

# CRISTINA G. CASSONE

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## EDUCATION

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- May 2010 – Present      **M.Sc. in Biology, with Specialization in Chemical and Environmental Toxicology**  
University of Ottawa *Ottawa, ON*
- Thesis: “The effects of perfluoroalkyl acids on *in ovo* toxicity and gene expression in the domestic chicken (*Gallus gallus domesticus*).”
- Sept 2004 – May 2009      **B.Sc. in Biochemistry, with honours**  
University of Ottawa *Ottawa, ON*
- Thesis: “The effect of various isomer compositions of perfluorooctane sulfonate on mRNA levels in chicken primary neuronal cells.”

## PROFESSIONAL EXPERIENCE

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- Nov 2011 – Present      **FSWEP Student, New Chemicals Evaluation Section**  
Environment Canada *Ottawa, ON*
- Update and maintain searchable New Substances databases (including drawing chemical structures) using ChemBioOffice.
  - Review of ecotoxicity reports to support activities for new substance notification evaluations.
  - Literature and database searches to determine potential sources and environmental fate of emerging perfluorinated compounds.
- Jan 2010 – May 2010      **Research Technician, Molecular Toxicology Group**  
Environment Canada *Ottawa, ON*
- Dosed primary chicken neuronal cells and hepatocytes with various environmental contaminants to determine their effects on mRNA expression via real-time RT-PCR.
  - Conducted microarray experiments and analysis, including Ingenuity Pathway and GeneSpring analyses.
- Feb 2009 – May 2009      **FSWEP Student, Office of Controlled Substances**  
Health Canada *Ottawa, ON*
- Reviewed licence and permit applications for manufacture and import/export of controlled substances.
  - Communicated with applicants to ensure any missing information was provided.
- May 2008 – Aug 2008      **Co-op Student, Membrane Proteins Group**  
Paul Scherrer Institute *Villigen, Switzerland*
- Purified oxaloacetate decarboxylase protein subunits through *E. coli* overexpression of HIS-tagged protein and affinity chromatography.
  - Set up crystallization experiments with purified proteins and measured with X-ray scattering techniques.
  - Cloned novel protein subunit into *E. coli* cells and tested for functionality and prepared proteins for polyclonal antibody production
- Jan 2007 – Dec 2007      **Co-op Student, Synaptic Pathophysiology & Gene Modulation Groups**  
National Research Council Canada *Ottawa, ON*
- Treated primary cortical mouse neurons with nicotine to determine changes in protein expression of acetylcholine receptors via immunocytochemistry and Western blotting.
  - Cloned a novel gene for isolation of antibodies using fusion protein technology, GST-column and immunoaffinity purification.

May 2005 –  
Dec 2006

**FSWEP Student, Office of Controlled Substances**  
Health Canada

Ottawa, ON

- Updated databases and tracking systems for uses of controlled substances.
- Prepared all incoming and outgoing mail and logged mail movement within Canada.
- Maintained filing system for licence and permit applications and pertinent paperwork.

## **SCIENTIFIC CONTRIBUTIONS**

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### **Publications**

**Cassone, C.G.**, Williams, A., Yauk, C.L., Crump, D., Kennedy, S.W. (2012). The effects of perfluorohexane sulfonate exposure on gene expression in cerebral cortex tissue of chicken embryos. (manuscript in preparation).

**Cassone, C.G.**, Vongphachan, V., Chiu, S., Williams, K.L., Letcher, R.J., Pelletier, E., Crump, D., Kennedy, S.W. (2012). *In ovo* effects of perfluorohexane sulfonate and perfluorohexanoate on pipping success, development, mRNA expression and thyroid hormone levels in chicken embryos. *Toxicol. Sci.* (submitted).

Egloff, C., Crump, D., Chiu, S., Manning, G., MacLaren, K.K., **Cassone, C.G.**, Letcher, R.J., Gauthier, L.T., Kennedy, S.W. (2011). *In vitro* and *in ovo* effects of four brominated flame retardants on toxicity and hepatic mRNA expression in chicken embryos. *Toxicol. Lett.* 207(1), 25-33.

Vongphachan, V., **Cassone, C.G.**, Wu, D., Chiu, S., Crump, D., Kennedy, S.W. (2011). Effects of perfluoroalkyl compounds on mRNA expression levels of thyroid hormone-responsive genes in primary cultures of avian neuronal cells. *Toxicol. Sci.* 120(2), 392-402.

Lei, J.X., **Cassone, C.G.**, Luebbert C., Liu, Q.L. (2011). A novel neuron-enriched protein SDIM1 is down regulated in Alzheimer's brains and attenuates cell death induced by DNAJB4 over-expression in neuroprogenitor cells. *Mol. Neurodegener.* 6(1), 9-25.

### **Conference Presentations**

**Cassone, C.G.**, Vongphachan, V., Chiu, S., Williams, K.L., Letcher, R.J., Pelletier, E., Crump, D., Kennedy, S.W. (2011). Are perfluoroalkyl acids (PFAAs) neurotoxic to birds? Society of Environmental Toxicology and Chemistry (SETAC) North America Meeting. Boston, MA. (November, 2011).

**Cassone, C.G.**, Vongphachan, V., O'Brien, J.M., Crump, D., Kennedy, S.W. Gene Expression Effects in Chicken Embryonic Neuronal Cells Following PFHxS and PFHxA Exposure. Society of Environmental Toxicology and Chemistry (SETAC) North America Meeting. Portland, OR. (November, 2010).

**Cassone, C.G.**, Vongphachan, V., Crump, D., Kennedy, S.W. The Effect of Various Isomer Compositions of Perfluorooctane Sulfonate (PFOS) on mRNA Levels in Chicken (*Gallus gallus*) Primary Neuronal Cells. University of Ottawa Department of Biochemistry, Microbiology and Immunology (BMI) Undergraduate Research Poster Session. Ottawa, ON. (April, 2009).

Vongphachan, V., **Cassone, C.G.**, Wu, D., Crump, D., Kennedy, S.W. The Effects of Perfluoroalkyl Compounds (PFCs) on the mRNA Levels of Thyroid Hormone-responsive Genes in Primary Cultures of Avian Neuronal Cells. Society of Environmental Toxicology and Chemistry (SETAC) North America Meeting. New Orleans, LA. (November, 2009).

Lei, J.X., Sikorska, M., **Cassone, C.G.**, Liu, Q.L. A novel transmembrane protein down regulated in Alzheimer's brains and interacts with a DnaJ-like heat shock protein (DNAJB4). International Conference on Molecular Neurodegeneration (ICMN). Xiamen, China. (May, 2009).

Mielke, J.G., **Cassone, C.G.**, Comas, T., Krantis, A., Mealing, G. Effect of Chronic Nicotine Treatment on Expression and Function of the alpha7 Nicotinic Acetylcholine Receptor in Cryopreserved Cortical Neurons. Canadian Association for Neuroscience (CAN-ACN) Meeting. Montreal, QC. (May, 2008).