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Glenn T. Seaborg

laureate and Berkeley physicist, Ernest O. Lawrence. He did research during the war at the Navy Radio and Sound Laboratory in San Diego, and in 1943 joined the Manhattan District's Los Alamos Laboratory in New Mexico. He returned to Berkeley in 1946 where he was responsible for modifying the 184-inch cyclotron in a way that made use of the phase stability principle so that the oscillation frequency could be varied to compensate for the increase in mass of accelerated particles traveling at high speeds. The altered cyclotron, rechristened the synchrocyclotron, was thus made to accelerate particles having twice the amount of energy originally expected.

Dr. Seaborg, who is thirty-nine years old, received his doctor's degree in chemistry from the University of California in 1937, when he became a member of the faculty.

Except for some wartime lapses, the Nobel Prizes have been awarded annually since 1901 and are made possible by the \$9,000,000 trust fund left by Alfred Nobel, the inventor of dynamite, who died in 1896. Selection of the award winners in physics and chemistry is in the hands of the Swedish Academy of Science. Presentation ceremonies take place in Stockholm on December 10th of each year, the date of Nobel's death.

National Science Foundation

On Submitting Research Grant Proposals

The first draft of a guide to assist scientific research investigators in the preparation of proposals for National Science Foundation research grants has been issued by the Foundation, and it has been announced that copies will be distributed widely to institutions

and organizations in a position to carry on competent scientific research. The Foundation has earmarked approximately \$1,500,000 for support of basic research in the mathematical, physical, medical, biological, and engineering sciences, and grants will be made to educational, industrial, governmental, or other institutions, or to individuals. Ordinarily, grants will be awarded to institutions for research by specified individuals.

Proposals are in most cases expected to be initiated by the scientist interested in carrying out the research. He may submit a proposal at once, or he may first choose to discuss the project informally, either by letter or in person, with an appropriate NSF staff member, in which case a proposal will usually follow. Emphasis in the review of proposals is placed by the Foundation on the scientific merit of the suggested research, including the competence of the investigator.

Payments will be made in advance on a quarterly, semiannual, or annual basis depending on the relative size of the grant, which normally will be sufficient to cover such items as salaries, materials, equipment, necessary travel, publication, and other direct costs. In addition, the grant will usually be sufficient to cover indirect costs up to 15% of the total direct costs.

The Foundation will not ordinarily require that title to equipment purchased with granted funds vest in the Government; such equipment may thus be retained by the grantee, and no accounting for equipment will be necessary. Quarterly or semiannual financial reports, annual progress reports, and a final report on the project will be expected in order that the Foundation may be kept adequately informed of the progress of work covered by the grant and of the use of funds made available. Publication of research papers may take the place of progress or final reports.

No specific form for proposals has been recommended, although it is suggested that the handling of proposals will be facilitated if they are submitted in fifteen copies on letter size paper to the National Science Foundation, Washington 25, D. C. It is also suggested that proposals cover the following points, wherever applicable, in as complete a manner as possible: 1. name and address of institution; 2. name of principal investigator; 3. title of proposed research; 4. description of proposed research; 5. procedural outline of the research; 6. description of available facilities and major items of permanent equipment; 7. biographical sketch and bibliography of each person involved in project; 8. estimate of project's total cost and duration, with cost breakdown for each year; and 9. the signature of the principal investigator, department head, or an official authorized to sign for the institution.

National Science Board

New Officers Elected at Annual Meeting

Chester I. Barnard, president of the Rockefeller Foundation, was elected chairman of the National Science Board of the National Science Foundation at its second annual meeting held in Washington on December 3rd. Dr. Barnard succeeds James B. Conant, president of Harvard University, who was elected to serve the initial term as chairman of the Board on December 12, 1950. Edwin B. Fred, president of the University of Wisconsin, was re-elected vice chairman of the National Science Board. The new chairman and vice chairman were elected for two-year terms of office as prescribed by the National Science Foundation Act of 1950. Four members of the executive committee, whose terms had expired, were also re-elected. These were: Dr. Barnard; Detlev Bronk, president of the Johns Hopkins University and president of the National Academy of Sciences; Lee A. DuBridge, president of the California Institute of Technology; and Elvin C. Stakman, chief of the division of plant pathology and botany at the University of Minnesota.

Dr. Barnard, who plans to retire soon as president of the Rockefeller Foundation and General Education Board, was long associated with the American Telephone and Telegraph Company. He was president of the New Jersey Telephone Company prior to his association with the Rockefeller Foundation. During the war he was president of the United Services Organization. He was given the Meritorious Civilian Service Award by the United States Navy in 1944 and the President's Medal for Merit in 1946. He was a member of the Board of Consultants to the State Department on Atomic Control in 1946, which drafted the Acheson-Lilienthal Report. He was also a member of the Presidential Special Committee on Integration of the Medical Services in the Government in 1946. Dr. Barnard holds the degree of Doctor of Science from Rutgers University and the University of Pennsylvania and the LLD degree from Princeton and Brown Universities.

Dr. Fred has been president of the University of Wisconsin since 1945. A bacteriologist, he was chairman of the Advisory Committee on Biological Warfare of the National Academy of Sciences from 1941 to 1943. He has been a member of the National Advisory Health Council since 1945. He holds the Medal for Merit for his wartime services. Dr. Fred received his PhD degree from the University of Göttingen, Germany.

The executive committee consists of nine members to be chosen by the National Science Board, and the director of the National Science Foundation, member ex officio. The other five members of the executive committee are: Dr. Conant; Paul M. Gross, vice president of Duke University; Robert F. Loeb, director of medical services, Presbyterian Hospital, New York; J. C. Morris, vice president, Tulane University; and Alan T. Waterman, director of the Foundation. The smaller group is authorized to act for the 24-member National Science Board in such matters as the Board desires, with the exception of the establishment of policy or the review and approval of major matters. Members are elected to the executive committee for a two-year term.

Last month's meeting marked the beginning of the second year of operation for the National Science Foundation, which was created by Congress early in 1950. The director and staff of the National Science Foundation have initiated programs in support of basic research in the medical, mathematical, physical, engineering, and biological sciences. Applications are also being received for National Science Foundation graduate fellowships for the academic year 1952-53 in the same fields. The Foundation expects to award about 400 such fellowships. Application forms may be obtained from the Fellowship Office, National Research Council, Washington 25, D. C.

Fulbright Program, 1951-52

Travel Grants for Visiting Scholars

A total of 357 travel grants have been made to visiting scholars from abroad under the Fulbright Program for lecturing or advanced research in the United States, and approximately 45 additional applications are in process of review. These figures represent an increase of approximately 25% over those of 1950-51. It is interesting to note that the number of scholars coming to the United States under the Fulbright Program now exceeds the number of American Fulbright scholars going abroad. It should be pointed out, however, that the usual length of time for which an American scholar is granted an award is nine months. In contrast, approximately 50% of the foreign scholars remain in the United States from three to nine months.

One-third of the scholars are in the physical sciences, according to information from the Conference Board of Associated Research Councils, Committee on International Exchange of Persons, under whose administration the program is conducted. Of the 119 physical scientists listed, 36 are chemists, 29 are engineers, 28