

## Sixteenth International Physiological Congress

FOUR successive international congresses, on cytology, physiology, veterinary science and history, respectively, have been held in Zurich this year. Each physiologist who had given his address, found in his room a packet containing a badge with his name on it, a list of members with local and home addresses, a small book dealing with the life and work of Albrecht von Haller, a copy of a special number of the *Schweizer Medizinischer Wochenschrift*, a book of abstracts of communications (if this had not been sent in advance), a history of the congresses, and travel folders about Switzerland and Zurich.

The Congress met without any formalities in the hall of the University on the evening of August 14. The president, Prof. W. R. Hess, opened the congress next morning in the 'Auditorium Maximum' of the Technische Hochschule. After welcoming the members of the Congress, he thanked Dr. K. J. Franklin and the Physiological Society of Great Britain and Ireland for making it possible to distribute the "Short History of the International Congresses of Physiologists" to all those present, and said that he thought that this would be of great value in fixing the tradition of these congresses (cf. *NATURE*, July 30, p. 222). This year marked the truly physiological hemicentenary of the first Congress, which was conceived in 1888 and met a year later, and the president expressed the gratitude of those present to the founders. Five survivors of the first congress were present, and telegrams of greetings and gratitude were approved by the meeting and dispatched forthwith to others who could not come. The meeting stood in silence to express its sorrow for the loss of those physiologists who had died in recent years, with particular mention of Pavlov, Johansson, Fredericq, Haldane, Cremer, Macleod and Abel. The president hoped that the present Congress would be worthy of the high ideals of its early predecessors.

The rector of the University of Zurich, Prof. E. Howald, welcomed the Congress in German on behalf of all the seven Swiss universities, and added that he was happy to be able to say that, in this particular matter, the universities were unanimous. The Congress was also welcomed in two other official Swiss languages—French and Italian.

Prof. L. Lapique spoke in honour of the jubilee as a member of the first Congress. He was glad to see so many young people carrying on the work of physiology, and happy to think that once this work had been published and distributed to the libraries of the world it would live, although more concrete things might be destroyed. Since the last congress, the political situation had become less stable, and the Congress was fortunate in meeting in a country that was famous for its international atmosphere.

Sir Henry Dale spoke on behalf of all in English, which experience had taught him to be one of the unofficial languages of Switzerland. He thanked the president, and those others who had spoken in welcome. He thanked Prof. E. Rothlin, and those others who had organized the Congress. They had done much to re-establish the early traditions of friendly informality described by Dr. Franklin. Physiological congresses should not be associated with formal official receptions, and members should

represent nothing but devotion to physiology and friendship for other physiologists. Switzerland had been proposed as a place for the first Congress because it was central, hospitable and attractive. The sixteenth Congress was glad to be able to meet in Switzerland not only for these reasons, but also because of the great scientific achievements of Swiss physiologists.

The scientific meetings started on Monday afternoon, and continued each morning and afternoon until Friday, with a break on Wednesday afternoon, which was devoted to an expedition on the Zürichsee to Rapperswil. Meetings were held simultaneously in five large lecture rooms in the Technische Hochschule, which is extraordinarily well adapted for the holding of congresses. The afternoons were mostly devoted to arranged discussions on chosen subjects—an innovation which was generally considered a great success. Each discussion was opened by two chosen speakers, and an abstract of their contributions was circulated some weeks in advance. They were followed by other speakers, most of whose contributions were also abstracted in a second volume circulated just before the Congress. At intervals the discussion became general, and arrangements were made by which it was possible for the chairman to invite particularly obstinate disputants to withdraw to another room so that the meeting might continue. There were also in the original programme about 330 individual communications, summaries of most of which were contained in the second volume of abstracts. These were grouped according to subject, and the discussions which arose were sometimes as interesting as the arranged discussions, and were continued in neighbouring cafés or in the *Studentenheim*, where meals were provided for the members of the Congress.

There were about fifty demonstrations, half of which were permanently on view, and the other half were each shown twice. The programme also contained twenty-seven films, some of them coloured, which were each to be shown twice between 5 and 6.15 p.m. on different days.

It is difficult to give an account of the scientific results announced at such a congress. The book of abstracts gives an interesting cross-section of the physiological thought of the day, but it takes some time to read it all, and there are probably few who could criticize it all. Papers which sound very good in abstract often sound less good when they have been criticized in the meetings. No one person could attend more than about a fifth of the meetings, and it is difficult even to be certain which papers have actually been delivered. The following papers, however, deserve special mention for various reasons.

Prof. W. R. Hess demonstrated ingenious and interesting methods for stimulating or destroying subcortical areas of the brain and observing the results. H. Theorell advanced a formula for the prosthetic group in cytochrome c. V. Menkin described the isolation from inflammatory exudates of a crystalline polypeptide 'leukotaxine', which increases permeability and attracts leucocytes. W. Feldberg and C. H. Kellaway presented evidence that the response of cells to injury is partly due to

the liberation of lysocithin. R. J. Williams described the isolation and properties of pantothenic acid—a universal growth stimulant present in all cells. J. F. Toennies presented evidence that sensory stimulation may evoke a reflex which leads to the appearance of antidromic impulses in dorsal spinal roots. A. v. Muralt demonstrated an apparatus which plunges nerve trunks into liquid air while impulses are actually passing, so that various evanescent effects of the impulses can be detected. F. Schütz demonstrated an apparatus for studying adsorption on foam, which may be useful in separating substances of physiological importance. J. S. Fruton described the results of the study of the action of various proteinases on simple peptides, which show that they may act specifically on the link between one particular pair of amino acids. A. C. Ivy demonstrated the masculinization of female rat embryos by the injection of male hormone into the mother during pregnancy, and also the reverse effect on male embryos. Another demonstration showed the same effect as the result of the injection of the embryos themselves by laparotomy. E. H. Venning and J. S. L. Browne described the results of a study of the physiology of progesterone by estimating its excretion product in the urine. R. D. Wright and H. W. Florey described interesting experiments on the secretion of the colon. L. A. Maynard, C. M. McCay and G. Sperling demonstrated experiments in which rats lived longer than normal rats and retained their youthful appearance, when they were fed on a diet which was deficient in calories, but otherwise complete.

The most popular discussions were on urinary excretion, the chemical transmission of nervous impulses, steroids, the adrenal cortex and the hypophysis. It was unfortunate that the last two of these discussions were held simultaneously.

The pharmacologists held a special meeting at which they discussed the scope and future of their science. Sir Henry Dale accused them of not taking an active interest in the important new remedies which are being introduced so rapidly, and of leaving the practical application of hormones, vitamins and chemotherapeutic agents to physiologists, biochemists and pathologists, who often have no medical training. Various speakers replied that pharmacological teaching does in fact keep up to date, and that pharmaco-

logical research is more likely to be fruitful if pharmacologists are allowed to study what interests them, than if they are diverted to the study of the practical applications of the work of others. Pharmacology has been handicapped because it has been regarded as a handmaid of medicine. Its proper scope includes not only the study of the scientific basis of therapeutics, but also more general problems of how drugs act, methods of assay and standardization, the absorption and fate of drugs, factors determining the intensity of their action and their toxic effects not only on man, but also on other forms of life such as insects, weeds, worms, protozoa, and bacteria. The pharmacologist must know something of many sciences, but diversity of interests has been stimulating in the past and is likely to be so in the future.

On Thursday evening the members of the Congress were divided into groups with common interests, and entertained to dinner in various parts of Zurich. Interesting speeches of welcome and of gratitude were made and there were various other postprandial entertainments.

The final meeting was held on Friday afternoon. Prof. A. V. Hill presented the report of the permanent International Committee. Prof. L. A. Orbeli was elected to succeed Pavlov on this committee and there was some general discussion of procedure. Sir Henry Dale, on behalf of the Physiological Society, invited the Congress to meet in England in 1941 and this invitation was accepted. Prof. Houssay put forward an invitation to Buenos Aires in 1944, which was received with enthusiasm.

The Swiss committee is to be warmly congratulated on the arrangements for this Congress, which were simple and worked smoothly and without delay. Membership was limited to genuine physiologists approved as such by national committees, so that the temporary physiologists who have attended some recent congresses were excluded, but this arrangement is unfortunately open to abuse, since it makes it possible for genuine physiologists to be excluded for political reasons. About 1,100 members registered, and they were officially accompanied by 260 other persons. There were no Russians, but most other nations were well represented. A number of Spaniards, including Prof. Negrin, were able to come.

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## Twelfth International Horticultural Congress

THE formal opening of the Twelfth International Horticultural Congress took place at 11 a.m. on August 12 in the Plenary Hall of the Congress Building (Kroll Opera House), Berlin, when the president, Herr R. Walther Darré, Reich Minister for Food and Agriculture and Reich Peasant Leader, gave a speech of warm welcome to all members, who represented about fifty nations. Addresses were also delivered by Herr Johannes Boettner, managing president; Prof. F. Angelini, first vice-president of the Congress; and Dr. J. J. L. van Rijn, vice-president of the International Institute for Agriculture, Rome. The British delegation was headed by Dr. H. V. Taylor, of the Ministry of Agriculture, and included Sir Arthur Hill, Sir Frank Stockdale, Colonel F. R.

Durham, R. G. Hatton (East Malling), F. J. Chittenden and Dr. M. A. H. Tincker (Wisley).

In view of the numerous and varied horticultural problems to be discussed during the week, twenty sections were set up embracing all branches of horticulture, such as growing of fruits and vegetables, nurseries, nomenclature, park and garden planning, education, physiology, etc. As it was quite impossible to attend all the sectional meetings, the present account cannot claim to be complete, and mention can be made only of the few sections visited. In the Section of Education great interest was shown in the international exchange of young gardeners. M. Tubart outlined the existing position and made proposals for the further extension of the system. In