without perfect objectivity, a separation of hopes and desires from the things studied. It is primarily an attitude, perhaps the most important mental acquisition of man. Because of this attitude it is democratic. It knows no creed, no country. It achieves the only true internationality the world has ever known and thereby presents striking evidence that men can sink their differences of opinion and their passions and work for a common cause.

The salvation of this international democracy of science and of this objectivity, as Mr. Calder and others see it, lies in a world-wide organization. He suggests that the British and American Associations unite to make the force of massed scientific thinking felt throughout the world. The first step would be the drafting of "a Magna Charta, a Declaration of Independence, proclaiming that freedom of research and of exchange of knowledge is essential, that science seeks the common good of all mankind, that 'national science' is a contradiction in terms." Even before this ringing appeal was addressed to Lord Rayleigh the more energetic spirits in England had started a movement to unite the British and American Associations for the purpose of combating the infectious bigotry that afflicts much of Europe. The British Association now discusses at its annual meetings the part that science can play in pointing out the course that society should follow if it would march on. This year its council took the initiative in "showing the nations of the world that they are members of a great commonwealth and in furthering the cause of international peace." To prove that these are not hollow words a deputation under Lord Rutherford is to convene with the Indian Science Congress and set an example of international action and solidarity.

Mr. Calder has not exaggerated. To save science his "World Association" is needed, an organization which shall indicate how the objective attitude of the laboratory may be applied in governing a people, in breaking down prejudices, in preventing war, in solving problems that mean progress not in one country alone but the world over. Will the American Association heed the appeal of its British counterpart? There was never a time when science had so vital a message to deliver, so high a social mission to perform.—*The New York Times.*

REPORTS

RESEARCH AWARDS OF YALE UNIVERSITY SCHOOL OF MEDICINE

FORTY-ONE awards, amounting to $28,263, have been assigned to members of the Yale teaching and research staffs under the provisions of the George H. Knight Memorial Fund and the Fluid Research Fund. These grants are made annually to aid in defraying the expenses of special investigations during the coming academic year. Awards have been made as follows for 1937–38:

Edgar Allen, professor of anatomy, to continue studies of the effects of sex hormones in small animals.

Henry G. Barbour, research associate in pharmacology and toxicology, for a continuation of investigations of the biological effects of heavy water in mammals.

Robert W. Clarke, instructor in physiology, for a study of renal clearance in monkeys.

George R. Cowgill, associate professor of physiological chemistry, for the following investigations: (1) joint research with Drs. Hoff and Nahum on the heart in vitamin B deficiency; (2) an extension of the work with the plasmapheresis technique on the effect of dietary factors on the regeneration of blood hemoglobin and blood cell stroma; (3) the relation of heightened metabolism due to hyperthyroid activity and other factors to the body's quantitative need for various dietary factors, particularly vitamins.

Daniel C. Darrow, assistant professor of pediatrics, for (1) a study of distribution of water and electrolyte in adrenal insufficiency; (2) a study of the distribution of water and electrolyte in convulsions.

Clyde L. Deming, clinical professor of urology, for a study of the anatomical origin of prostatic hypertrophy.

J. G. Dusser de Barenne, Sterling professor of physiology, for a continuation of studies on the physiology of the cerebral cortex and cerebellum in monkeys.

James C. Fox, clinical professor of neurology, and Donald G. Marquis, assistant professor of psychology, for studies of vibratory sensibility.

John F. Fulton, Sterling professor of physiology, for a continuation of studies of cerebral-cerebellar relationships in primates.

Arthur J. Geiger, instructor in medicine, Louis S. Goodman, instructor in pharmacology and toxicology, and Louis N. Claiborn, clinical instructor in surgery, for studies in pernicious anemia.

Edwin F. Gildea, associate professor of psychiatry and mental hygiene, for studies of lipoids in relation to disorders of the nervous system.

Alfred Z. Gilman, assistant professor of pharmacology and toxicology, for a continuation of the study of the osmotic relations between blood and urine.

Robert T. Hill, instructor in anatomy, for a study of the physiological relations of male and female gonads, and their connections with the rest of the endocrine system.

David I. Hitchcock, associate professor of physiology, for technical assistance in connection with studies of the standardization of hydrogen ion determinations, and of the combination or other reactions of amino acids and proteins with acids, bases and salts.

Hebbel E. Hoff, assistant professor of physiology, and John F. Fulton, Sterling professor of physiology, for a study of the primate motor unit.

Hebbel E. Hoff, assistant professor of physiology, and Louis H. Nahum, research assistant in physiology, for studies of cardiac arrhythmias.

Marion E. Howard, instructor in medicine, for a continuation of (1) studies on lymphogranuloma inguinale, and (2) study of the virus of lymphocytic chorio-meningitis.

Carlyle F. Jacobsen, assistant professor of psychobiology, for a continuation of studies of relations of behavior to neural functions.

Ralph H. Jenkins, assistant clinical professor of urology, for a study of the germinal epithelium of the testicle in relation to the endocrines.

Margaret A. Kennard, assistant professor of physiology, and Delafield DuBois, research assistant in physiology, for a study of skin resistance after cortical lesion.

Margaret A. Kennard, assistant professor of physiology, for study of frontal lobe functions in monkeys.

John H. Lawrence, instructor in medicine, to continue study of the comparative effects of x-ray and neutrons on tumors in animals.

Gustaf E. Lindskog, assistant professor of surgery, for the following studies: (1) The effect of environmental temperatures on the subtidal lung volume; (2) the effect of lipoidal on the normal pericardium; (3) the effect of Roentgen rays on the normal lung and pleura (pathological and physiological changes).

Cyril N. H. Long, professor of physiological chemistry, for a continuation of investigations on the relation of pituitary and adrenal glands to carbohydrate metabolism.

Donald G. Marquis, assistant professor of psychology, for studies of the visual functions of the cortex, and for an investigation of the neurophysiological mechanism of the sympathetic nervous response in emotional situations.

Clyde S. Marshall, assistant professor of anatomy, for studies of the pyramidal system and of accessory motor pathways.

Ralph G. Meader, assistant professor of anatomy, for studies of the evolution of the optic system, together with an experimental analysis of the evolution of retinal projection.

Arthur H. Morse, professor of obstetrics and gynecology, and Gertrude van Wagenen, research assistant in obstetrics and gynecology, for studies relating to the processes of reproduction.

Chris H. Neuswanger, assistant clinical professor of urology, to continue study of methods of treating various diseases of the ureter.

Ashley W. Oughterson, associate professor of surgery, to continue experiments on the effect of tobacco on the vascular system, and for investigations relating to tumors.

John P. Peters, John Slade Ely professor of medicine, and assistants, for studies of metabolism.

Theodore C. Ruch, instructor in physiology, for a comparative study of the sensory tracts of the spinal cord in relation to the process of "corticalization" of sensory function.

Elizabeth R. B. Smith, honorary research fellow, and Paul K. Smith, research assistant in pharmacology and toxicology, to continue the study of thermodynamic properties of amino acids and related substances.

Leon S. Stone, associate professor of anatomy, to continue and extend investigations dealing with studies of living nervous tissues in amphibian embryos.

Robert Tennant, assistant professor of pathology and surgery, and Averill A. Liebow, research assistant in pathology, for a study of growth characteristics of mammalian neoplasms by tissue.

Herbert Thoms, associate professor of obstetrics and gynecology, for a continuation of the study of physical constitution in relation to labor and pelvic types.

James D. Trask, associate professor of pediatrics, (1) to continue hemolytic streptococci studies; and (2) for clinical application of Goodpasture's method for the cultivation of virus on the chorio-allantoic membrane of the chicken egg.

George Valley, assistant professor of bacteriology, to continue the study of *Clostridium histolyticum*.

Abraham White, assistant professor of physiological chemistry, for studies on (1) the constitution of insulin and (2) sulfur metabolism.

Arthur M. Yudkin, clinical professor of ophthalmology, to continue studies on cataracts.

Harry M. Zimmerman, associate professor of pathology, for studies on convulsive disorders.

SPECIAL ARTICLES

A PROLONGED AFTER EFFECT FROM ELECTRICAL STIMULATION OF THE CEREBELLAR CORTEX IN UNANESTHETIZED CATS[1]

HAVING developed a technique which allowed permanent electrodes to be implanted on the cerebral cortex,[2] it was decided to try the effect of stimulation with this type of electrode on the cerebellum of unanesthetized animals with intact brains. The results obtained were so significant in the light of previous reports[3, 4, 5] that it was thought worth while to describe the main phenomena in a preliminary account.

The electrode consists of a stainless steel tube, containing an insulated silver wire, which is screwed into

[1] This work has been aided by a grant to Vanderbilt University School of Medicine from the Division of Medical Sciences of the Rockefeller Foundation.

[2] Sam L. Clark and James W. Ward, *Arch. Neur. and Psychiat.* (to be published).

[3] A. T. Mussen, *Brain*, 50: 313, 1927; *Arch. Neur. and Psychiat.*, 23: 411, 1930 and 25: 702, 1931.

[4] W. K. Hare, H. W. Magoun and S. W. Ranson, *Am. Jour. Physiol.*, 117: 261, 1936.

[5] H. W. Magoun, W. K. Hare and S. W. Ranson, *Arch. Neur. and Psychiat.*, 37: 1237, 1937.