

## WEBSITE

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<https://goo.gl/3pjXpR>

# VINCENT BOUDREAU

As a computational cell biologist and microscopist, observing cells carry out complex behavior inspires me. Using biologically-designed tools to engineer solutions to global problems drives me. I'm committed to using biomimicry to develop technology for the renewable energy sector and others.

## EXPERIENCE

### RESEARCH FACILITATOR

Physiology Course  
Marine Biological Laboratory  
Woods Hole, MA  
Summers 2016-2018

Under Dr. Wallace Marshall's supervision, I developed a research plan and oversaw the success of the Physiology Course's students in answering biological questions in a discovery-based setting. We examined the cell biological and metabolic relationship between a wild species of the pond dwelling protist *Stentor* and its endosymbiotic alga.

### CO-ORGANIZER & CO-FOUNDER

The Triangle Cytoskeleton  
Meeting  
2014-2017

Through the Triangle Cytoskeleton Meeting, our team aimed to provide a forum to present and discuss cutting edge research on the cytoskeleton in addition to promoting communication and collaboration between research institutions. Our 2014 to 2016 meetings gathered a total of over 600 attendees and raised more than \$60K in grants, sponsorships and awards.

### CITY COORDINATOR

Research Triangle Park  
Pint of Science US  
2016

Through a series of discussions about the importance, the similarities, the differences and the processes of pursuing art and science, we strived to bridge the communication gap between the general public and highly skilled artists and scientists.

## EDUCATION

### GRADUATE STUDENT

Biology  
UNC-Chapel Hill  
Chapel Hill, NC  
2012-Present

Under Dr. Paul Maddox's supervision, I've studied the cell biological and biophysical components of nuclear expansion as nuclei are assembled. I've used cultured human cells, flies and worms as model organisms and genetic, cell biological, imaging and computational as technological approaches.

### VISITING STUDENT

Biophysics  
UC, Berkeley  
Berkeley, CA  
Spring 2016

I established a collaboration with Dr. Hernan Garcia's lab to study the timing and regulation of transcription activation with respect to cell division using advanced microscopy, image analysis and computational biology approaches. This work was initiated in the context of the Physiology Course at the Marine Biological Laboratory.

### STUDENT

Physiology Course  
Marine Biological Laboratory  
Woods Hole, MA  
Summer 2015

I completed this research-based, intensive bootcamp-like course aimed at bridging the biological, physical and computational sciences to lead to new research discoveries. During the course I discovered a new structure within a pond-dwelling organism that physically supports the life of the organism's endosymbiotic algae.

### UNDERGRADUATE STUDENT

Biochemistry  
University of Montreal  
Montreal, QC  
2009-2012

Under the supervision of Dr. Vincent Archambault, I conducted genetic and proteomic screens to identify novel molecular interactions of critical importance to the exit from mitosis using the fly embryo.

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## PUBLICATIONS

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**Boudreau V.**, Chen R., Edwards A., Muhammad S., Maddox P.S. Cytoplasmic nuclear envelope tethering and microtubule motor-based forces collaborate in positioning centrosomes during mitotic entry. (in preparation)

Hatkevich T., **Boudreau V.**, Rubin T., Huynh J.-R., Maddox P.S., Sekelsky J. Centromere clustering promotes meiotic homolog pairing and synapsis. (in preparation)

Mehsen M., **Boudreau V.**, Garrido D., Bouroh M., Larouche M., Maddox P.S., Swan A., Archambault V. PP2A-B55 promotes nuclear envelope reformation after mitosis in *Drosophila*. (in revision)

Byrnes A.E., Lowe B.F., **Boudreau V.**, Slep K.C. Polarized TOG arrays cooperatively bind tubulin to promote microtubule dynamics. (in revision)

**Boudreau V.**, Hazel J., Sellinger J.K., Chen P., Manakova K., Radzysinski R., Garcia H.G., Allard J., Gatlin J., Maddox P.S. (2018) Nucleo-cytoplasmic trafficking regulates nuclear surface area during nuclear organogenesis. bioRxiv 326140; doi: <https://doi.org/10.1101/326140> (in revision)

Ryan J., Gerhold A.R., **Boudreau V.**, Smith L., Maddox P.S. (2017) Introduction to Modern Methods in Light Microscopy. In: Markaki Y., Harz H. (eds) Light Microscopy. Methods in Molecular Biology, vol 1563. Humana Press, New York, NY

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## FUNDING

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DOCTORAL FELLOWSHIP  
2014-2017

*Fonds de recherche en santé du Québec* (FRSQ) - Québec's NIH  
Competitive funding: 25% success rate

POST COURSE RESEARCH  
FELLOWSHIP - 2016

Funding to conduct research in Dr. Hernan Garcia's laboratory at the University of California - Berkeley

PHYSIOLOGY COURSE  
Summer 2015

Burroughs Wellcome Fund and Caswell Grave Scholarship Fund

MASTER'S FELLOWSHIP  
2012-2014

*Fonds de recherche en santé du Québec* (FRSQ) - Québec's NIH  
Competitive funding: 33.8% success rate

RESEARCH FELLOWSHIP  
2012-2014

*Faculté des études supérieures et postdoctorales* (FESP)  
Support for the direct transition to the PhD from the BSc

UNDERGRADUATE  
FELLOWSHIP  
2010

The Canadian Society for Mucopolysaccharide and Related Diseases

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## PRIZES

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HONOR SOCIETY INDUCTION  
2018

Induction into the "Frank Porter Graham Graduate and Professional Student Honor Society" of the University of North Carolina at Chapel Hill

TRAVEL AWARD  
2015

Travel award to attend the American Society for Cell Biology's 2015 annual meeting in San Diego, CA  
Geston & Schatz, P.C.

OUTSTANDING POSTER  
PRESENTATION - 2015

Developmental & Stem Cell Biology Symposium  
University of North Carolina at Chapel Hill

BEST ORAL PRESENTATION  
2013

Simon-Pierre Noël prize - Biochemistry department  
University of Montreal

BEST POSTER PRESENTATION  
2012

GE Healthcare prize  
4<sup>th</sup> IRIC Scientific Day, University of Montreal

BEST POSTER PRESENTATION  
Second place  
2012

Canadian Society for Molecular Biosciences (CSMB)  
Biochemistry department, University of Montreal

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## PRESENTATIONS

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MINISYMPOSIUM TALK  
ASCB Annual  
Meeting - Philadelphia, PA  
2017

Nuclear organogenesis requires nuclear surface area regulation through nucleo-cytoplasmic trafficking

TALK  
Triangle Cytoskeleton  
Meeting - Saxapahaw, NC  
2017

PP2A-B55 and Lamin B collaborate in regulating centrosome migration during mitotic spindle formation

TALK  
Kinetochore Dynamics  
Meeting - Copenhagen, DK  
2015

Completing mitosis requires the timely reactivation of nucleocytoplasmic trafficking

INVITED SPEAKER  
University of Sherbrooke  
2014

*PP2A interagit génétiquement et physiquement avec le centromère*  
Biochemistry department symposium

TALK  
MCCCM  
2012

PP2A-B55/Tws collaborates with CENP-C for the cell cycle progression and regulates merotelic kinetochore-microtubule attachments in anaphase  
Montreal Cell Cycle and Cytoskeleton Meeting

## LANGUAGES

ENGLISH

FRENCH

RUSSIAN