

# ANDREA CONSTANTINOF MSc

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## **EDUCATION**

### **Doctor of Philosophy Candidate (Computational Physiology), University of Toronto**

*Sep 2014 - Present*

- Characterized the adverse effects of stress on the fetal brain during pregnancy by establishing novel bioinformatic analyses pipelines to study the effects of stress on every gene in the genome
- Developed analytical pipelines using R, Python, and worked in Linux/Unix environment
- Worked with RefSeq and UCSC genome browser
- Applied machine learning techniques to model relationship between gene expression, methylation, and phenotypes
- Contributed to seven international and twelve local conferences
- Awarded a full two-year Brain Canada NeuroDevNet Trainee Scholarship totaling \$70,000 in 2015

**Courses:** Introduction to Data Analysis with R, Python for High Performance Computing, Python for Scientific Computing, Parallel R for Data Science, R for Data Science

GPA: 3.9/4.0      Publications: 4      Students Mentored: 5      TA Positions: 7      Scholarships: 4(\$100,000)

### **Springboard Data Science and Machine Learning Career Track Course**

*Feb 2017 – August 2017*

- Learned and performed machine learning and data analytic techniques such as natural language processing, random forests, support vector and k-nn models, along with regression techniques
- Worked in Unix, Python, and R environments with structured and unstructured data

### **Master of Science (Pharmacology and Toxicology), University of Toronto**

*Sep 2012 - Aug 2014*

- Investigated how the environment interacts with the genome to alter gene expression through epigenetic mechanisms to further develop personalized medicines
- Presented at three local seminars

GPA: 3.9/4.0      Students Mentored: 1      Scholarships: 2(\$15,000)

### **Honours Bachelor of Science (Specialist in Neuroscience), University of Toronto**

*Sep 2008 - May 2012*

- Characterized how cocaine administration in adolescent female animals affects offspring sensitivity to cocaine to gain further insights into the heritable mechanisms of drug addiction

Final 2 years GPA: 3.96/4.0      Publications: 3

## **PROFESSIONAL EXPERIENCE**

### **Co- Founder & Director of Sales and Marketing, AllergenFree Solutions Inc.**

*May 2014 - Present*

- To improve the quality of life of people with food allergies, I developed and formulated a non-toxic, effective, and easy-to use method for surface allergen removal; a major concern for food allergy sufferers
- Assessed the needs of our target market, created a survey and collaborated with blog-authors, which resulted in an increase in target market survey response rate by 900% and optimal product design
- Successfully negotiated with suppliers to decrease materials costs by 50% to allow for more product research and development
- Presented and won (out of 12) start-up funding (\$3,000) at Boehringer Ingelhiem sponsored pitch competition

### **Teaching Assistantships, University of Toronto**

*Jan 2015 - Present*

- Taught over 100 undergraduate students about new and emerging techniques in biotechnology. Hosted office hour tutorials to assist students, achieving 10% increase in grade point average relative to students from previous year.

### **Executive & Staff Supervisor University of Toronto Graduate Students' Union**

*May 2015 - Present*

- Member elected to represent over 17,000 graduate students, the largest graduate body in Canada
- Successfully lead funding initiatives by analyzing mass survey data (**over 1000 respondents**) that resulted in: 3.5% increase in stipends for over 4,000 graduate students in the Faculty of Medicine; \$2000 increase for over 5,000 graduate students in Faculty of Arts and Science; \$3000 Fellowships for over 300 graduate students in Faculty of Social Work
- Found funding for and created the first-ever conference bursary fund (\$100,000) to assist graduate students attend conferences by negotiating the costs of Annual Resources Guide saving the Union over \$3500 (20% savings from previous years) and collective agreement with unionized staff that cut increasing costs by 59%

### **Inside Sales Representative, PNP Data Systems Inc.**

*April 2014 - Oct 2014*

- Lead associate for a new product that wasn't selling. Performed market and competitor research to increase sales.

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- Implemented competitive pricing strategy and enhanced customer service experience to differentiate our company and product from the competition.
- Delivered over 300 in-person demonstrations of product's capabilities at trade conference resulting in lead-generation
- Recommended, and implemented the 'one-month free trial' go-to-market strategy, increasing sales by 30%

## PUBLICATIONS

- Moisiadis, V., **Constantinof, A.**, et. al. (2017). Prenatal Glucocorticoid Exposure Modifies Endocrine Function and Behaviour for 3 Generations Following Maternal and Paternal Transmission. *Scientific Reports*. 7:11814.
- **Constantinof, A.**, Moisiadis, V., Matthews S., Programming of Stress Pathways: A Transgenerational Perspective. *Journal of Steroid Biochemistry and Molecular Biology*. 160:175-180.
- Sasaki, A., **Constantinof, A.**, Pan, P., Kupferschmidt, D.A., McGowan, P.O., Erb, S. (2014). Cocaine exposure prior to pregnancy alters the psychomotor response to cocaine and transcriptional regulation of the dopamine D1 receptor in adult male offspring. *Behavioural Brain Research*. 265:163-170.
- Dounin, V., **Constantinof, A.**, Schulze, H., Bachmann, T.T., Kerman, K. (2011). Electrochemical detection of interaction between Thioflavin T and acetylcholinesterase. *Analyst*. 136: 1234-1238.
- Veloso, A.J., Hung, V.W., Sindhu, G., **Constantinof, A.**, Kerman, K. (2009). Electrochemical oxidation of benzothiazol dyes for monitoring amyloid formation related to the Alzheimer's Disease. *Analytical Chemistry*, 81: 9410-9415.

## MAJOR CONFERENCES

- Developmental Origins of Health and Disease, **Rotterdam, Netherlands October 15<sup>th</sup>-18<sup>th</sup> 2017 (Oral)**
  - Was awarded Travel Fellowship
- International Society for Computational Biology, **Prague, Czech Republic, July 21<sup>st</sup>-25<sup>th</sup> 2017 (Poster)**
- Society of Reproductive Research, **Florida, United States, March 16<sup>th</sup> – 19<sup>th</sup> 2017 (Oral)**
  - Was awarded Pfizer President's Presenter Award
- Canadian National Perinatal Research Meeting, **Montebello, Canada, February 10<sup>th</sup>-14<sup>th</sup> 2017 (Oral)**
- Society of Reproductive Investigation, **Montreal, Canada March 16<sup>th</sup>-19<sup>th</sup> 2016 (Oral)**
  - Was awarded with Thomas McDonald Award 2016 for highest ranked abstract in the field of fetal neuroscience
- Developmental Origins of Health and Disease **Cape Town, South Africa November 8<sup>th</sup>-11<sup>th</sup> 2015 (Poster)**
- Karolinska Developmental Biology Conference **Stockholm, Sweden August 16<sup>th</sup> -22<sup>nd</sup> 2015 (Poster)**

## SKILLS & INTERESTS

- MiniMBA completed March 2018
- QuintilesIMS case competition winners March 2018
- Avid traveller - have been to Sweden, Iceland, Denmark, Czech Republic, and South Africa in past two years.
- Bilingual: French and English