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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

BOARD MEMBER
Future of Research, LLC
2018-Present

Future of Research (FoR) is a 501(c)(3) nonprofit organization created for and by early career researchers to make the research enterprise more sustainable for future generations. I execute fundraising initiatives and contribute to our efforts in incentivizing scientific societies to include early career researchers in leadership positions across the research enterprise.

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.

PUBLICATIONS

Boudreau V., Chen R., Edwards A., Muhammad S., Maddox P.S. (2018) Centrosome-nuclear envelope tethering and microtubule motor-based pulling forces collaborate in centrosome positioning during mitotic entry. bioRxiv 442368; doi: https://doi.org/10.1101/442368

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. (2018) PP2A-B55 promotes nuclear envelope reformation after mitosis in Drosophila. J Cell Biol, vol 217, 4106-4123

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., Radzyminski 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

FUNDING

DOCTORAL FELLOWSHIP
2014-2017

Fonds de recherche en sant é du Québec(FRSQ) - Quebec'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) - Quebec'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

PRIZES

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 4th IRIC Scientific Day, University of Montreal
BEST POSTER PRESENTATION Second place 2012	Canadian Society for Molecular Biosciences (CSMB) Biochemistry department, University of Montreal

PRESENTATIONS

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