

Expansion and Consolidation: The Associate Committee and the Division of Medical Research of the NRC, 1938-1959

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Article abstract

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EXPANSION AND CONSOLIDATION: THE ASSOCIATE COMMITTEE AND THE DIVISION OF MEDICAL RESEARCH OF THE NRC, 1938 - 1959

Alison Li¹

Abstract

The federal government took on the responsibility for the funding and coordination of medical research in 1938 with the creation of the Associate Committee on Medical Research of the National Research Council of Canada. The Associate Committee and its successor, the Division of Medical Research, developed policies and practices which promoted the growth of original investigation in the medical sciences through the Second World War and the post-war expansion. Their work helped to stimulate and institutionalize medical research on a national basis.

Résumé

C'est en 1938, par la création du Comité associé sur la recherche médicale du Conseil national de recherches du Canada, que le gouvernement fédéral prit en charge le financement et la coordination de la recherche médicale. Le comité associé et son successeur la Division de recherche médicale, ont mis au point des politiques et des pratiques qui ont favorisé la croissance de nouvelles recherches en sciences médicales pendant la Seconde guerre mondiale et au cours de la période de croissance qui suivit. L'action de ces comités a stimulé et favorisé l'institutionnalisation de la recherche médicale à l'échelle nationale.

The funding and coordination of medical research became a governmental responsibility in Canada in 1938 when the National Research Council of Canada (NRC) established the Associate Committee on Medical Research. Over the succeeding twenty-two years, medical research was fostered under the care of the NRC until 1960 when an independent Medical Research Council was created. The policies and practices developed by the Associate Committee and its successor, the Division of Medical Research, helped to institutionalize and shape the growth of Canadian medical research.

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The early members of the Associate Committee struggled with the problem of how to promote research on a national basis. Institutional support for research was generally low in Canadian universities of this period. Academic scientists often carried heavy teaching loads and lacked sufficient funds to hire assistants or to purchase equipment. Furthermore, investigators, particularly those outside Toronto and Montreal, experienced intellectual isolation from their scientific peers. Finally, aspiring Canadian students found insufficient opportunities and support for post-graduate study, and too few academic posts once they had completed their education. The result was that many promising young graduates were lost through emigration to the United States where prospects for careers in medical research were greater.²

The policies and practices established during the early years of the Associate Committee and the Division shaped the growth of medical research. Unlike its counterparts in the United States and Britain, the Canadian Committee choose to develop a system of support that was entirely extramural rather than creating central laboratories.³ As a result, medical research was characterized by a particularly close connection with medical education.⁴ The Committee also actively promoted the development of centres of research outside of the older, more established institutions in Central Canada. Thus, medical research developed on a more even basis across the country.

The creation of an independent Medical Research Council had been envisioned as the ultimate goal of the Associate Committee from the very beginning. The slow evolutionary development of the Committee, from its start within the NRC to its full independence in 1960, is reflected in three national studies that were conducted in 1938, 1948, and 1958. The reports of these studies were instrumental in the crafting of subsequent policy changes. They also present a valuable survey of the nature and amount of research that was carried out during this period.

- 2 Frederick Banting and C. B. Stewart, *Survey of Facilities for Medical Research in Canada* (Ottawa, 1939).
- 3 In Great Britain, the Medical Research Committee was established in 1913 and replaced by the Medical Research Council in 1920. The Council employed technical and scientific staff at its research units at medical schools and hospitals, and at its central research establishment, the National Institute for Medical Research at Mill Hill. In the United States, the Public Health Service established its national research centre, the National Institute of Health in Bethesda, Maryland, in 1930.
- 4 C. B. Stewart, 'Reminiscences on the founding and early history of the Medical Research Council of Canada: Part 2,' in *Annals of the Royal College of Physicians and Surgeons of Canada* 9 (1986), 473.

In 1916, the National Research Council of Canada was created to act as science advisor to the government and to promote industrial research. One of its first actions was to set up a system of studentships and fellowships to support post-graduate studies in the sciences and a set of grants-in-aid for established investigators. Yves Gingras credits the post-graduate support programme with the institutionalization of the scientific research capacity of universities. These awards, however, were made primarily to students in physics and chemistry in these early years.⁵ During its first 22 years, the NRC did not accept responsibility for the support of medical research on a general basis, although it supported important work on specific projects, most notably, in the study of tuberculosis.⁶

In the early decades of the century, funding of medical research was supplied primarily through private donations. By 1920, both McGill and the University of Toronto, the only two universities with fully developed graduate programmes, had also begun to set aside university funds to support research. Some other sources were available as well. For example, at the University of Toronto, the Connaught Antitoxin Laboratories manufactured sera and antitoxin for public health use. Proceeds from the sales were put towards research. By 1920, the Connaught research fund had amassed over \$100,000.⁷ The university Insulin Committee administered the patent for insulin after the discovery of the hormone by Frederick Banting, Charles Best, J. B. Collip, and J. J. R. Macleod in 1922. Royalties from insulin sales averaged over \$180,000 a year during the 1930s and were divided among the general research fund of the University of Toronto and the support of research directed by Banting, Best, and Collip.⁸

Governmental support of medical research began in 1936 when Banting was asked to serve on the National Research Council. He agreed to do so on the condition that medical investigations be funded on the same basis as the other sciences.⁹ In November 1936, NRC President A. G. L. McNaughton and Banting worked together to prepare a draft proposal for the organization of medical re-

- 5 Yves Gingras, 'Financial Support for Post-graduate Students and the Development of Scientific Research in Canada,' in Paul Axelrod and John G. Reid, eds., *Youth, University and Canadian Society: Essays in the Social History of Higher Education* (Kingston, Montreal, 1989), 301 - 319.
- 6 Wilfrid Eggleston, *National Research in Canada: The NRC 1916-1966* (Toronto, 1978), 339.
- 7 Robin S. Harris, *A History of Higher Education in Canada, 1663 - 1960* (Toronto, 1976), 320.
- 8 Michael Bliss, *The Discovery of Insulin* (Toronto, 1982), 240.
- 9 G. H. Ettinger, 'The Origins of Support for Medical Research in Canada,' *Canadian Medical Association Journal* 78 (1958), 471.

search.¹⁰ Their chief recommendation was the establishment of an Associate Committee on Medical Research. They argued that, while there was a considerable amount of work being conducted, including some of great merit, that 'full value' was not being obtained because no central body was available to co-ordinate the activities. They felt that such a body could survey the field, ensure that investigations were assigned to those who were best qualified and equipped to carry them out, and could correlate the results obtained. Banting and McNaughton suggested that \$7,500 be made available for the preliminary organization of the Committee during its first year.¹¹ During the early stages of planning, they envisioned the main function of the Committee to be one of correlating, rather than funding, research. General McNaughton expressed the opinion, however, that while no provision had yet been made for the financial support of medical research, 'his experience had been that funds were always forthcoming when the needs were properly established and adequately presented.'¹²

Banting and McNaughton then solicited the opinions of the Canadian Medical Association, the Royal College of Physicians and Surgeons, and the Department of Pensions and National Health. The members of the Canadian Medical Association Executive demonstrated 'an overwhelming opinion in favour of the establishment of "an Associate Committee on Medical Research" and a fervent hope...that this would be the first step toward the establishment of a Medical Research Council for Canada similar in scope and function to the Medical Research Council of the United Kingdom.'¹³ R. E. Wodehouse, Deputy Minister of the Department of Pensions and National Health was even more vigorous in his support. In private conversation, he advocated the immediate organization of a separate Medical Research Council rather than proceeding through intermediate stages. Furthermore, in place of the rather modest sum suggested by Banting and McNaughton, he was in favour of asking for at least \$50,000 to \$100,000 for the first year. McNaughton and representatives of the CMA felt, however, that the new organization had to gain the confidence of the medical profession and that this was best achieved through a more cautious, gradual approach.¹⁴

10 Banting Papers, Canada Institute for Scientific and Technical Information [CISTI], 'The Organization of Medical Research in Canada,' Draft Proposal, 23 Nov. 1936.

11 A. G. McNaughton, 'Memorandum reporting conversations and discussions on the subject of the proposed organization of an Associate Committee on Medical Research,' 8 September 1937 - 11 September 1937, Banting Papers, CISTI.

12 Records Office, National Research Council of Canada (NRC), Proceedings of the Second Meeting of the Preparatory Committee, 18 December 1937, 5.

13 A. T. Bazin, 'Report of Committee on Organization of Medical Research in Canada,' undated, Banting Papers, CISTI.

J. G. FitzGerald, Director of the University of Toronto School of Hygiene and Connaught Laboratories shared his reservations about the proposal. He was concerned that there were already too many associations for organizing research and that investigators had to spend their already limited time at meetings and looking after administrative details rather than engaged in research:

I am, and have been for many years, deeply interested in the further development and expansion of investigations and research in the field of the medical sciences in this Dominion, but I am not interested in the elaboration of more machinery which might only serve further to distract the relatively small group of workers now so engaged in this country.¹⁵

Positive responses predominated, however. McNaughton convened a general conference in February 1938 of representatives from every institution and organization in the country with an interest in medical research. There were representatives from all universities with departments or faculties of medicine, universities providing pre-medical subjects, research institutions apart from universities, provincial departments of health, and national organizations concerned with medical issues. The task of the conference was to nominate the personnel of the Committee and to outline its scope and duties. T. H. Leggett, President of the Canadian Medical Association also expressed his objectives of securing greater funds for research and encouraging younger workers.¹⁶

R. E. Wodehouse had come to agree that the interests of the medical profession would be served best by not attempting to set up a separate Council immediately.¹⁷ At the conference, however, he continued to express concern about having the medical research body tied to the NRC. Speaking not in his official capacity but 'as a medical man with medical man's interests,' he suggested that these interests 'could possibly be jeopardized unknowingly by people whose intentions were of the best.'¹⁸ While he expressed friendly feelings toward the NRC, he believed that it would be preferable for the proposed organization to be autonomous as it was in England, the United States, South Africa, Australia and France. McNaughton hastened to assure him that the NRC considered the

14 McNaughton, 'Memorandum.'

15 J. G. FitzGerald to A. G. L. McNaughton, 9 November 1937, Banting Papers, CISTI.

16 Records Office, NRC, *Proceedings of the Conference on the Organization of Medical Research in Canada*, 18 February 1938, 11.

17 Records Office, NRC, *Organization of Medical Research in Canada: Proceedings of a Preliminary Conference*, 28 October 1937, 4-5.

18 Records Office, NRC, *Proceedings of the Conference on the Organization of Medical Research in Canada*, 18 February 1938, 21.

creation of the Committee to be only a preliminary measure, and that when an autonomous council became necessary, the NRC would give every assistance to it.¹⁹

Representatives from across the country reported on the work being conducted at their institutions. The primary theme that emerged from their presentations was the pressing need for funds. At the close of the session Banting concluded:

I think we are all surprised at the scope and amount of medical research that is actually being carried on in Canada. Medical research in Canada is at the critical stage. For the most part it has been carried on in connection with teaching and with money supplied gratuitously by wealthy people. In this day of high taxation it is becoming increasingly difficult to obtain funds from individuals. I believe that this discussion that we have had today is extremely important inasmuch as it is passing on to the government the responsibility for medical research. Today will go down in our history as marking an epoch; we have taken a step in the right direction.²⁰

Delegates debated a number of questions such as the relative support that should go to laboratory and clinical research, whether support should be directed toward established centres or to less-developed ones, and whether to create central laboratories or to promote research at existing institutions. The report of the conference concluded with the recommendation that the NRC create an Associate Committee. The terms of reference of the new Committee were established as follows:

- a) To receive suggestions for requirements in respect of medical research and in matters related thereto.
- b) To consider by whom the investigations required can best be carried out and to make proposals accordingly.
- c) To correlate the information when secured and to make it available to those concerned.
- d) To do such other things as the Committee may deem advisable to promote medical research in Canada.²¹

The details of the work of the Committee were left until a suitable study and evaluation could be made of the existing situation.

19 Ibid., 21 - 22.

20 Ibid., 33.

21 Ibid., 43, appendix 5.

In 1938, the Associate Committee on Medical Research was created with Sir Frederick Banting as its chair. The first act of the Associate Committee was to conduct a survey of the existing facilities for medical research. Banting, accompanied by Assistant Secretary, C.B. Stewart, travelled across the country, making personal visits to every medical school and major hospital, to the pre-medical departments of those universities with no medical schools, and to provincial laboratories of the departments of public health. They met and interviewed some 300 research workers. Banting found that the principal centres of research were at medical schools, most notably at Toronto and McGill. He reported that outstanding research was being carried out by such researchers as J. B. Collip and Hans Selye at McGill and Wilder Penfield of the Montreal Neurological Institute. He also mentioned the work of A. T. Cameron and Bruce Chown at the University of Manitoba.

Banting remarked that there were a promising number of other more junior investigators across the country who displayed an interest in research but were hampered by their huge teaching loads and by the shortage of funds to hire technical assistance and to buy equipment. He found that there was a great need for funds to encourage students to take up research training. Regional differences also emerged. Because of the lack of funds and facilities, the vast majority of graduates of Maritime and Western universities had to leave for post-graduate training in Toronto and Montreal or the United States and Britain. After their training was complete, few returned to these regions because not many academic posts were available. Investigators in these regions also experienced intellectual isolation from others working in their fields.²² They suggested that travelling fellowships would be helpful in overcoming this difficulty. Banting also gained some support for the idea of establishing a research journal. At that time there were two journals, the *Canadian Journal of Public Health* which had been founded in 1910, and the *Canadian Medical Association Journal*, founded in 1911, both of which emphasized papers more closely related to practice. Banting's visit may have stimulated interest in research among the students and faculty.²³ G. H. Ettinger, a member of the first Associate Committee commented that, 'in the small centres, particularly, he was welcomed almost as a Messiah; tired teachers had their hopes for assistance re-awakened; young men and women became ardent disciples.'²⁴

22 Banting and Stewart, *Survey of Facilities*, (Ottawa, 1939).

23 Stewart, 'Reminiscences,' 388.

24 G. H. Ettinger, 'Medical Research,' in *Royal Commission Studies: A Selection of Essays Prepared for the Royal Commission on National Development in the Arts, Letters, and Sciences*

The budget of the Committee was \$53,000 for its first year, \$25,000 of which was committed to the research programme in tuberculosis. The remainder was distributed as small grants in aid to researchers who had submitted requests for assistance. The response in the first year was great and there were requests for over \$125,000. Banting suggested, 'there has thus been an awakening on the part of research workers which we must do our best to assist.'²⁵ The Committee set its pattern of providing extramural support of research at universities rather than establishing central laboratories. This decision was appropriate given the modest budget of the Committee during the first year. McNaughton commented that he thought the Committee 'should first endeavour to make the best use of existing facilities,' and A. G. Fleming, Dean of Medicine at McGill, added that 'the feeling of the Conference was for men rather than for bricks and mortar.'²⁶ This practice broke from the model set by the British Medical Research Council which employed staff at the a central research institution, the National Institute for Medical Research at Mill Hill, and at its research units at medical schools. It also departed from the American model in which there was an extensive intramural programme of research at the National Institutes of Health.

Members of the Committee were also sensitive to the needs of smaller centres. P. H. T. Thorlackson of the University of Manitoba observed that 'the western universities were well equipped for fundamental research, and many of the men had good research work to their credit.' He added that 'he thought that a small amount of money expended in individual grants would give large returns in valuable research.'²⁷

The plans for the Committee were interrupted the following year when the Second World War broke out. Science assumed a position of considerable importance in the protection of national welfare during the emergency situation. The NRC became the focus of scientific activities to support the war effort. The staff and budget of the council increased enormously within months of the outbreak of war and by 1943, had expanded to five times the pre-war figure.²⁸

(Ottawa, 1951), 317 -336.

25 F. G. Banting to Wilder Penfield, 1 February 1939, Banting Papers, CISTI.

26 Records Office, NRC, 'Proceedings of the First Meeting of the Associate Committee on Medical Research,' 6 May 1938, 21.

27 Records Office, NRC, 'Proceedings of the Third Meeting of the Associate Committee on Medical Research,' 27 - 28 February 1939, 8.

28 Harris, *Higher Education*, 563 - 564.

The medical research arm of the NRC experienced dramatic changes as well. The Associate Committee placed its services at the disposal of the government and acted to investigate and advise on research problems related to the health of military and civilian populations. By 1942, much of the peace-time research programme of the Committee had been suspended in favour of work to support the war effort. Three additional Associate Committees on Medical Research were created, one for each of the branches of the Armed Services. In September 1939, J. B. Collip was made the Vice-Chairman of the Committee, and after the tragic death of Banting in February 1941, he assumed the chair.

The war generated a great increase in expenditure on medical research. Some 120 scientific publications were supported by grants-in-aid made between 1938 and 1946.²⁹ At the close of the war, the Associate Committee members sought to consolidate these gains by arguing that the same sum that had been spent by the four Associate Committees during the war would be required for postwar activities. At the urging of Wilder Penfield, the Associate Committee initiated a system of Graduate Fellowships in order to provide opportunities for medical officers to take up fundamental research upon leaving military service. It also took up Thorlackson's recommendation that a Western Regional Group be established to stimulate research in the four western provinces.³⁰

At this juncture, the Committee seriously debated the question of establishing an independent Medical Research Council but after considerable discussion, opted instead for the more cautious approach of gradual evolution within the NRC. One of the chief concerns was that a separate Medical Research Council would likely be made responsible to an existing Ministry rather than to a Committee of the Cabinet as was the NRC.³¹ Making another step towards the final goal however, the Associate Committee was replaced by the more autonomous Division of Medical Research. The new Division started its work in 1946 with a budget of \$200,000, almost a four-fold increase over the budget of the Associate Committee in 1938. The Division differed from other Divisions in the NRC in that its programme was entirely extramural; no central laboratories were built.

29 G. H. Ettinger, *History of the Associate Committee on Medical Research* (Ottawa, 1946), appendix.

30 Records Office, NRC, 'Proceedings of a Special Meeting of the Associate Committee on Medical Research,' 18 March 1944.

31 Records Office, NRC, 'Proceedings of the Sixteenth Meeting of the Associate Committee on Medical Research,' 30 October 1945, 11 - 13.

In 1948, the Privy Council commissioned a second national survey, conducted by C. B. Stewart, this time with Morley Whillans of the Defence Research Board and Ralph MacAulay of National Health and Welfare. This group reported that there had been an increase in the number of junior faculty over the ten years since the last survey. Many new investigators had been brought into medical research through involvement in wartime projects and their numbers contributed to a rapid post-war expansion. The report noted that there were 955 persons involved in medical research at universities, 278 technicians, 315 graduate students, 311 part-time, 51 full-time.³² The Committee also found an increased enthusiasm for research, despite the continuing shortage of funds, crowded conditions, and the burden of heavy teaching loads.³³ Stewart and his colleagues noted that, as before, most research was being conducted in medical schools or in university departments and special institutes apart from medical schools. Some research was also conducted in pharmaceutical houses, in hospitals and institutions apart from medical schools, in provincial and federal health laboratories, and by the Department of National Defence. The *Revue Canadienne de Biologie* had been established in 1942. Through the work of the Associate Committee, the NRC also authorized a medical research section of the *Canadian Journal of Research* (Section E) in 1944.

The most pressing needs noted were for senior research appointments for those who might otherwise have to go into clinical practice or to other countries, for the assurance of continuity in research, and for easier methods of administering grants. To this end, the Division developed an expanded programme of extramural grants to university researchers during this period of national prosperity. These grants were used to stimulate research, provide for travel opportunities, create university appointments and to train young graduates. The Division did not direct resources to particular research problems. Rather applications came directly from interested investigators and were judged on the merits of their proposals alone. The fellowship programme was aimed at assisting ex-service men who sought graduate training to prepare for the examinations of the Royal College of Physicians and Surgeons. Senior Research Fellowships were created for those who were graduates in medicine and were preparing for careers in research. By 1954, serious concern arose about the great need to provide opportunities for talented young investigators to devote 'the best years of their lives' to research.³⁴ The Senior Research Fellowships were replaced in 1955 by the Med-

32 Ettinger, 'Medical Research,' 332.

33 Stewart, 'Reminiscences,' 472.

34 Ray Farquharson to J. B. Collip, 19 November 1954, Records Office, NRC, 'Proceedings of the

ical Research Associateships which served to establish university posts for medical scientists with appointments and salaries like those of the Research Officers at NRC institutions. Universities applied for the associateships and provided the university appointment while the NRC paid the salary.

The Division also acknowledged the growing trend towards collaborative research by instituting a new type of award known as the consolidated grant. The grant was made in place of a group of individual grants-in-aid and provided long-term support and easier administration to laboratories with firm reputations.³⁵ The first recipients of these grants were the surviving insulin team-members, Collip and Best, as well as Penfield, and J. S. L. Browne, clinical endocrinologist at the Royal Victoria Hospital in Montreal.

In addition to direct funding from the NRC Division, medical research at universities was also supported through general university funds. Additional income came from societies for the study of special diseases such as the National Cancer Institute and that Canadian Arthritis and Rheumatism Society, philanthropic foundations, pharmaceutical firms, and private gifts. Governmental support also came through the Defence Research Board and the Department of National Health and Welfare. In 1948, the federal government instituted Public Health Grants to support research in the field of public health. In order to coordinate the activities of these many granting agencies, *ad hoc* conferences were held to review applications and to determine the appropriate body to which they should be routed. The Division of Medical Research aided the National Cancer Institute and the Canadian Arthritis and Rheumatism Society by reviewing and making recommendations on their applications for research grants and fellowships.³⁶

NRC President E. W. R. Steacie, who took office in 1952, was a strong advocate of fundamental research and of the desirability of having the fundamental work carried out primarily at universities.³⁷ Gradually, the NRC Division moved towards the support of the basic medical sciences. Clinical investigations received support through the Department of Veterans Affairs and the Public Health Research Fund which supported work in psychiatry, obstetrics, pediatrics and epi-

Nineteenth Meeting of the Advisory Committee on Medical Research - Division of Medical Research,' 3 -4 March 1955, appendix E.

35 Records Office, NRC, 'Proceedings of the Seventh Meeting of the Executive of the Advisory Committee on Medical Research,' 18 December 1948, 3 - 6; Ettinger, *Medical Research*, 327 - 328.

36 Ettinger, *Medical Research*, 321 - 324.

37 Harris, *Higher Education*, 563 - 564.

demology. Division Director, J. B. Collip argued, 'personally, I am in favour of an expansion of clinical research by competent workers, but if our funds are to be limited I feel sure that we will get the best value for the money expended if we use most, if not all of it, in supporting fundamental work in the basic medical sciences.'³⁸

C. B. Stewart notes that there was considerable competition between the NRC Medical Division and the National Health Research Grants for federal funds. He reports that it was 'particularly galling to the pre-clinical scientists because the budget of the National Health Research Grants grew at an unprecedented rate.'³⁹ By 1955, National Health Research Grants had a budget of \$1,785, which was more than a million dollars greater than that of the NRC Division.⁴⁰

The possibility of setting up an independent Medical Research Council continued to be a subject of debate. Ray Farquharson of the University of Toronto discussed the idea with Steacie:

We talked also about the possibility of developing a separate Medical Research Council for which so many of our colleagues are now pressing, thinking that it would have disposal of all the federal funds for medical research. The President confirms my fears that it would be difficult to acquire the large sums now disposed of by the Department of Health and Welfare and, further, that a Medical Research Council would almost certainly have to report to the Minister of Health and Welfare. It could hardly be hoped that a Medical Research Council would be so fortunate as to be left to develop its policies without political pressure. I think that it is much better for medical research to continue to build as part of the National Research Council.⁴¹

The promotion of medical research in the West was assisted by the work of the Western Regional Group. Annual meetings were held on a rotating basis at the four western universities - the universities of British Columbia, Alberta, Saskatchewan and Manitoba. This helped to alleviate the problems of isolation experienced by the Western researchers and saved the expense of travelling to larger centres. Participants were afforded the opportunity to share information in an informal atmosphere. J. B. Collip, head of the Division, had spent the early

38 J. B. Collip to C. J. Mackenzie, 6 October 1951, Records Office, NRC, 'Proceedings of the Twelfth Meeting of the Advisory Committee on Medical Research - Division of Medical Research,' 31 October 1951, appendix A.

39 Stewart, 'Reminiscences,' 472.

40 Ibid., 472.

41 Ray Farquharson to J. B. Collip, 19 November 1954, Records Office, NRC, 'Proceedings of the Nineteenth Meeting of the Advisory Committee on Medical Research - Division of Medical Research,' 3 - 4 March 1955, appendix E.

years of his career at the University of Alberta, and continued to be an advocate of developing research in the West.⁴²

Another part of the work of the Division was to coordinate the distribution of hormone products that were available only in limited quantities. After P. S. Hench and E. Kendall reported the effect of Cortisone on rheumatoid arthritis in 1949, great interest was aroused among investigators to explore the therapeutic value of the hormone in this and other diseases. The Division oversaw the Canadian production and distribution of Cortisone and ACTH (adrenocorticotrophic hormone), the hormone which stimulates the release of Cortisone from the adrenal gland. After 1953, the Division also coordinated the supply of growth hormone for research purposes.⁴³

The members of the Division had to deal with the difficult question of whether to channel support to the strong institutions or to distribute the funds more widely to promote the growth of newer research centres. Here, practice rather than explicit policy was to be very influential. Years later, C. B. Stewart praised the decisions of the early pioneers who he says 'had the wisdom to deviate from their own rules' by encouraging beginners and strengthening weak departments. For example, he notes that members provided such 'special treatment' and 'leniency' as sending constructive comments on grant applications and allowing applicants the opportunity to revise their proposals. Stewart credits these actions with allowing medical research to develop on a national basis rather than enriching only those institutions that were already strong.⁴⁴

In 1957, the Division reached the final stage of its development. The initiative for the move to full independence came from the Association of Canadian Medical Colleges which was made up of the deans of the medical schools. The Association expressed the concern that the federal funds available for research were inadequate to meet the requirements of a field that was now rapidly growing. G. H. Ettinger stated it strongly: 'There is great unrest in the medical research laboratories of universities because it is believed that this total sum (\$5,535,000) is inadequate and that the multiplicity of sources makes administration awkward and continuity uncertain.'⁴⁵ A number of factors contributed to the greatly in-

42 Elise A. Corbet, *Frontiers of Medicine: A History of Medical Education and Research at the University of Alberta* (Edmonton, 1990), 173.

43 Records Office, NRC, 'Proceedings of the Eighth Meeting of the Advisory Committee on Medical Research - Division of Medical Research,' 28 November 1949, 4 - 5; Ettinger, 'Medical Research,' 324 - 326.

44 Stewart, 'Reminiscences,' 473.

creased need for research support. First, there had been a sudden expansion of scientific programmes in the universities in the post-war period. Second, two new medical schools had been established, at the University of Ottawa and the University of British Columbia. The programme at the University of Saskatchewan had also been expanded to a four-year programme. Also, the nature of research itself was changing, demanding more expensive research equipment and more extensive facilities. Finally, there had been a great expansion in research opportunities in the field of medical science.⁴⁶ The deans resolved to ask the Prime Minister to increase the funds by at least \$500,000.

A third study was commissioned. Ray Farquharson headed up the Special Committee to Review the Extramural Support of Medical Research. The Committee interviewed and evaluated written submissions from representatives of Canadian institutions with an interest in research, as well as administrators from the United States, the United Kingdom, Australia and Sweden. By this time, NRC support amounted to almost one and a half million dollars, and support from the Department of National Health and Welfare and the Defence Research Board added another two and a half million. (This figure does not include the general university funds provided by the provincial governments.) In comparison the US National Institutes of Health spent 108 million dollars, or approximately twice as much as a percentage of the Gross National Product.⁴⁷ The Committee pointed out that funding had not kept pace with the growth in research. Grave inadequacies lay in the provision of grants and fellowships, salaries for the employment of scientific staff, fluid funds in medical schools, and for the construction of research facilities. The Committee recommended that longer grants be made to ensure continuity of research and that greater flexibility in the use of funds be permitted so as to allow researchers to pursue long-term goals.

The Farquharson Committee commended the decision of the Division to channel its resources through the universities and teaching hospitals rather than establishing central laboratories. It argued that medical research is unique in that it requires a close association with medical education in order to reach its full development. This association the Farquharson Committee argued, is also cru-

45 Ettinger, 'Origins of Support,' 474.

46 Special Committee Appointed to Review Extramural Support of Medical Research by the Government of Canada, *Report to The Honourable Gordon Churchill, Chairman, The Committee of the Privy Council on Scientific and Industrial Research*, 12 November 1959 (Ottawa, 1959), 5 - 6.

47 *Ibid.*, 9 - 10.

cial for the recruitment and training of young investigators and for stimulating teaching.⁴⁸

As had been originally planned, the medical research body had been gaining increasing funding and autonomy within the NRC over the twenty years since the inception of the Associate Committee. The Farquharson Committee regarded this development as complete:

The time has come to take the final step and establish an independent Medical Research Council. This opinion is shared by virtually all medical research workers in Canada, and those consulted in other countries.⁴⁹

The members of the special Committee argued that medical research had grown tremendously and that it should now be directed by a body directly reporting to the Privy Council Committee on Scientific and Industrial Research and not through a department of government. In 1960, the Medical Research Council was established. Until the final legislation was passed in 1968 however, the Medical Research Council was set up under the NRC and continued to obtain funding through joint grants.

The policies and practices established by the Associate Committee and the Division of Medical Research assisted the growth of medical research and shaped its institutions in the post-war period. Change was affected through a cautious, evolutionary approach. The Division consolidated the gains achieved by the Associate Committee during the war and used them effectively to meet the gravest needs of the research enterprise - the funding of established researchers, the training of students, the provision of travel grants, and the establishment of academic posts. Likely because of financial constraints, the programme of the Committee and Division was entirely extramural. Funds were channelled to universities and teaching hospitals and helped to create a system in which medical research was closely tied with medical education. The Associate Committee and the Division also promoted the growth of research on a truly national basis. They actively developed policies and practices that stimulated research not only in the established centres but across the country.

48 Ibid., 26.

49 Ibid., 31.

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