

Academics

University of Toronto

Ph.D Candidate, Department of Physiology

Toronto, ON
May 2011 – Present

- Department of Physiology, University of Toronto.
- Department of Developmental and Stem Cell Biology, SickKids.
- Exploring the role of GLI3R in renal organogenesis.

University of Toronto

M.Sc. Candidate, Department of Physiology
Reclassified into the Ph.D. program

Toronto, ON
Sep. 2009 – May 2011

- Department of Physiology, University of Toronto.
- Department of Developmental and Stem Cell Biology, SickKids.
- Exploring the role of GLI3R in renal organogenesis.

University of Guelph

B.Sc. Hons. Biomedical Sciences, Molecular Biology & Genetics

Guelph, ON
2005 – 2009

- Dean's list honours student.
- Primary focus on human structure and function, and associated pathologies.
- Secondary focus lies in the understanding of the genetic nature of life and its relevance to human health and wellbeing.

Gordon Graydon Memorial Secondary School

International Business & Technology Program

Mississauga, ON
2001 – 2005

- Ontario Scholar Graduate with OSS Diploma.
- Graduate of the International Business & Technology Program.
- Core focus on science and math.

Academic Experience

Lab of Dr. N. D. Rosenblum

The Hospital for Sick Children
Graduate Student

Toronto, ON
May 2009 – Present

GLI3R spatially regulates genes required for renal development.

Lab of Dr. J. LaMarre

Biomedical Sciences, University of Guelph
Fourth Year Project Student

Guelph, ON
September 2008 – April 2009

A Bioinformatics Approach to Defining the AU-rich Element (AURE): Identification of Novel Motifs Flanking AU-rich Elements.

- Techniques employed: PERL programming language and statistical analysis using Microsoft Excel 2008.

TGF- β Modulates Intracellular Localization of HuR in Rat Granulosa Cells.

Josh Blake *B.Sc. Hons.*

Curriculum Vitæ

416.953.8160

josh@joshblake.net

- Techniques employed: Immunofluorescence, Cell culture techniques, Real-Time PCR.

Lab of Dr. N. D. Rosenblum

The Hospital for Sick Children

SickKids Summer Research Award

Toronto, ON

May 2008 – August 2008

Understanding the Role of GLI Activators in the Metanephric Mesenchyme of the Developing Kidney.

- Studied the role of Sonic Hedgehog signaling pathway in murine renal patterning and development.
- Techniques employed include: PCR, In Situ Hybridization (ISH), Immunofluorescence Studies, TUNEL assay, cell proliferation assays, microscopy, genotyping.

Lab of Dr. A. R. Merrill

Ontario Workstudy Program Research Student

Guelph, ON

Sept. 2007 – May 2008

- Study of the Colicin E1 bacteriotoxin.
- Techniques employed include: PCR, mutagenesis, bacterial cloning and expression, Southern / Western blotting, SDS-PAGE, column chromatography, FPLC.

Volunteer & Related Experience

The Saturday Program

Volunteer Peer Mentor

Toronto, ON

Spring 2012

- Volunteer mentor and tutor for program youth in the Toronto District School Board who are struggling in any of their core subjects.

Teaching & Related Experience

PSL 480 (Prof. C. Wittnich)

Senior TA (120 hours)

University of Toronto

Fall 2011

- Invigilated examinations, graded examinations and assignments, managed blackboard, held office hours, held exam review, managed grades, held extra tutorial sessions.

PSL 280 (Prof. C. Wittnich)

Invited Lecture

University of Toronto

Fall 2010

“Physiology of the Renal System in Marine Mammals”

PSL 380 (Prof. C. Wittnich)

Senior TA (80 hours)

University of Toronto

Fall 2010

- Invigilated examinations, graded examinations and assignments, managed blackboard, held office hours, held exam review, managed grades, held extra tutorial sessions.

PSL 280 (Prof. C. Wittnich)

Invited Lecture

University of Toronto

Fall 2010

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Curriculum Vitæ

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“Physiology of the Renal System in Marine Mammals”

PSL 280 (Prof. C. Wittnich)

TA and Lab Demonstrator (40 hours)

University of Toronto

Fall 2010

- Invigilated examinations, weekly lab demonstrations with lab setup and takedown, managed blackboard, held exam review.

Publications

Cain, J. E., Islam, E., Haxho, F., **Blake, J.** and Rosenblum, N. D. (2011) GLI3 repressor controls functional development of the mouse ureter. *The Journal of Clinical Investigation*. 121(3): 1199-1206.

Blake, J., Gingerich, T. J. and LaMarre, J. (2009) A bioinformatics approach to defining the AU-Rich Element (AURE): Identification of novel motifs flanking AU-Rich Elements. *Studies by Undergraduate Researchers at Guelph*; Vol 3, No 1 (2009). 3(1).

Abstracts

Blake, J.*, Cain, J., Rosenblum, N.D. (2011) GLI3R Controls Ureteric Bud Branching Morphogenesis in a Mouse Model of Pallister-Hall Syndrome. *Frontiers in Physiology Symposium*. 31. Institutional Conference, *Poster Presentation*.

Blake, J.*, Cain, J., Rosenblum, N.D. (2010) GLI3 Repressor Inhibits Collecting System Development in a Murine Model of Pallister-Hall Syndrome. *Journal of the American Society of Nephrology*. 21. International Conference, *Poster Presentation*.

Blake, J.*, Cain, J., Rosenblum, N.D. (2010) GLI3 Repressor Inhibits Collecting System Development in a Murine Model of Pallister-Hall Syndrome. *Developmental Exchange Workshop*. International Conference, *Oral Presentation*.

Blake, J.*, Rosenblum, N.D. (2010) Constitutive GLI3 Repressor Is Detrimental To Nephrogenesis and Causes Duplex Collecting Systems in the Developing Kidney. *Frontiers in Physiology Symposium*. 30. Institutional Conference, *Poster Presentation*.

Blake, J.*, Cain, J., Rosenblum, N.D. (2009) The Role of Gli3 Repressor in the Developing Kidney: Characterization of A Model For Pallister-Hall Syndrome. *SickKids Summer Research Symposium*. Institutional Conference, *Poster Presentation*.

Blake, J.*, Cain, J., Rosenblum, N.D. (2008) Understanding the Role of GLI Activators in the Metanephric Mesenchyme of the Developing Kidney. *SickKids Summer Research Symposium*. Institutional Conference, *Poster Presentation*.

Awards

Josh Blake *B.Sc. Hons.*

Curriculum Vitæ

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josh@joshblake.net

- Frederick Banting and Charles Best Canada Graduate Scholarships - Master's Award (\$17 500) 2010 – 2011
- SickKids Summer Research Program Award Recipient (\$5 600) 2009
- Outstanding Poster Award (SickKids Summer Research Program) (\$100) 2008
"Understanding the Role of GLI Activators in the Metanephric Mesenchyme of the Developing Kidney"
- SickKids Summer Research Program Award Recipient (\$5 600) 2008

Skills & Training

- Landmark Education: Curriculum for Living Graduate (Completed January 2010)
- CPR Level C with Standard First Aid + AED (Completed May, 2008)

References and recommendations are available upon request.