

search fees and travel expenses to enable him to continue his work on the carotenoid pigments of animals. Dr. Myers is working on foraminifera at the Marine Biological Laboratory, Plymouth, England.

THE British Medical Research Council has appointed Sir Henry Bashford, chief medical officer of the General Post Office, and Sir Kenneth Lee, chairman of Tootal Broadhurst Lee Company, to fill vacancies in the membership of the Industrial Health Research Board.

DR. AUGUST KROGH, professor of animal physiology at the University of Copenhagen, has been appointed lecturer for 1939 of the Cooper Foundation of Swarthmore College. He will give the lectures on the "Comparative Physiology of Respiratory Mechanisms" on March 16 and 23 and on April 6, 13 and 20.

DR. CHARLES H. BEST, professor of physiology at the University of Toronto, addressed a joint meeting of the Institute of Medicine of Chicago and the Chicago Society of Internal Medicine on October 28. He spoke on "Heparin and Thrombosis."

THE second W. E. Dixon Memorial Lecture of the Royal Society of Medicine was delivered by Sir Frederick Banting at a meeting of the Section of Therapeutics and Pharmacology on October 11. The subject of his lecture was "The Immunity Aspect of the Tumor Problem."

SIR JAMES JEANS delivered on October 8 the Lorrain

mer Lecture of the Astronomical Society of Edinburgh. His address was entitled "The Depths of Space."

THE Institute of Medicine of Chicago announces that its fifteenth Pasteur Lecture will be given in conjunction with the Cancer Research Institute of the Chicago Woman's Club at a public meeting to be held on Tuesday evening, November 22, at eight fifteen o'clock in the auditorium of the museum of Science and Industry. Dr. Ludvig Hektoen, director of the John McCormick Institute for Infectious Diseases, Chicago, and of the National Advisory Cancer Council, Washington, D. C., will speak on "Progress in the Knowledge and Control of Cancer." A reception in honor of Dr. and Mrs. Hektoen will follow the lecture and, through the courtesy of the Museum of Science and Industry, the medical exhibits will be open.

THE new science building of Bryn Mawr College, which houses the departments of geology and chemistry, was formally opened on October 22. The principal address was made by Dr. Norman L. Bowen, professor of petrology at the University of Chicago. Other speakers were Dr. Florence L. Bascom, professor emeritus of geology at Bryn Mawr College, and Dr. Louis F. Fieser, of the department of chemistry of Harvard University, who formerly was a professor at the college. President Marion Edwards Park presided at the dedication.

DISCUSSION

GOVERNMENTAL SUPPORT OF RESEARCH IN FRANCE

THE following abstract translated from an article in "Réalités Françaises" for May, 1938, on the gradual development of the organization and financing of research in France is of interest at the present time when increased government support has been urged in this country.

ARTHUR J. DEMPSTER

UNIVERSITY OF CHICAGO

IN the past, scientific research in France received very little official support and the situation became more and more critical as the successful prosecution of scientific investigations required greater and greater expenditures for equipment. While, for example, Pasteur's apparatus could be purchased for very little, the "cyclotron" constructed for Frédéric Joliot involved an expenditure of 2,000,000 francs.

The "Caisse des Recherches Scientifique," which was created after the war, with a budget of 2 million francs, proved inadequate to support publications and the purchase of apparatus.

A new effort was made in 1924. As member of the chamber of deputies, Emil Borel, the well-known mathematician, proposed that the proceeds from a special tax should be devoted to the support of scientific laboratories. It was realized, however, that in addition to providing apparatus, it was just as important to recruit investigators and create positions where they could work free of material cares.

Up till the last few years, scientific research was centered in the universities; this, though excellent, did not make full use of the intellectual resources of the country. For the best results, it was essential to organize laboratories where instruction should not play the predominant role.

As early as 1921, Edmond de Rothschild, impressed by the important part played by scientific technique during the war, had created a foundation of 10,000,000 francs designed to provide fellowships for young investigators in subjects related to industry and national defence. The chemist, André Job, persuaded him to devote the proceeds of this endowment rather to the support of fellows in pure science, in order to com-

plete the existing "service fellowships" in the universities, which alone were available at that time, and which did not leave a student free for scientific work. The new fellowships thus created made possible among many others the early investigations of Frédéric Joliot. Intrigued by Claude Bernard's dictum that the mechanism of life might be elucidated by the study of physical-chemical phenomena, Edmond de Rothschild went further and created an enlarged endowment of 50,000,000 francs for an institute where physicists, chemists and biologists, working together, might attack this problem. Four scientists, Jean Perrin, Pierre Gérard, André Job and André Meyer, formed the permanent committee of this institute. Enlarging the original plan, a regular research organization was proposed. Four grades corresponding to university positions were planned: Boursiers (fellows), chargés de recherches, maîtres de recherches and directeurs de recherches, which would permit a man to devote himself to scientific research without giving part of his time to instruction.

THE "CONSEIL SUPERIEUR DE LA RECHERCHE"

To select the personnel and direct the expenditure, it was decided on the suggestion of Jean Perrin to form a committee of eminent scientists representing all the main branches of science, who would be willing to devote themselves to these tasks without remuneration. The proposed annual budget required by this scheme was estimated at 40,000,000 francs, of which 20,000,000 would be devoted to paying the salaries of the workers and 20,000,000 to defraying the cost of equipment. In June, 1930, Edouard Herriot, convinced by Perrin of the importance of such an organization for the national defense, asked for an appropriation from the chamber of 20,000,000 francs. An annual appropriation of 5,000,000 francs was granted and the "Caisse Nationale des Sciences" was set up. In 1931, research fellows were appointed and a committee was set up which was divided into subcommittees of ten to twelve members for each of the main branches of science. In 1933, the "Conseil Supérieur de la Recherche" finally came into being.

The various sections during the first year appointed more than 200 investigators, and the 5,000,000 francs were found quite insufficient. Its appropriation was then increased to 7,500,000 francs, with the understanding that one sixth of this sum should be devoted to the humanities. In 1935, the laws in connection with the devaluation of the franc resulted in a reduction of the budget by 25 per cent. and abolished the special tax devised by Emil Borel. However, the period of difficulty was followed in 1936 by the appointment of Irène Curie-Joliot to the newly created office of under-secretary for scientific research in the government of

Léon Blum. For the first time in the world, the claims of science as an essential national activity could have direct access to a government. After a few months, Irène Curie-Joliot was succeeded by J. Perrin, and the annual budget was increased from 11,500,000 to 26,500,000 francs. In 1937, thanks to the support of the minister of national education, Jean Zay, the budget was increased to 32,500,000 francs. To insure a stable organization and at the same time avoid every tendency to excessive bureaucracy, scientific directors have replaced civil service officials wherever possible.

Among the projects undertaken by the organization may be listed: the observatory for astrophysics at Forcalquier; the national chemical institute now being built at Ivry, the laboratory for atomic transformations which is a development of the laboratory of Joliot at the Collège de France, the laboratory for low temperature research at Bellevue, and in quite a different field, an "Institut des Textes." It also arranged the science exhibits at the International Exposition of 1937.

To be sure, the present annual budget of approximately 32,500,000 francs does not enlist in the service of science more than a small part of the native talent; however, the rapid increase in the budget in recent years marks a fundamental change of attitude. In France, the old belief has vanished that a true scientist lives in poverty and does marvels with makeshift equipment.

CYTOARCHITECTURE OF THE GORILLA BRAIN

THE late Alfred W. Campbell (1868-1937) made one of the first, and certainly the most adequate, comparative study of cytoarchitecture of the anthropoid cortex. His well-known book, "Histological Studies on the Localisation of Cerebral Function" (1905), was based upon brains of the chimpanzee and the orang which had been supplied to him by Sherrington and Grünbaum. He had not had opportunity at this time to take up the gorilla, and since it is generally believed that the cytoarchitecture of the gorilla brain has never been studied, it seems worth while to direct attention to a little-known paper on the subject published by Campbell in 1916 after he returned to Australia. In it, incidentally he modified his earlier views on the olfactory fields. The reference is as follows:

ALFRED W. CAMPBELL. "Histological Studies on the Localisation of Cerebral Function. The Brain of the Gorilla." *Reports from the Pathological Laboratory of the Lunacy Department, New South Wales Government*, 3: 20-35, 1916.

A copy of this report has just been sent to the writer of this note by the inspector-general of mental hospitals at Sydney, and I shall be glad to make it available through photographic reproduction to any student