



Dr. Howard Tenenbaum

## Recent Research Developments at the University of Toronto

Welcome to this special issue of *JCDA*, produced in collaboration with the University of Toronto faculty of dentistry. This edition features a variety of clinical articles authored by teaching staff at the U of T dental faculty, providing updates on some of the innovations in research, oral health care and education that have recently been introduced at the university.

Dr. David Mock, dean of the faculty of dentistry, offers his perspective on the future of dental education. Dr. Mock believes that we need to change our paradigm from a professional — and hence educational — standpoint and embrace the concept of the ‘physician of the mouth.’ Such a philosophical shift would expand upon traditional surgical and clinical skills training by placing a greater emphasis on understanding the rationales and biological principles underlying the diagnosis and management of oral diseases. Dr. Paul Santerre, associate dean of research and professor of biomaterials, contributes an overview of research at the University of Toronto. His article shows that as the faculty of dentistry has evolved, so has its scope of research in biomaterials, cell and molecular biology, and clinical epidemiology, to name but a few areas.

The “Point of Care” articles highlight our increasingly strong clinical research and training base at the university. Our academic and clinical staff provides very useful and practical approaches in several areas of clinical practice, including the development of novel diagnostic approaches for management of periodontitis, treatment of the traumatically avulsed tooth and guidelines for selection of appropriate restorative materials.

The papers in the “Clinical Practice” section demonstrate a level of creativity in addressing aspects of oral health care, from regeneration of bone using bone morphogenic protein to management of individuals suffering from orofacial pain

that is caused by disease of the central nervous system. These examples of patient care show how the divisions between dentistry and medicine are beginning to fade. The systematic review article on the use of fluoride varnish for the prevention of tooth decay is especially timely and important given the recent upsurge in public concern about exposure to fluorides.

Dr. Absjörn Jokstad, professor and head of prosthodontics, reviews the progress of research in implant dentistry, a field pioneered in North America by Dr. George Zarb at the University of Toronto. As Dr. Jokstad points out, many subsequent U of T researchers have added to the profession’s understanding of the biological principles that underlie osseointegration. His article reminds us of where we have come from and points to where we should be going with regard to implant dentistry in particular and endosseous implant treatment in general.

Other studies at the university on the subject of oral mucositis have shown that we can use the oral cavity to understand disease progress. This has been demonstrated in patients undergoing various forms of chemotherapy or radiation therapy for leukemia. Using newly developed analytical tools, researchers can now contribute to the development of treatment strategies or new drugs that will hopefully control oral mucositis and perhaps other painful mucosal diseases.

Finally, Dr. Chris McCulloch, professor and Canada Research Chair in Matrix Dynamics, and myself (while still associate dean, diagnostic and biological sciences), contribute an article on interprofessional education at the university. We want to focus on an innovation we are particularly proud of — the establishment of an interprofessional clinical unit that will focus on transdisciplinary research in the areas of diabetes, leukemia, oral mucositis, periodontitis, facial pain, implant dentistry, and bone regeneration. We hope to foster inter- and transdisciplinary research and education so that the dentists of the future will be prepared for any upcoming changes in the practice of dentistry and related areas.

The articles presented in this special issue demonstrate that while we must continue to expand our knowledge base with respect to specific dental issues, it is also strikingly important to acknowledge that the traditional boundaries between dental research, medical research and education are blurring — and that’s a good thing!

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