

Nineteenth Congress

Montreal—1953

F. C. MACINTOSH,
Chairman of the Local Committee

C. H. BEST, *President*

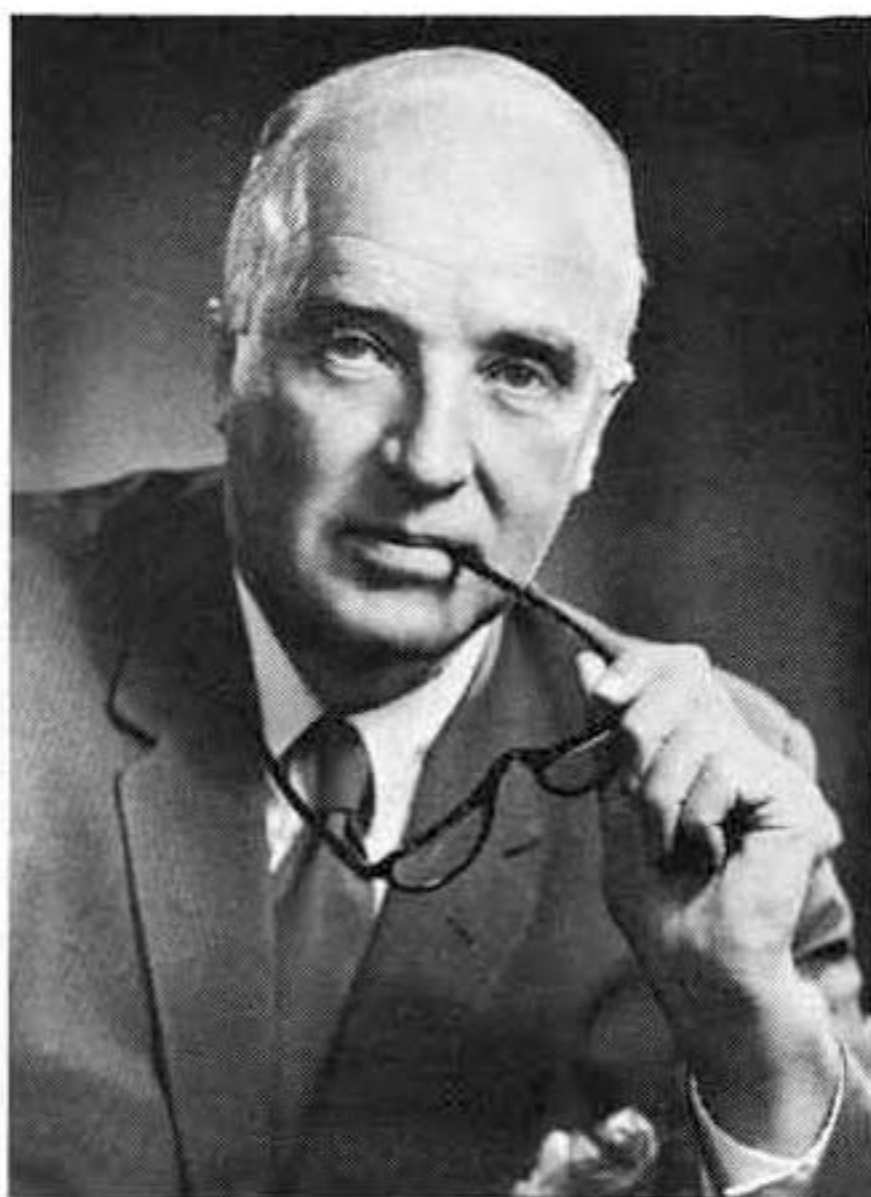


FIG. 1. Professor C. H. Best, President of the Congress and first President of IUPS.



FIG. 2. Professor F. C. MacIntosh, Chairman of the Local Committee and, later, Treasurer of IUPS (1962–1968).

The Permanent Committee at the Eighteenth Congress accepted the Canadian Physiological Society's invitation to hold the 1953 congress in Canada. The society judiciously chose Montreal as the site, because, of Canada's two big cities, it better represented the bilingual aspects of the country's culture, and named Professor C. H. Best of Toronto, Chairman of the National Committee and President of the Congress. The other members of the National Committee were A. C. Burton, A. S. V. Burgen, J. B. Collip, L. P. Dugal, J. K. W. Ferguson, F. C. MacIntosh, E. Robillard, and E. G. Young. This committee took the main responsibility for raising funds; and for this first western-hemisphere congress since 1929, it secured the cordial cooperation of the American Physiological Society and of the other societies of the Federation of American Societies for Experimental Biology and Medicine. Most of the detail work fell to the local committee, drawn from l'Université de Montréal, McGill University, and pharmaceutical industry: its members were R. Bernard, J. S. L. Browne, A. S. V. Burgen, O. F. Denstedt (Treasurer), K. A. C. Elliott, B. L. Frank, H. H. Jasper, A. Jutras, C. P. Leblond, E. Lozinski, J. J. Lussier, F. C. MacIntosh (Chairman), D. Marion, E. Pagé, M. Painisset, and E. Robillard (Secretary).

Montreal was unused to big international scientific gatherings, and the local committee was able to mobilize a large team of enthusiastic helpers: the official congress programme listed nine subcommittees, with some ninety members in all, and an office team of eleven led by a talented young executive secretary, Eileen O'Brien. Financial support, in addition to members' and exhibitors' fees, came from the National Research Council of Canada (\$50,000), the Province of Quebec, and industry (especially the pharmaceutical industry) in both Canada and the USA. In addition, the Council for International Organizations of the Medical Sciences participated for the first time, offering useful advice and a grant of \$5,000 to cover printing costs. Registration fees were \$15 for active and \$5 for associate members, except for overseas members, who paid respectively \$2 and \$1. The overall budget of over \$120,000 was an indication that the running of a

physiological congress had now become a substantial business operation, and it was with some relief that the national and local committees found that there was a small surplus when the accounts were closed.

Certain features of the organization were new. In the first place, because the committees were concerned that the overseas delegations would be small in number and swamped by the North American flood, a fund of \$30,000 was set aside to assist travel, especially by the younger scientists. This was allocated to participating nations on the basis of a complex formula. Within these nations, it was distributed with the advice of national societies or senior physiologists. In the second place, the programme subcommittee with pioneering insight insisted on a fixed time schedule for all the individual communications, rather than the then usual scheme of bulletins in each room to record progress in other rooms. The valour of K. A. C. Elliott, who as Subcommittee Chairman made dozens of distinguished scientists attend his school for session chairmen and memorize their instructions, won him the admiration of his colleagues. The result was satisfactory beyond expectation: only two of the hundred-odd sessions fell seriously behind schedule; and the use of time schedules seems now to be nearly universal at major scientific meetings. Apart from these innovations, however, the congress conformed to the well-tried pattern.

Many visitors to Montreal came prepared for the rigors of a northern climate. However, the daytime temperature, between August 31, when the Congress opened, and September 5, when it closed, stayed between 30 and 34 C throughout, and the unconditioned air of the older McGill classrooms brought stress close to tolerance limits. The slightly cooler evenings gave some relief; and the hospitality dispensed by the province and city, beside and on top of Mount Royal, was received with considerable acclaim. Among the most cherished nonscientific memories of the 1953 congressists were the bonhomie of Mayor Houde, who personally greeted every member and especially every wife, and the garden party, where the water ran out though the whiskey did not. Montreal was clearly aware of the quality of its guests. Most of those from overseas were invited to the houses of the local participants, a measure of hospitality long remembered by guests. The press reported the congress with great enthusiasm, with special attention to the ten Soviet scientists who at that period tended to be regarded by North Americans as rather exotic visitors. The Europeans, in turn, managed in spite of the heat to inspect a good deal of Montreal and its immediate environs, with special emphasis on the Iroquois village of Caughnawaga and the orchard-fringed slopes of Mont St. Hilaire, where the Swiss and German physiologists on one congress excursion surprised the locals by scaling the rocky face instead of ambling up the prescribed path winding to the top.

Of the 2188 active members—the largest number hitherto—651 were listed as coming from Canada and 1131 from the United States, but nearly 100 of these were overseas scientists working temporarily in North America.



FIG. 3. Participants in conference on *Perspectives in Physiology*. From left: G. Stella, E. Lundsgaard, H. F. Häusler, G. Liljestrand, H. Smith, C. H. Best, Ilza Veith, P. Hoffmann, B. A. Houssay, A. von Muralt, M. B. Visscher, E. D. Adrian, R. A. Peters, A. Rosenblueth.

The 406 others came from 39 countries, the largest delegations being from the United Kingdom (137), Latin America (45), Scandinavia (38), France (31), Germany (31), Switzerland (27), and Italy (21). There were 538 associate members. On the Saturday after the congress 411 members attended a special pharmacologists' meeting. The biochemists, on the other hand, having already held two independent congresses, did not attend in large numbers, though those who did come had lively sessions of good quality.

The plenary sessions, like the scientific ones, were shared between Montreal's two universities. The opening one, at McGill, was preceded by a university convocation at which honorary degrees were presented to the three surviving Congress presidents, Professor Walter Rudolph Hess of Zurich, Sir Henry H. Dale of London, and Professor Einar Lundsgaard of Copenhagen. Professor Edgar D. Adrian of Cambridge and Professor Leon Binet of Paris were similarly honoured by the University of Montreal after the closing plenary session. Dale's convocation address at McGill was the only major nontechnical address of the congress week: it was a stirring plea for a common loyalty, transcending national boundaries, to freedom in the search for knowledge, freely communicated for the common good. Best performed his presidential duties with brevity, surrendering to Collip as President of the Canadian Physiological Society the privilege of first formal welcome to the visitors. After further welcomes on behalf of the two universities, the city, and the Canadian government, Best introduced Adrian, who outlined the Permanent Committee's intention to create, during the congress, the structure of an International Union of Physiological Sciences. What must have been a busy week for the planners was followed, at the closing session, by the announcement that the Union had come into existence, taking over, among other responsibilities, the Permanent Committee's

task of ensuring the continuity of the triennial meetings, henceforth to be called the International Congresses of Physiological Sciences. C. H. Best, President of the congress, was elected as the first President of the new Union. There were brief speeches at the closing session by the three past presidents: Houssay for all the visitors expressed thanks to the Canadian hosts; and Best closed the congress with the announcement that Belgium was the site preferred for 1956.

The scientific offerings at the congress, though their quality was generally high, appear in retrospect to have included no single outstanding discovery. The distinguished contributors to the official symposia were able in their presentations to consolidate broad-front advances in a variety of areas and often to give prescient interpretations of their own new data and those of others. The first symposium, appropriate for its Canadian setting, was on the metabolic influence of insulin and was chaired by Houssay: the speakers were F. D. W. Lukens, DeWitt Stetten, F. G. Young, and W. C. Stadie, of whom the last especially was able to deal with events at the cellular level. Next, under B. Folkow's chairmanship, came a session on hemodynamics in small vessels, with contributions by A. C. Burton, B. W. Zweifach, J. R. Pappenheimer, and H. Barcroft. The emphasis, ranging from applied human physiology to molecular biophysics, well illustrated the increasing precision of observation and interpretation in postwar vascular physiology. A symposium on reflexes from the cardiac and pulmonary areas, chaired by C. F. Schmidt, with presentations by C. Heymans, O. Kraymer, G. S. Dawes, Y. Zotterman, and D. Whitteridge, was concerned more with peripheral than with central mechanisms. The balance between peripheral and central was more even in a session on postural mechanisms, chaired and introduced by F. Bremer, in which the newly prominent gamma efferents and descending reticular pathways claimed their share of attention; S. W. Kuffler, B. R. Kaada, H. W. Magoun, and G. Moruzzi were the other speakers. On physiological theories of learning, under Lashley's chairmanship, there were comments from widely differing points of view by J. Z. Young, R. W. Sperry, K. M. Bykov, and A. K. McIntyre, who must at least have convinced their hearers of the complexity of this fascinating problem. The panel on the mechanism of formation of the thyroid hormone, superintended by J. Roche, was composed of E. B. Astwood, O. M. P. Michel, E. De Robertis, and J. Gross with R. Pitt-Rivers: these workers were able to use recent data to give a rather comprehensive survey of a well-defined area. Finally, and again with some relevance to Canada if not to its climate of the moment, came a symposium on the physiology of cold, chaired with authority by E. F. DuBois, and with papers by L.-P. Dugal, C. Kayser, O. G. Edholm, and N. H. Mackworth.

All these symposia were held, mornings and afternoons, in the elegant Salle des Promotions of the University of Montreal, 2 miles by special bus from McGill University, where the traditional individual communications

were presented in 15 parallel sessions. A simultaneous translation service (English, French, and German), staffed by specially trained graduate students from the two universities, was provided for the symposia. In the outcome, about 90% of the scientific programme was in English and most of the rest was in French; but at the closing plenary session there was a moving plea by Hess that German should not lose its place of honour as one of the international languages for physiologists.

Other symposia and single-topic meetings were organized independently of the regular programme and attracted specialist groups. One all-day session dealt with biologically active peptides and the enzymes associated with them and heard from H. B. Van Dyke the exciting news of Du Vigneaud's synthesis of oxytocin. On Saturday, as the sky opened to cool the parched campus of nearby MacDonald College, the pharmacologists considered the ganglionic and renal tubular effects of drugs, in sessions supervised by J. H. Burn and A. N. Richards, respectively.

From the 800-odd individual communications, as usually happens, selection must be more random than judicious. Noteworthy trends were the increasing use of isotopes, of electrical recordings from single cells, and of transducers designed to explore hitherto inaccessible regions within healthy human subjects. Among the memorable papers one might cite Stämpfli's introduction of the sucrose-gap technique; Hartline and colleagues on intra-unit recording and lateral inhibition in the *Limulus* eye; Brown-Grant, C. von Euler, Harris, and Reichlin on control of thyroid activity; Rose and Mountcastle on thalamic units; Hoffmann and Suckling on cardiac repolarization; Geiger and Magnes on brain perfusion; Fessard, as well as Amassian, on cortical unit responses; Alvarez and Caldeyro-Barcia on uterine contractility; M. Vogt on noradrenaline in the brain stem; and a number of distinguished contributions on the biochemical side. Among the demonstrations, De Robertis showed what may have been the first electron micrographs to be seen at a physiological congress; and among the films, one by Essex and his colleagues on heart valves and sounds and Gregory's teaching film on gastric secretion certainly deserve mention. Perhaps only a few specialists paid much attention to Rothlin's film on the behavioral effect, in mice, of a new ergot derivative now referred to as LSD.

More detailed accounts of the Congress have been published in *Nature* (172: 1071, 1953) by W. L. M. Perry and in *Lancet* (265: 721, 1953). Other material is in the archives of IUPS and of McGill University.

EDITOR'S NOTE

The editor is grateful to Dr. MacIntosh and Dr. Best for this interesting account of the Montreal Congress. Between them and their various committees, a very successful congress was arranged as is well indicated by a letter written to Dr. MacIntosh after the congress by the President of the

American Physiological Society, Dr. E. F. Adolph, which read in part as follows:

The Council of the American Physiological Society joins me in congratulating you on the superb arrangements under which the International Congress of Physiology operated. We felt envious of your polish and care in arranging for the meetings, and for the actual success of the events as they occurred. We feel particularly proud of such a notable accomplishment by one of the members of our society.

In the account of the congress provided in *Lancet* (referred to above) it is further stated that Dr. Best in his opening remarks "gave a display of verbal virtuosity in welcoming the members in six languages including Gaelic and Mohawk." A further description of the social events merits quoting.

When one got tired of symposia and papers or needed relief from the heat, there were lounges for talking or writing, an open-air buffet under the trees for food or beer, in the garden of the Arctic Institute for North America. The entertainment was magnificently organized. All of the 3000 guests were invited to cocktail or dinner parties given in the private homes of the hospitable medical community of the city. Gay, free-and-easy receptions were given to the congress by the Province of Quebec and the City of Montreal. There were boat trips up and down the St. Lawrence, fun-fairs, a water ballet, and outings in the Laurentian Mountains. The wives went to fashion shows and on tours of Canadian industries, including a brewery, and were taken sight-seeing over Montreal by Trans Canada Airways.

In view of the high temperatures of the occasion the following incident, reported by Professor Adolph, is perhaps worthy of note.

It was a hot day in Montreal. During a symposium a member from Europe got up to speak. As he arose, he realized he had shed his jacket, and his braces were exposed. While walking forward to the microphone he lowered his braces, and addressed the meeting while holding up his trousers by hand. Having finished his remarks, he replaced his braces on his shoulders and walked back to his seat, having contributed to the scientific discussion while preserving sartorial decorum.

On September 4, a Symposium was held under the chairmanship of Professor Adrian on the Future and Limitations of Physiological Research. This was the beginning of a series of conferences on the general topic sponsored by the International Council of Scientific Unions (ICSU) which culminated in a book, *Perspectives in Physiology*, edited by Ilza Veith and published in 1954 by the American Physiological Society. A picture of the group including the authors of chapters in that book is shown in Fig. 3 (p. 39) at its meeting in Montreal.