



UNIVERSITY OF TORONTO  
FACULTY OF DENTISTRY

February 26, 2017

Sioban Nelson  
Vice-Provost, Academic Programs  
University of Toronto

re: response to external review

Dear Professor Nelson:

Thank you for forwarding the External Review Report of the Faculty of Dentistry, its undergraduate program: Doctor of Dental Surgery, D.D.S., and its graduate programs: Master of Science in Dentistry, M.Sc., and Doctor of Philosophy in Dentistry, Ph.D.

I wish to thank the external reviewers for taking the time to evaluate our programs and prepare their thoughtful and helpful report, which indicated both our strengths and challenges. As they have noted, we continue to implement our 2014-19 Strategic Plan. The following is our response to the recommendations as stated in your letter.

### **Undergraduate Program**

*1. The reviewers encouraged the Faculty to determine the most useful new technologies currently employed in clinical practice and develop a plan to incorporate these into the traditional educational program now and in the future.*

The Faculty is currently investigating the use of a number of technologies for our programs and implementation is an ongoing activity. For example, with respect to clinical education, new technologies are continually being incorporated into clinical operations as they become commercially available. Our Assistant Dean/Director of Clinics is leading this endeavour. A recent example of new technology being implemented in the undergraduate clinic includes CAD/CAM (computer-aided design and computer-aided manufacturing) scanning to permit dental restorative procedures such as crowns to be completed in one day compared with much longer time periods using traditional methods. Other examples of technology at the undergraduate level include the latest in rotary root canal preparation systems, computerized local anesthetic delivery, and digital 2D and 3D x-ray imaging. At the graduate level, the newest

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microscopy for endodontics (root canal therapy) has just been implemented along with the latest in dental implant treatment planning and placement technology. Looking longer term, over the next three to five years, digital models will be incorporated into the graduate orthodontic program permitting students to eliminate the traditional dental impression and to virtually manipulate a set of models on the computer screen, as well as virtual treatment planning of multi-jaw orthognathic surgery.

With respect to clinical management and Information Technology, axiUm<sup>®</sup>, the clinic management system, continues to be expanded. A new dispensary module will be implemented in the spring of 2017. In the medium term, over the next one to two years, the integration of this system with central sterilization is a priority.

With respect to didactic teaching and learning, our Vice-Dean Education and our Associate Dean Undergraduate Education are leading the efforts to employ new technologies. We are currently in the process of adopting a method for online course evaluation and electronic testing (Examsoft<sup>®</sup>). This is currently being pilot tested in the second year of the D.D.S. program. We are aiming for implementation in the medium term, over the next one to two years. For the past few years, lectures have been enhanced through their recording (Lecture Capture) and we continue to encourage more faculty members to utilize this resource. Electronic education material through the Dental Procedure Education System (DPES) continues to be developed. Digital learning tools are being introduced in a number of courses, such as in Oral Pathology and Oral Radiology.

*2. Reviewers suggested that student experiences in patient care might be improved through more effective recruitment of patients as teaching cases.*

This is a challenging objective that the Faculty recognizes needs to be addressed in both the short and long terms. Students currently do gain a solid foundation in basic care. Where their experiences could be strengthened are in a few areas of more advanced care. Unfortunately, the reality is that advanced care can be costly to provide. Our patient demographic is such that financial constraints limit their ability to undergo all dental procedures that, in turn, can have an impact on student experience. The Access to Care Fund currently exists to mitigate the financial barriers for patients in need. To address this concern, the Faculty will investigate mechanisms to improve its utilization and grow its capacity. As an example, since the time of the External Review, the Faculty has now received a generous donation of \$250,000 to the Access to Care Fund. This should allow more patients to receive more advanced care that, in turn, benefits both patients and students. Our Assistant Dean/Director of Clinics and our Director of Advancement lead these efforts.

## Graduate Programs

3. Reviewers recommended reviewing all 10 specialty programs for consistency with program and Faculty mission, need/demand and financial performance; they suggested this could lead to consolidation or redesign.

*The reviewers recommended redesigning MSc program and degree options to address any mismatch between existing programs outcomes and student desired outcomes, especially in relation to research activities.*

A review of all of our graduate specialty programs is now commencing, being led by our Associate Dean Graduate Education. Our Assistant Dean/Chief Administrative Officer and Assistant Dean/Director of Clinics will lead an investigation of their financial performance. Since 1998 clinical specialty training in the Faculty has been incorporated into graduate programs. It currently exists as different degree programs; a course-based M.Sc., a doctoral-stream M.Sc., and Ph.D. Since that time, the desired outcome for a vast majority of students has shifted from work in the public to the private sector, and students who have received M.Sc. or Ph.D. degrees from peer-institutions worldwide have developed an interest in clinical specialty training in dentistry at the University of Toronto. Moreover, a number of students have already undertaken clinical specialty training in one area, but wish to pursue a second specialty in another area. Currently, regardless of a student's clinical or academic credentials, that student is mandated to undertake M.Sc. degree work in addition to their clinical program. This inflexibility, as implied by the external reviewers, has motivated us to re-envision graduate specialty training in the Faculty for the future.

To address these issues, the Faculty has very recently begun discussions with the Vice-Provost Academic Programs Office regarding a restructuring plan of the Faculty's graduate offerings that incorporate concurrent clinical training in one of the dental specialty programs that we offer. It should be noted that these discussions are in their infancy and will require additional discussions with the broader university community and provincial government.

For the long-term, ideally within the next three to five years, we would like to see the Graduate Department offering a single doctoral-stream M.Sc. degree and a Ph.D. degree. Should an applicant also have a degree in dentistry, that individual may choose to apply to a suite of Diploma programs; one for each of the dental specialties. Any applicant applying without a graduate degree from a peer institution would be required to enroll in either the M.Sc. (Dentistry) or Ph.D. (Dentistry) program, and the Diploma program in the dental specialty of their choice. However, for a candidate entering with a M.Sc. from a peer institution, that candidate could enroll in their chosen Diploma program without having to complete a second M.Sc. degree, or enroll in the Ph.D. program and their chosen Diploma. For a candidate entering with a Ph.D. from a peer institution, that candidate could enroll in their chosen Diploma program and engage in research as a post-doctoral fellow. We would see this last option as a positive step in encouraging a future career in the academy as a clinician-scientist.

The improved flexibility of these new programs could potentially permit a student to enroll in the M.Sc. program and 2 concurrent Diploma programs within the Faculty of Dentistry or potentially combine a Diploma program with a degree offered through another Faculty at the university. These opportunities will have the long-term benefit of distinguishing our programs from the increasing number of clinical specialty programs in dentistry across Canada and the United States.

## **Students**

*4. Reviewers recommended that the Faculty evaluate the quality and responsiveness of student support provided by the Registrar and related offices and make modifications if indicated.*

In 2016 the Faculty commissioned an external review of its Registrar's Office. Its stated objective was written as follows: "*The review will consider the functioning and services of the Faculty Registrar's office, with a view to promoting effective delivery of services and provision of support to promote student success.*" A two-day site visit was conducted by a three-person team in October 2016. At the time of writing, we are waiting receipt of this report. Following its receipt, we will take into account its recommendations and act accordingly, in order to address concerns raised by the External Review of the Faculty. Being led by the Dean and Vice-Dean Education, we anticipate implementing the recommendations as soon as practicable.

## **Research**

*5. Reviewers encouraged the Faculty to implement the findings and recommendations of the April 2015 review of research.*

The plan to address this recommendation is being led by our Vice-Dean Research. Consistent with the External Review Report of our Faculty, the 2015 external review of research commended the solid international reputation of the Faculty's research enterprise. It also presented a number of recommendations of varying urgency and priority. Among those, the following lists the most prominent, followed by our actions regarding implementation.

i). Need to improve communication and collaboration between basic science, clinical, public health and educational researchers.

We have since established "Research Rounds" as a monthly venue for all faculty members involved in all research areas to discuss current issues including opportunities to improve communication and stimulate collaboration. In January 2016 we hired a Research and Business Development Manager to develop specific strategies to a) increase grant success, b) intensify collaboration between basic science and clinical researchers and c) facilitate the translation and commercialization of research findings in all areas. This has led to several large grant submissions (e.g. CFI) including co-applicants from within and outside the Faculty, and has spurred specific collaborations between researchers in different areas (e.g

public health and immunology; and modulation of pain perception in collaboration with researchers at the Faculty of Music).

ii). Need to clarify and focus administrative support for research.

The Faculty's recently implemented new organizational structure reflects the equal importance of education and research as our main academic mandates. The reporting structure within the Office of Research has been streamlined with all support staff (financial, administrative, and technical) now reporting to the Vice-Dean Research.

iii). The need for consistent representation at appropriate research-related University Councils and committees.

In the fall of 2016 the Vice-Dean Research was appointed as member of the University's Research Advisory Board and the Institutional Research Leadership Group. This has improved visibility of research at the Faculty of Dentistry on an institutional level.

iv). Various recommendations for improvements of research resources.

These ranged from allocation of an appropriate budget for internal research funds for seed projects and support for junior faculty, to improvements in research infrastructure. The office of research has worked with the Assistant Dean/Chief Administrative Officer to develop such a research budget under oversight by the Vice-Dean Research. The most appropriate allocation of these limited funds for the short-and long-term benefit of focus and efficiency is currently being reviewed. The research infrastructure has recently seen the greatest infusion of funds for this Faculty in well over 30 years through the Federal Government's Strategic Initiative Fund (SIF), which has allowed us to realize plans for the complete renovation of our research facilities that are housed on the fourth and fifth floors of the Dentistry building. These ongoing renovations are expected to be complete by April 2018 and will accommodate the vast majority of our research faculty in state-of-the-art laboratories.

*6. Reviewers observed that articulating priorities and focusing on fewer areas may maximize research investment.*

Led by the Vice-Dean Research, the Faculty's Office of Research has identified main areas of research strength (biomaterials, cancer/oral pathology, connective tissue/wound healing, dental public health, microbiology, and pain) and an area of future growth (education research).

Targeted support and investment in these particular areas is expected to increase investment revenue and overall impact, over the long-term.

## **Faculty**

*7. Reviewers suggested that the Faculty review faculty composition to optimize the balance between part-time and full-time; they suggested that an optimal balance and better mechanisms for calibration across teaching staff could strengthen teaching and consistency of instruction across all programs, including clinical teaching.*

As is commonly found in dental schools in Canada, there is an ongoing challenge recruiting academics in the clinical fields. The Faculty will be taking advantage of the newly created professorial teaching stream to more appropriately recruit faculty for clinical teaching. Led by the Dean and Vice-Dean Education, the Faculty will review the composition of the faculty complement, with a view to gradually decrease the number of part-time faculty with a corresponding increase in the number of full-time faculty. This review will be implemented over the long-term.

Led by our Vice-Dean Education and our Associate Dean Undergraduate Education, teaching quality and calibration are being addressed in the current Progress Report of our Strategic Plan 2014-2019. A working group has been formed to develop a formal program to strengthen teaching quality across undergraduate and graduate programs. This involves collecting data on teaching quality at the Faculty and to develop a robust program that will improve the teaching quality of the faculty members and instructors in dentistry. Topics have been identified and will be scheduled on a regular basis to calibrate and improve the clinical teaching. Faculty members are also encouraged to attend CTSI and ADEA (American Dental Education Association) seminars and programs.

*8. Reviewers commented on Faculty workload, specifically the balance between research, teaching and service; in your response it may be useful to explain what is/is not possible under U of T policy.*

The University of Toronto is committed to a 40:40:20 distribution of research:teaching:service for its professorial stream faculty. Those in the teaching stream (both professorial and lecturer) are expected to have a higher percentage devoted to teaching. During a faculty member's pre-tenure years the Faculty will pursue a policy of minimizing any service commitment, thus freeing up time to devote to scholarly activity. This plan will be led by the Dean with direct oversight of mentoring for junior faculty led by the Vice-Dean Research and Vice-Dean Education.

## **Relationships**

*9. Reviewers suggested the Faculty enhance internal and external communication (e.g., regarding organizational changes, roles and responsibilities) and find ways to support faculty engagement within and across disciplines.*

The Faculty's Communications Officer, a new position that commenced in 2015, will lead the efforts to seek ways to further improve communications both internally and externally.

Internally, the Faculty has recently undergone numerous changes, including a major structural reorganization. This new structure took effect in July 2016 and its implementation is now occurring. Planning of this reorganization took place over a two-year period that included a number of open information sessions/townhalls and focus groups for faculty, staff, and students. One of the objectives of the new organizational structure was to break down perceived silos between and among the many disciplines and to improve faculty engagement. This new structure will be assessed by a number of stated performance measures and its progress will be reported to faculty, staff and students on a regular basis. Similarly, we will pursue conveying more clarity regarding roles and responsibilities of faculty and staff. Since the External Reviewers were at the Faculty, we have hired someone to fill a newly created position: Manager, Academic Administrative Services. Part of this person's role is to clearly communicate the roles and responsibilities of the administrative staff.

External communications have recently been strengthened by means such as a monthly e-newsletter that is sent out to both internal and external constituents, and a significantly redesigned alumni magazine. Most recently, led by our Communications Officer and Manager of Information and Instructional Technology Services, our Faculty website has undergone a complete review and redesign, and this new one will be launched at the end of February 2017. An ongoing activity of our Communications Officer will be to reassess all of these vehicles to look for means of improvement.

## **Resources and Planning**

*10. Develop plans to ensure financial stability, including around clinical operations, without negatively impacting the current quality of research or teaching.*

This is clearly a significant challenge for the Faculty of Dentistry and one that requires a long-term plan. The Dean will lead this plan in consultation with the Assistant Dean/Chief Administrative Officer and the Assistant Dean/Director of Clinics. The greatest financial challenge resides in the reality of running a clinical education program within the university. Rising costs of delivering dentistry, as seen by examples such as improved standard of care in infection control, electronic patient records, and digital radiography, outweigh the clinical income as our patients are charged reduced fees. A number of plans for financial stability will be considered. These include potential operational efficiencies through automation of clinical



activity where possible. We will investigate potential administrative efficiencies. We will capitalize on our recent leadership change in Advancement and the creation of a position of Communication Officer to enhance the Faculty profile and alumni relations that, in turn, can hopefully lead to increased level of donations. We will continue discussions with the provincial government to seek increased funding for clinical education.

*11. Reviewers recommended that the Faculty complete the renovations of its research laboratories and develop a capital plan to enable the renovation or building of new facilities to create a modern clinical facility.*

The research revitalization program is now underway, as mentioned above in the discussion on research. This proposal has been a beneficiary of the SIF funding provided from the 2016 federal budget announcement. The renovation of our entire research facility is on schedule to be completed by the target date of April 2018.

A feasibility plan for clinical renovation and renewal with attention to sequencing a project to create a modern clinical facility is now underway. As a current Strategic Plan priority being led by the Assistant Dean/Director of Clinics, this proposal is scheduled to be presented by the end of the 2016-17 academic year. A capital plan for this proposal will then follow, and will be led by the Dean.

## **Summary**

The External Review Report generated a number of recommendations that will help strengthen the Faculty of Dentistry. We will take all of these into account and incorporate them as we concurrently continue to implement our Strategic Plan priorities.

Sincerely,



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Professor and Dean  
Zwingerberger Decanal Chair