



Dr. Greg Kawchuk DC, PhD
CANADA RESEARCH CHAIR
Faculty of Rehabilitation Medicine
University of Alberta

The Canadian Chiropractic Association (CCA) and the Canadian Chiropractic Research Foundation (CCRF) take great pleasure in announcing that Dr. Greg Kawchuk DC, PhD has been awarded a Canada Research Chair at the University of Alberta in Edmonton, Alberta.

The Government of Canada established the **Canada Research Chairs Program** in 2000 providing \$900 million to support the establishment of 2,000 Canada Re-

search Chairs. The key objective of the Canada Research Chairs Program is to enable Canadian universities, together with their affiliated research institutes and hospitals, to achieve the highest levels of research excellence to become world-class research centres in the global, knowledge-based economy.

The Chairs Program is governed by a Steering Committee comprising the presidents of the Natural Sciences and Engineering Research Council (NSERC), the Canadian Institutes of Health Research (CIHR), the Social Sciences and Humanities Research Council (SSHRC), and the Canada Foundation for Innovation, as well as the deputy minister of Industry Canada.

The Canadian Chiropractic Association (CCA) and the Canadian Chiropractic Research Foundation (CCRF) have been a significant part of Dr. Kawchuk's meteoric rise to the level of a world class researcher. Dr. Kawchuk initially became Canada's **1st university based Chiropractic Research Chair** at the University of Calgary. He has held the Chair since 2000. In support of the Chair and his chiropractic research projects, Dr. Kawchuk holds substantial funding grants from the CCA, CCRF, FCER, Whitaker Foundation, CCPA, University of Calgary, NSERC, and CIHR. His research is focused on developing functional spinal imaging techniques to better understand how the spine is injured and how it may be healed. Specifically, his investigations involve development of an ultrasonic technique able to measure spinal stiffness in a non-invasive manner, the creation of a new magnetic resonance imaging (MRI) technique able to distinguish acute from chronic intervertebral disc herniations, and the quantification of treatment dosage, outcomes and complications of spinal manipulation.

The Canada Research Chairs Program is the most ambitious initiative of its kind in the world. It allows Canadian universities to attract and retain outstanding researchers at the peak of their careers. To date, 926 Chairs

have been awarded to researchers from across Canada and around the world.

The Chairs Program allows these researchers to advance their careers among world-class colleagues and gain access to state-of-the-art research facilities. It gives them the opportunity to mentor and train top graduate students who can then become the next generation of world-class researchers at Canadian universities, and creates an enriched university environment that will contribute to a stronger economy and a better quality of life for Canadians.

Research program for the CRC in Spinal Function

Spinal disorders are a constellation of debilitating musculoskeletal conditions that affect almost 80% of Canadians over their lifetime. Despite reductions in our physical workload, problems related to spinal disorders continue to grow faster than any other disease group. These facts suggest that current resources are insufficient; new tools, tests and teams are needed to reduce the significant cost and morbidity associated with these conditions. This research programme will advance the overall understanding of spinal disorders by meeting these needs in order to pose two over-arching research questions: 1) what are the mechanisms that initiate and sustain spinal disorders and 2) can this mechanistic knowledge be used to alter the outcomes of spinal disorders? A focus on the most prevalent of these conditions will maximize the impact of this programme on Canadian society. To achieve this goal, three complementary spheres of inquiry will be conducted simultaneously. The three spheres of inquiry are:

- 1 **Methods Development:** Development of methodologies that are unique in their ability to span both *in vitro* and *in vivo* settings.
- 2 **Tissue Interrogation:** Employment of these methodologies to generate a knowledge continuum of spinal function that spans the bench, bedside and backyard.
- 3 **Gene to Mechanics:** Unite traditionally segregated investigational approaches to explore genotomechanic interactions and their effect on spinal function.

This research programme will be conducted within the new Common Spinal Disorders Laboratory in the Faculty of Rehabilitation Medicine at the University of Alberta, a

space that will act as an academic and physical convergence point for a diverse group of clinician-scientists. The open and reconfigurable spaces of this facility will incubate collaborations in traditionally isolated avenues of exploration (biomechanics, genetics and socioeconomics) and unite, for the first time, investigators whose clinical backgrounds represent the three major spine care professions (medicine, physical therapy and chiropractic). From this environment, Dr. Kawchuk will be able to address current knowledge deficits in spinal physiology and function. In the long-term, a genotomechanic framework will emerge on which to build a new understanding of the mechanisms involving spinal disorders. Such a framework will provide the palette from which new strategies for prevention, diagnosis, treatment and public policy will be developed. This team, the diversity of their backgrounds and the facility itself, will create an unparalleled atmosphere of collaboration, experimental innovation and graduate training. With a Tier I Canada Research Chair leading the investigative team (Dr. Michele Crites Battié) and the generous resources provided by the U of A, a fertile landscape is available on which to extend Dr. Kawchuk's initial investigations into a mature, sustainable and innovative programme of research. Team members include Greg Kawchuk, Michele Crites-Battié, Tapio Videman, Doug Gross, and Allyson Jones.

Dr. Kawchuk's appointment to a Canada Research Chair provides salary support for a period of ten years. The Canada Foundation for Innovation provides infrastructure support to the Chairs Program. By the time all 2,000 Chairs have been established, the Foundation will have provided up to \$250 million in research infrastructure needed by the Chair holders to carry out world-class research.

Integrating new chiropractic knowledge into Canada's health care system is a top priority for the CCA and CCRF and will bring tremendous benefit to both Canadians and the health system.

For further information contact Dr. Allan Gotlib, Director, Research Programs at the Canadian Chiropractic Association.

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