

# ROSALYN JOHNSON, PhD

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## EDUCATION

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**Ph.D. in Cardiovascular and Respiratory Sciences** **Dec 2008**  
University of Calgary, Calgary, Alberta, Canada  
Co-Advisors: Dr. William Cole and Dr. Michael Walsh  
Committee: Dr. Justin MacDonald, Dr. Susan Lees-Miller, Dr. Andrew Braun  
Thesis: Molecular mechanisms controlling vascular smooth muscle contractility

**B.Sc. in Honours Biology and Pharmacology (Co-op)** **Apr 2003**  
McMaster University, Hamilton, Ontario, Canada

## PROFESSIONAL AFFILIATIONS

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**Member, American Medical Writers Association (AMWA)** **2015-2017**

**Member, Editors Canada** **2015-2017**

## ACADEMIC AND PROFESSIONAL EXPERIENCE

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**Freelance Scientific Writer/Editorial Consultant and Principal** **Mar 2013-present**  
RPJ Scientific Communications, Hamilton, Ontario, Canada

- Provide writing, editing and consulting services to help clients effectively communicate concepts and advances in the life sciences, biomedical sciences, medicine, healthcare, and agriculture
- Provided technical writing support for successful federal grant applications
- Crafted research reports to granting agencies that highlighted clients' research accomplishments
- Drafted science-based strategic reports that guided industry decision-making
- Wrote blog posts to communicate high-quality clinical evidence about health topics to the public
- Edited scientific manuscripts for clarity, precision, and style for clients worldwide
- *Clients:* St. Joseph's Health System, Vineland Research and Innovation Centre, McMaster Optimal Aging Portal, Mushrooms Canada, American Journal Experts, and individual academic scientists and graduate students

**Sessional Instructor, Pharmacology 3A06: Introduction to Pharmacology** **Jan 2017-present**  
**Biology and Pharmacology Co-operative Education Program**  
McMaster University, Hamilton, Ontario, Canada

- Taught a third-year introductory pharmacology course run entirely in a student-centred, problem-based format that explored fundamental concepts in pharmacology; topics of inquiry included drugs acting on the central and autonomic nervous systems, anti-cancer drugs, and anti-microbial drugs
- Developed new problem sets reflecting recent advances in pharmacological research
- Assessed student learning through observation of student participation and evaluation of problem summaries; provided regular feedback about performance during formal in-class evaluations

**Heart and Stroke Foundation Postdoctoral Fellow**

May 2009-Dec 2010

Harvard Medical School, Boston, Massachusetts, USA

- Advisor: Dr. Thomas Michel
- Investigated the signaling pathways and protein-protein interactions that mediate ADP-dependent regulation of nitric oxide synthase in vascular endothelial cells using standard biochemical and pharmacological approaches, co-immunoprecipitation, and siRNA-mediated protein knockdown
- Supervised two undergraduate research students, participated in scientific manuscript preparation, presented research findings at interdepartmental seminars as an invited speaker

**Doctoral Research**

Sept 2004-Dec 2008

University of Calgary, Smooth Muscle Research Group, Calgary, Alberta, Canada

- Co-Advisors: Dr. William Cole and Dr. Michael Walsh
- Combined pressure myography with molecular, biochemical, and electrophysiological techniques to investigate the mechanisms regulating vascular smooth muscle contraction
- Developed a novel technique to analyze protein phosphorylation in small resistance vessels
- Led lab meetings and gave research talks to diverse audiences
- Mentored junior graduate students to facilitate their research success
- Wrote an award-winning thesis and prepared several manuscripts for peer-review publication

**Research Assistant**

May 2003-Aug 2003

McMaster University, Biology Department, Hamilton, Ontario, Canada

- Advisor: Dr. Ian Fearon
- Studied the effect of chronic hypoxia on the expression and regulation of potassium currents in adrenomedullary chromaffin cells

**Research Assistant, Electrophysiology and *In Vivo* Pharmacology**

Jan 2002-Aug 2002

Cardiome Pharma Corp., Vancouver, British Columbia, Canada

- Screened in-house compounds for anti-arrhythmic potential using patch-clamp electrophysiology, and determined the efficacy and toxicity of selected compounds *in vivo*
- Presented research findings to business and scientific teams

**Screening Officer, Regulatory Affairs**

May 2001-Aug 2001

Health Canada, Bureau of Pharmaceutical Assessment, Ottawa, Ontario, Canada

- Screened Generic Drug Applications to determine the suitability of select drugs for sale in Canada
- Liaised with applicants to ensure that submissions met approval requirements

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**PUBLICATIONS**

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**INDUSTRY REPORTS**

1. Gap Analysis of the European Rose Value Chain from Breeding to the Final Consumer: Value Chain Interviews. Vineland Research and Innovation Centre, May 2015.
2. Gap Analysis of the Complete Value Chain for Ornamental Plant Products from Breeding to the Final Consumer in Both Domestic and Export Markets: Executive Summary. Vineland Research and Innovation Centre, May 2015.
3. Characterizing the Value, Market Size and Evolution, and Infrastructure Needs for the Profitable Production of World Crop Vegetables in Ontario. Vineland Research and Innovation Centre, May 2014.
4. Identification and Analysis of Value-Added Opportunities for Canada's Mushroom Industry: Mushrooms Canada Strategic Report, May 2013.

## PEER-REVIEWED ACADEMIC PUBLICATIONS

1. Ahmed El-Yazbi, **Rosalyn P. Johnson**, Emma J. Walsh, Kosuke Takeya, Michael P. Walsh and William C. Cole. (2010). Pressure-dependent contribution of Rho kinase-mediated calcium sensitization in serotonin-evoked vasoconstriction of rat cerebral arteries. *Journal of Physiology*. 588: 1747-1762.
2. Connie N. Hess, Rujin Kou, **Rosalyn P. Johnson**, Gordon K. Li and Thomas Michel. (2009). ADP signaling in vascular endothelial cells: ADP-dependent activation of the endothelial isoform of nitric-oxide synthase requires the expression but not the kinase activity of AMP-activated protein kinase. *Journal of Biological Chemistry*. 284: 32209-32224.
3. **Rosalyn P. Johnson**, Morgan F. Hughes, David C. Schriemer, Emma J. Walsh, Michael P. Walsh and William C. Cole. (2009). Identification and functional characterization of protein kinase A-catalyzed phosphorylation of the potassium channel Kv1.2 at serine-449. *Journal of Biological Chemistry*. 284: 16562-16574.
4. **Rosalyn P. Johnson**, Ahmed El-Yazbi, Kosuke Takeya, Emma J. Walsh Michael P. Walsh and William C. Cole. (2009). Calcium sensitization via phosphorylation of the myosin phosphatase targeting subunit at threonine-855 by Rho-kinase contributes to the arterial myogenic response. *Journal of Physiology*. 587: 2537-2553.
5. Frances Plane, **Rosalyn P. Johnson**, Paul Kerr, William Wiehler, Kevin Thorneloe, Kuniaki Ishii, Tim Chen and William Cole. (2005). Heteromultimeric Kv1 channels contribute to myogenic control of arterial diameter. *Circulation Research*. 96: 216-224.
6. **Rosalyn P. Johnson**, Ita M. O'Kelly and Ian M. Fearon. (2004). System-specific oxygen sensitivity of the tandem pore domain potassium channel TASK-1. *American Journal of Physiology, Cell Physiology*. 286: C391-C397.
7. Stephen T. Brown, **Rosalyn P. Johnson**, Rhandi Senaratne and Ian M. Fearon. (2004). Amyloid beta peptides mediate physiological remodeling of the acute O<sub>2</sub> sensitivity of adrenomedullary chromaffin cells following chronic hypoxia. *Cardiovascular Research*. 64: 536-543.
8. **Rosalyn P. Johnson** and Ian M. Fearon (2003). GABA<sub>B</sub> receptor activation augments TASK-1 in MAH cells and mediates autoreceptor feedback during hypoxia. *Biochemical and Biophysical Research Communications*. 312: 421-5.

## GRANT WRITING AND SUPPORT

1. Agriculture and Agri-Food Canada's AgriScience Cluster Program Grant – Canadian Agricultural Automation Cluster. Vineland Research and Innovation Centre, Feb 2018 (pending).  
\*wrote Executive Summary, Project Purpose, Project Work Plans, and coordinated Peer Review Process.
2. Canadian Agricultural Automation Cluster: Call for Proposals, Application Forms and Applicant Guide, Oct 2017.  
\*wrote introductory explanation of initiative and its key priorities, and applicant guidelines; created application forms and budget spreadsheets in compliance with federal program requirements.
3. Agriculture and Agri-Food Canada's AgriInnovation Program Grant – Canadian Ornamental Horticulture Research and Innovation Cluster. Vineland Research and Innovation Centre, Apr 2013 (awarded in 2014).  
\*wrote Project Work Plans and Deliverables that highlighted key priorities of funding program.

## CONSUMER HEALTH WRITING

1. **Rosalyn P. Johnson**. (May 5, 2018). Fighting the Fungus Among Us: Treatment Options for Toenail Fungus [Blog Post, McMaster Optimal Aging Portal]. <https://www.mcmasteroptimalaging.org/blog/detail/blog/2018/03/05/fighting-the-fungus-among-us-treatment-options-for-toenail-fungus>

2. **Rosalyn P. Johnson.** (Feb 19, 2018). Struggling with your weight? Get active and improve your health with high intensity interval training! [Blog Post, McMaster Optimal Aging Portal]. <https://www.mcmasteroptimalaging.org/blog/detail/blog/2018/02/19/struggling-with-your-weight-get-active-and-improve-your-health-with-high-intensity-interval-training!>
3. **Rosalyn P. Johnson.** (Oct 31, 2016). Acupuncture: An effective treatment for chronic headaches. [Blog Post, McMaster Optimal Aging Portal]. <https://www.mcmasteroptimalaging.org/blog/detail/blog/2016/10/31/acupuncture-an-effective-treatment-for-chronic-headaches>

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**SELECTED TEACHING AND RESEARCH PRESENTATIONS**

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| <p><b>"Vascular Smooth Muscle Kv Channels in Health and Disease"</b><br/>         Guest Teaching Lecture, HTH 1I06: Cellular and Molecular Biology<br/>         Bachelor of Health Sciences Program, McMaster University<br/>         Hamilton, Ontario, Canada</p>         | <b>Feb 2017</b> |
| <p><b>"ADP Signaling in Vascular Endothelial Cells"</b><br/>         Frontiers in Biomedical Science Seminar Series, Brigham Research Institute:<br/>         Cardiovascular, Diabetes, and Metabolic Diseases Research Center,<br/>         Boston, Massachusetts, USA</p> | <b>Nov 2009</b> |
| <p><b>"Molecular Mechanisms Controlling Vascular Smooth Muscle Contractility"</b><br/>         Thesis Seminar, Smooth Muscle Research Group, University of Calgary,<br/>         Calgary, Alberta, Canada</p>   | <b>Nov 2008</b> |
| <p><b>"Ca<sup>2+</sup> Sensitization Pathways in Control of Cerebral Artery Myogenic Reactivity"</b><br/>         Research in Progress, Smooth Muscle Research Group, University of Calgary,<br/>         Calgary, Alberta, Canada</p>                                      | <b>Nov 2007</b> |
| <p><b>"Characterization of a Novel Protein Kinase A Phosphorylation Site on Kv1.2"</b><br/>         Research in Progress, Smooth Muscle Research Group, University of Calgary,<br/>         Calgary, Alberta, Canada</p>  | <b>Feb 2007</b> |
| <p><b>"Vascular Smooth Muscle K<sub>DR</sub> Modulation by Protein Kinase A"</b><br/>         Research in Progress, Smooth Muscle Research Group, University of Calgary,<br/>         Calgary, Alberta, Canada</p>  | <b>Feb 2006</b> |
| <p><b>"Identification of Protein Kinase A Phosphorylation Sites on Kv Channels"</b><br/>         6<sup>th</sup> Annual Alpine Pharmacology Research Symposium, Banff, Alberta, Canada</p>   | <b>Apr 2006</b> |
| <p><b>"Molecular Composition of Kv channels in Vascular Smooth Muscle"</b><br/>         4<sup>th</sup> Annual Alpine Pharmacology Research Symposium, Banff, Alberta, Canada</p>  | <b>Mar 2004</b> |

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**AWARDS AND FELLOWSHIPS**

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| <p><b>Heart and Stroke Foundation of Canada Postdoctoral Fellowship</b><br/>         Harvard Medical School, Boston, Massachusetts, USA</p> | <b>July 2009-Dec 2010</b> |
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<b>Top Graduate Thesis Award</b> Cardiovascular and Respiratory Sciences Graduate Program University of Calgary, Calgary, Alberta, Canada	Dec 2008
<b>Alberta Heritage Foundation for Medical Research Scholarship</b> University of Calgary, Calgary, Alberta, Canada	Feb 2005-Dec 2008
<b>Natural Sciences and Engineering Research Council of Canada Canada Graduate Scholarship (CGS-D)</b> University of Calgary, Calgary, Alberta, Canada	Sept 2005-Aug 2007
<b>Biochemical Journal Young Investigator Award</b> 6 <sup>th</sup> International Muscle Energetics Conference Banff, Alberta, Canada	July 2006
<b>Top Student/Postdoctoral Presentation</b> 6 <sup>th</sup> Annual Alpine Pharmacology Research Symposium Banff, Alberta, Canada	Apr 2006
<b>Natural Sciences and Engineering Research Council of Canada Postgraduate Scholarship (PGS-M)</b> University of Calgary, Calgary, Alberta, Canada	Sept 2003-Aug 2005
<b>Dean's Research Excellence Award</b> University of Calgary, Calgary, Alberta, Canada	Sept 2003-Aug 2005
<b>Dean's Entrance Award</b> University of Calgary, Calgary, Alberta, Canada	Sept 2003
<b>Jensen Medal</b> (for outstanding excellence and achievement in co-operative education) McMaster University, Hamilton, Ontario, Canada	Apr 2003
<b>Natural Sciences and Engineering Research Council of Canada Undergraduate Student Research Award (USRA)</b> McMaster University, Hamilton, Ontario, Canada	May 2003-Sept 2003
<b>Natural Sciences and Engineering Research Council of Canada Industrial Student Research Award (IUSRA)</b> Cardiome Pharma Corp., Vancouver, British Columbia, Canada	Jan 2002-Aug 2002

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**PROFESSIONAL DEVELOPMENT AND ACTIVITIES**

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<b>American Medical Writers Association Essential Skills Workshops</b> Essential Ethics for Medical Communicators Statistics for Medical Writers and Editors Elements of Medical Terminology Tables and Graphs for Medical Communicators	Oct 2016
<b>Medical Writing II: Promotional and Continuing Health Education Course</b> Concordia University, Montreal, Quebec, Canada	Mar 2016

**Writing in the Sciences Certificate, with Distinction** **Nov 2015**  
Stanford Online

**Co-Chair, 6<sup>th</sup> Annual Alpine Pharmacology Research Symposium** **Apr 2006**  
Banff, Alberta, Canada

**Co-Chair, 4<sup>th</sup> Annual Alpine Pharmacology Research Symposium** **Apr 2004**  
Banff, Alberta, Canada

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**VOLUNTEER EXPERIENCE**

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**Volunteer, Salk Mobile Science Lab** **Jan 2011-Dec 2011**

Salk Institute for Biological Studies, La Jolla, California, USA

- Facilitated inquiry-based, exploratory learning about DNA and genetics with elementary school children

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**REFERENCES**

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Donna Kline, Senior Advisor, Communications and Strategy, St. Joseph's Health System & Executive Lead, Provincial Digital QBP Program. Email: dkline@rogers.com.

Dr. William Cole, Professor, Department of Pharmacology and Therapeutics, Faculty of Medicine, University of Calgary. tel: (403) 220-8885; email: wcole@ucalgary.ca

Dr. Thomas Michel, Professor of Medicine and Biochemistry, Harvard Medical School, Boston, MA, USA. tel: (617) 732-7376; email: tmichel@rics.bwh.harvard.edu