

Dr. Marina Cvetkovska
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Research interests:

I am interested in exploring biotic and abiotic stress responses in photosynthetic organisms, with particular interest in how these organisms maintain energetic homeostasis through redox signalling during adverse conditions.

Summary of Qualifications:

- Extensive knowledge in a wide variety of molecular biology techniques (PCR and cloning, Northern blotting, Western blotting, organelle isolation, biochemical assays for various metabolites, plant hormone extraction, GC-MS, several microscopy techniques etc)
- A wide practical and theoretical knowledge in the field of plant-pathogen interactions and plant defence signalling, Significant experience with working directly on plant disease development and containment
- Experience in working with algal cultures
- A strong background in bioinformatics, statistical data analysis, and associated software
- Excellent skills in technical writing and literature assessment
- Experience in public speaking and data presentation

Research experience:

2014 - current **Postdoctoral fellow**
Department of Biology, University of Western Ontario, London, ON

2012- 2013 **Postdoctoral fellow**
Department of Biological Sciences, University of Toronto Scarborough, ON

2006 - 2012 **Research Assistant**
Department of Cell and Systems Biology, University of Toronto, Toronto, ON

2005 - 2006 **Research Assistant,**
Department of Biology, Carleton University, Ottawa, ON

Education:

- 2006-2012** **PhD, Department of Cell and Systems Biology**
University of Toronto, Toronto, ON
PhD dissertation: The Role of Mitochondrial Alternative Oxidase in Plant-Pathogen Interactions.
Supervisor: Dr. Greg C. Vanlerberghe
- 2001 – 2005** **Bachelor of Science Honours Major in Biology**
Carleton University, Ottawa, ON

List of Received Awards:

2013	NSERC Postdoctoral Fellowship	\$80 000
2007	Frederick P. Ide Graduate Award in Cell and Systems Biology (UTSC)	\$2500
2007	Valerie Anderson Graduate Fellowship (UTSC)	\$2 000
2001	President's Scholarship (Carleton University)	\$10 000

Teaching experience:

- 2006 – 2012** **Teaching assistant**
Department of Biological Sciences, University of Toronto at Scarborough, Toronto, ON
- Life on Earth: Unifying principles (1st year course)
 - Plant Physiology (2nd year course)
 - Molecular Biology Laboratory: Hosts, Vectors and Cloning (4th year course)

Advanced University Teaching Preparation Certificate (AUTP)

Offered by the Teaching Assistants' Training Program at University of Toronto

Certificate in University Teaching and Learning (in progress)

Offered by the Western Teaching Support Centre

Professional Societies:

Canadian Society of Plant Biologist (CSPB) - Member since 2008

List of Publications:

Cvetkovska, M. and Vanlerberghe G.C. 2014. *In planta* analysis of leaf mitochondrial superoxide and leaf nitric oxide. *Methods in Molecular Biology (in press)*

Vanlerberghe, G.C., Wang, J., Cvetkovska, M. and Dahal, K. 2014. Modes of electron transport chain function during stress: Does alternative oxidase respiration aid in balancing cellular energy metabolism during drought stress and recovery? *In press* for a book entitled "Alternative respiratory pathways in higher plants" edited by KJ Gupta, LAJ Mur, B Neelwarne. John Wiley & Sons, publisher.

Cvetkovska, M., Dahal, K., Alber, N., Jin, C., Cheung, M. and Vanlerberghe, G.C. 2014. Knockdown of mitochondrial alternative oxidase induces the "stress state" of signaling molecule pools in *Nicotiana tabacum*, with implications for stomatal function. *New Phytologist* 203(2): 449-461

Cvetkovska, M., Alber, N.A. and Vanlerberghe, G.C. 2013. The signalling role of mitochondrial superoxide burst during stress. *Plant Signalling and Behaviour* 8(1): 161-166

Cvetkovska, M. and Vanlerberghe, G.C. 2012. Alternative oxidase impacts the plant response to biotic stress by influencing the mitochondrial generation of reactive oxygen species. *Plant, Cell and Environment* 36(3): 721-732

Cvetkovska, M. and Vanlerberghe, G.C. 2012. Alternative oxidase modulates leaf mitochondrial levels of superoxide and nitric oxide. *New Phytologist*. 195(1): 32-39

Cvetkovska, M. and Vanlerberghe, G.C. 2012. Coordination of a mitochondrial superoxide burst during the hypersensitive response to bacterial pathogen in *Nicotiana tabacum*. *Plant, Cell and Environment*. 35(6): 1121-1136

Vanlerberghe, G.C., Cvetkovska, M. and Wang, J. 2009. Is the maintenance of homeostatic mitochondrial signalling during stress a physiological role for alternative oxidase? *Physiologia Plantarum*. 137(4): 392-406

Plett, J.M., Cvetkovska, M., Makenson, P., Xing, T. and Regan, S. 2009. *Arabidopsis* ethylene receptors have different roles in Fumonisin B-1-induced cell death. *Physiological and Molecular Plant Pathology*. 74(1):18-26

Cvetkovska, M., Rampitsch, C., Bykova, N. and Xing, T. 2005. Genomic analysis of MAPK kinase cascades in *Arabidopsis* defence responses. *Plant Molecular Biology Reporter*. 23(4): 331-343

List of Presentations:

Eastern Regional Meeting of the Canadian Society of Plant Biologist, Guelph, 2014

Annual Meeting of the Canadian Society of Plant Biologist, Edmonton 2012

Eastern Regional Meeting of the Canadian Society of Plant Physiologist, Ottawa 2011

Joint Annual Meeting of the American Society of Plant Biologists & the Canadian Society of Plant Physiologists. Montreal, 2010

Eastern Regional Meeting of the Canadian Society of Plant Physiologist, Guelph 2009

Eastern Regional Meeting of the Canadian Society of Plant Physiologist, Toronto, 2008 –

Annual Meeting of the Canadian Society of Plant Physiologist, Ottawa, 2008

Various oral presentations given for Plant Cellular and Molecular Processes (Student Seminar Series) at University of Toronto, Scarborough (April, 2007; February, 2008; January, 2009; October, 2010; November, 2011)

Community service and other experience:

2014-current **Member of executive committee**
Postdoctoral Association at Western, University of Western Ontario

2014 **Consult the Experts Annual Mentoring Series**
Graduate and Postdoctoral Services, University of Western Ontario

2010 – 2012 **Department of Biological Sciences Representative**
Council of University of Toronto Scarborough

2011 - 2013 **Judge**
Toronto Science and Technology Fair

2011 – 2013 **Volunteer**
Let's Talk Science Organization

2006 – 2012 **Invigilator**
Department of Biological Sciences, Dean's Office Exam Support Team
University of Toronto Scarborough, Toronto, ON

2010 – 2012 **Member of executive committee, social organizer**
Graduate Student Association of Scarborough, University of Toronto Scarborough,
Toronto, ON

2008 - 2009 **Graduate Student Union Campus Representative**
Cell and Systems Biology Graduate Union, University of Toronto, Toronto, ON

2008 - 2009 **Member of Organizing Committee**
Student Seminar Series, University of Toronto Scarborough, Toronto, ON