CRUIKSHANK
	FIRST LADY
	FRANCIS
	HARDEN
	HERTZBERG
	HUTCHESON
	KAHN
	LINDER
	MARTIN
	MILLER
	MOE
	PETERSON
	PRESS
	SANDERS
	SPETH
	STRAUSS
	TORRES
✓	VOORDE
✓	WISE

THE WHITE HOUSE

WASHINGTON

December 12, 1979

MEMORANDUM FOR: THE PRESIDENT
FROM : Frank Press 
SUBJECT : National Medal of Science Nominations

Background

The National Medal of Science -- established by Congress in 1959 -- is the highest honor our Nation accords its scientists and engineers. The legislation states that awards are to be made by the President, and that no more than twenty may be given in any one calendar year. Subsequent Executive Orders established a Presidentially-appointed committee to solicit nominations and then make recommendations to the President.

To date, 133 Medals have been awarded by Presidents beginning with John Kennedy. Except for two years during the Nixon Administration, awards have been given annually. You may recall that you made the most recent awards in a ceremony on November 22, 1977. No awards have been made since then because we undertook the reorganization of the selection committee to include a wider spectrum of participants and thereby to reflect philosophies of this Administration.

Nominations

The selection committee solicits nominations very broadly from the science and engineering communities in the United States. The committee has now forwarded its recommendations in the form of a rank-ordered list of twenty persons and has recommended that all receive awards this year.

I find that each of the twenty candidates forwarded by the selection committee has made outstanding contributions that are in the tradition of past recipients of the Medal. Four of the candidates already have received Nobel prizes. I concur in the advice of the selection committee and recommend that all receive awards this year. The slate of twenty nominees is set out for your consideration as TAB A, the report of the selection committee as TAB B, the citation list as TAB C, and a list of previous recipients as TAB D.

Recognition of Innovation

These awards, coming closely after your Innovation Message, offer an excellent opportunity to recognize publicly the importance of innovation

in the science and technology process. Several of the candidates have made noteworthy contributions to innovation. For example, Robert Noyce is considered the inventor of the integrated circuit, which is the cornerstone of modern electronics and computers. Paul Weiss invented techniques that are the basis for the surgical repair of injury to peripheral nerves. John Sinfelt is credited with the invention of new commercial reforming catalysts responsive to the need for higher-octane, no-lead gasoline. And Earl Parker is responsible for the invention of new steels that permit a wide range of safer, more practical structural designs.

Presentation

Since its inception, all medals have been awarded personally by the President in a brief ceremony at the White House. I recommend that you continue this tradition. If you agree with this approach, and the list of twenty nominees, we will schedule a ceremony at an appropriate time in the near future.

ACTION

Approve

Other

MEDAL OF SCIENCE CANDIDATES

1979

1st priority group: (equal ranking)

Joseph L. Doob
Richard P. Feynman
Robert N. Noyce
Earl R. Stadtman

2nd priority group: (equal ranking)

Elizabeth C. Crosby
Donald E. Knuth
Herman F. Mark
Edward M. Purcell
Victor F. Weisskopf
Paul Alfred Weiss

3rd priority group: (rank-ordered)

Severo Ochoa
John H. Sinfelt
Emmett Norman Leith
Arthur Kornberg
Raymond D. Mindlin
Earl R. Parker
George L. Stebbins
Robert H. Burris
Simon Ramo
Lyman Spitzer, Jr.

PRESIDENT'S COMMITTEE ON THE NATIONAL MEDAL OF SCIENCE
NATIONAL SCIENCE FOUNDATION
WASHINGTON, D. C. 20550

June 28, 1979

The President
The White House
Washington, D.C. 20500

Dear Mr. President:

I am writing to transmit for your consideration the Committee's recommendations for the National Medal of Science. As you know, Medals are awarded by the President pursuant to the National Medal of Science Act of 1959. To date 133 Medals have been awarded by Presidents beginning with John Kennedy. The most recent awards were made by you on November 22, 1977.

The Committee met on May 29 to consider candidates for the Medal and following extensive and careful deliberations arrived at the enclosed list of 20 persons. Also enclosed are minutes of the meeting, biographical sketches for the 20 candidates, and proposed award citations. The Committee believes that each of these candidates is highly deserving of a National Medal of Science and that their impressive accomplishments are entirely consistent with the tradition of the Medal. Accordingly, the Committee respectfully urges that you consider making awards to all 20 persons. While this would be the largest single group to receive Medals, the Committee notes that no Medals were awarded last year and therefore believes that a larger than normal number would be appropriate. However, should you choose to recognize a smaller group of our Nation's most outstanding scientists and engineers, the Committee has grouped the list for your convenience.

The Committee also respectfully suggests that you consider announcing new recipients at your earliest convenience. The actual ceremony for presentation of the Medals could be scheduled for next fall.

The Committee recognizes the importance of the National Medal of Science and is pleased to have been of service to you in recommending candidates. We stand ready to be of any additional assistance you may require.

Respectfully yours,



Mary L. Good
Chairman

Enclosures

PRESIDENT'S COMMITTEE ON THE NATIONAL MEDAL OF SCIENCE
NATIONAL SCIENCE FOUNDATION
WASHINGTON, D. C. 20550

Meeting Notes

President's Committee on the National Medal of Science

May 29, 1979

National Science Foundation

Washington, D. C.

Present: Mary Good (Chairman), Dale Compton, Carl Djerassi, Leon Lederman, Calvin Moore, Frank Press, Dorothy Simon, James Wyngaarden, Richard Nicholson (Executive Secretary), Lois Hamaty (Staff Associate).

Dr. Good called the meeting to order at 9:15 AM. She briefly reviewed the agenda for the day noting the need to arrive at a rank-ordered list of nominees. She next distributed to the Committee a letter from Dr. Handler who raised several issues about the selection procedures to be used. Following a lengthy debate, it was agreed that the Committee's central objective was to select what in its judgment would be the best possible list of candidates to forward to the President. However, before discussing individual nominees, there was a general discussion of the criteria for selecting candidates. Issues included the extent to which previous forms of recognition should be a factor; whether a single, major achievement is more important than a long history of contributions; and the possible useful purposes that may be served as a result of receiving a Medal.

Dr. Good asked a representative from each subcommittee to describe briefly the accomplishments of the nominees brought forward by the subcommittee. After these presentations, Dr. Good asked Committee members individually to list the five persons they felt were most deserving. This produced ten names for whom the Committee unanimously agreed on four as being the top candidates. This procedure was repeated to produce another group of six candidates as the second highest-ranking group. The Committee decided not to attempt rank-ordering within either of the groups of four and six. The first priority group of four candidates and the second priority group of six are each listed alphabetically on the attached list. The same procedures were repeated until the Committee agreed on a final group of ten persons ranked from "11" through "20." The list of the twenty candidates is attached. Following a further consideration of the scientific achievements of each of the candidates, the Committee decided to urge the President to award Medals to all twenty persons. The Committee noted in particular the outstanding character of the group and the fact that Medals had not been awarded last year.

Following selection of the list, Dr. Good asked that each subcommittee representative examine the citations and biographies, modify them appropriately, and then forward them to Dr. Nicholson.

The Committee next discussed the request for an exception to the five-year rule on posthumous awards. The Committee considered the relation of the candidate with respect to those on the attached list, as well as the various unique aspects of the case. Following a lengthy debate it was agreed that the Chairman should draft a separate letter to the President summarizing the Committee's discussion and outlining possible options. Dr. Good stated that a draft of the letter would be circulated to the full Committee.

Dr. Good next introduced the topic of the solicitation process. It was agreed that the solicitation letter should be issued in July with a postmark of October 26 for receipt of nominations. It was further agreed that the solicitation should be broadened to include some additional segments of industry as well as appropriate chairpersons in university departments. Finally, it was agreed that the use of a nominating form should be attempted. The form would request one page of biographical information, one page of justification for award of a Medal, a list of not more than twenty of the most important publications/contributions, and not more than three seconding letters from persons located outside the nominee's home institution familiar with the technical aspects of the nominee's accomplishments. It was further agreed that the solicitation letter should state that in order for prior nominations to remain active renomination via the new form would be required.

The Committee agreed to hold its next meeting at Stanford University on December 20, 1979. There was no other business and the chairman adjourned the meeting at 2:00 PM.



Mary L. Good, Chairman

Attachment

MEDAL OF SCIENCE CANDIDATES

1979

1st priority group: (equal ranking)

Joseph L. Doob
Richard P. Feynman
Robert N. Noyce
Earl R. Stadtman

2nd priority group: (equal ranking)

Elizabeth C. Crosby
Donald E. Knuth
Herman F. Mark
Edward M. Purcell
Victor F. Weisskopf
Paul Alfred Weiss

3rd priority group: (rank-ordered)

Severo Ochoa
John H. Sinfelt
Emmett Norman Leith
Arthur Kornberg
Raymond D. Mindlin
Earl R. Parker
George L. Stebbins
Robert H. Burris
Simon Ramo
Lyman Spitzer, Jr.

C

CITATIONS

NATIONAL MEDAL OF SCIENCE CANDIDATES

1979

First Priority Group (equal ranking):

JOSEPH L. DOOB

In recognition of his work on probability and mathematical statistics, characterized by novel and fruitful ideas of a general character that opened new fields of study which began to be transplanted abroad and now are acclaimed worldwide.

RICHARD P. FEYNMAN

In recognition of his essential contributions to the quantum theory of radiation and to his illumination of behavior of constituents, constituents of the atom, of the atom nucleus, and of the subnuclear particles.

ROBERT N. NOYCE

For contributions to a variety of semiconductor devices, but especially for the integrated circuit, the cornerstone of modern electronics.

EARL R. STADTMAN

For seminal contributions to understanding of the energy metabolism of anaerobic bacteria and for elucidation of major mechanisms whereby the rates of metabolic processes are finely matched to the requirements of the living cell.

Second priority Group (equal ranking):

ELIZABETH C. CROSBY

For outstanding original contributions to comparative and human neuro-anatomy and for the synthesis and transmission of knowledge of the entire nervous system of the vertebrate phylum.

DONALD E. KNUTH

For his deeply significant research into the mathematical analysis and design of efficient computer algorithms and for his profoundly influential books which have codified the fundamental knowledge at the core of computer programming.

HERMAN F. MARK

For his contributions to polymer chemistry, and his role in the introduction of polymer science as an academic discipline in the United States.

EDWARD M. PURCELL

For contributions to nuclear magnetic resonance in condensed matter and the measurement of interstellar magnetic fields.

VICTOR F. WEISSKOPF

For important contributions to our understanding of nuclear matter and nuclear reactions, and early fundamental contributions to our understanding of elementary particles.

PAUL A. WEISS

For outstanding contributions to cell biology and understanding of the development of the nervous system including the basis for surgical repair of injury to peripheral nerves.

Third Priority Group (rank-ordered):

SEVERO OCHOA

For his important contributions to the development of biochemistry and molecular biology, and his discoveries that led to our present understanding of the reactions of the citric acid cycle and the mechanisms of energy production, the biosynthesis of ribonucleic acid and the genetic code, and the biosynthesis of proteins.

JOHN H. SINFELT

For scientific research on the nature of heterogeneous catalysis by supported metals, leading to the development of new catalyst systems for the production of low lead gasoline and the removal of pollutants from automobile exhaust gases.

EMMETT N. LEITH

For pioneering discoveries and developments in wavefront construction and holography, leading the way in applying these techniques to applications in engineering and science.

ARTHUR KORNBERG

For his accomplishments in providing the conceptual and experimental framework for much of our current understanding of the manner in which DNA, the genetic substance, is replicated.

RAYMOND D. MINDLIN

For fundamental contributions to applied mechanics, including theory and applications in photoelasticity, package cushioning, piezoelectric oscillators, and ultra high frequency vibrations.

EARL R. PARKER

For contributions profoundly influencing and advancing materials engineering through research in flow and fracture, and for his development of new alloys with unusual combinations of strength and toughness.

GEORGE L. STEBBINS, JR.

For his outstanding contributions to the synthesis of an evolutionary theory, particularly as it applies to plants.

ROBERT H. BURRIS

For numerous original contributions leading to an understanding of the physiology and biochemistry of the process of biological nitrogen fixation.

SIMON RAMO

For basic contributions to microwave electronics, and imaginative technical leadership in making large electronic systems available to the country for defense and civilian uses.

LYMAN SPITZER, JR.

For important contributions to the theory of star formation and evolving stellar systems and plasma physics, including use of fusion as a source of energy.

D

Recipients of the National
Medal of Science

ADAMS, ROGER (1964)
ALVAREZ, LUIS WALTER (1963)
AMMANN, OTHMAR H (1964)
ARNON, DANIEL ISRAEL (1973)

BACKUS, JOHN (1975)
BARDEEN, JOHN (1965)
BARKER, HORACE ALBERT (1968)
BARTLETT, PAUL DOUGHTY (1968)
BEAMS, JESSE WAKEFIELD (1967)
BENEDICT, MANSON (1975)
BETHE, HANS A. (1975)
BIRCH, ALBERT FRANCIS (1967)
BJERKNES, JACOB (1966)
BLOEMBERGEN, NICOLAAS (1974)
BRAUER, RICHARD DAGOBERT (1970)
BREIT, GREGORY (1967)
BRODIE, BERNARD BIGHAM (1968)
BRONK, DETLEV WULF (1968)
BROWN, HERBERT CHARLES (1969)
BUSH, VANNEVAR (1963)

CHANCE, BRITTON (1974)
CHANDRASEKHAR, SUBRAHMANYAN (1966)
CHARGAFF, ERWIN (1974)
CHERN, SHIING-SHEN (1975)
COHEN, MORRIS (1976)
COHEN, PAUL JOSEPH (1967)
COLE, KENNETH STEWART (1967)

DANTZIG, GEORGE BERNARD (1975)
DAVIS, HALLOWELL (1975)
DEBYE, PETER J. W. (1965)
DICKE, ROBERT H. (1970)
DJERASSI, CARL (1973)
DOBZHANSKY, THEODOSIUS (1964)
DRAPER, CHARLES STARK (1964)
DRYDEN, HUGH L (1965)

ECKERT, J PRESER (1968)
EDGERTON, HAROLD EUGENE (1973)
EWING, WILLIAM MAURICE (1972)
EYRING, HENRY (1966)

FELLER, WILLIAM (1969)
FLORY, PAUL JOHN (1974)
FOWLER, WILLIAM A. (1974)
FRIEDMAN, HERBERT (1968)
FRIEDRICHS, KURT OTTO (1976)

GODEL, KURT (1974)
GOLDMARK, PETER C (1976)
GOUDSMIT, SAMUEL A. (1976)
GUILLEMIN, ROGER (1976)
GUTOWSKY, H. S. (1976)
GYORGY, PAUL (1975)

HAAGEN-SMIT, ARIE JAN (1973)
HAENSEL, VLADIMIR (1973)
HAMMETT, LOUIS PLACK (1967)
HARLOW, HARRY F (1967)
HEIDELBERGER, MICHAEL (1967)
HENDRICKS, STERLING B. (1975)
HIRSCHFELDER, JOSEPH OAKLAND (1975)
HUEBNER, ROBERT JOSEPH (1969)

JOHNSON, CLARENCE LEONARD (1965)

KILBY, JACK S. C. (1969)
KISTIAKOWSKY, GEORGE BOGDAN (1967)
KNIPLING, EDWARD FRED (1966)
KOMPFFNER, RUDOLF (1974)

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LEWIS, WARREN KENDALL (1965)
LIPMAN, FRITZ A. (1966)
LUSH, JAY LAURENCE (1968)

MAYR, ERNST (1969)
MCCLINTOCK, BARBARA (1970)
MILLER, NEAL ELGAR (1964)
MILNOR, JOHN WILLARD (1966)
MORSE, HAROLD MARSTON (1964)
MUELLER, ERWIN (1976)
MUELLER, GEORGE E. (1970)

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ROSSINI, FREDERICK D. (1976)
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SANDAGE, ALLAN REX (1970)
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SHANNON, JAMES A. (1974)
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SUTHERLAND, EARL W., JR. (1973)

TAUBE, HENRY (1976)
TERMAN, FREDERICK EMMONS (1975)
TUKEY, JOHN WILDER (1973)

UHLENBECK, GEORGE E. (1976)
UREY, HAROLD CLAYTON (1964)

VAN NIEL, CORNELIS B (1963)
VAN SLYKE, DONALD D (1965)
VAN VLECK, JOHN HASBROUCK (1966)
VOGEL, ORVILLE ALVIN (1975)
VON BRAUN, WERNER (1975)
VON KARMAN, THEODORE (1962)

WHEELER, JOHN ARCHIBALD (1970)
WHITCOMB, RICHARD TRAVIS (1973)
WHITNEY, HASSLER (1976)
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WILSON, EDWARD O. (1976)
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WILSON, ROBERT RATHBUN (1973)

WINSTEIN, SAUL (1970)
WOLMAN, ABEL (1974)
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WRIGHT, SEWALL (1966)
WU, SHIEN-SHIUNG (1975)

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ZWORYKIN, VLADIMIR KOSMA (1966)

THE WHITE HOUSE

WASHINGTON

12 DEC 1979

MEMORANDUM FOR: THE PRESIDENT
FROM : Frank Press **SIGNED**
SUBJECT : National Medal of Science Nominations

Background

The National Medal of Science -- established by Congress in 1959 -- is the highest honor our Nation accords its scientists and engineers. The legislation states that awards are to be made by the President, and that no more than twenty may be given in any one calendar year. Subsequent Executive Orders established a Presidentially-appointed committee to solicit nominations and then make recommendations to the President.

To date, 133 Medals have been awarded by Presidents beginning with John Kennedy. Except for two years during the Nixon Administration, awards have been given annually. You may recall that you made the most recent awards in a ceremony on November 22, 1977. No awards have been made since then because we undertook the reorganization of the selection committee to include a wider spectrum of participants and thereby to reflect philosophies of this Administration.

Nominations

The selection committee solicits nominations very broadly from the science and engineering communities in the United States. The committee has now forwarded its recommendations in the form of a rank-ordered list of twenty persons and has recommended that all receive awards this year.

I find that each of the twenty candidates forwarded by the selection committee has made outstanding contributions that are in the tradition of past recipients of the Medal. Four of the candidates already have received Nobel prizes. I concur in the advice of the selection committee and recommend that all receive awards this year. The slate of twenty nominees is set out for your consideration as TAB A, the report of the selection committee as TAB B, the citation list as TAB C, and a list of previous recipients as TAB D.

Recognition of Innovation

These awards, coming closely after your Innovation Message, offer an excellent opportunity to recognize publicly the importance of innovation

in the science and technology process. Several of the candidates have made noteworthy contributions to innovation. For example, Robert Noyce is considered the inventor of the integrated circuit, which is the cornerstone of modern electronics and computers. Paul Weiss invented techniques that are the basis for the surgical repair of injury to peripheral nerves. John Sinfelt is credited with the invention of new commercial reforming catalysts responsive to the need for higher-octane, no-lead gasoline. And Earl Parker is responsible for the invention of new steels that permit a wide range of safer, more practical structural designs.

Presentation

Since its inception, all medals have been awarded personally by the President in a brief ceremony at the White House. I recommend that you continue this tradition. If you agree with this approach, and the list of twenty nominees, we will schedule a ceremony at an appropriate time in the near future.

ACTION

Approve _____

Other _____

MEDAL OF SCIENCE CANDIDATES

1979

1st priority group: (equal ranking)

Joseph L. Doob
Richard P. Feynman
Robert N. Noyce
Earl R. Stadtman

2nd priority group: (equal ranking)

Elizabeth C. Crosby
Donald E. Knuth
Herman F. Mark
Edward M. Purcell
Victor F. Weisskopf
Paul Alfred Weiss

3rd priority group: (rank-ordered)

Severo Ochoa
John H. Sinfelt
Emmett Norman Leith
Arthur Kornberg
Raymond D. Mindlin
Earl R. Parker
George L. Stebbins
Robert H. Burris
Simon Ramo
Lyman Spitzer, Jr.

PRESIDENT'S COMMITTEE ON THE NATIONAL MEDAL OF SCIENCE
NATIONAL SCIENCE FOUNDATION
WASHINGTON, D. C. 20550

June 28, 1979

The President
The White House
Washington, D.C. 20500

Dear Mr. President:

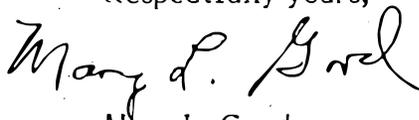
I am writing to transmit for your consideration the Committee's recommendations for the National Medal of Science. As you know, Medals are awarded by the President pursuant to the National Medal of Science Act of 1959. To date 133 Medals have been awarded by Presidents beginning with John Kennedy. The most recent awards were made by you on November 22, 1977.

The Committee met on May 29 to consider candidates for the Medal and following extensive and careful deliberations arrived at the enclosed list of 20 persons. Also enclosed are minutes of the meeting, biographical sketches for the 20 candidates, and proposed award citations. The Committee believes that each of these candidates is highly deserving of a National Medal of Science and that their impressive accomplishments are entirely consistent with the tradition of the Medal. Accordingly, the Committee respectfully urges that you consider making awards to all 20 persons. While this would be the largest single group to receive Medals, the Committee notes that no Medals were awarded last year and therefore believes that a larger than normal number would be appropriate. However, should you choose to recognize a smaller group of our Nation's most outstanding scientists and engineers, the Committee has grouped the list for your convenience.

The Committee also respectfully suggests that you consider announcing new recipients at your earliest convenience. The actual ceremony for presentation of the Medals could be scheduled for next fall.

The Committee recognizes the importance of the National Medal of Science and is pleased to have been of service to you in recommending candidates. We stand ready to be of any additional assistance you may require.

Respectfully yours,



Mary L. Good
Chairman

Enclosures

PRESIDENT'S COMMITTEE ON THE NATIONAL MEDAL OF SCIENCE
NATIONAL SCIENCE FOUNDATION
WASHINGTON, D. C. 20550

Meeting Notes

President's Committee on the National Medal of Science

May 29, 1979

National Science Foundation

Washington, D. C.

Present: Mary Good (Chairman), Dale Compton, Carl Djerassi, Leon Lederman, Calvin Moore, Frank Press, Dorothy Simon, James Wyngaarden, Richard Nicholson (Executive Secretary), Lois Hamaty (Staff Associate).

Dr. Good called the meeting to order at 9:15 AM. She briefly reviewed the agenda for the day noting the need to arrive at a rank-ordered list of nominees. She next distributed to the Committee a letter from Dr. Handler who raised several issues about the selection procedures to be used. Following a lengthy debate, it was agreed that the Committee's central objective was to select what in its judgment would be the best possible list of candidates to forward to the President. However, before discussing individual nominees, there was a general discussion of the criteria for selecting candidates. Issues included the extent to which previous forms of recognition should be a factor; whether a single, major achievement is more important than a long history of contributions; and the possible useful purposes that may be served as a result of receiving a Medal.

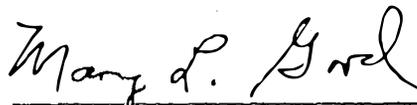
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Dr. Good next introduced the topic of the solicitation process. It was agreed that the solicitation letter should be issued in July with a postmark of October 26 for receipt of nominations. It was further agreed that the solicitation should be broadened to include some additional segments of industry as well as appropriate chairpersons in university departments. Finally, it was agreed that the use of a nominating form should be attempted. The form would request one page of biographical information, one page of justification for award of a Medal, a list of not more than twenty of the most important publications/contributions, and not more than three seconding letters from persons located outside the nominee's home institution familiar with the technical aspects of the nominee's accomplishments. It was further agreed that the solicitation letter should state that in order for prior nominations to remain active renomination via the new form would be required.

The Committee agreed to hold its next meeting at Stanford University on December 20, 1979. There was no other business and the chairman adjourned the meeting at 2:00 PM.



Mary L. Good, Chairman

Attachment

MEDAL OF SCIENCE CANDIDATES

1979

1st priority group: (equal ranking)

Joseph L. Doob
Richard P. Feynman
Robert N. Noyce
Earl R. Stadtman

2nd priority group: (equal ranking)

Elizabeth C. Crosby
Donald E. Knuth
Herman F. Mark
Edward M. Purcell
Victor F. Weisskopf
Paul Alfred Weiss

3rd priority group: (rank-ordered)

Severo Ochoa
John H. Sinfelt
Emmett Norman Leith
Arthur Kornberg
Raymond D. Mindlin
Earl R. Parker
George L. Stebbins
Robert H. Burris
Simon Ramo
Lyman Spitzer, Jr.

CITATIONS

NATIONAL MEDAL OF SCIENCE CANDIDATES

1979

First Priority Group (equal ranking):

JOSEPH L. DOOB

In recognition of his work on probability and mathematical statistics, characterized by novel and fruitful ideas of a general character that opened new fields of study which began to be transplanted abroad and now are acclaimed worldwide.

RICHARD P. FEYNMAN

In recognition of his essential contributions to the quantum theory of radiation and to his illumination of behavior of constituents, constituents of the atom, of the atom nucleus, and of the subnuclear particles.

ROBERT N. NOYCE

For contributions to a variety of semiconductor devices, but especially for the integrated circuit, the cornerstone of modern electronics.

EARL R. STADTMAN

For seminal contributions to understanding of the energy metabolism of anaerobic bacteria and for elucidation of major mechanisms whereby the rates of metabolic processes are finely matched to the requirements of the living cell.

Second priority Group (equal ranking):

ELIZABETH C. CROSBY

For outstanding original contributions to comparative and human neuro-anatomy and for the synthesis and transmission of knowledge of the entire nervous system of the vertebrate phylum.

DONALD E. KNUTH

For his deeply significant research into the mathematical analysis and design of efficient computer algorithms and for his profoundly influential books which have codified the fundamental knowledge at the core of computer programming.

HERMAN F. MARK

For his contributions to polymer chemistry, and his role in the introduction of polymer science as an academic discipline in the United States.

EDWARD M. PURCELL

For contributions to nuclear magnetic resonance in condensed matter and the measurement of interstellar magnetic fields.

VICTOR F. WEISSKOPF

For important contributions to our understanding of nuclear matter and nuclear reactions, and early fundamental contributions to our understanding of elementary particles.

PAUL A. WEISS

For outstanding contributions to cell biology and understanding of the development of the nervous system including the basis for surgical repair of injury to peripheral nerves.

Third Priority Group (rank-ordered):

SEVERO OCHOA

For his important contributions to the development of biochemistry and molecular biology, and his discoveries that led to our present understanding of the reactions of the citric acid cycle and the mechanisms of energy production, the biosynthesis of ribonucleic acid and the genetic code, and the biosynthesis of proteins.

JOHN H. SINFELT

For scientific research on the nature of heterogeneous catalysis by supported metals, leading to the development of new catalyst systems for the production of low lead gasoline and the removal of pollutants from automobile exhaust gases.

EMMETT N. LEITH

For pioneering discoveries and developments in wavefront construction and holography, leading the way in applying these techniques to applications in engineering and science.

ARTHUR KORNBERG

For his accomplishments in providing the conceptual and experimental framework for much of our current understanding of the manner in which DNA, the genetic substance, is replicated.

RAYMOND D. MINDLIN

For fundamental contributions to applied mechanics, including theory and applications in photoelasticity, package cushioning, piezoelectric oscillators, and ultra high frequency vibrations.

EARL R. PARKER

For contributions profoundly influencing and advancing materials engineering through research in flow and fracture, and for his development of new alloys with unusual combinations of strength and toughness.

GEORGE L. STEBBINS, JR.

For his outstanding contributions to the synthesis of an evolutionary theory, particularly as it applies to plants.

ROBERT H. BURRIS

For numerous original contributions leading to an understanding of the physiology and biochemistry of the process of biological nitrogen fixation.

SIMON RAMO

For basic contributions to microwave electronics, and imaginative technical leadership in making large electronic systems available to the country for defense and civilian uses.

LYMAN SPITZER, JR.

For important contributions to the theory of star formation and evolving stellar systems and plasma physics, including use of fusion as a source of energy.

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Medal of Science

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ALVAREZ, LUIS WALTER (1963)
AMMANN, OTHMAR H (1964)
ARNON, DANIEL ISRAEL (1973)

BACKUS, JOHN (1975)
BARDEEN, JOHN (1965)
BARKER, HORACE ALBERT (1968)
BARTLETT, PAUL DOUGHTY (1968)
BEAMS, JESSE WAKEFIELD (1967)
BENEDICT, MANSON (1975)
BETHE, HANS A. (1975)
BIRCH, ALBERT FRANCIS (1967)
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BRAUER, RICHARD DAGOBERT (1970)
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COHEN, MORRIS (1976)
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DOZHANSKY, THEODOSIUS (1964)
DRAPER, CHARLES STARK (1964)
DRYDEN, HUGH L (1965)

ECKERT, J PRESER (1968)
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EWING, WILLIAM MAURICE (1972)
EYRING, HENRY (1966)

FELLER, WILLIAM (1969)
FLORY, PAUL JOHN (1974)
FOWLER, WILLIAM A. (1974)
FRIEDMAN, HERBERT (1968)
FRIEDRICHS, KURT OTTO (1976)

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GUILLEMIN, ROGER (1976)
GUTOWSKY, H. S. (1976)
GYORGY, PAUL (1975)

HAAGEN-SMIT, ARIE JAN (1973)
HAENSEL, VLADIMIR (1973)
HAMMETT, LOUIS PLACK (1967)
HARLOW, HARRY F (1967)
HEIDELBERGER, MICHAEL (1967)
HENDRICKS, STERLING B. (1975)
HIRSCHFELDER, JOSEPH OAKLAND (1975)
HUEBNER, ROBERT JOSEPH (1969)

JOHNSON, CLARENCE LEONARD (1965)

KILBY, JACK S. C. (1969)
KJSTIAKOWSKY, GEORGE BOGDAN (1967)
KNIPLING, EDWARD FRED (1966)
KOMPNER, RUDOLF (1974)

LAND, EDWIN HERBERT (1967)
LEDERMAN, LEON MAX (1965)
LEFSCHETZ, SOLOMON (1964)
LEWIS, WARREN KENDALL (1965)
LIPMAN, FRITZ A. (1966)
LUSH, JAY LAURENCE (1968)

MAYR, ERNST (1969)
MCCLINTOCK, BARBARA (1970)
MILLER, NEAL ELGAR (1964)
MILNOR, JOHN WILLARD (1966)
MORSE, HAROLD MARSTON (1964)
MUELLER, ERWIN (1975)
MUELLER, GEORGE E. (1970)

NEEL, JAMES V. (1974)
NEWMARK, NATHAN MORTIMORE (1968)
NEYMAN, JERZY (1968)
NIRENBERG, MARSHALL WARREN (1964)

ONSAGER, LARS (1968)

PANOFSKY, WOLFGANG K.H. (1969)
PAULING, LINUS (1974)
PECK, RALPH BRAZELTON (1974)
PICKERING, WILLIAM H. (1975)
PIERCE, JOHN ROBINSON (1963)
PITZER, K. S. (1974)
PORTER, KEITH ROBERTS (1976)

RACKER, EFRAIM (1976)
ROSE, WILLIAM CUMMING (1966)
ROSSINI, FREDERICK D. (1976)
ROUS, FRANCIS PEYTON (1965)
RUBEY, WILLIAM WALDEN (1965)

SABIN, ALBERT B. (1970)
SANDAGE, ALLAN REX (1970)
SARETT, LEWIS HASTINGS (1975)
SCHWINGER, JULIAN (1964)
SEITZ, FREDERICK (1973)
SHANNON, CLAUDE ELWOOD (1966)
SHANNON, JAMES A. (1974)
SJKORSKY, IGOR I (1967)
SIMPSON, GEORGE GAYLORD (1965)
SKINNER, BURRHUS FREDERIC (1968)
SLATER, JOHN CLARKE (1970)
STURTEVANT, ALFRED HENRY (1967)
SUOMI, VERNER E. (1976)
SUTHERLAND, EARL W., JR. (1973)

TAUBE, HENRY (1976)
TERMAN, FREDERICK EMMONS (1975)
TUKEY, JOHN WILDER (1973)

UHLENBECK, GEORGE E. (1976)
UREY, HAROLD CLAYTON (1964)

VAN NIEL, CORNELIS B (1963)
VAN SLYKE, DONALD D (1965)
VAN VLECK, JOHN HASBROUCK (1966)
VOGEL, ORVILLE ALVIN (1975)
VON BRAUN, WERNER (1975)
VON KARMAN, THEODORE (1962)

WHEELER, JOHN ARCHIBALD (1970)
WHITCOMB, RICHARD TRAVIS (1973)
WHITNEY, HASSLER (1976)
WIENER, NORBERT (1963)
WIGNER, EUGENE PAUL (1968)
WILSON, EDWARD O. (1976)
WILSON, E. BRIGHT (1975)
WILSON, ROBERT RATHBUN (1973)

WINSTEIN, SAUL (1970)
WOLMAN, ABEL (1974)
WOODWARD, ROBERT BURNS (1964)
WRIGHT, SEWALL (1966)
WU, SHIEN-SHIUNG (1975)

ZARISKI, OSCAR (1965)
ZWORYKIN, VLADIMIR KOSMA (1966)

THE WHITE HOUSE

WASHINGTON

12 DEC 1979

MEMORANDUM FOR: THE PRESIDENT
FROM : Frank Press **SIGNED**
SUBJECT : National Medal of Science Nominations

Background

The National Medal of Science -- established by Congress in 1959 -- is the highest honor our Nation accords its scientists and engineers. The legislation states that awards are to be made by the President, and that no more than twenty may be given in any one calendar year. Subsequent Executive Orders established a Presidentially-appointed committee to solicit nominations and then make recommendations to the President.

To date, 133 Medals have been awarded by Presidents beginning with John Kennedy. Except for two years during the Nixon Administration, awards have been given annually. You may recall that you made the most recent awards in a ceremony on November 22, 1977. No awards have been made since then because we undertook the reorganization of the selection committee to include a wider spectrum of participants and thereby to reflect philosophies of this Administration.

Nominations

The selection committee solicits nominations very broadly from the science and engineering communities in the United States. The committee has now forwarded its recommendations in the form of a rank-ordered list of twenty persons and has recommended that all receive awards this year.

I find that each of the twenty candidates forwarded by the selection committee has made outstanding contributions that are in the tradition of past recipients of the Medal. Four of the candidates already have received Nobel prizes. I concur in the advice of the selection committee and recommend that all receive awards this year. The slate of twenty nominees is set out for your consideration as TAB A, the report of the selection committee as TAB B, the citation list as TAB C, and a list of previous recipients as TAB D.

Recognition of Innovation

These awards, coming closely after your Innovation Message, offer an excellent opportunity to recognize publicly the importance of innovation

in the science and technology process. Several of the candidates have made noteworthy contributions to innovation. For example, Robert Noyce is considered the inventor of the integrated circuit, which is the cornerstone of modern electronics and computers. Paul Weiss invented techniques that are the basis for the surgical repair of injury to peripheral nerves. John Sinfelt is credited with the invention of new commercial reforming catalysts responsive to the need for higher-octane, no-lead gasoline. And Earl Parker is responsible for the invention of new steels that permit a wide range of safer, more practical structural designs.

Presentation

Since its inception, all medals have been awarded personally by the President in a brief ceremony at the White House. I recommend that you continue this tradition. If you agree with this approach, and the list of twenty nominees, we will schedule a ceremony at an appropriate time in the near future.

ACTION

Approve _____

Other _____

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1979

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Richard P. Feynman
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Earl R. Stadtman

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Herman F. Mark
Edward M. Purcell
Victor F. Weisskopf
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3rd priority group: (rank-ordered)

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Emmett Norman Leith
Arthur Kornberg
Raymond D. Mindlin
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Robert H. Burris
Simon Ramo
Lyman Spitzer, Jr.

PRESIDENT'S COMMITTEE ON THE NATIONAL MEDAL OF SCIENCE
NATIONAL SCIENCE FOUNDATION
WASHINGTON, D. C. 20550

June 28, 1979

The President
The White House
Washington, D.C. 20500

Dear Mr. President:

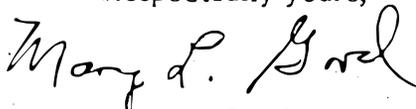
I am writing to transmit for your consideration the Committee's recommendations for the National Medal of Science. As you know, Medals are awarded by the President pursuant to the National Medal of Science Act of 1959. To date 133 Medals have been awarded by Presidents beginning with John Kennedy. The most recent awards were made by you on November 22, 1977.

The Committee met on May 29 to consider candidates for the Medal and following extensive and careful deliberations arrived at the enclosed list of 20 persons. Also enclosed are minutes of the meeting, biographical sketches for the 20 candidates, and proposed award citations. The Committee believes that each of these candidates is highly deserving of a National Medal of Science and that their impressive accomplishments are entirely consistent with the tradition of the Medal. Accordingly, the Committee respectfully urges that you consider making awards to all 20 persons. While this would be the largest single group to receive Medals, the Committee notes that no Medals were awarded last year and therefore believes that a larger than normal number would be appropriate. However, should you choose to recognize a smaller group of our Nation's most outstanding scientists and engineers, the Committee has grouped the list for your convenience.

The Committee also respectfully suggests that you consider announcing new recipients at your earliest convenience. The actual ceremony for presentation of the Medals could be scheduled for next fall.

The Committee recognizes the importance of the National Medal of Science and is pleased to have been of service to you in recommending candidates. We stand ready to be of any additional assistance you may require.

Respectfully yours,



Mary L. Good
Chairman

Enclosures

PRESIDENT'S COMMITTEE ON THE NATIONAL MEDAL OF SCIENCE
NATIONAL SCIENCE FOUNDATION
WASHINGTON, D. C. 20550

Meeting Notes

President's Committee on the National Medal of Science

May 29, 1979

National Science Foundation

Washington, D. C.

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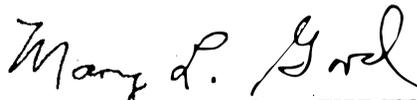
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The Committee agreed to hold its next meeting at Stanford University on December 20, 1979. There was no other business and the chairman adjourned the meeting at 2:00 PM.



Mary L. Good, Chairman

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MAYR, ERNST (1969)
MCCLINTOCK, BARBARA (1970)
MILLER, NEAL ELGAR (1964)
MILNOR, JOHN WILLARD (1966)
MORSE, HAROLD MARSTON (1964)
MUELLER, ERWIN (1976)
MUELLER, GEORGE E. (1970)

NEEL, JAMES V. (1974)
NEWMARK, NATHAN MORTIMORE (1968)
NEYMAN, JERZY (1968)
NIRENBERG, MARSHALL WARREN (1964)

ONSAGER, LARS (1968)

PANOFSKY, WOLFGANG K.H. (1969)
PAULING, LINUS (1974)
PECK, RALPH BRAZELTON (1974)
PICKERING, WILLIAM H. (1975)
PIERCE, JOHN ROBINSON (1963)
PITZER, K. S. (1974)
PORTER, KEITH ROBERTS (1976)

RACKER, EFRAIM (1976)
ROSE, WILLIAM CUMMING (1966)
ROSSINI, FREDERICK D. (1976)
ROUS, FRANCIS PEYTON (1965)
RUBEY, WILLIAM WALDEN (1965)

SABIN, ALBERT B. (1970)
SANDAGE, ALLAN REX (1970)
SARETT, LEWIS HASTINGS (1975)
SCHWINGER, JULIAN (1964)
SETTZ, FREDERICK (1973)
SHANNON, CLAUDE ELWOOD (1966)
SHANNON, JAMES A. (1974)
SIKORSKY, IGOR I (1967)
SIMPSON, GEORGE GAYLORD (1965)
SKINNER, BURRHUS FREDERIC (1968)
SLATER, JOHN CLARKE (1970)
STURTEVANT, ALFRED HENRY (1967)
SUOMI, VERNER E. (1976)
SUTHERLAND, EARL W., JR. (1973)

TAUBE, HENRY (1976)
TERMAN, FREDERICK EMMONS (1975)
TUKEY, JOHN WILDER (1973)

UHLENBECK, GEORGE E. (1976)
UREY, HAROLD CLAYTON (1964)

VAN NIEL, CORNELIS B (1963)
VAN SLYKE, DONALD D (1965)
VAN VLECK, JOHN HASBROUCK (1966)
VOGEL, ORVILLE ALVIN (1975)
VON BRAUN, WERNER (1975)
VON KARMAN, THEODORE (1962)

WHEELER, JOHN ARCHIBALD (1970)
WHITCOMB, RICHARD TRAVIS (1973)
WHITNEY, HASSLER (1976)
WIENER, NORBERT (1963)
WIGNER, EUGENE PAUL (1968)
WILSON, EDWARD O. (1976)
WILSON, E. BRIGHT (1975)
WILSON, ROBERT RATHBUN (1973)

WINSTEIN, SAUL (1970)
WOLMAN, ABEL (1974)
WOODWARD, ROBERT BURNS (1964)
WRIGHT, SEWALL (1966)
WU, SHIEN-SHIUNG (1975)

ZARISKI, OSCAR (1965)
ZWORYKIN, VLADIMIR KOSMA (1966)

THE WHITE HOUSE

WASHINGTON

12 DEC 1979

MEMORANDUM FOR: THE PRESIDENT
FROM : Frank Press **SIGNED**
SUBJECT : National Medal of Science Nominations

Background

The National Medal of Science -- established by Congress in 1959 -- is the highest honor our Nation accords its scientists and engineers. The legislation states that awards are to be made by the President, and that no more than twenty may be given in any one calendar year. Subsequent Executive Orders established a Presidentially-appointed committee to solicit nominations and then make recommendations to the President.

To date, 133 Medals have been awarded by Presidents beginning with John Kennedy. Except for two years during the Nixon Administration, awards have been given annually. You may recall that you made the most recent awards in a ceremony on November 22, 1977. No awards have been made since then because we undertook the reorganization of the selection committee to include a wider spectrum of participants and thereby to reflect philosophies of this Administration.

Nominations

The selection committee solicits nominations very broadly from the science and engineering communities in the United States. The committee has now forwarded its recommendations in the form of a rank-ordered list of twenty persons and has recommended that all receive awards this year.

I find that each of the twenty candidates forwarded by the selection committee has made outstanding contributions that are in the tradition of past recipients of the Medal. Four of the candidates already have received Nobel prizes. I concur in the advice of the selection committee and recommend that all receive awards this year. The slate of twenty nominees is set out for your consideration as TAB A, the report of the selection committee as TAB B, the citation list as TAB C, and a list of previous recipients as TAB D.

Recognition of Innovation

These awards, coming closely after your Innovation Message, offer an excellent opportunity to recognize publicly the importance of innovation

in the science and technology process. Several of the candidates have made noteworthy contributions to innovation. For example, Robert Noyce is considered the inventor of the integrated circuit, which is the cornerstone of modern electronics and computers. Paul Weiss invented techniques that are the basis for the surgical repair of injury to peripheral nerves. John Sinfelt is credited with the invention of new commercial reforming catalysts responsive to the need for higher-octane, no-lead gasoline. And Earl Parker is responsible for the invention of new steels that permit a wide range of safer, more practical structural designs.

Presentation

Since its inception, all medals have been awarded personally by the President in a brief ceremony at the White House. I recommend that you continue this tradition. If you agree with this approach, and the list of twenty nominees, we will schedule a ceremony at an appropriate time in the near future.

ACTION

Approve _____

Other _____

MEDAL OF SCIENCE CANDIDATES

1979

1st priority group: (equal ranking)

Joseph L. Doob
Richard P. Feynman
Robert N. Noyce
Earl R. Stadtman

2nd priority group: (equal ranking)

Elizabeth C. Crosby
Donald E. Knuth
Herman F. Mark
Edward M. Purcell
Victor F. Weisskopf
Paul Alfred Weiss

3rd priority group: (rank-ordered)

Severo Ochoa
John H. Sinfelt
Emmett Norman Leith
Arthur Kornberg
Raymond D. Mindlin
Earl R. Parker
George L. Stebbins
Robert H. Burris
Simon Ramo
Lyman Spitzer, Jr.

PRESIDENT'S COMMITTEE ON THE NATIONAL MEDAL OF SCIENCE
NATIONAL SCIENCE FOUNDATION
WASHINGTON, D. C. 20550

June 28, 1979

The President
The White House
Washington, D.C. 20500

Dear Mr. President:

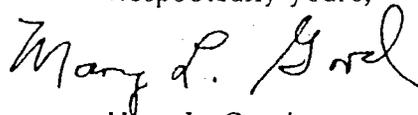
I am writing to transmit for your consideration the Committee's recommendations for the National Medal of Science. As you know, Medals are awarded by the President pursuant to the National Medal of Science Act of 1959. To date 133 Medals have been awarded by Presidents beginning with John Kennedy. The most recent awards were made by you on November 22, 1977.

The Committee met on May 29 to consider candidates for the Medal and following extensive and careful deliberations arrived at the enclosed list of 20 persons. Also enclosed are minutes of the meeting, biographical sketches for the 20 candidates, and proposed award citations. The Committee believes that each of these candidates is highly deserving of a National Medal of Science and that their impressive accomplishments are entirely consistent with the tradition of the Medal. Accordingly, the Committee respectfully urges that you consider making awards to all 20 persons. While this would be the largest single group to receive Medals, the Committee notes that no Medals were awarded last year and therefore believes that a larger than normal number would be appropriate. However, should you choose to recognize a smaller group of our Nation's most outstanding scientists and engineers, the Committee has grouped the list for your convenience.

The Committee also respectfully suggests that you consider announcing new recipients at your earliest convenience. The actual ceremony for presentation of the Medals could be scheduled for next fall.

The Committee recognizes the importance of the National Medal of Science and is pleased to have been of service to you in recommending candidates. We stand ready to be of any additional assistance you may require.

Respectfully yours,



Mary L. Good
Chairman

Enclosures

PRESIDENT'S COMMITTEE ON THE NATIONAL MEDAL OF SCIENCE
NATIONAL SCIENCE FOUNDATION
WASHINGTON, D. C. 20550

Meeting Notes

President's Committee on the National Medal of Science

May 29, 1979

National Science Foundation

Washington, D. C.

Present: Mary Good (Chairman), Dale Compton, Carl Djerassi, Leon Lederman, Calvin Moore, Frank Press, Dorothy Simon, James Wyngaarden, Richard Nicholson (Executive Secretary), Lois Hamaty (Staff Associate).

Dr. Good called the meeting to order at 9:15 AM. She briefly reviewed the agenda for the day noting the need to arrive at a rank-ordered list of nominees. She next distributed to the Committee a letter from Dr. Handler who raised several issues about the selection procedures to be used. Following a lengthy debate, it was agreed that the Committee's central objective was to select what in its judgment would be the best possible list of candidates to forward to the President. However, before discussing individual nominees, there was a general discussion of the criteria for selecting candidates. Issues included the extent to which previous forms of recognition should be a factor; whether a single, major achievement is more important than a long history of contributions; and the possible useful purposes that may be served as a result of receiving a Medal.

Dr. Good asked a representative from each subcommittee to describe briefly the accomplishments of the nominees brought forward by the subcommittee. After these presentations, Dr. Good asked Committee members individually to list the five persons they felt were most deserving. This produced ten names for whom the Committee unanimously agreed on four as being the top candidates. This procedure was repeated to produce another group of six candidates as the second highest-ranking group. The Committee decided not to attempt rank-ordering within either of the groups of four and six. The first priority group of four candidates and the second priority group of six are each listed alphabetically on the attached list. The same procedures were repeated until the Committee agreed on a final group of ten persons ranked from "11" through "20." The list of the twenty candidates is attached. Following a further consideration of the scientific achievements of each of the candidates, the Committee decided to urge the President to award Medals to all twenty persons. The Committee noted in particular the outstanding character of the group and the fact that Medals had not been awarded last year.

Following selection of the list, Dr. Good asked that each subcommittee representative examine the citations and biographies, modify them appropriately, and then forward them to Dr. Nicholson.

The Committee next discussed the request for an exception to the five-year rule on posthumous awards. The Committee considered the relation of the candidate with respect to those on the attached list, as well as the various unique aspects of the case. Following a lengthy debate it was agreed that the Chairman should draft a separate letter to the President summarizing the Committee's discussion and outlining possible options. Dr. Good stated that a draft of the letter would be circulated to the full Committee.

Dr. Good next introduced the topic of the solicitation process. It was agreed that the solicitation letter should be issued in July with a postmark of October 26 for receipt of nominations. It was further agreed that the solicitation should be broadened to include some additional segments of industry as well as appropriate chairpersons in university departments. Finally, it was agreed that the use of a nominating form should be attempted. The form would request one page of biographical information, one page of justification for award of a Medal, a list of not more than twenty of the most important publications/contributions, and not more than three seconding letters from persons located outside the nominee's home institution familiar with the technical aspects of the nominee's accomplishments. It was further agreed that the solicitation letter should state that in order for prior nominations to remain active renomination via the new form would be required.

The Committee agreed to hold its next meeting at Stanford University on December 20, 1979. There was no other business and the chairman adjourned the meeting at 2:00 PM.



Mary L. Good, Chairman

Attachment

MEDAL OF SCIENCE CANDIDATES

1979

1st priority group: (equal ranking)

Joseph L. Doob
Richard P. Feynman
Robert N. Noyce
Earl R. Stadtman

2nd priority group: (equal ranking)

Elizabeth C. Crosby
Donald E. Knuth
Herman F. Mark
Edward M. Purcell
Victor F. Weisskopf
Paul Alfred Weiss

3rd priority group: (rank-ordered)

Severo Ochoa
John H. Sinfelt
Emmett Norman Leith
Arthur Kornberg
Raymond D. Mindlin
Earl R. Parker
George L. Stebbins
Robert H. Burris
Simon Ramo
Lyman Spitzer, Jr.

CITATIONS

NATIONAL MEDAL OF SCIENCE CANDIDATES

1979

First Priority Group (equal ranking):

JOSEPH L. DOOB

In recognition of his work on probability and mathematical statistics, characterized by novel and fruitful ideas of a general character that opened new fields of study which began to be transplanted abroad and now are acclaimed worldwide.

RICHARD P. FEYNMAN

In recognition of his essential contributions to the quantum theory of radiation and to his illumination of behavior of constituents, constituents of the atom, of the atom nucleus, and of the subnuclear particles.

ROBERT N. NOYCE

For contributions to a variety of semiconductor devices, but especially for the integrated circuit, the cornerstone of modern electronics.

EARL R. STADTMAN

For seminal contributions to understanding of the energy metabolism of anaerobic bacteria and for elucidation of major mechanisms whereby the rates of metabolic processes are finely matched to the requirements of the living cell.

Second priority Group (equal ranking):

ELIZABETH C. CROSBY

For outstanding original contributions to comparative and human neuro-anatomy and for the synthesis and transmission of knowledge of the entire nervous system of the vertebrate phylum.

DONALD E. KNUTH

For his deeply significant research into the mathematical analysis and design of efficient computer algorithms and for his profoundly influential books which have codified the fundamental knowledge at the core of computer programming.

HERMAN F. MARK

For his contributions to polymer chemistry, and his role in the introduction of polymer science as an academic discipline in the United States.

EDWARD M. PURCELL

For contributions to nuclear magnetic resonance in condensed matter and the measurement of interstellar magnetic fields.

VICTOR F. WEISSKOPF

For important contributions to our understanding of nuclear matter and nuclear reactions, and early fundamental contributions to our understanding of elementary particles.

PAUL A. WEISS

For outstanding contributions to cell biology and understanding of the development of the nervous system including the basis for surgical repair of injury to peripheral nerves.

Third Priority Group (rank-ordered):

SEVERO OCHOA

For his important contributions to the development of biochemistry and molecular biology, and his discoveries that led to our present understanding of the reactions of the citric acid cycle and the mechanisms of energy production, the biosynthesis of ribonucleic acid and the genetic code, and the biosynthesis of proteins.

JOHN H. SINFELT

For scientific research on the nature of heterogeneous catalysis by supported metals, leading to the development of new catalyst systems for the production of low lead gasoline and the removal of pollutants from automobile exhaust gases.

EMMETT N. LEITH

For pioneering discoveries and developments in wavefront construction and holography, leading the way in applying these techniques to applications in engineering and science.

ARTHUR KORNBERG

For his accomplishments in providing the conceptual and experimental framework for much of our current understanding of the manner in which DNA, the genetic substance, is replicated.

RAYMOND D. MINDLIN

For fundamental contributions to applied mechanics, including theory and applications in photoelasticity, package cushioning, piezoelectric oscillators, and ultra high frequency vibrations.

EARL R. PARKER

For contributions profoundly influencing and advancing materials engineering through research in flow and fracture, and for his development of new alloys with unusual combinations of strength and toughness.

GEORGE L. STEBBINS, JR.

For his outstanding contributions to the synthesis of an evolutionary theory, particularly as it applies to plants.

ROBERT H. BURRIS

For numerous original contributions leading to an understanding of the physiology and biochemistry of the process of biological nitrogen fixation.

SIMON RAMO

For basic contributions to microwave electronics, and imaginative technical leadership in making large electronic systems available to the country for defense and civilian uses.

LYMAN SPITZER, JR.

For important contributions to the theory of star formation and evolving stellar systems and plasma physics, including use of fusion as a source of energy.

Recipients of the National
Medal of Science

ADAMS, ROGER (1964)
ALVAREZ, LUIS WALTER (1963)
AMMANN, OTHMAR H (1964)
ARNON, DANIEL ISRAEL (1973)

BACKUS, JOHN (1975)
BARDEEN, JOHN (1965)
BARKER, HORACE ALBERT (1968)
BARTLETT, PAUL DOUGHTY (1968)
BEAMS, JESSE WAKEFIELD (1967)
BENEDICT, MANSON (1975)
BETHE, HANS A. (1975)
BIRCH, ALBERT FRANCIS (1967)
BJERKNES, JACOB (1966)
BLOEMBERGEN, NICOLAAS (1974)
BRAUER, RICHARD DAGOBERT (1970)
BREIT, GREGORY (1967)
BRODIE, BERNARD BIGHAM (1968)
BRONK, DETLEV WULF (1968)
BROWN, HERBERT CHARLES (1969)
BUSH, VANNEVAR (1963)

CHANCE, BRITTON (1974)
CHANDRASEKHAR, SUBRAHMANYAN (1966)
CHARGAFF, ERWIN (1974)
CHERN, SHIING-SHEN (1975)
COHEN, MORRIS (1976)
COHEN, PAUL JOSEPH (1967)
COLE, KENNETH STEWART (1967)

DANTZIG, GEORGE BERNARD (1975)
DAVIS, HALLOWELL (1975)
DEBYE, PETER J. W. (1965)
DICKE, ROBERT H. (1970)
DJERASSI, CARL (1973)
DORZHANSKY, THEODOSIUS (1964)
DRAPER, CHARLES STARK (1964)
DRYDEN, HUGH L (1965)

ECKERT, J PRESER (1968)
EDGERTON, HAROLD EUGENE (1973)
EWING, WILLIAM MAURICE (1972)
EYRING, HENRY (1966)

FELLER, WILLIAM (1969)
FLORY, PAUL JOHN (1974)
FOWLER, WILLIAM A. (1974)
FRIEDMAN, HERBERT (1968)
FRIEDRICH, KURT OTTO (1976)

GODEL, KURT (1974)
GOLDMARK, PETER C (1976)
GOUDSMIT, SAMUEL A. (1976)
GUILLEMIN, ROGER (1976)
GUTOWSKY, H. S. (1976)
GYORGY, PAUL (1975)

HAAGEN-SMIT, ARIE JAN (1973)
HAENSEL, VLADIMIR (1973)
HAMMETT, LOUIS PLACK (1967)
HARLOW, HARRY F (1967)
HEIDELBERGER, MICHAEL (1967)
HENDRICKS, STERLING B. (1975)
HIRSCHFELDER, JOSEPH OAKLAND (1975)
HUEBNER, ROBERT JOSEPH (1969)

JOHNSON, CLARENCE LEONARD (1965)

KILBY, JACK S. C. (1969)
KISTIAKOWSKY, GEORGE BOGDAN (1967)
KNIPLING, EDWARD FRED (1966)
KOMPFFNER, RUDOLF (1974)

LAND, EDWIN HERBERT (1967)
LEDERMAN, LEON MAX (1965)
LEFSCHETZ, SOLOMON (1964)
LEWIS, WARREN KENDALL (1965)
LIPMAN, FRITZ A. (1966)
LUSH, JAY LAURENCE (1968)

MAYR, ERNST (1969)
MCCLINTOCK, BARBARA (1970)
MILLER, NEAL ELGAR (1964)
MILNOR, JOHN WILLARD (1966)
MORSE, HAROLD MARSTON (1964)
MUELLER, ERWIN (1976)
MUELLER, GEORGE E. (1970)

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RUBEY, WILLIAM WALDEN (1965)

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TERMAN, FREDERICK EMMONS (1975)
TUKEY, JOHN WILDER (1973)

UHLENBECK, GEORGE E. (1976)
UREY, HAROLD CLAYTON (1964)

VAN NIEL, CORNELIS B (1963)
VAN SLYKE, DONALD D (1965)
VAN VLECK, JOHN HASBROUCK (1966)
VOGEL, ORVILLE ALVIN (1975)
VON BRAUN, WERNER (1975)
VON KARMAN, THEODORE (1962)

WHEELER, JOHN ARCHIBALD (1970)
WHITCOMB, RICHARD TRAVIS (1973)
WHITNEY, HASSLER (1976)
WIENER, NORBERT (1963)
WIGNER, EUGENE PAUL (1968)
WILSON, EDWARD O. (1976)
WILSON, E. BRIGHT (1975)
WILSON, ROBERT RATHBUN (1973)

WINSTEIN, SAUL (1970)
WOLMAN, ABEL (1974)
WOODWARD, ROBERT BURNS (1964)
WRIGHT, SEWALL (1966)
WU, SHIEN-SHIUNG (1975)

ZARISKI, OSCAR (1965)
ZWORYKIN, VLADIMIR KOSMA (1966)