The Constitution and Functions of the United Kingdom Medical Research Council[1]

Francis H. K. Green

Medical Research Council, London, England

I MUST APOLOGIZE for my temerity in coming here, on this, my first visit to the United States, to tell you about a British government organization. I was emboldened to do so by hearing from scientific colleagues who had been lucky enough to visit America earlier than I, and for enviably longer periods, that there is a genuine and widespread interest here in the structure and activities of the U. K. Medical Research Council; and, more decisively, by reading in the issue of SCIENCE of November 16, 1951, the very stimulating article by Leonard A. Scheele and W. H. Sebrell on "Medical Research and Medical Education." I was especially interested, although not much surprised, to find that the U. S. Public Health Service has encountered many of the same problems and difficulties in administering to the best advantage the Congressional funds at its disposal as has the Medical Research Council in administering its Parliamentary grant-in-aid, and that generally similar expedients have been adopted to meet them. It seemed to me, therefore, that you might like to have a factual account of our medical research organization for comparison with your own under the Public Health Service. Later, I hope to refer specifically to some of the analogies between your arrangements and ours, and between our respective methods of dealing with our common problems.

The promotion of medical research in the United Kingdom has been predominantly a government responsibility for nearly 40 years. The funds granted by Parliament to the Medical Research Council for this purpose amount at present to about £1,666,000, or $4,665,000, per annum, exclusive of nonrecurrent provision for capital expenditure on buildings and special equipment, totaling about £232,000, or $650,000, in the current year. In addition to these direct subventions, the government also gives substantial support to medical research—particularly in the basic sciences—through the block grants to universities distributed through the University Grants Committee and—in the clinical field—through the maintenance of hospitals and the payments to doctors under the National Health Service. Thus the major part of U. K. resources for medical research comes directly or indirectly from the national exchequer. Nevertheless, a very important contribution to research in particular subjects is made by private charities, of which the Nuffield Foundation and the British Empire Cancer Campaign are the largest. There is close cooperation between the Medical Research Council and the principal private organizations supporting medical research, with a view to ensuring the most effective allocation of their respective resources and the avoidance of undesirable overlap; it can justly be said, therefore, that medical research is a field in which the philanthropic activities of the state and of private enterprise are successfully coordinated for the public good. It is relevant to remark also that the government organization for medical research—the Medical Research Council—is itself empowered to receive private benefactions to augment the public funds at its disposal; though small in relation to the council's total annual expenditure, these gifts and bequests, usually made for the support of research on particular diseases, provide a welcome supplement to its grants from Parliament.

It may perhaps have come as a surprise to learn that the state provision for medical research in the U. K. is an institution of such respectable antiquity, and not just another manifestation of the increasing intervention of government in human affairs since the end of the second world war. I shall try to explain, as simply as possible, how this came about, and how, from very modest beginnings, the organization has gradually achieved its present magnitude.

When the original National Health Insurance scheme was introduced by Lloyd George in 1911 (to the inevitable cries of public execration and dismay, which I am old enough to remember), provision was made in the act for a sum of money calculated on the basis of one penny for each insured person in the United Kingdom to be set aside annually as a Medical Research Fund. A special Medical Research Committee was appointed to administer the fund, and the late Sir Walter Fletcher, who was to become the first secretary of the Medical Research Council, was persuaded to leave his academic and research post as fellow and senior tutor at Trinity College, Cambridge, to become the committee's secretary. It was significant for the whole course of development of state-aided medical research in Great Britain that the chief executive officer of the Medical Research Committee should

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himself have been not only a medical man but a research scientist of distinction. His work with Gowland Hopkins at Cambridge on lactic acid in muscle had earned him a fellowship of the Royal Society. Even before Fletcher's appointment in the early summer of 1914, the Medical Research Committee had acquired a disused hospital at Hampstead, London, as the building for a National Institute for Medical Research, and had begun to make plans for a research program within the limited funds at its disposal, then amounting to about £55,000 per annum. These plans were rapidly completed under Fletcher's guidance, but they had been only partly implemented when the normal life of the country was disrupted by the impact of the first world war. From the committee's point of view this meant that its program of fundamental researches in pathology, physiology, and biochemistry, and of direct attack on diseases such as tuberculosis and rheumatism, had mostly to be shelved, and it had instead to cooperate with the Army Medical Service in studying problems of more urgent military significance, such as wound infection, shock, and the dysenteries. Study of the committee's reports on work carried out on many different subjects during the war of 1914–18 makes it clear that the committee honorably won its spurs at that time, and there is no doubt that the fact that it did so was largely responsible for its being perpetuated as a separate body when the Ministry of Health was created in 1919.

It might seem logical to have attached the Medical Research Committee to the new ministry. That this was not done was not just another manifestation of British contrariness, for there were cogent reasons against it. I have indicated one reason why the concept of an independent Medical Research Committee was perpetuated. Other reasons, of even greater force, were set forth in a historic memorandum presented to Parliament by Christopher Addison, who was then president of the Local Government Board and became the first minister of health, at the time when the bill to set up the ministry was under discussion. In this it was pointed out that a progressive Ministry of Health must necessarily become deeply committed from time to time to particular policies of health administration and that, if the medical research organization were placed directly under the minister, it might find itself constrained to keep in step with the ministry's current policies, instead of being entirely at liberty to recommend alterations of those policies in the light of new knowledge; its activities, moreover, might tend to be undesirably limited to the study of "those problems which appeared at the moment to be of the most pressing practical importance" from the point of view of the ministry's executive functions, to the exclusion of the more fundamental studies upon which all advances in knowledge of short-term practical problems must ultimately be based, and which of themselves have so often been found to lead suddenly and unexpectedly to new advances in the practice of medicine. Such a myopic view of the functions of medical science could best be avoided by leaving the promotion of medical research in the hands of the relatively autonomous body of scientific experts which had already proved its value, and which should be given (in the words of the memorandum) "the widest possible freedom" to make new discoveries within its field, and to make them available for the use of any or all of the executive government departments, and of the medical profession, without regard to questions of political or administrative expediency. It was realized that the Ministry of Health ought itself to have power to employ a research staff to undertake short-term investigations of practical problems related to its work, and this was given in the act; it may be added, parenthetically, that power to promote medical research is also given to the minister under the Act of 1946, which set up the National Health Service; the relative functions of the Medical Research Council and the ministry in this regard are a matter of amicable arrangements between the council and the ministry.

Another important reason against incorporating the Medical Research Committee in the Ministry of Health, which was adduced in the Memorandum of 1919, was that the jurisdiction of the ministry would extend only to England and Wales, similar but separate arrangements being contemplated for Scotland and Ireland, whereas it was clearly desirable that the Research Committee should be empowered to maintain close touch with the best scientific activities in the whole United Kingdom and, indeed, in the entire Empire. Fortunately, H.M. Privy Council provided—and still provides—a convenient constitutional umbrella for various government standing committees that are independent of the administrative departments, and it was, as the memorandum put it, the only government department with an imperial range. An Advisory Council on Scientific and Industrial Research had already been set up under a special Committee of Privy Council in 1916, to direct the work of the Department of Scientific and Industrial Research, and it was decided that the Medical Research Committee (henceforth to be known as the Medical Research Council) should be given a generally similar constitution.

A Committee of Privy Council for Medical Research was accordingly appointed in March 1920, "to direct the continued performance of the duties heretofore performed by the Medical Research Committee": in fact, the Committee of Privy Council took over the existing Medical Research Committee, which thereupon became the Medical Research Council and was granted a Royal Charter of incorporation under that name. The Lord President—at present Lord Woolton—is chairman of the Privy Council Committee, and he is the minister directly responsible to Parliament for the work of the Medical Research Council. Other members of the committee include the minister of health (as vice chairman) and the ministers in charge of the principal U.K. departments that may also be concerned with questions of public health either at home or overseas; the fact that the minister

of health is vice chairman of this committee provides the only direct constitutional link between the Medical Research Council and the ministry, though naturally there is the closest possible working relationship between them, and the council carries out many research investigations at the ministry's request. The secretary of the Medical Research Council is ex officio secretary of the Committee of Privy Council for Medical Research, and since this ministerial committee very rarely needs to meet (it has, in fact, met only once in history), this means in practice that the council through its secretary has direct access to the Lord President as its minister in Parliament. It may be added that the Agricultural Research Council, set up under the formal direction of another ministerial Committee of the Privy Council in 1931, has a closely similar constitution to that of the Medical Research Council. The fact that the Lord President is the minister responsible for the Department of Scientific and Industrial Research and for the Agricultural Research Council, as well as for the Medical Research Council, is valuable in enabling these three government research organizations to work together on matters of common interest.

If you have been able to follow me through this thicket of constitutional detail, you will, I hope, have realized that the Medical Research Council is in effect a nearly autonomous scientific body maintained by the government. The public funds at the council's disposal are provided annually by the Treasury in the form of a Parliamentary grant-in-aid, and in allocating these in fulfillment of its functions the council is not merely an advisory body but has full executive control. Naturally it is responsible to the Lord President and through him to Parliament as well as to the Treasury and the government auditors, for the proper expenditure of the funds entrusted to it. The council's annual estimate of expenditure is submitted to the Treasury under itemized headings, and if the estimate satisfies the Treasury its approval by Parliament as part of the Civil Estimates is usually purely formal, though it obviously is open to any Member of Parliament to challenge it during the debate on the estimates. Once the grant is approved, the council is virtually free to spend it at its scientific discretion, although the Treasury not unreasonably likes to be consulted in advance about costly commitments of a kind that may extend from year to year; and it requires the council to keep approximately in step with the Civil Service on matters such as salary scales for members of the staff.

There are nowadays twelve members of the Medical Research Council—three lay and nine scientific. The scientific members are appointed by the Privy Council Committee, after consultation with the president of the Royal Society as representing independent scientific opinion in the country, and with the existing members of the council. The scientific members are all distinguished experts who have done important research in their particular branches of medical science; at present they include a physician, a general surgeon, a neurosurgeon, a psychologist, two pathologists, a biochemist, a physiologist, and an anatomist with strong physiological interests. Of the three lay members, at least one must be a member of the House of Lords and one a member of the House of Commons; it is customary for a representative of the House of Lords to be made chairman, and it is a matter of historic interest that the late Chairman of Council, Viscount Addison, who died in December 1951, was, in fact, that same Christopher Addison who had played so important a part in designing the council's constitution; he was happy to be reunited in his old age with the child of his begetting. Members of the council retire in turn at regular intervals, and the scientific members are not eligible for immediate reappointment after serving continuously for four years. This arrangement gives the council a useful turnover of scientific experience. The council appoints its own secretary and other administrative officers, and also its own scientific staff. The present secretary is Sir Harold Himsworth, who succeeded Sir Edward Mellanby in this post in October 1949.

The arrangement by which the individual scientific members serve for only a limited period helps give the council flexibility of outlook and provides a useful variation in the range of technical interests directly represented upon it. Clearly, however, it is impossible for the nine scientific members at any given time to possess detailed knowledge of all the complex and specialized problems of medical science. To counter this difficulty, the council has appointed a large number of expert technical committees to advise it on particular subjects. Some are standing committees, others are appointed on a short-term basis to organize research on a particular subject—such as clinical trials of a promising new remedy. At present there are over thirty standing committees and over twenty *ad hoc* committees, their total membership comprising several hundreds of doctors and other scientists. On some parts of its program the council is advised by joint committees with the appropriate government departments. Thus the Colonial Medical Research Committee, which advises on the promotion of research work bearing on the health and welfare of colonial peoples, is appointed jointly by the council and the Colonial Office.

In promoting research on problems of industrial well-being and efficiency the council is advised by its Industrial Health Research Board and by special committees on occupational health, psychology, toxicology, industrial pulmonary diseases, and many other subjects. Since the beginning of World War II the council, assisted by expert committees, has also undertaken a great deal of research for the defense services on problems affecting the health and efficiency of the fighting man. The council itself meets about nine times a year; its advisory committees, as often as necessary.

I have said that in 1914 the funds available for the work of the Medical Research Committee amounted to about £55,000. The annual Parliamen-

tary grant-in-aid of the Medical Research Council, exclusive of nonrecurrent provision for buildings and special equipment, was £195,000 during the years 1938–43, £295,000 by the end of the second world war, £770,000 in 1948–49, £1,216,000 in 1949–50, and at present it is about £1,666,000. Unfortunately, these rather spectacular increases in the moneys provided by Parliament for medical research since the end of the war have to a large extent been offset by the enormous increase in the costs of services and equipment, as well as by salary increases in the postwar period. The net increase in research resources is therefore much smaller than at first sight appears, but even so it has been remarkable since the end of the war. In the prevailing chilly financial climate, it is certain that the increase cannot be maintained at anything like the same rate in the immediate future, even though Parliament is kindly disposed toward medical research; with steadily mounting expenses, this means, of course, that the council will have less to spend on research projects than it has had recently. That is one of the major difficulties with which we have to contend at the moment.

There are three main methods by which the council supports and subsidizes medical research. First, it employs a scientific and technical staff of its own, of about 1000; of these, approximately 150 are medically qualified, and nearly 300 others have science degrees. Scientific personnel may be employed on a temporary basis for special studies, or they may have permanent engagements, normally tenable until the ages of 60 or 65, with provision for pensions thereafter. The great majority of these men and women work as teams in the council's various research establishments, but a few are attached individually to university departments. Members of the scientific staff are appointed for their attainments or promise in their chosen branch of medical research; within the broad terms of reference of the establishment or department in which they work, they are encouraged, under the guidance of the director, to choose their own problems (and may change these at their discretion) unless—as happens chiefly in the case of temporary appointments—they are recruited specifically to take part in particular projects.

Second, the council makes temporary grants for research projects directly to independent workers in universities, hospitals, and elsewhere. These grants may be made for the personal support of the investigator himself, for the provision of assistance to senior investigators, or for research expenses. Applicants for grants must submit details of their projects for approval, and in reaching decisions the council may take advice from its appropriate expert committee. The grants from the council are ordinarily awarded on an annual basis, but nonrecurrent grants for special research expenses are also made; those made for the personal support of investigators are not normally tenable for a longer total period than three years, though extensions are occasionally allowed. It is against the council's usual policy to make grants to institutions instead of directly to individuals; it does, however, transmit a special block grant of £150,000 from public funds to the research department of the Royal Cancer Hospital, now the Institute of Cancer Research of the University of London.

Third, the council awards studentships and fellowships to enable promising young graduates to be trained under suitable direction in the methods of medical research. These awards are of fairly recent origin, mostly dating from the time of the second world war. It is hoped that they will prove a valuable source of new recruits to medical research. A recent introduction under this heading was a series of Fellowships in Clinical Research to enable well-qualified young men and women who already have had some clinical experience to train in methods of clinical research, this training in appropriate cases including study of the research methods applicable in the basic subject most germane to their particular clinical interests.

In addition to these appointments, which are tenable in the United Kingdom, the council also awards traveling fellowships for work at centers in the United States or elsewhere overseas. The best-known of these awards are the Rockefeller Medical Fellowships, which have been provided from funds generously placed at the council's disposal by the Rockefeller Foundation of New York. This scheme, which was introduced in 1923, has been a great success; a recent survey showed that, of the 147 men and women who have held these fellowships, no fewer than 70 now have academic or research posts of professorial or reader status. A generous donation by the Lilly Research Laboratories has just made possible an additional series of traveling fellowships of generally similar kind, which are tenable in America. The council also awards traveling fellowships for research in tuberculosis from a special benefaction entrusted to it for the purpose. Research and traveling fellowships in ophthalmology and otology have been provided from another special benefaction.

By far the largest of the council's own research establishments is the National Institute for Medical Research. In 1950 the majority of the divisions of the institute were moved from the old building at Hampstead to a new and much more commodious building at Mill Hill, constructed especially for the purpose just before the second world war and equipped in the postwar period. The staff at present working at the institute includes 31 research workers who are medically qualified, and 58 with nonmedical qualifications, in addition to a few administrative officers and the technical, clerical, and maintenance staffs. The first director of the institute was Sir Henry Dale, and it was in the building at Hampstead that he carried out the work on the chemical transmission of nerve impulses for which he shared the Nobel prize in medicine with Otto Loewi in 1936. He was succeeded by the present director, Sir Charles Harington, in 1942. The research work of the institute is divided into ten

main divisions, each under its own head: Biochemistry, Chemotherapy, Bacterial Chemistry, Physiology and Pharmacology, Applied Physiology, Experimental Biology, Bacteriology and Virus Research, Physical Chemistry, Biophysics and Optics, and Biological Standards. The Standards Department—in addition to its national duties in regard to the British Pharmacopoeia and the Therapeutic Substances Act—has important international functions in relation to the activities of the Expert Committee on Biological Standardization of the World Health Organization.

Next to the National Institute, the oldest of the council's research establishments is the Department of Clinical Research at University College Hospital, London. It was here that the late Sir Thomas Lewis, the first director of the department, carried out his historic work on the cardiac arrhythmias and other problems of cardiovascular disease. The success of this department at University College Hospital led the council to set up a Clinical Research Unit on generally similar lines at Guy's Hospital a few years before the war. In the same period they set up a Neurological Research Unit at the National Hospital for Nervous Diseases, London. Among the council's nonclinical establishments which long antedated the second world war are the Statistical Research Unit in London, which was originally part of the National Institute, and the Dunn Nutritional Laboratory at Cambridge.

Since the beginning of the war there has been a remarkable increase in the number of the council's research establishments, and there are now over 40, the majority of them being situated in university departments. The arrangement in such cases is that the professor in charge of the department has the status of "Honorary Director" of the council's Research Unit within it. Each unit consists of a group of picked investigators in the full-time employment of the council, which also provides their research expenses. In the case of the clinical research units in hospitals, the council usually provides the salaries of the director and other members of the research staff, although the remuneration of the directors may be supplemented from other sources. The council also meets the research expenses of the unit, the hospital being responsible for the costs of nursing, feeding, and treating the patients.

Some examples of the council's long list of present research establishments (all with wide terms of reference) include, in addition to the National Institute and the five other prewar establishments already mentioned: a Department of Experimental Medicine (Cambridge); a Tuberculosis Research Unit (London); a Human Nutrition Research Unit (London); Units on Problems of Blood Transfusion, Blood Products and Blood Grouping (London); a Radiotherapeutic Research Unit (London); Otological, Ophthalmological, and Dental Research Units (London); a Chemical Microbiology Research Unit and a Unit for Research on the Molecular Structure of Biological Systems (Cambridge); a Biophysics Research Unit (London); a Cell Metabolism Research Unit (Sheffield); a Department for Research in Industrial Medicine at the London Hospital; an Industrial Injuries and Burns Research Unit (Birmingham); a Pneumoconiosis Research Unit (Cardiff); an Applied Psychology Research Unit (Cambridge); a Social Medicine Research Unit (London); and a Unit for Research on Climate and Working Efficiency (Oxford). In Scotland, there are the Clinical Endocrinology Research Unit at Edinburgh and the Clinical Chemotherapy Research Unit at Glasgow. An important unit outside a university is the Radiobiological Research Unit at the Atomic Energy Research Establishment of the Ministry of Supply at Harwell. Moreover, the council's research units are not confined to the United Kingdom, for it has in the Gambia a Field Research Station which undertakes investigations of tropical diseases and the nutritional requirements of African races; and the council at present shares with the Admiralty the cost of maintaining a Research Unit in Tropical Climatology at Singapore. All these special research units—and many others at home and abroad—form part of the council's own research organization, although they are sometimes shared with other bodies. They are quite separate from the system of research grants to independent workers, in universities and elsewhere, of which there may be as many as 300 or 400 in operation at any given time.

The results of the work carried out in the council's establishments, or by independent investigators financially assisted by the council, are mostly, of course, published as papers in the scientific journals on the authors' own initiative. In addition, however, the council issues through H.M. Stationery Office a series of "Special Reports" giving the results of extensive investigations that cannot be adequately described within the scope of a journal article. Since the war, the council has also issued a series of memoranda describing the results of certain *ad hoc* investigations made with its support, or giving concise summaries of the existing state of knowledge of particular subjects. In accordance with the terms of the council's charter, an Annual Report reviewing the year's activities is presented to Parliament and published. Since the beginning of the war, the reports for a number of successive years have been published together, the latest to appear being that for 1948–50. It is hoped, however, to resume henceforth the prewar system under which the Annual Reports to Parliament did, in fact, appear year by year.

Before concluding, I should refer to an important executive function which the council undertook for the Ministry of Health at the beginning of the second world war and has maintained since: this was the organization of a Public Health Laboratory Service, consisting of an integrated network of bacteriological laboratories throughout the country. It was originally conceived as a wartime emergency service, its primary purpose being to meet the sinister possibilities of bacteriological warfare or of large-scale epi-

demics caused by the disorganization of sanitary services under heavy bombardment from the air. Fortunately, it was not needed for either of these purposes, but it proved so valuable during the war years as a means of rapidly investigating and controlling outbreaks of infectious disease and of bacterial food poisoning that it has been maintained, and indeed expanded, since. The cost of this service is not charged against the grant-in-aid of the council's research program, but is provided separately by action of the Ministry of Health. It is important to add, however, that a great deal of valuable research on problems of bacteriology and epidemiology is carried out by the members of the service, in addition to their more routine duties.

One of the constitutional advantages of the Medical Research Council is that it can cooperate directly with other bodies with similar interests, either at home or abroad. I have already mentioned its cooperation with the Nuffield Foundation and the British Empire Cancer Campaign in the United Kingdom, and I have referred to the invaluable scheme of traveling fellowships for British medical graduates, for which the council has long been indebted to the Rockefeller Foundation. That, indeed, is only one of many activities in which the council has had important help from the Rockefeller Foundation. To take another example, the post of director of the Department of Clinical Research at University College Hospital, London, has for many years been permanently endowed by the foundation, although the council provides the rest of the cost of the department's research program. A particularly interesting form of transatlantic cooperation in the past two years has been the collaborative scheme of research into the value of cortisone and ACTH in rheumatic fever, in which a number of American, Canadian, and British investigators are at present engaged on a freely agreed common plan. Organized by the American Heart Association in the United States and by a committee of the Medical Research Council in the United Kingdom, and financed partly by the U. S. Public Health Service and partly by the council, this study is, I believe, the first example of an international experiment in clinical research. Whatever may be the answers to the scientific questions posed, there can, I think, be no doubt that the scheme itself as a collaborative effort has been an outstanding success, and it is perhaps not too much to hope that it may serve as a model for similar ventures in the future.

I began with a reference to the recent article by Scheele and Sebrell on medical research and medical education, and I promised to end with a brief consideration of some analogies between your medical research organization and ours, and between our respective methods of dealing with similar problems. It seems to me that the seven National Advisory Councils of your Public Health Service approximate in function the Medical Research Council itself, and the eighteen technical "Study Sections" have duties corresponding more nearly to those of the council's expert advisory committees. The emphasis on the value of the Public Health Service research fellowships for expanding the pool of highly trained research manpower corresponds to our own experience with the system of studentships and fellowships that we have instituted since the war. I understand that the research fellowships in medical science awarded by the National Science Foundation will have a similar object.

I have been interested to learn of the discussions taking place within the Public Health Service as to the respective merits of project grants to individuals and block grants to institutions as means of ensuring both intellectual freedom and continuity of support for medical research workers. We believe that our direct staff appointments (inside and outside our own research establishments) and our direct project grants to independent workers are in general the arrangements best suited to conditions in the United Kingdom. (We have in mind in this connection that a prophet may sometimes be without sufficient honor in in his own country, which means in his own university or hospital.) I should remind you, however, that a great deal of both fundamental and applied medical research in the United Kingdom is in fact supported indirectly from the quinquennial block grants made by government to the universities through the University Grants Committee. Clearly, the dominant aim of your arrangements and ours is to provide conditions under which investigators with good ideas and the appropriate skills will have opportunity and facilities to make their discoveries in their own way, whether they work in isolation or as members of a unit or team that includes workers trained in several or many different disciplines. Although planned investigation of particular problems—especially, but not exclusively, military problems—is occasionally necessary, in general we, like you, prefer to avoid the concept of "research to order." Indeed, I believe there has been only one occasion in the long history of the Medical Research Council and its predecessor committee when a research worker was actually ordered, willy-nilly, to study a particular problem. That was in 1916, when Edward Mellanby was—according to his story—positively instructed to work on rickets, although, even here, the methods to be used were left to his discretion. The fact that his study met with triumphant success was no doubt due in the main to his being a very exceptional person. In all ordinary cases the council prefers to leave the choice of problem, within wide limits, to the individual investigator or the director of the unit or team, and to avoid interference with the work while it is in progress, subject to the council's indisputable right to call for a report when necessary. Recently we have tried to minimize even the not-so-insignificant burden of report writing, by telling the directors of our research units that they need submit annually only a very brief report under subject headings, longer and more detailed reports being provided only once in every three years, unless the council thinks it desirable

to call for fuller information in the meantime. This is a rather novel experiment, and it will be interesting to see how it works.

It is reassuring to find that not only individuals, but also the official medical research organizations, in our two countries think so nearly alike as to the best means of achieving their main objective, the advancement of knowledge for the betterment of human health and well-being; and that your avowed aim, like ours, is to supply the means and environment to enable men and women with promising ideas for original research to cultivate those ideas under optimum conditions in their own way, with the minimum of interference or dictation by the executive. That is the cherished, and cherishable, method of the great democracies, and I hope that it always will be.

News and Notes

Scientists in the News

John V. Atanasoff has resigned from the U. S. Naval Ordnance Laboratory, White Oak, Md., where he was assistant to the technical director for fuses, to form The Ordnance Engineering Corporation. The corporation will engage in engineering, evaluation, development, and manufacture of technical and scientific apparatus, especially ordnance devices. The plant is located near Rockville, Md. Officers of the new company are John V. Atanasoff, president and general manager; Arthur C. Ross, vice president; David W. Beecher, vice president and assistant general manager (formerly of the Acoustics Division, U. S. Naval Ordnance Laboratory); Alice C. Atanasoff, secretary; and Frank C. Kramer, treasurer (formerly on the technical director's staff of NOL).

Eugene N. Beesley has been named an executive vice president by the board of directors of Eli Lilly and Company. He formerly held the post of vice president in charge of administration of the pharmaceutical firm.

Lester R. Dragstedt, chairman of the Department of Surgery of the University of Chicago Medical Center, has been named Thomas D. Jones distinguished service professor of surgery at the university. He succeeds the late **Dallas B. Phemister** in the professorship, which was established in 1940 to honor the late Chicago industrialist, who made large gifts to the endowment of the university medical center when it was first being planned in 1917.

Louis I. Dublin, second vice president and statistician, has reached retirement age, and will retire from the Metropolitan Life Insurance Company on Jan. 1, 1953. **Edward A. Lew,** now associate actuary, will be appointed associate actuary and statistician, as successor to Dr. Dublin, and **Mortimer Spiegelman,** now assistant statistician, will be appointed associate statistician.

Paul Engel, formerly professor of biology, anthropology and psychology at La Universidad Libre de Colombia, Bogotá, and professor of pharmacology at the National University of Colombia, has received an honorary D.Sc. degree from Universidad Libre de Colombia. Dr. Engel is now on the research staff of Laboratorios LIFE, Quito.

Fred L. Fitzpatrick has been made head of the Department of Natural Sciences at Teachers College, Columbia University. He was on the faculties of the Colorado College of Education and Coe College before joining the Teachers College staff as an associate professor of science in 1931.

Samuel S. Goldich, of the U. S. Geological Survey, is in Brazil for a reconnaissance examination of the bauxite deposits of the Pocos de Caldas area in Minas Gerais. Dr. Goldich's examination will be conducted in cooperation with the geologists of the Departamento Nacional da Produção Mineral, who have been engaged in the study of this area for some years. This investigation is a part of a long-term program of cooperative investigation of Brazilian mineral deposits conducted jointly by the Geological Survey and the Brazilian DNPM under the auspices of TCA.

Harrison F. Gonnerman and **William Lerch,** of the Portland Cement Association, received the Sanford E. Thompson Award at the 50th anniversary meeting of the American Society for Testing Materials. The award was won by the Gonnerman-Lerch paper on the subject "Changes in Characteristics of Portland Cement as Exhibited by Laboratory Tests over the Period 1904 to 1950." The paper was presented at the annual meeting of the ASTM last June. Mr. Lerch is administrative assistant in the Research and Development Division, and Mr. Gonnerman is assistant to the vice president for Research and Development in the Portland Cement Association.

Alonzo G. Grace, professor of education at New York University, has been appointed associate dean of the university's School of Education. Professor Grace, who joined the NYU faculty in 1951 as director of the Division of Advanced Studies, will direct a new program under the Division of the Scientific Study and Advancement of Education, which will go into operation in the fall.

William A. Hinton has retired as chief of the Department of Clinical Laboratories at the Boston