

CREATING THE FUTURE OF HEALTH: The History of the Cumming School of Medicine at the University of Calgary, 1967-2012

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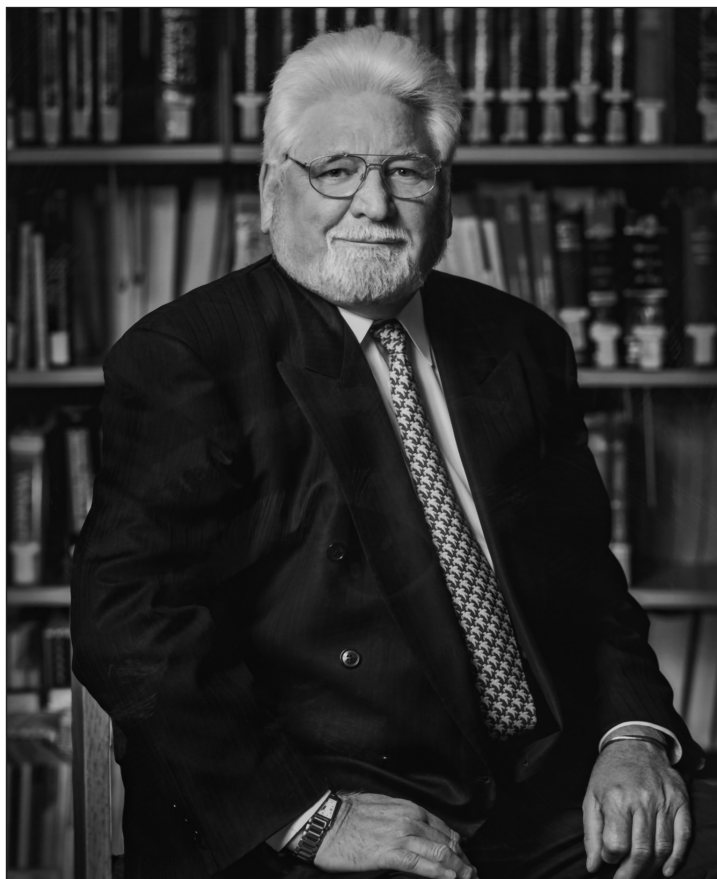
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Donald Grant Gall
MD, FRCPC

The Dean Gall Years, 1997–2007

Frank W. Stahnisch and Robert Lampard

The decade between 1997 and 2007 was a period of continued and very visible growth in undergraduate and graduate education in Canadian faculties of medicine.¹ Those working in the Dean’s Office at the U of C Faculty of Medicine during this era also recall the busy pace at which the faculty created its research institutes and constructed new facilities, among many other innovative projects.² Their testimony, and the working papers then circulating in the school of medicine (such as the “Orange Bulletin” comprising the latest curricular and educational news),³ allow for a historical reconstruction of the excitement and challenges behind some of the major events in the faculty and the city of Calgary, and especially the growth and diversification of the Foothills Medical Centre (FMC), during what might be called the Gall era.⁴

Dr. Donald Grant Gall’s decade-long deanship was a transformative period for the medical school as well as the university at large. It was, moreover, the start of a decade characterized by many challenges, transformations, and achievements under his leadership. His tenure was marked by a more stable political and economic climate, particularly when compared with the Smith era before it, as the Alberta government recovered from a period of fiscal austerity in the early 1990s.⁵ These conditions made for a better navigable terrain, through which both the dean and the medical faculty manoeuvred more effectively.

Dr. Gall did have a plan of action when he became the dean. His vision focused in part on medical research and an evolving relationship with the Alberta Heritage Foundation for Medical Research (AHFMR). The growth in funding from the AHFMR had already led to a marked increase in researchers and was well-received by all faculty.⁶ It helped Calgary create a larger research profile and emerge as a respectable medical school, one that would receive a much more balanced level of support when compared with the U of A Faculty of Medicine in Edmonton, which had been the only medical faculty in the province since its establishment in 1913. The Gall era was marked by a degree of competition, especially in

the matter of medical students.⁷ Dr. Gall wanted the two Alberta schools to be the same size, a goal he almost achieved—even if that might have been questionable from the standpoint of physician resources for the province overall.

The narrative of those ten years was dominated by major fund-development activities, such as the faculty-wide \$300 million Reach! Campaign. That campaign, which sought to gather external funding support through philanthropic contributions, was the result of the intensive and continuing work of Drs. Johan Hubert (“Hans”) van de Sande and Grant Gall. It further allowed the faculty’s research institutes to begin establishing endowments with the help of many community donations.

Dr. Gall also inherited the continuing challenge of integrating the basic medical sciences into the faculty. A year after the U of C Faculty of Medicine began in 1967,⁸ the Division of Medical Biochemistry was created under the leadership of Dr. Robert Bertram (“Bob”) Church (1937–2019). Originally appointed to the Department of Chemistry, Dr. Church was reappointed to the Department of Biology in the Faculty of Science and the Faculty of Medicine’s early Division of Medical Biochemistry, in 1968. He immediately initiated an MSc graduate education program. It began in 1969 under the aegis of the U of C’s Faculty of Graduate Studies, which brought all graduate programs at the university under its jurisdiction.

The dichotomy of biochemical research and education that began with the formation of the Division of Medical Biochemistry has continued

to this day. The two groups have developed complementary areas of strength: structural and computational biology within the Faculty of Science, and molecular and cellular biology within the U of C Faculty of Medicine.

Biochemist Dr. Gordon Henry Dixon (1930–2016) took over leadership of the department in 1983 and was succeeded, in 1988, by Dr. Hans van de Sande. During van de Sande’s tenure as department head, the membership of the department grew to twenty-seven faculty members. In 1992, the medical sciences graduate program devolved into seven parallel programs, one of which—biochemistry and molecular biology—aligned with the department. The biochemistry and molecular biology graduate program have since grown and flourished, gaining a reputation for scientific excellence. Hans van de Sande left his position as head of the department in 1997 to assume the role of associate dean in the U of C Faculty of Medicine. Henceforth, it was one of his main personal achievements to successfully plan and facilitate the major fund-development and endowment activities, such as the above-mentioned faculty-wide Reach! Campaign.

After the U of C Faculty of Medicine had begun to create its seven research institutes in 2004, pursuing other large-scale projects at the same time, it increasingly distanced itself from the direct government funding model on which it had relied. Gall credited the original concept of developing separate institutes to clinical researcher Dr. Cy Frank (1949–2015).⁹

At the same time, the faculty also became an increasingly visible international player through co-operative programs with institutions in Nepal, Tanzania, the Dominican Republic, the Philippines, and several other countries.¹⁰ The dynamism of the Gall era was further displayed in new programs augmenting existing education programs and continued medical teaching activities. The bachelor of health sciences program, along with the veterinary medicine school, which developed into its own faculty, are lasting monuments to these years.¹¹

Dr. Gall began his deanship directly after Eldon Smith, when the search committee—with the input and advice of the Faculty Council (FC)—decided to appoint another clinician from within the faculty, making Dr. Gall the second pediatrician to become dean, following Dr. Cochrane. When he came into office on 1 July 1997,¹² Dr. Gall became the leader of an increasingly larger faculty that had turned the previous teaching-focused medical school, with its mandate for producing family physicians in a three-year program, into a more research-minded faculty supported by the increasing number of basic medical science and clinical research programs on the Foothills medical campus.¹³

Faculty members' memories of Dr. Gall emphasize that he was a dynamic visionary; yet he could also be polarizing as well.¹⁴ His colleagues variously praised, disliked, or even feared him, though most agreed that the decade of Gall's leadership was one of tremendous growth and

wide achievement for the U of C Faculty of Medicine overall.¹⁵

Gall's previous administrative positions prepared him to serve as dean of the U of C Faculty of Medicine. His medical leadership and administrative styles were thought by many to be noticeably different from his predecessors at the time. As one of his colleagues later recalled,

[Dr. Gall] didn't tolerate nonsense. . . .
[He] was a very straight shooter. . . .
[He] likes to see that he has given you a position, and he doesn't really do micro-management. He would say, "These are the goals of what [your] programs are. You achieve it." He would not come and point fingers and say, "Do this and do that," but he would like to see results, and if he sees the results, he is happy with it. That was his style. Lots of people don't like that. They like diplomacy, and, "Oh you are doing a great job," but Grant Gall was never like that. . . .
[He] would tell you to your face, and I saw that with some of the faculty members, they didn't like that. Somebody telling them, "Sorry, you are not performing." That becomes an issue. But I knew that, this was the way he likes things.¹⁶

As we shall see, Dr. Gall's leadership corresponded with a time of drastic changes on the institutional,

political, and economic levels, which may partially account for the certitude and sometimes brusqueness with which he defended and executed the decisions he and his team had made.¹⁷

Education, Internationalization, and Physical Expansion at the Faculty of Medicine

Dr. Gall had previously been associate dean (research) under deans Watanabe and Smith from 1989 to 1993, and the director of pediatrics (1993–7) under Dr. Smith. As such, he was well acquainted with the constraints and challenges faced by the faculty's educational programs.¹⁸ His decade-long deanship, though, needs to be put into a wider context of North American medical education during the second half of the twentieth century. Deans at medical institutions in Canada and the United States mostly had shorter terms and therefore were often unable to pursue more long-term projects. Dr. Gall's decade as dean was exceptionally fortuitous in its timing. Provincial oil revenues increased substantially, and one-time funding requests, particularly capital requests to the Alberta government, were remarkably successful. He and his team made the most of this situation; in this they were also aided by the fact that Dr. Gall's tenure as dean was the second-longest in the faculty's history to date.¹⁹

One hallmark of Dr. Gall's time was initiating the O'Brien Centre for the Bachelor of Health Sciences.²⁰ The faculty's second undergraduate

program received its official approval on 7 May 2002. The program was underpinned by a \$5 million donation from the O'Brien family, which created the eponymous centre and endowed it with scholarships. The centre and program were modelled after a similar one at Queen's University in Kingston. As a former vice dean noted,

(the establishment of) a pre-med track created some controversy. It did create a source for future MD and future post-graduate students. There were certainly fears [for example in kinesiology] that the program would take the cream of the crop.

Reciprocally, the O'Brien program gave PhDs more of an opportunity to teach. It was instituted at a time when Heritage dollars were diminishing. Starting a new program did give the university another reason for requesting more funding. It did get the faculty some financial assistance to help the program. There still tended to be a distinction in the minds of the faculty that you either taught or you did research.

The O'Brien program has been successful. Many students have gone on to participate in international projects.²¹

The O'Brien Centre for the Bachelor of Health Sciences was officially opened three years after its previous administrative approval, and the first

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International Health Program

Dr. Melville Kerr brought the International Health program (IHP) to the faculty of medicine, when he arrived from Edinburgh in 1977.¹ He had just spent four months assessing the feasibility for a new medical school at Tribhuvan University in Kathmandu, Nepal, for the World Health Organization. His approach was to foster learning over teaching, and respond to requests from the host institution but not impose specific direction in development of the local program. As one dean later added, the objective was “for host institutions to express themselves within their own cultural reality—to rise above, given the right support.”²

With the partnership confirmed (1980), Kerr joined Dean McLeod in giving the keynote address at the 10th All-Nepal Medical Conference in early 1981. The relationship was cemented when CIDA granted the U of C \$5.0M to adapt their curriculum to meet the medical needs of rural Nepal, and Calgary philanthropist Kelly Gibson offered to fund faculty exchange travel.³

Dean McLeod set the initial parameters: participation by U of C faculty members was to be voluntary, their medical expertise was needed, temporary backfill in Calgary was available, and there was a passion for the service. Enthusiastically received, the increasing number of faculty visits led to renting “Calgary House” in Kathmandu.⁴

In 1986 Dr. Kerr extended the medical school partnership to Davos on Mindanao island, Philippines.⁵ Positive feedback from these experiences

encouraged many first year medical and bachelor of health students, to choose international electives.⁶

Dr. Clarence Guenter succeeded Dr. Kerr as the Director of the IHP in 1997. His approach was more specific - to focus on identification of the needs of the country, team formation, curriculum standardization, student and program evaluation, as well as continuity, stability, and faculty follow-through.⁷ Requests increased, limited only by funding. By the early 2000s, over 22 international collaborations or partnerships had been approved by the respective deans.⁸ The directorship of the program was elevated to an Associate Dean position in 2003. While all deans supported the program, none did more enthusiastically than Dr. Gall, who personally visited programs from Chile to Iceland and China.⁹

It wasn't just a one way exchange. Unique examples included upgrading 15 Sudanese physicians who had graduated from Cuba. After the Swiss government agreed to fund a medical school upgrading program in Tajikistan, the U of C was invited as long term consultants. Many scholars came for visits. Multidisciplinary research collaborations increased.¹⁰ Eighteen students came and earned PhDs. When the Clinical Presentation curriculum was introduced at the U of C,¹¹ many faculties from Harvard to Holland implemented parts of it because of its clarity and simplicity, by focusing their curriculum on the 120 common patient clinical presentations.

Faculty interest has continued unabated, motivated by a responsibility to give back “because we can help those in need,”¹² and the opportunities to learn so much from and about the global community. A generation of medical students and postgraduate trainees have become involved in health needs abroad. Successful, U of C participants have received awards and honorary degrees, from host and international institutions. But the most impressive impact is the ongoing collaboration that has developed with otherwise isolated teachers and students in many impoverished countries.¹³

class of forty-eight students from the four-year bachelor of health sciences program eventually graduated in 2007.²²

And yet, this growth did not happen without a certain amount of trepidation. As one colleague later recalled,

the physical separation from the university [the main campus] didn't create great problems. Dr. Gall tried to increase the links with kinesiology. While partnerships could be established, mergers were not in the cards. Other faculties, like kinesiology, feared they would be taken over as they were small. . . . There certainly was talk of a VP health science, but that's as far as it went.²³

At the same time a series of major new initiatives were taking place. Specialized research institutes were created in 2004 to refocus and concentrate the research activities of the previous interdisciplinary research groups. The undergraduate medical class was expanded. Together with many other individuals and organizations, Dr. Gall also played an important—arguably a critical—role in the establishment of a U of C Faculty of Veterinary Medicine, separate from the Faculty of Medicine. To this end, he also served on the Dean's Advisory Committee, Faculty of Veterinary Medicine from 2004 to 2008. He was recognized for his contribution to the establishment of this “sister faculty” through the bestowment of a Distinguished

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Health Research and Innovation Centre and Teaching, Research and Wellness Building

The Grant Gall deanship was a period of heightened building activity at the University of Calgary's Faculty of Medicine.¹ Following the establishment of the faculty's first six interdisciplinary research institutes at the in 2004, which concentrated and focused research activities in those areas representing the pre-existing interdisciplinary research groups, a heightened need was also felt for the creation of new institute and laboratory research space.² With the price of oil surging to \$35 per barrel between 1997 and 2000,³ increasing crude oil royalties bolstered provincial budgets and allowed for new capital investment spending on larger infrastructure projects. This decade of prosperity, along with support from the AHFMR, provided the funding to substantially expand the space available at the Health Sciences Centre, for teaching in the undergraduate and graduate programs, along with the planning and construction of two massive new research

buildings: the Health Research and Innovation Centre (HRIC) and the Teaching, Research and Wellness (TRW) Building, to be located at the west end of the Foothills Medical Centre site, facing the Trans-Canada Highway.⁴ It is of particular irony, however, that the original plans for the two buildings were to represent—in concrete architectural form—the medical research concept of a “knowledge translation” conduit, from the clinical building (the first concept for the TRW Building), to its laboratory “wing” (the original concept for the HRIC), or “from bedside to bench and back again.”⁵ The concept harkened back to Dr. Cochrane’s early idea to include a clinical investigation unit in the medical school.

This conceptual view was apparent in the original names attached to the buildings, which were the “Health Research Investigation Clinic” and the “Translational Research Wing” (some interviewees referred to it also as “Translational Research Wards”). Due to the long distance to the Foothills Hospital, the high building/outfitting costs, and the lack of sufficient interest from private clinics and pharmaceutical research units, the original concept for the two buildings was partly abandoned. In good Canadian tradition, the original planning acronyms for the HRIC and the TRW Building (as we know them today) were kept.⁶ In addition, finding the financial support to complete the buildings and outfit the laboratories and departments turned into a constant struggle for the senior leaders of the faculty. Another obstacle was the unkept promise of a contribution from the Medical Research Council (MRC), leaving space for other departments, such as

the Department of Community Health Sciences, which was originally not one of the planned occupants.⁷ Eventually, because of the special security conditions required for the subterranean laboratory floors (i.e., for animal stalls and genetic laboratories), as well as air-conditioning, safety, and hygienic factors, costs mounted to a staggering \$500 million for both the HRIC and the TRW Building.⁸

The new buildings, which had been in the planning stage long before 2007, opened in phases that continued until the summer 2010. The Hotchkiss Institute for Brain Research, which was officially launched in 2010, moved into large parts of the HRIC.⁹ The completion of the laboratories and offices in the HRIC and the TRW Building took even longer. They required space for the wet and dry labs, as well as the latest improvements in medical technology equipment. The outpatient clinics were sized to serve 150,000 patients each year, according to a self-study report conducted by the Faculty in 2007.¹⁰ Now, the TRW hosts the Department of Community Health Sciences (on the third floor), the Mathison Centre for Mental Health Research and Education (first and fourth floors), the Centre for Health Informatics on the fifth floor, and the Dean’s Office (on the seventh or top floor), with its large corner offices overlooking the spectacular Rocky Mountains. Likewise, the administrative offices, some teaching units, and several laboratories of the Faculty of Veterinary Medicine moved into the first and second floors, after Grant Gall’s leadership team facilitated the creation and establishment of the University of Calgary’s youngest faculty in 2005.

Service Award by the Faculty of Veterinary Medicine in June 2008.²⁴ The medical faculty's activities were now also visibly highlighted and promoted through public-relations activities—for example, through the *UCalgary Medicine Magazine*.²⁵

Known as a building dean—or by his colleague's tongue-in-cheek nickname of “Grant the Builder”²⁶—Dr. Gall's name remains linked with the establishment and completion (under his successor, Dean Tom Feasby) of the Teaching, Research, and Wellness Building (TRW) in 2010. The TRW acronym first stood for “Translational Research Wing,” but the name changed in Alberta in 2006 after the Calgary Health Region pulled out of financing the building's development.

The original construction plan had been to integrate clinical and research activities in the Health Research Innovation Centre (HRIC built from 2003 to 2006) with those in the adjacent TRW facility in order to attract and retain medical research talent.²⁷ After an extended period spent planning the TRW building, the plans were, however, cancelled. The U of C assumed full responsibility for it, redesigning it primarily for departmental and administrative purposes, for the Faculties of Medicine and Veterinary Medicine.

Early planning for the building of the McCaig Tower (opened in 2011–12 and located alongside the TRW/HRIC facilities and the Foothills Hospital)—provided surgical services and critical care medicine—also began during Gall's deanship. The same architects who had worked on the TRW Building were retained to develop plans for “the McCaig,” as it became commonly known.

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McCaig Tower

The McCaig Tower of the Foothills Medical Centre (FMC) was officially opened by the Honorable Gene Zwozdesky (1948-2019; Minister, Alberta Health and Wellness), Ken Hughes (Board Chair, Alberta Health Services), and Dr. Peter Jamieson (Medical Director, FMC) on October 12, 2010.¹

The building was to be the first stage of a twenty-year master plan to redevelop and renovate the FMC site. It required careful design work by the architectural firm DIALOG due to the restrictions imposed by the limited available space and existing buildings and roadways. Provincially funded, construction costs totaled \$550 million. The eight-storey building has 60,978 metres squared of internal space that was occupied in a phased manner over a number of years. In the fall of 2010 only one patient care unit, two operating rooms, four day surgery beds and four post-anesthesia beds, an x-ray room, and the central sterile reprocessing department were opened. The Tower now houses a large intensive care unit organized into three pods, eight operating rooms, orthopedic and trauma surgery patient care units, short-stay beds, pathology and laboratory services, and other programs.

A unique feature of the McCaig Tower was the creation of a RAPTOR (Resuscitation with Angiography, Percutaneous Techniques, and Operative Repair) surgical suite (also called ITOR, which stands for Interventional Trauma Operating Room) to deal with trauma patients experiencing uncontrolled haemorrhaging.² Capitalizing on space made available by the construction of the McCaig Tower (two large operating theatres were eventually combined into one in order to allow enough room for surgical and diagnostic imaging teams to simultaneously work on a patient) and the willingness of the Calgary Health Trust to raise the required \$3 million to initially equip it, an interprofessional steering committee informed by human factor analysis directed its development. When opened in 2013 it was the first purpose-designed and built trauma operating room of this nature in the world.³

With birth things also come to an end. Between 2004 and 2009 the Calgary Health Region contracted with Health Resource Centre (HRC), a private surgical facility located in the former Grace Hospital, to perform hip and knee replacements. This was to deal with a backlog of patients requiring these procedures that had grown over the previous decade. The need for this service concluded with the expansion of surgical capacity in the public system after the opening of the McCaig Tower.⁴

The Tower is named in honor of John Robert (Bud) McCaig (1929-2005) who was a Calgary businessman, co-owner of the Flames, and, as described in chapter four “The Dean Smith Years,” the first Chair of the Calgary Regional

Health Authority (1994-1998). As also noted in chapter four, he was heavily engaged in both the Project Motion and Partners in Health campaigns that raised funds for what eventually became the McCaig Institute for Bone and Joint Health. His “tireless advocacy” for this area made naming after him a building that houses orthopedic services frequently engaged in the research activities of the Institute particularly fitting.⁵ His wife Ann served as the eighth Chancellor of The University of Calgary from 1994 to 1998.

The other named part of the building is the Dr. Gregory Powell Helipad. Likewise, this is particularly fitting. While division chief of the FMC emergency department, Powell in 1985 founded the Shock Trauma Air Rescue Society (STARS) to provide local helicopter medical rescue and transport services.⁶ The helipad on the roof of the Tower was named after him in 2015.⁷ STARS, the demolition of the CGH Bow Valley Centre (where Alberta’s first dedicated trauma operating room had been based) in the 1990s, and the leadership of Dr. John B. Kortbeek (Head, Department of Surgery between 2006 and 2016) were all felt to have played important roles in FMC becoming the leading adult trauma centre in southern Alberta.⁸

Nevertheless, as a former colleague in the Dean's Office noted, there could be problems finding the funds to complete and fill these buildings with programs.

It was always a challenge to allocate space and build new structural opportunities for expanding and growing faculties. As many of the buildings were delayed in securing funding, by the time they came around, often much of the vacant space had been filled or called for. Dr. Gall was always "building." The inevitable question was, "How big?" Often, the projected gross and supplementary external revenue sources didn't match expectations. Budgets often didn't reach projections. Medical Research Council of Canada (MRC or after 2000 the CIHR), spending was expected to be a lot more.²⁸

As this observation indicates, the two buildings (the HRIC and the TRW) were constructed as empty shells. Gall and his leadership team expected that there would be more money available from the Alberta government to fill these spaces with laboratories and clinical units. Although he and his team were quite successful in receiving more funding from the provincial government, these payments could unfortunately not keep up with the fast-paced Calgary economy, which was characterized during this period by the soaring inflation of building costs. By the time the provincial government was once again willing to consider offering additional funding, costs had increased even further.

Such funding challenges represented a vicious cycle for the faculty.²⁹ By the time it had convinced the Alberta government to commit to one figure,

costs had increased, and it needed to return, hat in hand. Eventually, other players who had available funding, such as the new veterinary school, stepped in and took over space that the faculty had originally allocated for different purposes. The reality was that the buildings simply could not sit empty, and existing and newly built space was therefore reallocated internally and externally, which led to considerable animosities between individual departments, programs, and the medical and veterinary faculties over the allocation of space.

Dean Gall's building projects were often led by Richard Hawkes, associate dean (graduate sciences education). Hawkes had joined the U of C Department of Anatomy in 1989 and rose to fill several administrative roles in the Faculty of Medicine, the Faculty of Graduate Studies, and the university at large. Trained as an anatomist and cell biologist in London and Oxford in the United Kingdom, his own research interests and accomplishments encompassed the cellular and histological organization and morphology of the cerebellum—particularly working on zebra fish animal models. He was a founding member of the Hotchkiss Brain Institute in 2004 and the Alberta Children's Hospital Research Institute (ACHRI) in 2009. Furthermore, based on his experiences and insights as an accomplished biomedical researcher of international standing, he was chosen for the role of associate dean (research) in Grant Gall's leadership team, where he was particularly associated with the planning and promotion of the major building projects, the establishment of the

veterinary school, the research institutes, and the expansion of the school's research infrastructure (shared uses of laboratory spaces, technology infrastructure access and support, as well as the initial planning for computational big data storage facilities for larger scale research initiatives especially in clinical research programs and public health epidemiology).

Following his successful work with Dean Gall's leadership team, Dr. Hawkes was invited to serve as associate vice-president research to help coordinate the university's strategic research plan and support both inter-faculty research infrastructure initiatives—such as the initial steps leading to the creation of the Institute for Population and Public Health—and inter-university research alliances, including the Campus Alberta Neuroscience initiative. The latter helped to bridge research and educational initiatives in neurology, psychiatry, and mental health between the Universities of Alberta, Calgary, and Lethbridge.³⁰

During his tenure, Dean Gall also concerned himself with several international activities. One was the Sapporo-Calgary exchange program with Hokkaido University in Sapporo, Japan, which served as a model for other international programs of the faculty during these years. On 17 April 1997, the FC passed a further motion indicating that all international students needed to meet the requirements outlined in the September 1996 policy for accepting international medical students. At first, this decision drastically reduced the admission rate of international students into the undergraduate medical education program at the U of C. This

was counterbalanced to a degree by the establishment in 2000 of the Alberta International Medical Graduate (AIMG) program, which assessed medical graduates in Alberta trained outside of Canada and the United States for their suitability for postgraduate training programs at the U of A and the U of C.³¹ Moreover, the educational medical curriculum was modified to include subjects related to global and public health. A cohort of international medical students also remained within the undergraduate medical education program. Dean Gall's interest and achievements in this area were acknowledged by the inauguration of a new faculty award—the Grant Gall Award in International Medicine.³²

As an overtly enthusiastic traveler and ambassador for the faculty, Grant Gall also helped build collaborative international health programs, with institutions as far flung as Chile, Laos, and the Philippines.³³ By 2003 the Faculty of Medicine had consulted with and helped establish international programs in an astonishing twenty-two countries. These initiatives resulted in important health benefits, including preventive programs for people living in these countries, not to mention training experiences for undergraduate medical students and faculty from the U of C. As one former associate dean recalled, Dr. Gall seemed to follow international strategies that reflected his personal preferences, while continuing commitments previously made by the faculty:

The one that comes to mind particularly would be Chile. . . . I went there

with him twice, to Concepción. I think it's gone now, but we had a very nice partnership with the University of Concepción that he had started before he was dean, through his gastroenterology research. We had those from Concepción come here and we would go there, and it was a good relationship. [Dean Gall] used to just love travel, and the more exotic the better.³⁴

Gall's love of exotic and unusual circumstances even extended to how he perceived others. On one occasion a new department head he was trying to recruit attempted to negotiate additional moving expenses; he argued that the relocation would necessitate selling both a lake cottage and an ocean beach house. Gall immediately indicated this was not a problem but after a moment of additional reflection added, "Wow, I've never recruited anybody with three houses."³⁵

Dr. Gall worked tirelessly to develop long-term relationships with the Alberta corporate community, including oil and gas philanthropists.³⁶ To this end, he actively involved them in developing and supporting a plan to build medical and research programs through the Dean's Advisory Council. The HRIC, for example, was established with commitments from private donations amounting to \$129 million and provincial government support in the form of \$94 million.

Other administrative and political challenges during Grant Gall's deanship included activating the Alberta Children's Hospital Foundation

established in 1974 by revising its terms of reference, hiring a full-time director, and initiating its fundraising program. Similarly, he secured donors and private funding to counter the perennial threats from the Alberta government to reduce the faculty's baseline funding—a challenge that never seemed to go away. Further issues included finding space, constructing buildings, and securing and setting up partnerships with other on-campus faculties or clinical departments at the affiliated hospitals.

These activities brought people together and co-operation consequently improved, particularly with the Calgary Regional Health Authority, who had been appointed in 1994. (The name was changed to the Calgary Health Region (CHR) in 2000). The chief executive officer of the CHR (from 1999 to 2008), Jack Davis, was on close terms with Grant Gall,³⁷ yet they did not always get along—perhaps because their personalities and leadership styles were quite alike. The complex relationship between the CHR and the faculty proved at times to be mutually supportive, and other times created deep and bitter conflicts, as Davis lived up to his reputation as a "conservative fiscal manager."³⁸ He implemented massive layoffs during his time as chief executive officer of the CHRA/CHR, particularly in support staff. His decisive actions endangered the continuation of several of the clinical services at the FMC, and secondarily the clinical research programs related to them. This happened to such a degree that outsiders had a hard time identifying where exactly the health region began and ended; the same could be said

of the Faculty of Medicine, which was seen as the “research and education laboratory” of the CHR, which “[used] all their facilities.”³⁹ It required both the U of C and the U of A medical schools to create a new and different relationship with both their local health authorities and the government.⁴⁰ Dr. Gall pointed out that the CHR supported the faculty’s growth and development, which eventually led to an expansion of the entering class from 69 undergraduate students to 125 students by 2007. At the same time the faculty grew from 270 to 500 members, while the total faculty revenue increased to \$240 million, a four-fold increase during the Gall era.⁴¹

The Alberta Children’s Hospital Moves to the U of C campus

After the 17th Avenue site was opened in 1982, it gradually became apparent, as specialty and subspecialty pediatric services were either transferred to it or expanded, that the facility was vastly undersized and needed to be expanded. Over the course of the 1980s and early 1990s, the ACH was therefore transformed into a tertiary-care referral centre for children in Southern Alberta⁴² and ambulatory clinics alone eventually increased to thirty-one. Concurrently the price of oil continued to decline.

In 1993, Albertans elected Premier Ralph Klein on a promise to balance the provincial budget. Dramatic health-care decisions followed. In Calgary, the Holy Cross Hospital (HCH), the

Calgary General Hospital (CGH), and Grace Hospitals were closed. The cuts were still insufficient. In March 1994 the new Calgary Hospital Board retained former deputy premier Lou Hyndman, who recommended the closure of the ACH as well. Large public rallies, protests, and petitions followed.⁴³ HCH, CGH and Grace hospitals were closed. The Foothills Hospital pediatric units were transferred to the ACH in 1982. The ACH budget was reduced by 20%. As this was still not adequate, Price Waterhouse consultants proposed to keep the Foothills, Rockyview, and Peter Lougheed hospital sites open while closing three of the remaining four: Alberta Children’s, Grace, Holy Cross, and/or Bow Valley Centre.⁴⁴ Fortunately, the appointment of Dr. Grant Gall as the professor and head of pediatrics in 1993 had brought a measure of leadership to the uncertain scene. His vision was to keep the ACH concept viable, deflect the closure calls, and then explore a long-term plan for future pediatric care in the city.

While researching the decision to renovate, rebuild, or move to the Foothills Hospital site in the late 1990s, Dr. Gall uncovered a new site on the west end of the U of C campus, overlooking the Bow Valley, a kilometre and a half from the FMC. Approved in 2000, the Lego blocks-inspired structure opened in September 2006. It was Dr. Gall’s first major building project.⁴⁵

The design benefitted significantly from the advice of the patients, parents, and children. Multiple Teen Advisory Group (or TAG) teams were formed to provide input, with participants ranging in age from three to seventeen years. The

teams recommended low windows, maximum use of bright, primary colours, abundant open spaces, a pet bonding area, a separate entrance for kids on chemo, and a large play area.⁴⁶ While the number of beds remained constant at 130, hospital rooms were enlarged to allow families to access live-in accommodations. A pleased Dr. Gall noted how the ACH had already “evolved into a major Centre of Excellence for Child Care in Canada.”⁴⁷

The ACH would be one of the few new pediatric hospitals built in Canada. This was similar, for example, to the Izaak Walton Killam Hospital for Children in Halifax, which would bear the imprint of Dr. Cochrane.

Antecedents to Establishing the U of C Faculty of Veterinary Medicine

Dr. Gall had originally chosen a career in medicine, based on his interests in biology, natural history, and agriculture. On graduation he chose pediatrics and took subspecialty training in gastroenterology and nutrition before initiating his research career. As a researcher he specialized in clinical and basic investigations of gastroenterological diseases such as diarrhoea, mucosal nutrition transport, and infectious pathways in the intestines.⁴⁸

Born in Saskatchewan and raised on a farm northeast of Calgary, Dean Gall was well aware of the importance of veterinarians and the value a provincial school would have if located close to a medical school, where it could maximize the educational and research synergies between the two.

At the time, all the province’s veterinarians were trained in other Canadian centres, the United States, or abroad. Gall therefore strongly advocated for the creation of a faculty of veterinary medicine,⁴⁹ a need amplified by the cases of “Mad Cow Disease” (bovine spongiform encephalopathy) that were found in Alberta in May of 2003.⁵⁰

Dean Gall and colleague Dr. Benedikt Hallgrímsson lobbied hard for the veterinary school by leveraging the pathological concept of zoonosis—the transmission of diseases from animals to humans—as a reason why veterinarians and human health-care specialists should collaborate. As Dr. Hallgrímsson recalled, “the idea was that we would use our institute’s structure [and] we would plug all the vet. med. people into the different institutes and it would be genuinely joined: there would be a Faculty of Veterinary Medicine, but it would be indistinguishable from the Faculty of Medicine except for teaching.”⁵¹

Dr. Gall and his team were successful in securing approval for the school at the U of C over a competing, traditional four-year proposal from the U of A. In the fall of 2004, American veterinary physician and surgeon Dr. Peter Eyre was appointed as the interim dean of the faculty. He had just retired as the dean of the Virginia-Maryland Regional College of Veterinary Medicine. After only a few months, Eyre decided not to move to Calgary and relinquished his position, in part, because he could not find enough agreement and support for the newly planned faculty. He was replaced by Eugene Janzen.⁵²

The U of C Faculty of Veterinary Medicine was officially approved by the provincial government in 2005. It has remained an autonomous faculty despite plans, discussed at the 22 September 2004 FC meeting, to integrate the U of C Faculty of Human and Veterinary Medicine.⁵³ The university subsequently transferred responsibility for the operation of the large-animal research centre at Spy Hill to the new faculty, which used some of its start-up funds to optimize its structure for additional functions, including teaching.⁵⁴

With funding from the Province and the U of C in place, and with subsequent contributions from private donors to fund the first chairs, the Faculty of Veterinary Medicine began its recruitment program. It started by creating its own curriculum along with clinical and research departments. Although some of the early faculty were jointly appointed with the Faculty of Medicine, and vice versa, this was the exception. The degree of integration was less than originally anticipated, as neither of the veterinary school's interim deans nor its inaugural dean, Alastair E. Cribb, fostered that approach, expressing concern that this could create problems for the provisional accreditation of the school before it started with thirty students in 2008.⁵⁵ In the beginning, the faculty were located in scattered places in the Heritage Medical Research Building (HMRB), and later the HRIC and TRW buildings. The faculty now also occupies two floors in the TRW building.

The undergraduate curriculum was organized using the medical faculty's clinical presentation (CP) model, with an introduction to large animals

right from the start. The eleven month per year curriculum extended over two years, similar to the Faculty of Medicine.⁵⁶ Dr. Cochrane would have been excited about the innovative approach taken to design the curriculum, and indeed many leaders in the field came to see the novel approach taken to this end. No separate hospital or clinical facilities were included in the plan. Instead the program drew on local veterinarians, their expertise, and their facilities to design the clinical experiences. Leaders at the Olds and Lethbridge agricultural science colleges were also consulted.⁵⁷ Not only was this approach more economical, but also avoided the building of facilities that competed with the local veterinary community. It also enabled the Calgary school to be started in the same three-year period it took the medical faculty.

The first- and second-year courses were taken in faculty, HSC, and Spy Hill classrooms, while clinical electives, clerkships, and internships were done at approved veterinarian practices and agricultural facilities. The original plan was for a three-year course, but this was extended to four years to give the students more clinical experience, in the form of an internship, before graduating. The "one health" (human, animal, and environment) educational and research philosophy has since gained increasing attraction in the other veterinary faculties in Canada and beyond.⁵⁸

The Bachelor in Science Honours Neuroscience Program

Dean Gall's background, contacts, and the various positions he held at the U of C, contributed to the emergence in 2006 of a plan to create a new bachelor of science honours in neuroscience program within the Faculty of Science. It was developed jointly by the Faculties of Arts, Science, and Medicine.⁵⁹ The toxicologist and neuropharmacologist Sheldon H. Roth was the first lead for the program, which accepted its first undergraduate students in 2008.⁶⁰ On the clinical side, there already were teachers in the Faculty of Medicine affiliated with the long-standing accredited residency training programs in neurosurgery, neurology, and physical medicine and rehabilitation. In 1981 these divisions had been united into the Department of Clinical Neuroscience. All inpatient neuroscience units had been centralized on the FMC site following the closure of the HCH and CGH and the latter's demolition on 4 October 1998.

Outside Perceptions and an Evaluation Dispute

Despite these innovations and diverse achievements, there were also areas of concern after national university comparisons and rankings first appeared in 1997 in *Maclean's*, one of Canada's leading news magazines. It ranked fifteen medical and doctoral universities in the country. While the

U of A was in sixth place, the U of C was ranked thirteenth.⁶¹ This was a blow to the confidence and pride of both faculty and students.

In 1998, for example, an anonymous writer in the *Chronicle of Higher Education* noted that

students from the University of Calgary have blamed cuts in funds from the province for the institution's low ranking. It was rated 12th of the 15 institutions with a medical school and a broad range of research and PhD programs. . . . "There is a direct correlation between the province's slashing of U. of C.'s budget by 23 per cent and the consistent low ranking in recent years," said the president of the Students' Union, Paul Galbraith. He called on the province to reinvest in postsecondary education to make up for cuts imposed in recent years. The university's president, Terry White, argued that the ranking system used by *Maclean's* did not measure some factors that are important to his institution, such as recent breakthroughs in cancer research and the availability of non-traditional learning opportunities, including a weekend program.⁶²

By 2006, twenty-one Canadian universities, including some of the country's leading research universities, had decided to opt out of the *Maclean's*

university rankings altogether.⁶³ Many academics throughout the country viewed this as a very big deal at the time.⁶⁴ The presidents of Simon Fraser, McMaster, Dalhousie, and the Universities of British Columbia, Alberta, Calgary, Lethbridge, Manitoba, Toronto, Ottawa, and Montreal signed an open letter to the editor of the magazine. *Maclean's* university rankings, which competed with the *Globe and Mail's* University Report Card, had certainly become the subject of much discussion. Criticisms of the evaluation procedure culminated in reservations expressed over the methodology used in the university rankings and the overall validity of the tools applied. Despite the negative feedback, Tony Keller, the managing editor of special projects at *Maclean's* said, "This data is all available and we will be publishing it."⁶⁵

Keller's reply, however, did not fully address the concerns held by the university presidents—namely, that *Maclean's* used aggregate data from a range of variables. The magazine, they said, arbitrarily assigned weight to variables that were of questionable validity, doing the students a major disservice.⁶⁶ Of course, *Maclean's* did not give in to the criticisms it received from the eleven research-orientated universities. Undeterred, Mr. Keller stated that the methodology used was sound and valid. "Based on 16 years of experience of doing this at *Maclean's*, on extensive consultation with the universities, and with experts in the field, we came up with a ranking of all the elements that make up quality in a university."⁶⁷ This remarkable incident in the history of Canadian higher education then sort of fizzled. Without further fanfare,

the above-named universities continued their withdrawal for the next two decades, undermining *MacLean's* analysis of the quality of Canadian universities.⁶⁸ It was only in 2016, when Elizabeth Cannon, the new president of the U of C, had also become the chair of the Universities Canada Board, that the U of C took part in *Maclean's* rankings again. This time it scored well above its previous rankings.

The Creation of the Research Institutes and New Unit Structures

The diversification and growth attained by the U of C Faculty of Medicine before and during Dean Gall's tenure are impressive (see appendix 2). This is especially remarkable when one considers that the faculty itself was only a few decades old. The medical school had started out with the primary aim of producing family physicians. Over the years, however, it became more research-oriented, particularly so during the 1980s and '90s, when funding from the AHFMR accelerated this process.⁶⁹ Of particular importance was a \$15 million infrastructure grant offer in 1984 to the U of C Faculty of Medicine from the AHFMR Opportunity Fund, which matched funds for strategic research infrastructure initiatives in the province of Alberta, and became a component of the sources of funding cobbled together for the HMRB building. This was one of many forms by which the AHFMR contributed to the development of the local biomedical research

infrastructure without duplicating research funds that were allocated through national programs.⁷⁰

In February of 1997 the faculty's PGME programs were reviewed by accreditation teams from the RCPSC and CFPC. That year also saw the successful launch of the Leaders in Medicine program. Through this graduate program, medical students could undertake combined degree work, such as an MD/MSc, MD/PhD, or the MD/MBA.⁷¹ Some saw this program as a game changer, since it fostered undergraduate medical students' involvement in broader academic and research-orientated programs.

The further development of the graduate programs was overseen by Pamela A. Sokol in the Dean's Office. She was a professor in the Department of Microbiology and Infectious Diseases in the U of C Faculty of Medicine before serving as associate dean (graduate studies) for two years (1997–9), associate vice-president of research (2000–5), and then vice-dean of the Faculty of Medicine (2005–7), when she succeeded Dr. van de Sande.

The initial priority for the school had been to accept students who wanted to be family doctors.⁷² As the proportion of students taking family practice declined, the Dean's Office again studied the problem to determine why fewer and fewer students were choosing family practice. A plan was then implemented to reverse the trend.⁷³

The diversification of the student body across multiple educational streams—with basic medical and clinical faculty actively teaching in these training programs—changed the culture of the medical

school in Calgary.⁷⁴ In response, the faculty moved away from a relatively flat organizational structure with few departmental boundaries, found at the beginning of its existence, to a more complex one that met the needs of a much larger and diverse institution (see appendices 6 and 7).

The establishment of six (later seven) research institutes under Dean Gall, which were largely based on the pre-existing system-based, interdisciplinary research groups, presented a new structural issue. Since Dean Cochrane had decided that there would be no departments in the faculty, only “divisions,”⁷⁵ the movement of resources and staff under the provincial Universities Act,⁷⁶ could be done on the dean's order. Dean McLeod reversed that decision in 1981, in part because these jointly appointed leaders were already known as clinical department heads within the affiliated hospitals. The subsequent creation of many interdisciplinary or system-based research groups cut across and interlinked many departments.⁷⁷ By the early 2000s, there were seventeen research groups in the faculty that, to a variable degree, integrated basic medical and clinical investigators.

The MRC, which had been encouraging team building since the early 1970s, were giving preferential funding support to interdisciplinary research groups or non-departmentalized research institutes and centres. Inter-departmental research interactions as well as cross-faculty forms of collaboration were already occurring, with some university faculty moving over to the FMC site from the Faculty of Kinesiology. An example of this trend can be seen in the emergence of the

McCaig Bone and Joint program led initially by Dr. Nigel Shrive, who was a professor from the U of C's Schulich School of Engineering. Moreover, the Hotchkiss Brain Institute received strong support from the University of Lethbridge in the areas of behavioural neuroscience and psychology.⁷⁸

Dr. Gall's introduction of a research superstructure, with research institutes having authority over the departments, became a source of frustration in the faculty. Several investigators of the pre-existing interdisciplinary research groups were highly critical of the decision, as it appeared random to them how "winners and losers were picked."⁷⁹ The changes also led to the closure of several existing, and successful, interdisciplinary groups of scientific investigators, such as the mucosal inflammation one in 2006.⁸⁰

Some of these groups were strong enough to push themselves back into the faculty conversation. At one point, for example, it was not even clear that there would be a cardiovascular research institute. Yet the cardiologists emerged as a large and powerful group and they found considerable support from private donors.⁸¹ Some department heads, particularly the clinical department heads, found that the changes adversely affected their ability to recruit new faculty members to fulfill specific clinical roles or provide other required expertise. Prior to this, the department heads had more autonomy, as they controlled the salary lines for vacancies in their departments and most also had some ability to negotiate research start-up packages and allocate laboratory space. However, negotiation and joint decision-making processes

became necessary with the introduction of the new research institutes, with inter-unit conflict at times arising. However, through the implementation of the new research institutes, department heads no longer had control over research space or start-up funds, which were now entirely within the purview of the institutes.⁸² This meant that department heads wanting to recruit research-oriented faculty members could not accomplish this without the help of an institute director who was committed to recruiting that professor. A faculty member who was active during the transition to institutes described the changes as follows:

We had always organized around research groups, of which there was of the order of twenty, and so when I was, for example, for ten years head of anatomy, there was no place called "anatomy," there was no anatomy [department] physically, so all of the members were scattered to different [research groups]. Round about 2000, Cy Frank had this idea that he was pushing for what he called ACMEs, which stands for Academic Centres of Medical Excellence. . . . His vision was to create one of those, which would essentially be the same thing as the McCaig Institute now. This was talked about, but nothing actually was done. Then when Grant became dean, he and Hans van de Sande started the planning towards a big fundraising

campaign, [the] Reach! Campaign, which . . . was a really good partnership with Calgary Health and Jack Davis, who was a close friend of Grant's. . . . They sought advice from all sorts of people about how we sell the faculty, how do we get money. Rightly or wrongly the impression came about that if you have twenty research groups there is a lack of focus. . . . And Grant [was] . . . not a good consultation person. He told me that we were going to have six or seven institutes, this was what they are, and go make it happen.⁸³

It was only through a partnership between a department head and an institute director that salary lines and attractive research packages could be “married” into a winning job offer. This was not a problem for those institutes that were closely linked with a department—for instance, the Libin Cardiovascular Institute and the Department of Cardiac Sciences, or the Hotchkiss Brain Institute and the Departments of Clinical Neurosciences and Psychiatry. However, many “orphan departments” existed that did not have a natural institute partner. Other departments benefited from having potential “fits” within multiple institutes that could be used to their recruiting advantage. Regardless, the model proved complicated, and successful recruitment required co-operation and good institutional behaviour and citizenship. As noted by one department head, after a

few “botched” recruitments, both parties began to embrace the new rules and work together.⁸⁴

In the end, this approach appears to have greatly strengthened the research thrust of the faculty. Before the advent of the research institutes, department heads could manage their recruitment specifically to meet their own departmental needs, but often with a research focus that was not consistent with the larger faculty research needs and frequently with a less-than-optimal start-up package. After the implementation of the institutes, institute directors, who in many instances were better able to assess a potential candidate's ability to succeed in the faculty's research milieu, often served on departmental search committees. This helped the selection committee pick candidates who were well positioned to succeed not only because of appropriate collaborators, but also because the director would commit the required resources and then provide research mentorship to facilitate success. While there has been no quantitative study on the success of the research institute model, qualitative evidence suggests that it has worked, although not all seven institutes have been equally successful.⁸⁵

The research institutes were started at a propitious time (between 2004 and 2009). National funding bodies were emphasizing interdisciplinary research teams and multi-centre co-operation, while opportunities for philanthropic support in the city of Calgary were abundant, in line with the economic upturn of the province's latest oil and gas boom.⁸⁶ Membership in the institutes was voluntary. However, the basic organizational

structure was pre-set by the faculty. Unexpected demands arose, from the need to locate related laboratories close together, to an increase in research and technical personnel. The growing research activity created additional demands for more space, more dollars, more training, and more students. The hoped-for outcome was that there was more interaction within the institutes and more transitional research with other faculties on campus and at other universities. While there was little critical examination of the effect of the changes—that is, to prove they were actually beneficial⁸⁷—several case studies suggest that these initiatives were successful on the research level, assisted funding-raising campaigns, and increased external donor support for the U of C’s Faculty of Medicine.⁸⁸

The institutes were also a way to raise additional money. It was easier and simpler to explain their mandate and contributions to the public as a group of talented researchers with common research and clinical interests. In turn, the support obtained locally could be used to fund infrastructure, pilot studies, awards for trainees, and to help the affiliated investigators obtain peer-reviewed funding. Medical inquiry in Calgary has long been interdisciplinary—even when going back to the time of the research groups at the CGH—so this fit well with the changes that were occurring in the research environment. As the financial picture improved, so did the scientific output from the institutes.⁸⁹

Dr. Gall was very effective in fostering the development of the institutes. He surrounded himself with people hand-picked to help him

operationalize his vision. As noted by many colleagues in the faculty, he was rather an ideas man and wanted to get things done. Furthermore, he was quick to anger, and made quick decisions.⁹⁰ His modus operandi was success-driven and project-oriented. As one department head recalled,

Grant . . . was certainly gruff compared to the others, but you always knew exactly where you stood with him. He was a little more dictatorial, but decisions were rapidly forthcoming. Sometimes you might not like the decision, but this was not normally the case. If a plan was well-conceived (and you could prove it to him), he would just say, “proceed.” I found that refreshing. . . . He was an excellent negotiator and dealmaker! Without any question, his first term was much more successful than his second.⁹¹

However, over time he alienated more and more people. Unhappiness among certain quarters of the faculty led to a prolonged discussion at the 9 May 2001 FC meeting about the selection/review committee for the new dean. Many members expressed disappointment with Grant Gall’s top-down and often blunt leadership style.⁹² It was hoped that research institutes could potentially find the best fit for addressing research questions with up-to-date interdisciplinary methods. Because the existing research institutes were primarily set up to control research space and find start-up funds for newly

recruited faculty, the pre-existing departments had little say in this matter.

In December of 1997 several former departments changed their names. This included the Department of Anatomy, which became the Department of Cell Biology and Anatomy, and the Department of Pathology, which changed to the Department of Pathology and Laboratory Medicine. The latter change coincided with the formation of Calgary Laboratory Services.⁹³ In 1998 the Planning and Priorities Committee was recreated to develop faculty-wide benchmarks for personnel and programs in order to link planning with the annual budget process and space resources.⁹⁴

Some Curriculum Reforms

During Dr. Gall's deanship, the U of C Faculty of Medicine took additional steps to reaffirm one of its founding educational mandates—to train much-needed family physicians to serve Western Canada.⁹⁵ On 12 May 1999, the FC reaffirmed that 85 per cent of U of C medical students in any given academic year should be Albertans. However, despite the original hopes for more Albertans to join the student cohort, it remained a goal, as local students were not as well trained as some of their peers from other provinces and they often had limited research experience. A limited number of international students were accepted as well, as they could readily pay the out-of-country tuition fees.⁹⁶ In May 2000, Dr. Gall reported to the FC that the LCME accreditation team left Calgary “very unimpressed by [the U of C] UME program.

. . . However, the accreditation team was very impressed with our CME program.”⁹⁷ Some contemporary sources reported that “Calgary graduates are perceived to be different compared to graduates from other traditional medical schools,”⁹⁸ as they emphasize the softer communicative, social, ethical, and clinical-diagnostic skills, with a reduced emphasis on practical and scientific skills. Dr. Gall did not think that these comments would necessarily have a negative impact on the medical school's reputation, though he agreed that the concerns and complaints of the external accreditation and review committees had to be taken seriously.

Like his predecessors, Gall was supportive of the three-year medical curriculum. He saw the benefits of medical students being able to commence their careers earlier. While the curriculum was not without its detractors,⁹⁹ it was recognized as a novel contribution that received continued reassessment by the faculty's curriculum committee during Dr. Gall's term as dean.¹⁰⁰ However, some of the department heads felt that the curriculum was light on basic medical science teaching and that insufficient content in particular areas was provided to medical students. To help answer unsettled questions about the benefits and problems of a three-year medical curriculum,¹⁰¹ the Association of American Medical Colleges approached the U of C in 2000 to administer an end-of-medical-school questionnaire, like the ones used in the United States. Along with Dalhousie, the U of C was the first Canadian school to run such a baseline survey.

It is worth noting that, independent of the drop in provincial funding and the constant troubles with external accreditation bodies and ranking institutions that characterized this period, the U of C Faculty of Medicine's financial situation gradually and steadily improved over these years.¹⁰² In the year 2000, external funding reached a new high of \$84.49 million. On 15 September 2003, a total of \$8,160,978 was received from the CIHR. For the first time, this put the U of C faculty fifth of all universities in the country receiving CIHR funding.¹⁰³

The McCaig Bone and Joint health program, with a its focus on arthritis and inflammation research, had its origins in the early interdisciplinary research groups, most of which were originally housed in the HMRB building. The program expanded into both the HRIC and TRW buildings, while the clinical service became the basis for planning the McCaig Tower, which opened in 2011.¹⁰⁴ The Klein government approved the expansion, which was paralleled by the building of the Mazankowski Heart Institute at the U of A.¹⁰⁵ The rise in incoming dollars from increasingly successful research funding and philanthropic sources also saw the faculty increase its number of full-time members. In 2004, it had 280 full-time faculty members, which at that time made it the U of C's largest faculty (this would change when the Faculty of Arts merged in 2011).

In 2006 external, non-government funding for the Faculty of Medicine reached an all-time high of \$134,100,000 up to that point.¹⁰⁶ Increases in operational funding permitted an expansion of

all entry classes. That fall, for example, more than 500 students were admitted into degree programs in the Faculty of Medicine, and for the first time the UME program took in 125 students, matching the U of A's enrollment.¹⁰⁷ In December 2006, the faculty opened the undergraduate bachelor program in neuroscience in conjunction with the Faculties of Science and the Social Sciences.

A member of the Calgary community later recalled the impact of the changes that Dean Gall oversaw during his tenure:

Ten years later, as a result of [Dean Gall's] single-minded determination and his vision, the entire campus was transformed. We have a brand new HRIC building, we have the brand new TRW building, we have the McCaig Centre, we have the retrofit of the Bachelor of Health Sciences. . . . [Dr. Gall] literally physically transformed the entire campus. . . . Once he had the buildings, he had already been thinking about what would go in them. . . . He created six research institutes and the vision of the institutes was to link the research lab, the bench, to the bedside—i.e., the patient, and beyond . . . to the community and community health—and most of those institutes are thriving. And he selected the best and brightest. And there's been some remarkable things that have happened within them and they've

wound up creating a cornerstone of this U of C Faculty of Medicine, creating the anchor in terms of the academic end to the health delivery system. . . . Another part of how the Faculty of Medicine evolved almost exponentially in that ten-year period was through the REACH! Campaign . . . and Grant was definitely part of the founding and strategizing about that . . . \$300 million campaign. . . . The reason it was so successful, I believe, was there were three great co-chairs. . . . It was so integrated . . . such a . . . close relationship with Jack Davis, who was then CEO of the region, the health-care system. . . . It was so integrated that they were able to work to a have an umbrella campaign. . . . He [Grant] was kind of the right person at the right time, he was kind of the maverick in the Wild West.¹⁰⁸

The success of the O'Brien Centre for the Bachelor of Health Sciences was seen when the first class of forty-seven students completed their bachelor of health sciences degree and graduated on 12 June 2008. Forty-three of those students graduated with honours and thirty-one even received first-class honours, the U of C's highest distinction. Most of these graduates had studied in the biomedical stream, with some in the health sciences and a few in the bioinformatics streams.¹⁰⁹

Plans were also initiated during Dean Gall's tenure to move the bachelor of community rehabilitation program from the Faculty of Education to the Faculty of Medicine. This process took two and a half years, until 2007, at which point the bachelor of community rehabilitation was offered online for the first time (for more on this program, see the following chapter on the deanship of Tom Feasby).¹¹⁰

The fall of 2007 also presented the faculty with a noticeable political and socio-economic challenge in the form of the growing need for new health-care workers in the province,¹¹¹ a topic that was soon taken up by local media.¹¹² The recently built Alberta Children's Hospital even had to close services—including operating rooms and the recent magnetic resonance imaging facilities—because of staffing shortages.

In January 2007, the Dean's Office moved to the seventh floor of the newly opened TRW building with offices overlooking western Calgary and the Canadian Rocky Mountains. That July, Dr. Thomas Feasby succeeded Dr. Gall and began his first term as dean.¹¹³

Research Contributions

Investigators in the Faculty of Medicine were responsible for several substantial research achievements at the U of C during the Gall deanship. Above all, the work on neuronal regeneration and cell proliferation in the brain done by Dr. Sam Weiss (b. 1955), a neuroscientist and the head of the Hotchkiss Brain Institute, stands out. The paper

Figure 1: First page of Brent A. Reynolds and Samuel Weiss, "Generation of Neurons and Astrocytes from Isolated Cells in the Adult Mammalian Central Nervous System," *Science* 255, no. 5052 (1992): 1707-10.

Generation of Neurons and Astrocytes from Isolated Cells of the Adult Mammalian Central Nervous System

BRENT A. REYNOLDS AND SAMUEL WEISS*

Neurogenesis in the mammalian central nervous system is believed to end in the period just after birth; in the mouse striatum no new neurons are produced after the first few days after birth. In this study, cells isolated from the striatum of the adult mouse brain were induced to proliferate in vitro by epidermal growth factor. The proliferating cells initially expressed nestin, an intermediate filament found in neuroepithelial stem cells, and subsequently developed the morphology and antigenic properties of neurons and astrocytes. Newly generated cells with neuronal morphology were immunoreactive for γ -aminobutyric acid and substance P, two neurotransmitters of the adult striatum in vivo. Thus, cells of the adult mouse striatum have the capacity to divide and differentiate into neurons and astrocytes.

THE GENERATION OF NEURONS IN the mammalian central nervous system (CNS), with few exceptions, occurs during early development (1). Mitogenic growth factors, such as basic fibroblast growth factor (bFGF) and nerve growth factor (NGF), may participate in the production of CNS neurons (2, 3). Epidermal growth factor (EGF) is a powerful mitogen of numerous non-neuronal cells and enhances wound healing and tissue regeneration in various adult organs such as skin, liver, and intestinal epithelium (4). In the CNS, mitogenic and trophic actions of EGF on embryonic and early postnatal cells indicate its importance in neuronal development (5). The demonstration of EGF- and EGF receptor-immunoreactivity in the adult rodent and human CNS (6) prompted us to examine whether EGF-responsive cells could be isolated from the adult mouse CNS.

The striata of 3- to 18-month-old adult mice were enzymatically dissociated and plated in serum-free culture medium containing 20 ng of EGF per milliliter. Cells were seeded in 35-mm-diameter culture

dishes (1000 viable cells per plate) in the absence of supplementary substrate or adhesion factors (7). After 2 days in vitro (DIV) most of the cells had died; however, 15 ± 2 cells per plate ($n = 4$ independent culture preparations; the striata of two adult mice were pooled in each of the four experiments) were undergoing cell division (Fig. 1A). Cell division continued for an additional 2 to 3 DIV (Fig. 1, B and C), after which the proliferating clusters of cells detached and formed (6 to 8 DIV) a sphere of proliferating cells (Fig. 1D). Cell division and proliferation were not observed in the absence of EGF, nor were they mimicked by bFGF (20 ng/ml), platelet-derived growth factor (20 ng/ml), or NGF (100 ng/ml). In addition, if cells were seeded on a substrate that had been treated with poly-L-ornithine, proliferation was not observed in the presence of EGF. These findings suggest that the presence of both EGF and a nonadhesive substrate is required to initiate cell division of these isolated adult striatal cells.

To assess the antigenic properties of cells within these 6- to 8-DIV spheres, we transferred them to poly-L-ornithine-coated cover slips, allowed them to adhere for 1 hour, and processed them for indirect immunocytochemistry (8). Virtually all cells in the spheres were immunoreactive for nestin (Fig. 1, E and F; $n = 8$ independent culture

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was an example of the important work being done in this research area; it won Dr. Weiss a Gairdner Award—a faculty first—in 2008. It marked the important discovery of neuronal stem cells in the brain and helped cement the Hotchkiss Brain Institute’s reputation as a new centre of excellence in neuroscience and mental health research.

A critical mass of investigators, plus a substantial body of important work, also contributed to the identification of neuroscience and mental health as an area of local research strength.¹¹⁴ With the original discovery of neuronal stem cells in the human brain by Dr. Weiss’s group, they solved a major problem in the history of neuroanatomy regarding the existence and mechanism of structural plasticity.¹¹⁵ The resulting research article in the prestigious journal *Science* became the most-cited paper in the history of the U of C Department of Pathology. However, shortly after this publication, the restructuring of the department and of laboratory medicine services during regionalization resulted in the formation of Calgary Laboratory Services, which initially did not have a research mandate. Therefore, Dr. Weiss and other basic scientists who were not pathologists were relocated from the pathology department to basic science departments.¹¹⁶

In 2004 the Clark H. Smith Brain Tumour Centre was opened at the U of C. The centre became the home of a comprehensive translational research program that sought to accelerate moving basic laboratory discoveries to treatments in neuro-oncology.¹¹⁷ At the same time Bryan E. Kolb (b. 1947) at the University of Lethbridge was also

pioneering important experimental paradigms in behavioural neuroscience, such as comparative investigations on the prefrontal cortex in cats and monkeys, the relationship of age to the outcome of brain injuries, as well as pre- and post-injury treatment and rehabilitation influences on neuronal recovery.¹¹⁸ At the same time his Canadian Centre for Behavioural Neuroscience was beginning to exchange trainees in behavioural neuroscience with the Hotchkiss Brain Institute. The Lethbridge centre arranged co-teaching events and workshops together with colleagues from the U of C Faculty of Medicine, who were now travelling back and forth between Calgary and Lethbridge. This represented a new form of educational and research collaboration with additional provincial post-secondary institutions and research organizations.¹¹⁹

Other research institutes also made important contributions during this period. For example, Canada Research Chair in Leukocyte Recruitment in Inflammatory Disease Dr. Paul Kubes—of the “Triple I” (Institute of Infection, Inflammation, and Immunity), renamed the Calvin, Phoebe and Joan Snyder Institute for Chronic Disease in 2008—had his gastrointestinal research honoured by numerous awards, including the CIHR Investigator of the Year Award in 2011. He also received the Alberta Science and Technology Award and the Henry Friesen Award for his basic science research on the brain’s immunity interactions. Work from the Snyder Institute has been published in leading biomedical research journals, such as *Cell*, *Science*, and *Nature*, in addition to clinical journals like *The Lancet* and translational journals such as

the *Journal of Clinical Investigation*.¹²⁰ Likewise, the creation of the Libin Cardiovascular Research Institute and its research programs enabled new insights into the nature of clinical diagnoses and cardiovascular treatment options, as well as new interactions on the clinical and investigative levels between heart surgeons, internists, cardiologists, nurses, biomedical scientists, and administrative staff.¹²¹

The development of cardiovascular science and clinical heart care in Calgary over the past ninety years culminated in the creation of this interdisciplinary research institute. It based its technological and research developments on the early introduction of a new electrocardiograph (ECG) machine by Calgary's first heart specialist, Dr. Earle P. Scarlett (1896–1982), which transformed the diagnostics and patient care for heart disease, followed by the first open heart surgery performed in Calgary in 1960, as well as current innovations in pacemaker technology, including the pioneering work of Libin co-founder Dr. D. George Wyse.¹²² In March 2005 the Stephenson Cardiovascular Magnetic Resonance Centre was also opened, which was the first of its kind in Canada, enabling important new heart and blood vessel research.¹²³

These are only a few of the developments and individuals that have contributed and shaped the appearance of modern institutes and research centres at the U of C's Faculty of Medicine. Another of the Faculty of Medicine's major contributions was the introduction of hyperthermic intraperitoneal

chemotherapy, or “hot chemo,” the first offering of its kind in Canada. The treatment approach helped to reduce the treatment frequency in several abdominal cancers to one post-operative treatment and to decrease toxic effects on the rest of the body.¹²⁴ Further research contributions during the mid-1990s included those of Robert Bertram (“Bob”) Church's group in molecular genetics, in collaboration with the team at the University of Edinburgh in Scotland that cloned sheep “Dolly;”¹²⁵ the further development and diversification of the Calgary neurological stroke program facilitated by Tom Feasby in clinical neuroscience; and the bioengineering contributions of Cy Frank's group to the development of new endoprosthetic knee-replacement technologies. Each of these developments helped the U of C take its position as one of the more research-intensive medical schools in Canada, with strengths in clinical, biomedical, and health-care research.

Others' Views of Dean Gall

Throughout his career, Dr. Gall was active in federal and provincial funding agencies. At the national level, for example, he served on various MRC committees for over ten years, and he chaired its Experimental Medicine Grant Review Committee for basic and clinical research for two consecutive years. He supervised a well-funded laboratory for more than twenty years, maintaining his personal research program while dean. He was recognized as a leader in intestinal adaptation and diarrheal diseases.¹²⁶

Grant Gall spent his administrative leaves travelling and hiking in many parts of the world. As U of A gastroenterologist and long-time colleague of Gall's, Robert J. Baley, related in his obituary note:

He was a man with a passion for life. If you have only seen him in a shirt and tie at meetings, stop and imagine Grant in short pants, a T-shirt, walking shoes and a Tilly sun hat, bristling for the adventure at hand. He loved to fish in the Bow River, hunt prairie chickens, walk across countries (particularly Scotland), search for antique cars, listen to the blues and drink expensive Scotch. . . . He was convinced to buy a buffalo coat, a replica of the winter coats worn by the Royal Canadian Mounted Police a hundred (or so) years ago. Imagine Grant standing outside the Banff Springs Hotel, at -40C, waiting for two tardy friends to appear in their buffalo coats, only to be the sole centre of excitement for a busload of Japanese tourists.¹²⁷

Dr. Gall perceived working in a medical dean's office as a way to engage in active decision-making processes, as well as the pursuit of power and personal influence over the U of C Faculty of Medicine's fate—an influence that was also felt abroad at collaborating medical schools. As Dr. Clarence A. Guenter recalled, Gall's contributions and his

personal exchanges have been much venerated, even, for example, at Daqing Medical College in the People's Republic of China:

One school in China [Daqing Medical College] had 16 of their 18 department heads/scholars who had been trained at the U of C. They met after Dr. Gall's death in 2007 and stood respectfully in silence to express their deep sadness. One after the other said how they were unwavering in regarding Dr. Gall's example as their lifelong model, to learn from his medically innovative skills and professionalism, and incorporate them into their respective positions, so as to gain superior achievements [and] to contribute to the medical cause.¹²⁸

Due to the many demands on his time and given his personal contributions as a high-achieving administrator for the U of C Faculty of Medicine, his involvement in provincial and national medical bodies—while juggling his rather extravagant private passions for travel, living abroad, and organizing group trips with colleagues and family friends—Dr. Gall's commitment to teaching was limited. Moreover, his interactions with medical students, residents, and graduate students were of a mixed nature. As one of his leadership colleagues later recalled:

Grant was a dynamo; he was interested only in the biggest of big ideas. He had a great capacity to piss people off. He was a very polarizing figure. . . . If he liked and trusted you, you had carte blanche to carry things out . . . [but] if he didn't trust you it didn't matter how good the idea was, he wasn't interested. . . . [He] was always rushing to the next big idea. I think the faculty had a lot of trouble catching up with him. I think by the time he stepped down there was a desire [in the faculty] to slow down and catch up, and I think it was [a] great mistake, and I think everybody [in the current leadership team] realized it was a mistake [that the pace of changes and decision-making was not kept up]. Grant, as you know, was the leading force in the creation of Vet Med. . . . We put these two buildings up [HRIC and TRW], we created the [research] institutes [in the faculty] . . . we had the most successful fundraising [Reach!] Campaign in the faculty's history to that time . . . [and] in part it was because Grant was a dynamo, and in part it was an era in which the university was very hands-off and let us get on with [our projects].¹²⁹

Indeed, Dean Gall's working style was repeatedly described by contemporaries as individualistic,

opaque, and even exclusionary. And yet, many colleagues from his leadership team remember him as a dynamic leader who was frequently driven by bold ideas, who was always thinking about new opportunities, and who tried to make a difference.¹³⁰

The AHFMR's Commitment to Excellence and a Growing U of C Research Community

In 1998, the third AHFMR International Board of Review committee came to Calgary. In their final report, the committee members declared that the AHFMR's commitment to excellence had given rise to a growing scientific community, particularly in Calgary and Edmonton, an achievement that received a lot of international awareness and admiration.¹³¹ The AHFMR's success was attributed to the arms-length nature of this provincial research funder, which left the scientists themselves a lot of freedom to choose their projects and investigate the research questions that interested them. At the same time, the creativity-driven approach nurtured positive economic spinoff activity, apart from the specific research funds that had been spent.

The cumulative total of the AHFMR research funding had risen to \$600 million by 1998. In 2001 the AHFMR became more concerned with commercialization of the scientific output of the researchers they had supported. To this end, it consecutively set up the ForeFront program to

increase the commercial adaptation of innovations in biomedical research and to contribute to the economic diversification of Alberta's oil- and agriculture-based economy.¹³² The board of the AHFMR hoped that the foundation could become an important stabilizer during the unpredictable “boom” and “bust” periods that the province's economy often faced, and which had significant downstream impacts on the ability of the U of C faculty to build and equip its facilities and hire and retain personnel.

On the positive side, for example, the extraordinary \$15 million infrastructure grant helped to construct and open the HMRB in 1988; this was done through the creation of the new AHFMR Opportunity Fund, which enabled matching funding for strategic research infrastructure initiatives in the province of Alberta. The HMRB became necessary after the Health Sciences Centre had become fully congested with the new laboratories and related research equipment, which had emerged in this teaching-related centre since the end of the 1970s. In line with AHFMR's mandate to provide matching funding to the U of C, the university, the FMC, and the Alberta Cancer Board helped co-finance the necessary \$35 million for this 10,934-square-metre new laboratory and clinical research facility, which was located at the north entrance to the original Faculty of Medicine building.

At the outset, the architectural plan not only included laboratory spaces and offices for researchers, but also seminar rooms, lecture theatres, and even a canopied “garden court” with real trees

that lay between the original medical school and the HMRB—constructed with the intention to enhance faculty communication and collaborative research planning. A gym space served the health and well-being of forty faculty and their research teams, while also being accessible to the whole student population at the Foothills campus. The creation of the Heritage Medical Research Building was just one important initiative through which the AHFMR came to decisively contribute to the local research infrastructure without duplicating research funds that were allocated through other national programs.¹³³

Some of these projects were not popular and were only accomplished due to Dean Gall's political clout and strong advocacy. Referring to the institutes, he had personally noted that the initial idea or creating centres of excellence could be traced back to 2000 and the hopes of the clinical researcher Dr. Cy Frank.¹³⁴ However, of particular importance was the continuing work of Drs. Hans van de Sande and Grant Gall, who organized the Reach! Campaign to find further philanthropic support for the ongoing activities of the U of C's Faculty of Medicine. This later allowed the institutes to flourish through several established endowments that were created with the help of many community donations, while the end of the AHFMR as an important supporting institution is remembered by many in the faculty as a disastrous political decision.¹³⁵

In fact, the increase of the funding activities through the AHFMR had led to an exponential increase in researchers and well-received clinical

faculty, and it helped Calgary to create a much larger research profile and to compete with the traditionally strong and research-minded Faculty of Medicine at the U of A in Edmonton:

Heritage [the AHFMR] . . . immediately permitted us to hire researchers. The essence of it was that they didn't give money for projects, they gave money for salaries of people who would be good enough to write research grants, who would fund their research themselves. They would provide them with some start-up money, equipment, and a salary. And it wasn't forever, it had to be renewed. . . . That was a much better way of recruiting good people and it immediately allowed us to recruit scientists in pulmonary medicine and physiology. To get a Heritage grant was like getting an MRC grant (personnel support). It was a huge deal. Another thing that helped is that when they built the medical school, they didn't plan the space for scientists. When I went for an interview, I got a letter from this guy I had never heard of, Clarence A. Guenter. I wrote back and said that I was not interested, thank you very much, but I forgot to post it (people will tell you that's normal for me) and then my research boss said you should never turn down an invitation

like that because it's their problem if they want to spend the money to get you there and then you can advertise what we're doing in our research and it gives you practice to interview for a job. I knew it was very important being hired as a researcher to be sure that you'd have a sufficient space to do research, because almost everywhere there is not enough space, you'd get a job and find out you'd be working in a broom closet. You can tell I'm not a very aggressive person, but I said to Clarence, "What about space?" So he walked me up to the—not immediately but in the course of the day—the third floor of Health Sciences Centre and you couldn't actually get into it because the doors were locked but you could peer through the glass and what you saw was farmland essentially, acres and acres; the whole building was completely empty. But every few yards there was electricity, vacuum, distilled water that came up from the floor. He wasn't bothered with any more questions from me about the space.¹³⁶

In its 1998 report, the International Board of Review recognized that the AHFMR's solid "commitment to excellence" had given rise to an increasing scientific community, particularly in Edmonton and Calgary, and had earned the

province international recognition. Moreover, many research jobs had been created through AHFMR funding, although these were usually limited term, non-tenured positions that were dependent on future grant funding to these basic and clinical researchers.¹³⁷

In 2001, the AHFMR became more concerned with the commercialization of the scientific products researched in the biomedical laboratories at the U of A and U of C, by helping researchers build connections with the pharmaceutical and medical device industry, supporting the patenting of drugs and medical equipment, and offering assistance for economic start-up opportunities. Further, it was central to the construction of almost all the medical research buildings at the FMC, and the hiring of many researchers in the Faculty of Medicine:

Heritage was vital, it supported about 100 faculty members who essentially did nothing except research and train graduate students, if you bundle that in with research, then really no other teaching, very small teaching. Technically 70 per cent time for research, but in reality 99 per cent. The foundation here and [in] Edmonton and a few in Lethbridge supported something in excess of maybe 230 faculty members. That got blown up by an act of vandalism by the minister in 2004 or 5 or something. It was [a] disaster. . . . I remember meeting

with the minister and being told that they were going to reform it but not to worry as the money would all still be there . . . and then they just destroyed it and it became Alberta Innovates—Health Solutions, and in the next two or three . . . [or] four weeks we will hear it will be changed again. . . . It was a disaster because the way they wound it up was, the awards were five-year awards, and if you had an award then at the end of it they would run out and there would be no more, just the salaries . . . and suddenly the faculty was on the hook for 100 salaries, which is significant money. . . . It was a very very bad thing.¹³⁸

The fourth International Board of Review report, compiled in 2004, applauded the Alberta government for its foresight in inaugurating the AHFMR twenty-five years before and for its continued support for biomedical research. It congratulated the foundation for its sound management and the contributions it had made to the medical research in the province.¹³⁹ Inspired, the Alberta government announced a \$500 million increase to the AHFMR's endowment. This increase was aimed at allowing the foundation to continue and support its activities, as well as attracting new and innovative international researchers to the province. All major stakeholders had been consulted on this decision and were seen to play a role in the decision-making processes and the planning for how

Alberta should move forward into the future of biomedical research. However, in the period immediately following Dr. Kevin Keough's decision to step down as president and CEO of the AHFMR in 2007, the Government of Alberta chose to renounce its plans, dissolve the AHFMR, and use the funds for immediate political purposes under its direction—against the statements in the original AHFMR bylaws. The end of the AHFMR as an important seconding, financially potent, and engaged body is remembered by many in the faculty as a disastrous political decision by the Alberta government.¹⁴⁰

The AHFMR was not the only major contributor to medical research. The Alvin and Mona Libin Foundation, for example, presented the largest-ever one-time donation in March of 2003 to the Calgary Health Region and to the U of C. It totalled \$15 million and contributed to the creation of the Libin Cardiovascular Institute of Alberta.¹⁴¹ While provincial funding cuts were being deeply felt on the infrastructure and development side of the faculty, the Reach! Campaign was launched in October 2005. The timing was fortuitous. The campaign represented the work of a core group of community volunteers and a joint fundraising initiative on the part of the U of C, the Calgary Health Trust, and Alberta Health Services. It started with the goal of raising \$300 million in external philanthropic support for over a hundred projects in medical research, education, patient care, and public health and wellness, in which the faculty already had considerable strength.

By November 2007, the Faculty of Medicine had raised \$180 million of its targeted \$300 million for its large-scale fundraising campaign. By using this remarkable show of support from community partnerships and philanthropic donors, these projects enjoyed substantial increases in funding, particularly after the campaign exceeded its goal by reaching the \$312-million mark in 2009.¹⁴² Favorably presaging this development had been the Alvin G. Libin (b. 1931) family endowment for the Libin Cardiovascular Research Institute in 2003, two years before the Reach! Campaign even began.¹⁴³ All research funding continued to be augmented by AHFMR funding for medical and health-care researchers until the AHFMR was dissolved in 2010 and replaced with Alberta Innovates—Health Solutions, an agency of the provincial government.¹⁴⁴

Unexpectedly, in 2008 the Government of Alberta decided to dissolve the health regions in the province altogether (including the Calgary Health Region) and create a superstructure, the Alberta Health Services, to replace them (for more on this, see the following chapter on the Dean Feasby years). This posed a large internal administrative and organizational challenge, one that was compounded by the 2008 global financial crisis, which also hit the endowments of the U of C Faculty of Medicine very hard. Despite the austerity, the first (of approximately five) research professorships became fully endowed during this period—including the Alberta Medical Foundation/Hannah Professorship in the History of Medicine and Health Care—to pursue international-level research in

the history of medicine and public health, and enhance the teaching offers in medical history and allied subjects.¹⁴⁵ Now there are fifty-five different endowed chairs and professorships in the Cumming School of Medicine alone.

Conclusion

This overview of the development of the U of C Faculty of Medicine under Dean Gall offers particular insights into the educational and medical research demands that the faculty faced between 1997 and 2007 (see Appendix 4). A direct relationship is seen between the decisions made by the faculty and the challenging external circumstances it faced. During Gall's deanship, the FMC and the U of C Faculty of Medicine entered an intricate, give-and-take relationship with the Calgary Health Region, which was heavily influenced by the decisions made by the provincial government and the economic health of Alberta. Ad hoc opportunities and threats resulted from frequent structural changes in Alberta's health and research funding agencies. During this period, educational activities were diversified and research intensity increased as the faculty grew in overall size and complexity. It emerged as one of the larger medical schools in Canada with strengths in select research areas. It continued to struggle to redefine its strategic direction to both position itself for future success and continue to contribute to meeting the educational, health, and research needs of Albertans.

With respect to Dean Gall's impact on the Canadian health sciences research landscape, his reviewing and research-direction roles were more strongly reflected in his work with various political committees of research and clinical funding bodies and entities, rather than his actual review of the work—research grants and publication manuscripts—submitted to the six agencies and nine journals with which he was affiliated. For two decades, he also served on the Steering Committee of the Canadian Association for Gastroenterology and acted as that body's president from 1994 to 1996. His expertise and insights into academic organizational structures were sought as well, with Dr. Gall serving as an external reviewer and adviser to the Hospital for Sick Children in Toronto, the International Centre for Diarrheal Disease Research in Dhaka, Bangladesh, the Baylor College of Medicine in Houston, Texas, as well as the National Institute of General Medical Sciences for the Trauma Research Centre at the University of Texas, also in Houston. Further international speaking and travelling engagements brought him to New Delhi, Hong Kong, Tokyo, Sydney, Amsterdam, Oxford, Basel, and Phoenix, Arizona.

Donald Grant Gall passed away in 2009 while doing what many saw as his favorite activity—international travelling. This brought his retirement plans to an unfortunate and abrupt halt a short two years after his deanship at the U of C Faculty of Medicine ended.¹⁴⁶

