

## 2001/2002 Research Fellows

\* *Applicants who are funded via the HSFC/CIHR Health Research Partnership Fund.*

- \* **Aarts, Michelle M** (Surgery, University of Toronto)  
*Modulation of excitotoxicity by protein-protein interactions at the post-synaptic density.*  
Supervisor: Tymianski, Michael
- \* **Anderson, Christopher M.** (Neurology, University of California)  
*Purinergic signaling and glutamate release in cerebral ischemia.*  
Supervisor: Swanson, Raymond A.
- **Annot, Michelle I.** (Physiology & Biophysics, University of Calgary)  
*Modulation of N-type calcium channels by G-protein beta subunit isoforms.*  
Supervisor: Zamponi, Gerald W.
- \* **Barber, Philip A.** (Clinical Neurosciences, University of Calgary)  
*Caspase and NF-KB activation mediated cerebral inflammation in focal ischemia.*  
Supervisor: Buchan, Alastair M.
- \* **Basque, Jean-Rene** (Cell Growth and Signaling Laboratory, Clinical Research Institute of Montreal)  
*Genetic analysis of the roles of ERK2 MAP kinase during embryonic development and cellular differentiation.*  
Supervisor: Meloche, Sylvain
- **Benisty, Jacques** (Surgery & Cell Biology, Children's Hospital)  
*Angiogenic growth factors in pulmonary vascular disease.*  
Supervisor: Folkman, Judah
- **Bouzeghrane, Fatiha** (Biologie cellulaire de l'hypertension, IRCM)  
*Role de l'integrine dans les processus d'adhésion des fibroblastes cardiaques de rat adulte après stimulation in vivo par des peptides vasoactifs*  
Supervisor: Thibault, Gaétan
- **Cunningham, Michael A.** (Biological Chemistry, University of Michigan)  
*Elucidation of the phospholipid binding site on human factor VIII.*  
Supervisor: Kaufman, Randal J.
- \* **Czubryt, Michael P.** (Molecular Biology, University of Texas Southwestern Medicine at Dallas)  
*Role of MEF2 in cardiac hypertrophy.*  
Supervisor: Olson, Eric N.
- **Derakhchan Khadjou , Katayoun** (Medicine, Montreal Heart Institute)  
*Three-dimensional mapping of atrial fibrillation.*  
Supervisor: Nattel, Stanley
- \* **Devereaux, Philip J.** (Clinical Epidemiology & Biostatistics, McMaster University)  
*Evaluation of perioperative cardiac risk and modification.*  
Supervisor: Guyatt, Gordon H.
- \* **Drolet, Benoit** (Clinical Pharmacology, Vanderbilt University)  
*Cardiac sodium channel: the possible role of genetics in sudden cardiac death.*  
Supervisor: Roden, Dan M.
- \* **Dumont, Aaron S.** (Neurosurgery, Foothills Hospital)  
*Metabolism and the ischemic brain: new perspectives.*  
Supervisor: Sutherland, Garnette R.

- **Elmoselhi, Adel B.** (Medicine, University of Toronto)  
*Role of endothelin-1 in vascular tone and growth: studies in transgenic conditional overexpression targeted to smooth muscle.*  
Supervisor: Stewart, Duncan J.
- \* **Fedak, Paul W.** (Cardiac Surgery, University of Toronto)  
*Experimental cardiomyocyte transplantation to improve left ventricular function in chronic decompensated mitral regurgitation.*  
Supervisor: Weisel, Richard D.
- \* **Feng, Zhong-Ping** (Neuroscience, University of Calgary)  
*Membrane targeting of presynaptic calcium channels.*  
Supervisor: Zamponi, Gerald W.
- **Foell, R. Blaine** (Neurology & Neurological Sciences, London Health Sciences Centre)  
*MRI predictors of clinical outcomes in t-PA treated patients.*  
Supervisor: Hachinski, Vladimir C.
- \* **Gladstone, David J.** (Medicine, University of Toronto)  
*Amphetamine for stroke recovery: a clinical and fMRI study.*  
Supervisor: Black, Sandra E.
- **Grand'Maison, Anne** (Medicine, Ottawa Hospital Research Institute)  
*Pharmacokinetic profile of subcutaneous low-molecular-weight-heparin in overweight and underweight patients with acute venous.*  
Supervisor: Wells, Philip S.
- **Guo, Lei** (Biochemistry, University of Alberta)  
*Transcriptional control of cardiac expression of calreticulin.*  
Supervisor: Michalak, Marek
- **Han, Hong** (Medicine, Montreal Heart Institute)  
*Role of potassium channels in cardiomyocyte apoptosis.*  
Supervisor: Wang, Zhiguo
- **Heckman, George A. W.** (Medicine, McMaster University)  
*Development and evaluation of a CHF care map for long-term care.*  
Supervisor: McKelvie, Robert S.
- \* **Hemmings, Denise G.** (Perinatal Research Centre, University of Alberta)  
*Endothelial cell dysfunction in preeclampsia.*  
Supervisor: Davidge, Sandra T.
- **Hennan, James K.** (Pharmacology, University of Michigan)  
*Role of the complement system in mediating myocardial injury and pharmacological cardioprotection.*  
Supervisor: Lucchesi, Benedict R.
- \* **Hirasawa, Michiru** (Physiology and Biophysics, University of Calgary)  
*Mechanism of neurotransmitter release and plasticity in the supraoptic nucleus.*  
Supervisor: Pittman, Quentin J.
- **Huang, Yue-Qiao** (Brain and Behaviour, Hospital for Sick Children)  
*NMDA receptor regulation by Src: a role of PSD-95.*  
Supervisor: Salter, Michael W.
- \* **Jackson, Michael F.** (Physiology, University of Toronto)  
*Mechanisms underlying the PKG-independent regulation of AMPA receptors by cGMP.*  
Supervisor: MacDonald, John F.

- \* **Jahromi, Babak S.** (Neurosurgery, University of Chicago)  
*Effect of subarachnoid hemorrhage and vasospasm on smooth muscle calcium homeostasis.*  
Supervisor: Macdonald, Robert Loch
- \* **Jain, Neelesh K.** (Surgery, University of Toronto)  
*Hemodynamic forces prime the NF- $\kappa$ B signal transduction pathway to initiate human atherosclerosis.*  
Supervisor: Macdonald, Cybulsky, Myron
- \* **Jong, Philip** (Cardiology, University of Toronto)  
*Long-term mortality and morbidity in patients with left ventricular dysfunction.*  
Supervisor: Naylor, C. David
- **Jutras, Isabelle** (Biologie des Interactions Cellulaires, Institut Pasteur)  
*Interactions of the intracellular pathogen chlamydia with host cells: effects on cellular trafficking.*  
Supervisor: Dautry-Varsat, Alice
- \* **Kahr, Walter** (Pathology & Molecular Medicine, McMaster University)  
*Studies of an inherited fibrinolytic defect associated with increased urokinase plasminogen activator.*  
Supervisor: Hayward, Catherine P.
- **Kaprielian, Roger** (Cardiovascular Research Centre, Massachusetts General Hospital)  
*Role of Kv4.3 and SERCA2a on [Ca<sup>2+</sup>]<sub>i</sub> and signal transduction in cardiac failure.*  
Supervisor: Hajjar, Roger
- \* **Kaul, Padmaja** (Medicine, Duke University Medical Centre)  
*Long-term impact of early revascularization in AMI patients: Canada versus the US.*  
Supervisor: Mark, Daniel B.
- **Kong, Jennifer Y.** (Medicine, Jack Bell Centre)  
*Cell survival of macrophages by oxidized LDL is by a PI3K-dependent pathway in atherosclerosis.*  
Supervisor: Steinbrecher, Urs P.
- **Krebs, Claudia** (Physiology, University of British Columbia)  
*Calbindin and NMDA receptor subtypes in ischemia/anoxia-induced neuron death.*  
Supervisor: Baimbridge, Kenneth G.
- \* **Lam, Buu-Khanh** (Thoracic and Cardiovascular Surgery, Cleveland Clinic Foundation)  
*Defining the appropriate roles for valve replacement versus valve repair in the spectrum of mitral valve disease.*  
Supervisor: Blackstone, Eugene H.
- **Leary, Scot C.** (Biology, Queen's University)  
*Genetic and functional basis of cytochrome C oxidase deficiency in fatal infantile cardiomyopathy.*  
Supervisor: Shoubridge, Eric A.
- \* **Lee, Douglas S.Y.** (Medicine & Public Health Science, University of Toronto)  
*Determination of prognosis and outcomes of congestive heart failure in Ontario.*  
Supervisor: Tu, Jack V.
- \* **Lee, Paul C.** (Medicine, University of Toronto)  
*Microvascular dysfunction as etiology and target for therapy in heart failure.*  
Supervisor: Liu, Peter
- \* **Leong-Poi, Howard M.** (Medicine, University of Virginia)  
*The noninvasive assessment of inflammation using contrast enhanced ultrasound.*  
Supervisor: Kaul, Sanjiv
- **Leung, Nathalie** (Medicine, Toronto General Hospital)  
*Importance of substrate delivery and hepatic hyperinsulinemia in VLDL production in insulin*

*resistance.*

Supervisor: Lewis, Gary F.

- **Leung, Yuk Man** (Physiology and Medicine, University of Toronto)  
*The mechanisms of cardiac hypertrophy and disease following reductions in transient outward currents.*  
Supervisor: Backx, Peter H.
- **Liu, Que** (Pharmacology & Toxicology, University of Western Ontario)  
*Na-H exchange and cardiac hypertrophy and heart failure.*  
Supervisor: Karmazyn, Morris
- **Lomax, Alan** (Physiology & Biophysics, University of Calgary)  
*Na<sup>+</sup>/Ca<sup>2+</sup> and Na<sup>+</sup>/Ca<sup>2+</sup>/K<sup>+</sup> antiporters in the cardiovascular system.*  
Supervisor: Giles, Wayne R.
- \* **Mallidi, Hari** (Surgery, University of Toronto)  
*Radial artery patency randomized clinical trial.*  
Supervisor: Weisel, Richard D.
- \* **Martino, Rosemary** (Medicine, Toronto Western Hospital)  
*Development of a medical outcomes scale for adult stroke patients with dysphasia.*  
Supervisor: Diamant, Nicholas
- **Masumiya, Haruko** (Physiology & Biophysics, University of Calgary)  
*Molecular characterization of the ion-conducting pore of the cardiac Ca<sup>2+</sup> - release channel (ryanodine receptor).*  
Supervisor: Chen, S.R. Wayne
- **McGuire, John J.** (Pharmacology & Therapeutics, University of Calgary)  
*Endothelium-derived vasoregulatory factors.*  
Supervisor: Triggle, Christopher R.  
Co-supervisor: Hollenberg, Morley D.
- \* **Miner, Steven E. S.** (Medicine, University of Toronto)  
*Transcardiac L-arginine kinetics and nitric oxide synthase activity.*  
Supervisor: Parker, John D.
- **Mochizuki, Satsuki** (Cardiovascular Research, Hospital for Sick Children)  
*The role of elastin receptor(s) in modulating cellular proliferation.*  
Supervisor: Hinek, Aleksander
- \* **Nantthakumar, Kumaraswamy** (Medicine, University of Alabama at Birmingham)  
*Cardiac optical mapping of ventricular fibrillation and defibrillation.*  
Supervisor: Ideker, Raymond E.
- **Nygren, Anders** (Physiology & Biophysics, University of Calgary)  
*Voltage-sensitive dye recordings of cardiac rhythm disturbances: image processing algorithms.*  
Supervisor: Giles, Wayne R.
- \* **O'Leary, Deborah** (Kinesiology, University of Western Ontario)  
*Gender and central autonomic control in stroke.*  
Supervisor: Shoemaker, J. Kevin
- \* **Oudit, Gavin Y.** (Medicine, University of Toronto)  
*Role of estradiol and L-type calcium channel in the pathophysiology of iron-overload.*  
Supervisor: Backx, Peter H.

- **Pheng, Leng Hong** (Neurologie, Université McGill)  
*Internalisation et trafic intracellulaire des recpteurs du NPY*  
Supervisor: Beaudet, Alain
- **Pritzker, Laura** (Engineered Biomaterials, University of Washington)  
*Role of osteoprotegerin in endothelial cell survival and angiogenesis.*  
Supervisor: Giachelli, Cecilia
- **Raffai, Robert L.** (Gladstone Institute of Cardiovascular Disease, The J. David Gladstone Institutes)  
*An animal model for human apolipoprotein E4 and diet-induced hypercholesterolemia.*  
Supervisor: Weisgraber, Karl Heinrich
- \* **Raj, Satish** (Medicine, University of Calgary)  
*Influence of cardiac hypertrophy and gender on Class III antiarrhythmic drug effects.*  
Supervisor: Gillis, Anne M.
- **Remy-Zolghardi, Murielle** (Médecine, Université Laval)  
*Approche originale de reconstruction vasculaire par l'utilisation de progéniteurs cellulaires.*  
Supervisor: Auger, François A.
- **Rezvani, Mojgan** (Medicine, Harvard Medical School)  
*Genomic approach towards understanding the underlying mechanisms involved in cardiomyocyte differentiation.*  
Supervisor: Dzau, Victor J.
- \* **Ruel, Marc André** (Surgery, Beth Israel Medical Center)  
*Therapeutic angiogenesis research, including: 1. Effects in endothelial dysfunction and 2. Revascularization using a gastric submucosal patch.*  
Supervisor: Sellke, Frank
- **Rupert, Jim** (Pathology, University of British Columbia)  
*Genetic risk factors for cardiovascular disease in Native Americans.*  
Supervisor: Devine, Dana V.
- \* **Sahlas, Demetrios J.** (Neurology, Sunnybrook Health Science Centre)  
*Brain mapping and biomarkers in poststroke dementia.*  
Supervisor: Black, Sandra E.
- **Sambandam, Nandakumar** (Pediatrics & Pharmacology, University of Alberta)  
*5'AMP-activated protein kinase control of glucose metabolism in the newborn heart.*  
Supervisor: Lopaschuk, Gary D.
- **Schulze, Costas** (Pediatrics & Pharmacology, University of Alberta)  
*Role of matrix metalloproteinases in cytokine-mediated heart injury.*  
Supervisor: Schulz, Richard
- **Sharma, Parveen** (Medical Research, University of Toronto)  
*Sites of interaction between phospholamban and Ca<sup>2+</sup> pump.*  
Supervisor: MacLennan, David H.
- \* **Sheikh, Farah** (Molecular Medicine, University of California)  
*The role of cypher in cardiac structural integrity and cardiac disease.*  
Supervisor: Chien, Kenneth R
- \* **Skaro, Anton** (Surgery & Pathology, Dalhousie University)  
*Cytolytic mechanisms in the pathogenesis of aortic allograft arteriosclerosis.*  
Supervisor: Hirsch, Gregory M.

- \* **Stewart, Ronald J.** (Biochemistry, Queen's University)  
*Characterizing the antifibrinolytic properties of TAFa.*  
Supervisor: Nesheim, Michael E.
- \* **Storey, Margo K.** (Medicine, National Jewish Medical Research Centre)  
*The biochemistry and genetics of eucaryotic lipid transport and organelle biogenesis.*  
Supervisor: Voelker, Dennis R.
- **Temsah, Rana** (Laboratory of Cardiac Growth & Differentiation, Clinical Research Institute of Montreal)  
*The CNC family of transcription factors and oxidative stress in the heart.*  
Supervisor: Nemer, Mona
- **Thorneloe, Kevin S.** (Pharmacology, University of Vermont)  
*Regulation of the BK channel by its modulatory beta 1 subunit.*  
Supervisor: Nelson, Mark T.
- \* **Tsuda, Takeo** (Banting & Best Department of Medical Research, University of Toronto)  
*Conformational changes that accompany Ca<sup>2+</sup> transport by SERCA molecules.*  
Supervisor: MacLennan, David H.
- **Tupling, Allan R.** (Banting & Best Department of Medical Research, University of Toronto)  
*Analysis of compensatory mechanisms in animal models of Ca<sup>2+</sup> regulatory muscle diseases.*  
Supervisor: MacLennan, David H.
- **Turcato, Sally** (Pharmacology & Therapeutics, University of Calgary)  
*Regulation of vascular smooth muscle KNDP channels by PKC.*  
Supervisor: Cole, William C.
- \* **Verma, Subodh** (Cardiology, University of Calgary)  
*Diabetes, atherosclerosis and endothelial dysfunction.*  
Supervisor: Anderson, Todd J.
- **Walker, John B.** (Medicine, McMaster University)  
*Differential regulation of thrombomodulin-dependent activation of TAFI and protein C.*  
Supervisor: Bajzar, Laszlo
- **Wang, Xi** (Pathology, University of Washington)  
*Functional genomics of arterial unique genes.*  
Supervisor: Schwartz, Stephen
- \* **Wang, Yushan** (Brain and Behaviour Research, University of Toronto)  
*Molecular mechanisms by which insulin induces a rapid internalization of AMPA receptors.*  
Supervisor: Wang, Yu Tian
- **Wilson, David P.** (Biochemistry and Molecular Biology, University of Calgary)  
*CA<sup>2+</sup> sensitization of smooth muscle contraction.*  
Supervisor: Walsh, Michael P.
- \* **Wu, Lingyun** (Anatomy and Cell Biology, University of Saskatchewan)  
*Management of oxidative stress and inflammation in brain microvasculature.*  
Supervisor: Juurlink, Bernard H.J.
- **Zhang, Shetuan** (Physiology, University of British Columbia)  
*Modulation of cardiac potassium channels by cocaine.*  
Supervisor: Fedida, David