

House Cuts Science Foundation Budget; Major Programs Endangered

On 20 April the House of Representatives approved a 1961 budget of \$160 million for the National Science Foundation, reducing the Administration's proposal of \$191,600,000 by \$31,600,000 and cutting the foundation's original request of \$214,835,000 by \$54,385,000. Four major areas of support are seriously affected: basic research, reduced from the Administration's \$78,800,000 to \$70,283,000, a cut of \$8,517,000; development of graduate research laboratories, reduced from \$15 million to \$2 million, a cut of \$13 million; maintenance and operation of the National Radio Astronomy Observatory and the Kitt National Observatory, reduced from \$5 million to \$1,800,000, a cut of \$3,200,000; and the dissemination of scientific information, reduced from \$7,335,000 to \$5,335,000, a cut of \$2 million.

Some Effects

Despite growing recognition of the urgent need for more basic research, the House Appropriations Committee approved a budget that would eliminate the means of support for approximately 1000 advanced graduate students who would participate in such research. Even with the funds the President requested for basic research, the foundation would be able to support only 38 percent of the meritorious proposals that are received each year from more than 300 colleges.

Closely linked with the basic research program is the foundation's program to share with colleges and universities the very high cost of modernizing graduate research laboratories. At present, adequate laboratory facilities are not available in a majority of this country's institutions of higher education. The foundation launched a pilot matching-fund aid program last year, to which there was a vigorous response. The planned program will have to be radically curtailed if the present reduction from \$15 million to \$2 million is allowed to stand.

The appropriation that has been recommended for the two new national astronomical observatories, built at a cost of some \$20 million, would provide only enough funds to continue the interim pre-operational support allowed in 1960. In 1961 major new instruments should be in full use, others should

be tested, new programs should be launched and a new staff employed. One of the new programs that would have to be canceled would be that for the space telescope, which is expected to constitute one of the most significant advances in astronomy ever achieved.

Throughout the year much attention has been given, both nationally and internationally, to the ever-growing problem of dissemination of scientific information, of obvious fundamental importance. The development of more efficient electronic searching and retrieval techniques is essential if the research results are to be effectively utilized.

The National Science Foundation budget was included in the Independent Offices Appropriation bill (H.R. 11776), which received an over-all cut of approximately 3 percent. However, the foundation's appropriation was reduced by about 16.5 percent. The Senate will soon have an opportunity to modify the NSF budget reductions.

Promising Isotope with Short Half-Life Now Available

During the last 2 years the International Atomic Energy Agency has made special efforts to promote the production of calcium-47, which has a half-life of only 4.9 days, for use in medicine and radiology. Limited amounts of the isotope may now be obtained in England and the United States.

Because of the present method of production—the $\text{Ca}^{40} (n, \gamma) \text{Ca}^{47}$ reaction—the isotope is unavoidably contaminated with calcium-45, which has the hazard-producing half-life of 164 days, prohibiting experiments on normal, healthy people. Work is now going on at Oak Ridge National Laboratory to increase the $\text{Ca}^{40}/\text{Ca}^{44}$ ratio until the fraction of calcium-45 at pile-out time will be so low that it will not contribute to the radiation dosage.

Pure Samples Have Been Prepared

Laboratory samples of pure calcium-47 have been prepared both here and abroad—generally by means of fast neutrons or accelerated particles and a target, such as a separated titanium isotope. However, a spokesman for the Atomic Energy Commission explains that these samples are laboratory curi-

osities, for the methods used are far too expensive for routine production purposes.

Meanwhile, calcium-47 in its present form is considered satisfactory for diagnostic and research work in certain special patients and for agricultural and other applications. The International Atomic Energy Agency is now developing a research contract program to help researchers obtain the isotope and to coordinate further work on applications as well as work on the development of new production methods. Requests for calcium-47 should be sent to the United Kingdom Atomic Energy Authority's Radiochemical Centre, Amersham, Bucks, England, or to the Atomic Energy Commission's Oak Ridge National Laboratory, Oak Ridge, Tenn.

Grants, Fellowships, and Awards

Heart. Applications from research investigators for support of studies to be conducted during the fiscal year beginning 1 July 1961 are now being accepted by the American Heart Association. The deadline for applying for research fellowships and established investigatorships is 15 September. Applications for grants-in-aid must be received by 1 November.

Stipends in all categories have been increased this year, on the basis of the rising cost of living. Further information and application forms regarding research awards may be obtained from the Assistant Medical Director for Research, American Heart Association, 44 E. 23 St., New York 10, N.Y.

NATO institute travel. Under the sponsorship of the North Atlantic Treaty Organization, a number of Advanced Study Institutes will be held in NATO countries during the summer of 1960. These institutes, covering advanced specialized fields, vary in length from 2 weeks to about 2 months. The National Science Foundation has announced that a limited number of travel grants, including only transportation costs, will be available to U.S. citizens who have been accepted by the institute directors.

The 1960 summer program of Advanced Study Institutes will include the following.

"Elementary particles," Les Houches, France (director, Professor Cecile DeWitt, Department of Physics, Univer-