



Profiles in Research

Research Governors Society

SIR MORTIMER B. DAVIS-JEWISH GENERAL HOSPITAL FOUNDATION



Lady Davis Institute for Medical Research

Founded in 1974, the Research Governors Society (RGS) provides members with the opportunity to support leading-edge research at the Jewish General Hospital's (JGH) Lady Davis Institute for Medical Research (LDI), one of Quebec and Canada's premier research institutes. By advancing innovative research in AIDS, aging, cancer, cardiovascular disease, emergency medicine, endocrinology and metabolism, hemovascular diseases and human genetics, LDI researchers seek to determine the causes of disease and devise new and more effective means of prevention and treatment.

The RGS boasts roughly 850 members who contribute at four giving levels—**bronze, silver, gold** and **platinum**. Programs like the RGS are vital to providing our scientists with the funding that they require to remain at the forefront of scientific discovery. Superior health care depends largely on breakthroughs made in the laboratory. It is only through scientific inquiry that answers will be found to today's most important medical questions.

Ernesto L. Schiffrin, MD, PhD, FRCPC, FACP



Dr. Ernesto Schiffrin joined the JGH on January 1, 2006 as Physician-in-Chief and Chair of the JGH's Department of Medicine, which includes the Divisions of Allergy & Immunology, Cardiology, Dermatology, Endocrinology, Gastroenterology, Geriatric Medicine, Internal Medicine, Nephrology, Pulmonary

Diseases and Rheumatology. A native of Argentina, Dr. Schiffrin received his MD from the University of Buenos Aires and holds a PhD in Experimental Medicine from McGill University.

Dr. Schiffrin is an authority on hypertension (elevated blood pressure) and a specialist in internal medicine who was recently elected as a Fellow of the Royal Society of Canada, being recognized for his role as a world leader in the "mechanisms and management of arterial hypertension". As recipient of a Canada Research Chair, Dr. Schiffrin is also Director of the LDI's Vascular and Hypertension Research Unit as well as a Professor and Vice-Chair for Research in McGill University's Department of Medicine.

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Morris Schweitzer PhD, MD, FRCPC



Dr. Morris Schweitzer joined the JGH's Division of Endocrinology in 1979 following completion of Fellowship training in Endocrinology at the Mayo Clinic in Rochester, Minnesota where he worked on gonadotropin regulation of ovarian steroid hormone production. A PhD in steroid hormone metabolism (McGill University)

and MD (Memorial University), who completed his internship and residency in Internal Medicine at the Montreal General Hospital, Dr. Schweitzer is a senior staff member who is currently Director of the Lipid Research and Management Clinic and Co-Director of the Cardiovascular Prevention Centre. Dr. Schweitzer is also an Associate Professor in McGill University's Faculty of Medicine, where he is actively involved in teaching at all levels.

As Co-Director of the Cardiovascular Prevention Centre, Dr. Schweitzer continues to treat high-risk patients with a variety of lipid disorders. The Cardiovascular Prevention Centre features a multidisciplinary approach to cardiovascular disease with expertise from Endocrinology, Cardiology, Internal Medicine,

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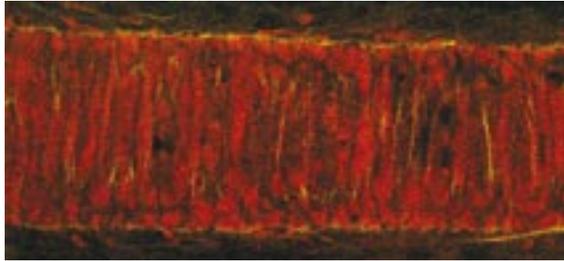
Dr. Ernesto L. Schiffrin (continued)

Dr. Schiffrin's research interests include:

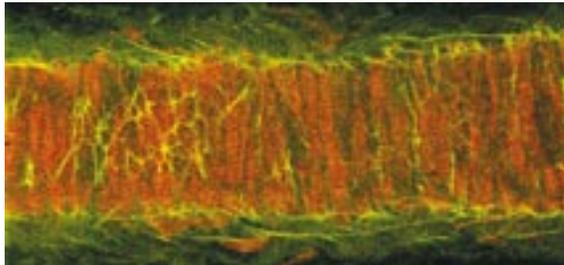
- the biology of blood vessels and the role of endothelin, angiotensin, nuclear receptors and inflammation in hypertension;
- the effects of antihypertensive treatment on blood vessels of hypertensive patients; and
- the molecular and cellular determinants of elevated blood pressure.

Given that elevated blood pressure has actually been shown to pose an even greater health risk than tobacco, the implications of Dr. Schiffrin's research are truly far-reaching.

Confocal microscopy shows the impact of hypertension on small arteries.



Arteries from normotensive individual



Arteries from hypertensive individual

As Physician-in-Chief, Dr. Schiffrin has put a renewed emphasis on the importance of research to the Department of Medicine, positioning it at the cutting edge of medical science especially as regards translational research that transforms scientific breakthroughs in the lab into new therapies for patients sooner. As Founder of the new Cardiovascular Prevention Centre, located in the new Pavilion H, Dr. Schiffrin has helped to create a leading facility for the diagnosis and prevention of cardiovascular disease at the JGH. This centre, with its emphasis on prevention, will not only result in long-term savings for our health care system, but will also significantly improve patients' quality of life and enhance clinical research in the area of cardiovascular disease. Cardiovascular disease, which includes both heart disease and stroke, is the number one cause of death in Canada as well as a major cause of disability and a primary source of increased health care costs.

A former President of the Canadian Hypertension Society and immediate Past-Chair of the American Heart Association's High Blood Pressure Research Council, Dr. Schiffrin is currently President of the InterAmerican Society of Hypertension as well as Associate Editor of Hypertension (Journal of the AHA). As author of over 390 publications, and numerous book chapters and editor of one published book (with two in preparation on the molecular and clinical aspects of vascular disease and hypertension), Dr. Schiffrin is also a most sought after speaker.

Dr. Morris Schweitzer (continued)

Nephrology, Family Medicine, Psychology, Nursing and Dietary Science. Risk factor management involves treatment of cholesterol disorders, hypertension, smoking cessation and weight control as well as assessment and treatment of novel risk factors that impact on vascular disease. The centre, which serves a large patient population, also allows for more effective clinical and basic research as well as expanded teaching programs.



Dr. Schweitzer's research focuses on human vascular disease, studying abdominal aortic aneurysms, which are caused by a weakening of the abdominal aortic wall. This can result in spontaneous

rupture, a common and potentially life threatening condition that occurs in 5-9% of North Americans (primarily men) over age 65. In 65% of cases, ruptured aneurysms result in death, accounting for some 15,000 deaths each year and being the tenth leading cause of death in North America. Over 80,000 surgical procedures are performed each year to repair abdominal aortic aneurysms.

Specifically, Dr. Schweitzer's lab is focused on clarifying the events that lead to programmed cellular death (apoptosis) in those cells that are important to maintaining the structural integrity of the abdominal aortic wall as well as regulation of enzymes (metalloproteinases) that are capable of digesting elastin and collagen, both of which are important structural components of the aortic wall. Digestion of elastin and collagen diminishes structural integrity, allowing aneurysms to form and enlarge with potentially disastrous results. By identifying gene mutations in apoptosis regulating factors and metalloproteinases and metalloproteinase inhibitors that could have a direct impact on the development and progression of vascular disease, a clearer understanding of the mechanisms involved may be ascertained possibly leading to discovery of innovative new pharmaceuticals to prevent aortic aneurysm formation and potentially decrease the associated morbidity and mortality. Dr. Schweitzer's research findings have been published in peer-reviewed journals and have been presented at national and international forums.

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