



Brock University

Issue 22



March 2005

A changing research environment

The environment in which research and scholarly work is conducted in Ontario's universities continues to change at a rapid pace. In recent months, the Ontario Government announced the formation of the Ontario Research Fund and Ontario Research Commercialization Program, and is planning on replacing the Premier's Research Excellence Award. Also, the Rae Commission strongly urged the Ontario Government to be "clearer on its support for research and innovation," reiterated the value of fundamental research in all disciplines to the mission of higher education and social and economic development, and recommended the formation of an Ontario Research Council, reporting to the Premier.

The recent Federal budget continued the government's investment in research through CIHR, NSERC and SSHRC, as well as Genome Canada. While welcomed, these additional funds will not satisfy the increasing demand on the granting agencies from established and new faculty members for funds to support graduate students and acquire equipment and research tools for their scholarly and scientific work. The Canada Foundation for Innovation did not receive any additional funds in the budget.

CIHR and Health Canada, among others, are concerned about the governance of research involving humans conducted in Canadian universities, health care centres, government laboratories and the not-for-profit and for profit sectors. The National Council on Ethics in Human Research is consulting with stakeholders to determine what might constitute an appropriate form of accreditation for human research protection programs (HRPP). Brock's REB and Office of Research Services will be engaged in this consultative process.



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Innovative research focuses on diabetes and cancer

With diseases such as diabetes and cancer on the rise, it is no surprise that today the Canadian health-care system is experiencing an enormous social and economic burden. Dr. Evangelia Tsiani, an Assistant Professor in Brock's Departments of Community Health Sciences and Biological Sciences is conducting innovative research in the hopes of one day finding new, therapeutic strategies to better manage these diseases.

After completing her undergraduate studies at Aristotle University of Thessaloniki, Greece, Tsiani went to London, England to pursue her M.Sc. studies at University College London (UCL). She moved to Canada to continue her graduate studies at the University of Toronto where she obtained her PhD in Physiology in 1997. Prior to her arrival at Brock in 1999, she worked for two years at U of T as a Banting and Best Research Fellow and Canadian Diabetes Association Research Fellow.

Tsiani trained in the diabetes research field and investigated the mechanisms of action of hypoglycemic drugs and hyperglycemia-induced diabetic nephropathy. One of the goals of her current research is to examine the biological effects of resveratrol and to determine its impact on glucose homeostasis both in vitro and in vivo. Resvera-

tol is a natural phytochemical found in plant species of mulberries, peanuts, grapes and in high concentrations in red wine.

Although the cardio-protective and anti-cancer effects of resvera-

tol have been the subject of several reports, studies investigating its possible anti-diabetic properties are lacking. Tsiani's groundbreaking studies are the first to examine the biological effects of resveratrol in insulin target tissues.

Tsiani explains how insulin plays an important role in regulating blood glucose. When the levels of glucose are increased in the blood, the pancreas releases insulin. Through the bloodstream, insulin reaches the muscle and fat tissue causing them to take up glucose from the blood and inhibits glucose production and release into the blood by the liver. The net effect of these processes is to bring the blood glucose levels back to normal. Lack of insulin or reduced insulin action (insulin resistance) are the main characteristics of Type 1 and Type 2 diabetes, respectively.

Tsiani's hypothesis is that resveratrol and polyphenols in general, may have similar effects to that of the hormone insulin. In her lab at Brock, Tsiani is testing her hypothesis by performing in vitro studies using muscle cells in cul-

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Dr. Evangelia Tsiani

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ture. She is also collaborating with investigators from the University of Toronto to perform in vivo studies in healthy and insulin resistant (diabetic) rats. Tsiani says, "These studies will help us to understand the role of resveratrol in glucose homeostasis and determine its potential in the treatment of insulin resistant states such as Type 2 diabetes."

Tsiani's research program also focuses on understanding cell signaling pathways in cancer cells – their radioresistance in response to ionizing radiation treatment, and chemoresistance in response to chemotherapy. Collaborating with investigators from McMaster University, Tsiani is examining the role that signaling molecules including Ras, mitogen activated protein kinases (MAPKs) and Akt/PKB may play in radioresis-

tance and chemoresistance of cancer cells. She says, "Understanding the events in the cell signaling cascades that are altered in disease is very important and presents possibilities for applying the information to design new approaches for treatment."

Tsiani received funding from the Banting Research Foundation in 2003, and in 2004, Sciences and Engineering Research Canada (NSERC) awarded her a three-year Discovery Grant.

With implications for job creation, economic growth and cost savings, Tsiani's research not only has the potential to better manage diseases and improve the quality of patients' lives, but also to abate the demand imposed on an already overburdened health-care system.

~ Lynne German

Jane Koustas accepts appointment

Professor Jane Koustas has been appointed the Craig Dobbin Chair of Canadian



Jane Koustas

Studies at the University College, Dublin, Ireland for the 2005-06 academic year. Through the great generosity of Dr. Craig Dobbin, whose family was from County Waterford, Ireland, the endowed Craig Dobbin Professorship was established at UCD in 1994.

Koustas' responsibilities include promoting discipline-specific and interdisciplinary research related to the study of Canada, promoting teaching about Canada within the university and beyond, and fostering within the wider community greater awareness and understanding of all matters Canadian. She will be asked to liaise with the Canadian Embassy in Dublin, as well as with universities throughout Ireland and the United Kingdom.

Koustas is active in Canadian Studies on both the national and international scenes. As Director of Canadian Stud-

ies at Brock from 1996 to 2002, Koustas represented the university on the International Council for Canadian Studies, the Association for Canadian Studies, the Association for Canadian Studies in the U.S., as well as on other international associations in the U.K., Ireland and France. She continues to participate in the Golden Horseshoe Education Alliance that aims to stimulate cross border cooperation and exchange among universities in the Niagara Region. Her research interests include Canadian translation studies, Quebec theatre and theatre translation. A co-editor of *Théâtre sans frontières: The Dramatic Universe of Robert Lepage*, as well as *Vision/Division: L'oeuvre de Nancy Huston*, Koustas has published in *Theatre Research in Canada*, *La linguistique*, *Traduction Terminologie Rédaction* and *Meta The University of Toronto Quarterly*. She has also published articles in books and encyclopedias on translation in Canada, Robert Lepage and broader questions of cultural transfer, and border crossings and transnationalism.

Koustas currently holds a SSHRC grant to study the success of English language Canadian writers translated and published in France.

In 2004, Professor Koustas was the recipient of the Brock University Award for Excellence in Teaching.

Prestigious invitation for Brock's Joanne Wright

Because of her work on Thomas Hobbes, Dr. Joanne Wright received an invitation she could not refuse – to deliver a lecture at the Folger Institute's Center for the History of British Political Thought in Washington, D.C. at the end of March.

Wright's lecture was part of a three-day roundtable designed to commemorate the first two decades of the Center and to reflect on the state of the field. Entitled *British Political Thought in History, Literature and Theory*, this invitation-only event brought together the leading thinkers in the field of British political thought. These included Quentin Skinner, J.G. A. Pocock, Gordon Schochet and David Armitage. Cambridge University Press will publish the proceedings.

Wright's paper, *Reading the Private in Margaret Cavendish: Conversations in Political Thought* examines the voluminous writings of the 17th-century intellectual, Margaret Cavendish. Wright bridges what are too often discrete conversations on the gendered public/private dichotomy taking place in political theory, feminist theory and social history.

Wright completed her PhD in political theory at York University. She has been a visiting scholar at NYU and a SSHRC

post-doctoral fellow at Rutgers University. Last year, the University of Toronto Press published her book, *Origin Stories in the History of Political Thought*. In addition to her ongoing research on John Locke and midwifery, Wright is cur-



Joanne Wright

rently co-editing a volume of essays on Thomas Hobbes for Penn State University Press' important series, *Re-Reading the Canon*. This series offers feminist re-interpretations of the writings of major figures in the Western philosophical tradition.

Dr. Wright holds a joint appointment in the Centre for Women's Studies and the Department of History.

In the next issue of *Research Reporter*, we will be highlighting the success of Brock faculty members in the CIHR, NSERC and SSHRC grants competition.