

## **Academics**

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### 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**

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### 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- $\beta$  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.

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**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.

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**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

**Josh Blake** *B.Sc. Hons.*

Curriculum Vitæ

416.953.8160

josh@joshblake.net

“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

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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

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**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

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**Josh Blake** *B.Sc. Hons.*

Curriculum Vitæ

**416.953.8160**

**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**

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- 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.*