ment of physiology and biophysics, University of Mississippi, Jackson, received the AAAS–Ida B. Gould Memorial Award for Research on Cardiovascular Problems. The $1000 award is provided by the Richard and Hinda Rosenthal Foundation and was given for the fourth time at this year's meeting.

Guyton invented instruments for making precise measurements in the study of respiratory and circulatory systems. These instruments include electronic devices for determining pressures, volumes, and flows in the heart and lungs and in the peripheral circulation. Out of investigations with these instruments have come new ideas concerning the way in which circulation of the blood is regulated.

Industrial Science Award. Armour and Company and Swift and Company were corecipients of the AAAS Industrial Science Achievement Award, which is administered by Section P (Industrial Science). The award is made annually to a company or companies that develop significant practical applications of basic scientific discoveries.

In accepting the citation for Armour and Company, John A. King, director of research of that organization, said: "Early in Armour's history, the meat packer confined his operations almost entirely to edible products. When the disposal of waste products became more and more of a problem, Armour saw an opportunity to convert millions of pounds of such materials into valuable commercial items and turned to science for the means of doing this."

In accepting the citation for Swift and Company, H. E. Robinson, vice president for research, described some recent company achievements. He said: "The use of our four-point program to control staphylococcus organisms in hospitals will be a major benefit to the medical profession. The utilization of electrical stunning of hogs represents a major contribution toward humane slaughter of livestock. Our continuous chilling technique for poultry is another example of the application of basic scientific principles to our operations."

Socio-Psychological Prize. Stanley Schachter, of the department of psychology and the laboratory for research in social sciences, University of Minnesota, received the AAAS–Socio-Psychological Prize. The basis for the award is Schachter's most recent book, *The Psychology of Affiliation*. Published in 1959 by the Stanford University Press, the work reports experimental studies of the circumstances that drive men to seek each other out and the circumstances that cause men to seek privacy. Schachter considers the ways in which emotion and anxiety affect social needs, and he examines social behavior under such conditions as hunger, isolation, and fear of pain.

Schachter's early research was concerned with problems in communication and social influence, affiliative behavior, cross-cultural research, and sensory psychology. His interests at present are concentrated in the study of the physiological and social determinants of emotional states.

William Procter Prize. Charles S. Draper, head, department of aeronautical engineering, Massachusetts Institute of Technology, received the William Procter Prize for scientific achievement, which is awarded annually by the Scientific Research Society of America.

Criminology Award. Archbishop Bernard J. Sheil of the Chicago Archdiocese received an annual award offered by the American Society of Criminology, which is an affiliate of the AAAS. The award was for Sheil's 50 years of work in the field of criminology. After serving in his youth as a jail chaplain, Sheil founded the Catholic Youth Organization as a major bastion against juvenile delinquency. His leadership in the fight against racial and religious intolerance and prejudice, culminated in his acceptance of the chairmanship of the Illinois Committee to Abolish Capital Punishment.

The winner of the 32nd AAAS–Newcomb Cleveland Prize will not be announced until next March. The $1000 award is for an outstanding paper delivered at the annual meeting. The 1959 winner will be honored at the 1960 AAAS meeting in Philadelphia next December.

Defense Education Act Aids Study of Foreign Languages

Thirty-five modern foreign language institutes for the training of 2000 elementary- and secondary-school language teachers will be established at colleges and universities next summer. Authorized under Title VI of the National Defense Education Act, the language institutes provide professional training to elementary and secondary school teachers of French, German, Italian, Russian, and Spanish.

With three exceptions, none of the institutes will accept teachers who attended one of the 12 institutes conducted last summer. The three institutes which will give preference to those who have already attended an institute include Hollins College for teachers of French, University of Puerto Rico for teachers of Spanish, and Stanford University for teachers of German.

The institute sponsored by Stanford University will be the only one of the 35 to be conducted abroad. About 85 secondary-school teachers of German will spend 9 weeks at the institute to be located at Stuttgart, Germany. It is regarded as a pilot enterprise, and from this experiment the Office of Education will be able to determine whether a limited number of institutes may effectively be established in foreign countries.

Two institutes have been designed for elementary-school language teachers. They will be conducted at the University of Kansas for teachers of German and Spanish and at Tufts University for teachers of French and Spanish. Twenty-five institutes will enroll secondary-school teachers, and the remaining eight institutes will enroll both elementary- and secondary-school teachers.

Teachers from public schools who attend the institutes receive stipends of $75 a week and an allowance of $15 a week for each dependent. Private-school teachers attend the institutes without charge but receive no stipends. School teachers interested in attending an institute should write to the institute director, not to the Office of Education.

Graduate Studies Also Aided

Under Title VI of the National Defense Education Act, the U.S. Office of Education will also award nearly 400 Modern Foreign Language Fellowships. The purpose of these fellowships, for graduate study during the summer of 1960 and the 1960–61 academic year, is to increase the number of teachers of 85 foreign languages seldom taught in the United States—languages spoken by millions of people throughout the world.

First preference in awarding fellowships will be given to students studying Arabic, Chinese, Hindi, Japanese, Portuguese, Russian, and Urdu. Candidates for the language fellowships should apply to universities offering advanced training in any of the 85 languages for which the Commissioner of Education has declared there is a national need. Graduate schools offering these languages have been asked

by the Office of Education to set up committees to review fellowship applications and to make recommendations to the Office. The deadline for receipt of applications from the graduate schools is 15 February 1960, and awards will be made before 30 April 1960.

Fellowships will carry stipends ranging up to $2700, plus tuition and fees. The graduate fellow will receive travel allowances and allowances for dependents.

History of Science Prize Offered

An annual award of $250 has been established by Henry and Ida Schuman of New York City for an original prize essay in the history of science and its cultural influences. This competition is open to graduate and undergraduate students in any American or Canadian college, university, or institute of technology. Papers submitted for the prize competition should be approximately 5000 words in length, exclusive of footnotes, and should be thoroughly documented. It is hoped that the prize-winning essay will be suitable for publication in *Isis*.

It is the wish of the donors that "the history of science and its cultural influences" be broadly interpreted. The papers may deal with the ideas and accomplishments of scientists in the past; they may trace the evolution of particular scientific concepts; or they may study the historical influences of one branch of science upon another. The phrase "cultural influences" is taken to include studies of the social and historical conditions that have influenced the growth of science, or the effects of scientific developments upon society in the realms of philosophy, religion, social thought, art and literature, economic progress, and so on. Essays dealing with medical subjects are not acceptable, although papers dealing with the relations between medicine and the natural sciences will be welcomed.

Papers submitted for competition should be sent to the Chairman of the Prize Committee, Professor Erwin Hiebert, Department of History of Science, University of Wisconsin, Madison. Inquiries about the competition may also be addressed to Professor Hiebert. To be eligible for consideration, papers must be received on or before 1 July 1960. Announcement of the prize-winning essay will be made at the annual meeting of the History of Science Society in December.

News Briefs

Genetics and embryology. The National Foundation, 800 2nd Ave., New York, has announced its first fellowship program specifically to provide training for medical students in genetics and embryology. This group of awards will help in the training of scientists needed in fields which are basic to the National Foundation's expanded research program in birth defects and arthritis.

Under the new fellowship program, which became effective on 1 January 1960, every approved medical school in the country may nominate one student who wishes to undertake a research program in genetics or embryology. The students must have completed at least a year of medical school and be able to devote a minimum of 8 weeks consecutively to full-time research. The stipend for these fellowships is $600.

* * *

Life sciences. The Division of Biological and Medical Sciences of the National Science Foundation has announced that the next closing date for receipt of basic research proposals in the life sciences is 15 January 1960. Proposals received prior to that date will be reviewed at the spring meetings of the foundation's advisory panels, and disposition will be made approximately 4 months after the closing date. Proposals received after the January closing date will be reviewed after the summer closing date of 15 May. Inquiries should be addressed to the National Science Foundation, Washington 25, D.C.

* * *

Astronomy. The International Astronomical Union will hold its 11th general assembly in August of 1961 at Berkeley. The world-wide body of astronomical scientists meets only once every 3 years. More than 1000 astronomers attended the tenth general assembly of the union a year ago in Moscow, and even more delegates are expected to participate in the Berkeley meeting.

* * *

Behavioral sciences. The American Orthopsychiatric Association will meet 25–27 February 1960 at the Sherman Hotel, Chicago. More than 4000 specialists in the behavioral sciences from all parts of the United States and Canada are expected to attend. Cochairmen of the Chicago arrangements committee are Dr. Henry L. Ruehr, Psychiatric Institute, 200 S. Michigan Ave., Chicago 4, Ill., and Miss Mildred Tate, 2336 E. 70 St., Chicago 49, Ill. For information, write to Dr. Marion F. Langer, Executive Secretary, American Orthopsychiatric Association, 1790 Broadway, New York 19, N.Y.

* * *

Human genetics. The second International Conference of Human Genetics will be held at the University of Rome, 6–12 September 1961. All meetings will be held in the conference building of the Food and Agriculture Organization of the United Nations. The organization of the conference will closely follow the successful pattern established at the first International Congress of Human Genetics, held in Copenhagen in 1956.

* * *

Reactors. Detailed information on 77 research test and experimental reactors in 22 countries is given in volume 2 of the International Atomic Energy Agency's *Directory of Reactors*, published recently. The reactors described are situated in the following countries: United States (37); United Kingdom (7); France (5); Germany (4); Canada (3); Belgium, Denmark, Italy, and Sweden (2 each); and Australia, Austria, Belgian Congo, Brazil, Greece, Iran, Israel, Korea, Norway, Portugal, Puerto Rico, Spain, and Venezuela (1 each).

The first volume of the *Directory*, dealing with power reactors in operation or under construction, was released in June 1959. A third volume, covering the remaining research reactors, will be issued in the middle of 1960. The directory, which is published in English only, is for sale through IAEA sales agents in various countries. Inquiries may also be directed to IAEA, Vienna.

* * *

Plowshare Committee. The Atomic Energy Commission has appointed a 12-member committee to advise the commission on its Plowshare Program, the investigation of peaceful uses of nuclear explosives. The committee members have been drawn from the areas of science, government, and business. Chairman of the new committee is Spofford G. English, special assistant to the general manager of the commission (acting). Plowshare is under the technical direction of the Lawrence Radiation Laboratory at Livermore, California, which is operated for the commission by the University of California.