



Samuel Lunenfeld Research Institute – Administration Welcome

Science is the backbone of advancement in medicine. It is through research that new knowledge, understanding and therapies are found, ultimately improving outcomes and quality of lives for patients at Mount Sinai Hospital and throughout the world. Pushing the limit of what will be possible tomorrow is what some of the world's very best researchers are doing today – and have been doing for the past for 20 years - right here at Mount Sinai, in our very own Samuel Lunenfeld Research Institute (SLRI).

It has been an honour to join the SLRI as Director during this notable 20th anniversary year in 2005, and to become a part of this superb team, and great institution, home to many of Canada's highest impact medical researchers. For example, in the last Canadian Institutes for Health Research (CIHR) grants competition our scientists received \$6.5-million in funding, virtually the same as much larger research enterprises in Toronto.

It is exhilarating – personally and professionally - to follow the great Directorships that precede me – from the founding in 1985 under Dr. Lou Siminovitch, to Dr. Alan Bernstein who moved on to become the inaugural president of CIHR, to the recent leadership of Dr. Tony Pawson who stepped down after an exceptional five-year term in order to concentrate on his own superlative research interests. We are particularly proud of Tony as he was one of this year's five inductees into the Canadian Medical Hall of Fame. I am deeply honoured to step into Tony's Directorship shoes. I hope to live up to his standards and to inspire all of the Institute's scientists – and to be inspired by them.

Indeed, there has been much to be inspired by in this past year. Our anniversary celebration, *Decades of Discovery*, was a reflection on the remarkable growth of the SLRI, and a springboard for our exciting future. With over 700 staff including 32 Principal Investigators, more than 125,000 square feet of lab space, and a \$64-million budget (2004-05), the SLRI is now considered one of the world's top ten biomedical research centres. We feature some of the world's best minds and are large enough to make a profound difference in the global scientific community – and yet we are small enough to retain the personal interactions that are critical to exchange of ideas. Our award-winning researchers are taking steps every day toward a better understanding of chronic illnesses such as cancer, gastrointestinal disease, heart disease, arthritis and diabetes, as well as improving women's and infants' health. We have chosen a strategic focus on these areas due to their tremendous impact on health, and their alignment with Mount Sinai's own clinical centres of excellence.

There are great benefits having a world-renowned research institute in an equally revered teaching hospital such as Mount Sinai. We are perfectly poised to translate the latest knowledge to the frontline of patient care, enabling us to deliver the best medicine. Scientific discovery can reveal the way a gene, a protein, or a drug functions in the body, uncover previously unimagined ways in which our cells work, and identify better means to prevent, detect and treat disease. Without these intellectual advances, medicine cannot progress.

Through the intimate association of the SLRI and the Hospital, this research is carried further by the intermingling of basic scientists, clinical scientists, epidemiologists, and physicians. All diseases, no matter how complex or devastating, have as their root cause underlying aberrations

that we can discover and then use this new information to design intelligent and effective interventions. For example, before committing resources to expensive drug development, we can accurately predict whether switching off a particular protein will be useful. If so, we can then screen for molecules that specifically interfere with that protein – effectively increasing our “earned run average.”

2005-2006 has certainly been marked by outstanding work by our researchers. Our ability to secure peer-reviewed research funds and infrastructure grants has continued to increase at a truly impressive rate. As a few examples, we received \$15-million from the Canada Foundation for Innovation for new equipment towards an expansion in the area of Systems Biology. Dr. Andras Nagy has been highly funded for his pioneering work on human embryonic stem cells, Dr. James Dennis heads a CIHR-funded team project that will investigate the genetic differences among patients who are sensitive or resistant to the SARS virus; and Genome Canada will support a \$12-million project on protein interactions, in collaboration with the University of Western Ontario.

The SLRI is excited to have recruited and gained the fresh energies of two remarkable researchers in 2005. Dr. Anne-Claude Gingras trained at the Institute for Systems Biology in Seattle. She is an authority in the field of proteomics (the comprehensive analysis of proteins), and in the cellular pathways that control cell growth, with important implications for cancer and diabetes. Dr. Helen McNeill comes to us from Cancer Research UK in London, England. Helen is an expert in the genetics of cellular organization, and uses fruit flies and mice to investigate the conserved processes that govern the architecture of tissues. In the summer of 2006, we will welcome Dr. Dan Drucker to the SLRI. Dan is an exceptionally gifted clinician scientist and will further enhance our ability to transfer discoveries from the bench. We will also be combing the globe for other talented scientists – we are not resting on our laurels.

Our researchers lead the country in competing for funds for their innovative research programs and are supported by Federal and Provincial grants as well as charities such as the Canadian Cancer Society and Heart & Stroke Foundation. This year alone, we received over \$50 million in such support. Yet the SLRI would not be able to perform at such a leading, transformational level without the generosity of the donor community who share our scientists’ passion for research excellence.

One example of this generosity is the expansion of the SLRI that has been made possible by gifts from the Lunenfeld and Lebovic families which will increase our laboratory space by 50%. This new facility will open in the fall of 2007 and will be followed by rejuvenation of our existing space – allowing our world-leading scientists to work in an equally leading-edge environment.

It is an exciting time to lead the Institute, and I look forward to nurturing the continued successes that our future holds. Please venture through the following pages and learn more about how our scientists’ research enables medicine here at home, and around the world.

Dr. James Woodgett

Director of Research
Samuel Lunenfeld Research Institute