

Mathieu Quesnel-Vallières, Ph.D.
 mathieu.quesnel-vallieres@usherbrooke.ca

AREAS OF EXPERTISE

RNA biology, transcriptomics, cancer, immunology, neuroscience, developmental biology, virology

POSITIONS AND TRAINING

Assistant Professor	09/2023-current
Department of Immunology of Cell Biology Université de Sherbrooke	
Postdoctoral training	01/2018-08/2023
Laboratories of Dr. Yoseph Barash, Dr. Kristen Lynch and Dr. Andrei Thomas-Tikhonenko Department of Biochemistry and Biophysics & Department of Genetics University of Pennsylvania <i>“Exploring transcriptomic signatures in myeloid and lymphoid malignancies”</i>	
Postdoctoral training	06/2017-08/2017
Laboratories of Dr. Benjamin Blencowe & Dr. Sabine Cordes Donnelly Centre & Lunenfeld-Tanenbaum Research Institute University of Toronto <i>“Implications of a program of alternative splicing in autism spectrum disorders”</i>	
Ph.D.	01/2011-05/2017
Department of Molecular Genetics University of Toronto Supervisors: Dr. Benjamin Blencowe & Dr. Sabine Cordes <i>“Investigating the functions of a neural-specific splicing regulator in the developing and adult mammalian nervous system.”</i>	
Ph.D. rotation	08/2010-12/2010
Department of Molecular Genetics University of Toronto	
Summer Institute in Taiwan studentship	06/2009-09/2009
Institute of Cellular and Organismic Biology Academia Sinica, Taipei Supervisor: Dr. Jen-Leih Wu	
M.Sc.	09/2007-06/2010
Department of Microbiology and Immunology Université de Montréal Supervisor: Dr. Hugo Soudeyns <i>“Establishing transgenic zebrafish lines to study the role of alternative reading frame protein (ARFP) in Hepatitis C pathogenesis.”</i>	
Summer studentship	05/2007-08/2007
Department of Microbiology and Immunology	

Université de Montréal

Supervisor: Dr. Hugo Soudeyns

“In vitro characterization of the Hepatitis C alternative reading frame protein.”

Summer studentship

05/2006-08/2006

Department of Microbiology and Immunology

Université de Montréal

Supervisor: Dr. Hugo Soudeyns

“Characterization of HIV-1 recombinant forms in antenatal cohort.”

B.Sc. Honor

09/2004-04/2007

Department of Microbiology and Immunology

Université de Montréal

Supervisor: Dr. Hugo Soudeyns

“Influence of interferon-alpha treatment on Hepatitis C Virus quasispecies evolution in HIV-1 and HCV-coinfected children.”

PUBLICATIONS

Manuscripts submitted or under review

Quesnel-Vallières M, Schultz DC, Orlenko A, Lo Y, Moore J, Ritchie M, Roth D, Carroll M, Barash Y, Lynch KW, Cherry S; Trametinib sensitivity is defined by a myeloid differentiation profile in acute myeloid leukemia. [under review]

Torres-Diz M, Reglero C, Falkenstein C, Castro A, Hayer K, Radens C, **Quesnel-Vallières M**, Ang Z, Sehgal P, Li M, Barash Y, Tasian S, Ferrando A, Thomas-Tikhonenko A; A Novel Aberrantly Spliced Gain-of-Function NT5C2 Isoform Contributes to Thiopurine Resistance in Acute Lymphoblastic Leukemia. [under review]

bioRxiv: <https://doi.org/10.1101/2023.09.14.557413>

Liu X, Devadiga SA, Stanley RF, Morrow R, Janssen K, **Quesnel-Vallières M**, Pomp O, Moverley AA, Li C, Skuli N, Carroll MP, Huang J, Wallace DC, Lynch KW, Abdel-Wahab O, Klein PS; Targeting mitophagy in SRSF2 mutant hematologic malignancies. [under review]

Peer-reviewed publications

Quesnel-Vallières M, Jewell S, Lynch KW, Thomas-Tikhonenko A, Barash Y (2024) MAJIQlopedia: an encyclopedia of RNA splicing variations in human tissues and cancer. *Nucleic Acids Res.* 52:D213-D221.

Liu X, Jones WD, **Quesnel-Vallières M**, Devadiga SA, Lorent K, Valvezan AJ, Myers RL, Li N, Lengner CJ, Barash Y, Pack M, Klein PS (2023) The tumor suppressor adenomatous polyposis coli (APC) is required for cranial neural crest migration in zebrafish. *J Dev Biol.* 11:29.

Wang D, **Quesnel-Vallières M**, Jewell P, Elzubeir M, Lynch KW, Thomas-Tikhonenko A, Barash Y (2023) A Bayesian model for unsupervised detection of alternative splicing based subtypes in heterogeneous cancers. *Nature Communications.* 14:63.

Peart NJ, Hwang JY, **Quesnel-Vallières M**, Sears MJ, Yang Y, Stoilov P, Barash Y, Park JW, Carstens RP (2022) The global protein-RNA interaction map of Epithelial Splicing Regulatory Protein

1 defines a post-transcriptional program that is essential for epithelial cell function. *iScience*. 25:105205.

Peart NJ, Johnson TA, Lee S, Sears MJ, Yang F, **Quesnel-Vallières M**, Feng H, Recinos Y, Barash Y, Zhang C, Hermann BP, Wang PJ, Geyer CB, Carstens RP (2022) The germ cell-specific RNA binding protein RBM46 is essential for spermatogonial differentiation in mice. *PLoS Genetics*. 18:e1010416.

Cortés-López M, Schulz L, Enculescu M, Paret C, Spiekermann B, Busch A, Orekhova A, Kielisch F, **Quesnel-Vallières M**, Torres-Diz M, Faber J, Barash Y, Thomas-Tikhonenko A, Zarnack K, Legewie S, König J (2022) High-throughput mutagenesis identifies mutations and RNA-binding proteins controlling CD19 splicing and CART-19 therapy resistance. *Nat Commun*. 13:5570.

Wakabayashi A, Kihui M, Sharma M, Thrasher AJ, Saari MS, **Quesnel-Vallières M**, Abdulmalik O, Chou ST, Peslak SA, Khandros E, Keller CA, Giardine BM, Hardison RC, Shi J, Blobel GA (2022) Identification and characterization of RBM12 as a novel regulator of fetal hemoglobin expression. *Blood Adv*. 2022007904.

Jha A^{*#}, **Quesnel-Vallières M^{*#}**, Wang D, Thomas-Tikhonenko A, Lynch KW, Barash Y[#] (2022) Identifying common transcriptome signatures of cancer by interpreting deep learning models. *Genome Biol*. 23:117.

* equal contribution; # corresponding authors

Zheng S, Gillespie E, Naqvi A, Hayer K, Ang Z, Torres-Diz M, **Quesnel-Vallières M**, Hottman D, Bagashev A, Chukinas J, Asnani M, Shraim R, Schmidt C, Taylor DM, Rheingold SR, O'Brien MM, Singh N, Lynch KW, Ruella M, Barash Y, Tasian SK, Thomas-Tikhonenko A (2022) Modulation of CD22 protein expression in childhood leukemia by pervasive splicing aberrations: implications for CD22-directed immunotherapies. *Blood Cancer Discov*. 3:103-115.

Article highlighted in a Spotlight in Blood Cancer Discovery and winner of the Blood Cancer Discovery Award for Outstanding Journal Article

Rivera OD, Mallory MJ, **Quesnel-Vallières M**, Schultz DC, Carroll M, Barash Y, Cherry S, Lynch KW (2021) Alternative splicing redefines landscape of commonly mutated genes in acute myeloid leukemia. *Proc Natl Acad Sci USA*. 118:e2014967118.

Barbieri E, Hill C, **Quesnel-Vallières M**, Zucco AJ, Barash Y, Gardini A (2020) Rapid and Scalable Profiling of Nascent RNA with fastGRO. *Cell Reports*. 33:108373.

Gonatopoulos-Pournatzis T, Niibori R, Salter EW, Weatheritt RJ, Tsang B, Farhangmehr S, Liang X, Braunschweig U, Roth J, Zhang S, Henderson T, Sharma E, **Quesnel-Vallières M**, Permanyer J, Maier S, Georgiou J, Irimia M, Sonenberg N, Forman-Kay JD, Gingras AC, Collingridge GL, Woodin MA, Cordes SP, Blencowe BJ (2020) Autism-Misregulated eIF4G Microexons Control Synaptic Translation and Higher Order Cognitive Functions. *Molecular Cell*. 77:1176-1192.

Fiordaliso SK, Iwata-Otsubo A, Ritter AL, **Quesnel-Vallières M**, Fujiki K, Nishi E, Hancarova M, Miyake N, Morton JEV, Lee S, Hackmann K, Bando M, Masuda K, Nakato R, Arakawa M, Bhoj E, Li D, Hakonarson H, Takeda R, Harr M, Keena B, Zackai EH, Okamoto N, Mizuno S, Ko JM, Valachova A, Prchalova D, Vlckova M, Pippucci T, Seiler C, Choi M, Matsumoto N, Di Donato N, Barash Y, Sedlacek Z, Shirahige K, Izumi K (2019) Missense Mutations in NKAP Cause a Disorder of Transcriptional Regulation Characterized by Marfanoid Habitus and Cognitive Impairment. *American Journal of Human Genetics*. 105:987-995.

Quesnel-Vallières M[#], Weatheritt RJ, Cordes SP[#], and Blencowe BJ[#] (2019) Autism Spectrum Disorder: Insights into convergent mechanisms from transcriptomics. *Nature Reviews Genetics*. 20:51-63.

corresponding authors

Featured as the cover of this Nature Reviews Genetics issue

Tapial J, Ha KCH, Sterne-Weiler T, Gohr A, Braunschweig U, Hermoso-Pulido A, **Quesnel-Vallières M**, Permanyer J, Sodaei R, Marquez Y, Cozzuto L, Wang X, Gómez-Velázquez M, Rayon T, Manzanares M, Ponomarenko J, Blencowe BJ, and Irimia M (2017) An atlas of alternative splicing profiles and functional associations reveals new regulatory programs and genes that simultaneously express multiple major isoforms. *Genome Research*. 27:1759-1768.

Quesnel-Vallières M, Dargaei Z, Irimia M, Gonatopoulos-Pournatzis T, Ip J, Wu M, Sterne-Weiler T, Nakagawa S, Woodin MA, Blencowe BJ, and Cordes SP (2016) Misregulation of an activity-dependent splicing network as a common mechanism underlying autism spectrum disorders. *Molecular Cell*. 64: 1023-1034.

Featured in international media, including The Globe and Mail, The Independent, ABC (newspaper) and The Scientist

Quesnel-Vallières M, Irimia M, Cordes SP, and Blencowe BJ (2015) Essential roles for the splicing regulator nSR100/SRRM4 during nervous system development. *Genes & Development*. 29:746-759.

Irimia M, Weatheritt RJ, Ellis J, Parikshak NN, Gonatopoulos-Pournatzis T, Babor M, **Quesnel-Vallières M**, Tapial J, Raj B, O'Hanlon D, Barrios-Rodiles M, Sternberg MJ, Cordes SP, Roth FP, Wrana JL, Geschwind DH, and Blencowe BJ (2014) A highly conserved program of neuronal microexons is misregulated in autistic brains. *Cell*. 159:1511-1523.

Featured as a preview in Cell, as an editor's choice in Science and a research highlights in Nature Genetics, as well as in international media, including The Toronto Star, Yahoo! News and the Scientist

Larouche A, Gaëtan G, El-Bilali N, **Quesnel-Vallières M**, Martin SR, Alvarez F, Shoukry NH, and Soudeyns H (2012) Seronegative Hepatitis C Virus infection in a child infected via mother-to-child transmission. *Journal of Clinical Microbiology*. 50:2515-2519.

Quesnel-Vallières M, Kouzayha I, Tran E, Barry I, Lasgi C, Méridol N, Monteil V, Ransy DG, Boucher M, Lapointe N, and Soudeyns H (2011) Novel HIV-1 recombinant forms in antenatal cohort, Montreal, Quebec, Canada. *Emerging Infectious Diseases*. 17:271-274.

Quesnel-Vallières M, Lemay M, Lapointe N, Martin SR, and Soudeyns H (2008) HCV quasispecies evolution during treatment with interferon alfa-2b and ribavirin in two children coinfecting with HCV and HIV-1. *Journal of Clinical Virology*. 43:236-240.

FUNDING AND AWARDS

Funding

Early career researchers competition in genomics – human health Génome Québec Can\$ 25,000 in services	01/2024-12/2024
Scholarship for the next generation of scientists Cancer Research Society Can\$ 50,000 postdoctoral fellowship/1 year Can\$ 120,000 operating grant/2 years	09/2022-08/2025

Scholarships

Ontario Graduate Scholarship	01/2016-12/2016
------------------------------	-----------------

Can\$ 15,000

Ontario Graduate Scholarship 09/2014-08/2015

Can\$ 15,000

Frederick Banting and Charles Best Canada Graduate Scholarship 05/2011-06/2014

Doctoral award, Canadian Institutes of Health Research

Can\$ 90,000 + Can\$ 15,000 research allowance

Master's training scholarship 09/2009-04/2010

Fonds de Recherche du Québec – Health

Can\$ 8,750

Summer Program in Taiwan Fellowship 06/2009-08/2009

Natural Sciences and Engineering Research Council of Canada

Can\$ 4,800 and travel expenses

Frederick Banting and Charles Best Canada Graduate Scholarship 09/2008-08/2009

Master's award, Canadian Institutes of Health Research

Can\$ 17,500

Master's training scholarship 09/2007-08/2008

CHU Sainte-Justine Foundation of Stars

Can\$ 13,500

Gabriel-Marquis Excellence Scholarship 07/2007-06/2008

Department of Microbiology and immunology Université de Montréal

Can\$ 8,500

COPSÉ Summer Studentship 05/2007-07/2007

Faculty of Medicine, Université de Montréal

Can\$ 4,251

COPSÉ Summer Studentship 05/2006-07/2006

Faculty of Medicine, Université de Montréal

Can\$ 4,251

Awards and distinctions

1st Prize, Postdoc poster in Biochemistry 12/2022

Retreat of the Department of Biochemistry and Biophysics of the University of Pennsylvania, Pocono Mountains

US\$ 100

1st Prize, Postdoc poster 11/2018

Retreat of the Department of Biochemistry and Biophysics of the University of Pennsylvania, Pocono Mountains

US\$ 100

Poster Prize 06/2016

Gordon Research Conference on Molecular and Cellular Neurobiology, Hong Kong

US\$ 250

Sigma Xi Distinguished Lecturer, Toronto Chapter 04/2016

"Autism spectrum disorders and the molecular roots of brain function"

2015 Dorrington Award 01/2016

<i>Donnelly Centre of the University of Toronto</i> <i>Can\$ 2,000</i> <i>Awarded every year to the top two or three graduate students at the Donnelly Centre</i>	
Margaret & Howard Gamble Research Grant <i>University of Toronto</i> <i>Can\$ 5,350</i>	09/2015
Mary Gertrude l'Anson Scholarship <i>University of Toronto</i> <i>Can\$ 5,000</i>	09/2015
Conference grant for the Cold Spring Harbor Laboratory meeting on <i>Eukaryotic mRNA Processing</i> <i>University of Toronto</i> <i>Can\$ 1,490</i>	08/2015
Travel grant for the Gordon Research Conference on <i>Excitatory Synapses and Brain Function</i> <i>Lunenfeld-Tanenbaum Research Centre</i> <i>Can\$ 1,000</i>	05/2015
Hannah Farkas-Himsley and Alexander Himsley Memorial Prize <i>Department of Molecular Genetics of the University of Toronto</i> <i>Can\$ 2,396</i> <i>Awarded every other year to the most meritorious all-around PhD student in the Department of Molecular Genetics</i>	09/2014
2 nd Prize, Poster <i>Retreat of the Department of Molecular Genetics of the University of Toronto, Orillia (ON)</i> <i>Can\$ 300</i>	09/2014
Poster Prize <i>Retreat of the Lunenfeld-Tanenbaum Research Institute, Orillia (ON)</i> <i>Can\$ 100</i>	05/2014
Norman Bethune Award <i>Department of Molecular Genetics of the University of Toronto</i> <i>Can\$ 2,000</i> <i>Awarded annually to the most meritorious junior PhD student in the Department of Molecular Genetics</i>	09/2011
Poster Prize <i>Samuel Lunenfeld Research Institute Retreat, Orillia (ON)</i> <i>Can\$ 100</i>	05/2011
Poster Prize <i>CHU Sainte-Justine Graduate students and postdoctoral fellows symposium, Montréal (QC)</i> <i>Can\$ 150</i>	06/2009
Excellence Award <i>Faculty of Graduate and Postdoctoral Studies of the Université de Montréal</i> <i>Can\$ 5,000</i> <i>One of ten awards attributed annually to the best all-around graduate students at the Université de Montréal</i>	09/2008

Poster Prize	06/2008
<i>Symposium of the CHU Sainte-Justine Graduate students and postdoctoral fellows, Montréal (QC)</i>	
<i>Can\$ 150</i>	
Excellence Award	05/2008
<i>CHU Sainte-Justine Research Centre</i>	
<i>Can\$ 1,500</i>	
Honourable Mention	11/2007
<i>Symposium of the FRQS AIDS and Infectious Disease Network, Montréal (QC)</i>	
Best oral presentation in Molecular and Cell Biology	01/2007
<i>Symposium of the Department of Biological Sciences of the Université de Montréal, Montréal (QC)</i>	
<i>Can\$ 100</i>	

PRESENTATIONS

(a star marks the presenting author)

Invited and selected talks

Quesnel-Vallières M*, Jewell S, Radens C, Davis J, Ang Z, Hayer K, Lynch KW, Thomas-Tikhonenko A, Barash Y. Transcriptomic approaches for the discovery of new immunotherapy targets. The RNA Processing in Cancer Conferences (FASEB). Houston, USA, November 2023.

[Selected talk, international]

Quesnel-Vallières M*, Radens C, Davis J, Hayer K, Lynch KW, Thomas-Tikhonenko A, Barash Y. Discovery of new immunotherapy targets in cancer from transcriptomic data. ISMB, Lyon, France, July 2023.

[Selected talk, international]

Quesnel-Vallières M*, Lynch KW, Thomas-Tikhonenko A, Barash Y. Discovery of cancer immunotherapy targets from splicing variations. RiboClub Meeting, Orford, Canada, September 2022.

[Selected talk, international]

Quesnel-Vallières M*, Jha A, Thomas-Tikhonenko A, Lynch KW, Barash Y. Identifying universal cancer transcriptome signatures by interpreting deep learning models. Intelligent Systems for Molecular Biology Meeting, Virtual, July 2021. *[Selected talk, international]*

Quesnel-Vallières M*, Vaquero-Garcia J, Slaff B, Norton S, Wang D, Lynch KW, Barash Y. Methods for RNA splicing analysis using large heterogeneous datasets. RNA Society Meeting, Krakow, Poland, June 2019. *[Selected talk, international]*

Quesnel-Vallières M*, Barash Y. Big RNA splicing data – challenges and advancements. RiboClub Annual Meeting, Orford, Canada, September 2018. *[Invited talk, international]*

Quesnel-Vallières M*, Dargaei Z, Irimia M, Gonatopoulos-Pournatzis T, Ip J, Sterne-Weiler T, Nakagawa S, Woodin MA, Blencowe BJ, and Cordes SP. Linking an alternative splicing regulatory network to autism spectrum disorder. Gordon Research Conference and Seminar on Molecular and Cellular Neurobiology, Hong Kong, People's Republic of China, June 2016. *[Selected talk at Seminar, poster at Conference, international]*

Quesnel-Vallières M*, Dargaei Z, Irimia M, Gonatopoulos-Pournatzis T, Ip J, Sterne-Weiler T, Nakagawa S, Woodin MA, Blencowe BJ, and Cordes SP. An alternative splicing regulatory network underlies autism spectrum disorder. Lunenfeld-Tanenbaum Research Institute Retreat, Orillia, Canada,

May 2016. *[Invited talk, institutional]*

Quesnel-Vallières M*, Dargaei Z, Irimia M, Sterne-Weiler T, Woodin MA, Cordes SP, Blencowe BJ. Role of a neuronal-specific alternative splicing regulatory network in autism spectrum disorders. RiboClub Annual Meeting, Orford, Canada, September 2015. *[Invited talk, international]*

Quesnel-Vallières M*, Sterne-Weiler T, Irimia M, Cordes SP, Blencowe BJ. nSR100/SRRM4 links alternative splicing to brain function and behavior in the adult animal. Cold Spring Harbor Laboratory meeting on Eukaryotic mRNA Processing, Cold Spring Harbor, USA, August 2015. *[Selected talk, international]*

Quesnel-Vallières M*, Irimia M, Blencowe BJ, Cordes SP. Functional roles of the nSR100/SRRM4 alternative splicing regulator in the adult mammalian nervous system. Gordon Research Conference and Seminar on Excitatory Synapses and Brain Function, Newport, USA, June 2015. *[Selected talk at Seminar, poster at Conference, international]*

Quesnel-Vallières M*, Irimia M, Cordes SP, Blencowe BJ. Functional roles of the nSR100/SRRM4 alternative splicing factor in the development of the mammalian nervous system. Gordon Research Conference and Seminar on Post-Transcriptional Gene Regulation. Newport, USA July 2014. *[Selected talk at Seminar, poster at Conference, international]*

Quesnel-Vallières M*, Irimia M, Cordes SP, Blencowe BJ. Essential roles for the neural-specific splicing regulator nSR100 in the developing mouse nervous system. Cold Spring Harbor Laboratory meeting on Eukaryotic mRNA Processing, Cold Spring Harbor, Canada August 2013. *[Selected talk, international]*

Talks and posters

Quesnel-Vallières M*, Jha A, Wang D, Thomas-Tikhonenko A, Lynch KW, Barash Y. Common RNA signatures of cancer. RNA Society Meeting, Boulder, USA, June 2022. *[Poster, international]*

Quesnel-Vallières M*, Irimia M, Cordes SP, Blencowe BJ. Dissecting the in vivo functions of the neural splicing regulator nSR100. Department of Molecular Genetics Annual Retreat, Orillia, September 2014. *[Poster, institutional]*

Quesnel-Vallières M*, Irimia M, Cordes SP, Blencowe BJ. Dissecting the in vivo functions of the neural splicing regulator nSR100/SRRM4. RNA Society Meeting, Québec city, Canada, June 2014. *[Poster, international]*

Quesnel-Vallières M*, Irimia M, Cordes SP, Blencowe BJ. Essential roles for the neural-specific splicing regulator nSR100 in the developing mouse nervous system. Lunenfeld-Tanenbaum Research Institute Retreat, Orillia, Canada May 2014. *[Poster, institutional]*

Quesnel-Vallières M*, Cordes SP, Blencowe BJ. Investigating the functions of a neural-specific splicing regulator in the developing mouse central nervous system. 2012 Canadian meeting of the Society for Developmental Biology, Banff, Canada March 2012. *[Poster, national]*

Quesnel-Vallières M*, Cordes SP, Blencowe BJ. Investigating the functions of nSR100 in the mammalian central nervous system. 2011 Samuel Lunenfeld Research Institute Retreat, Orillia, Canada, May 2011. *[Poster, institutional]*

Quesnel-Vallières M*, Liu W, Wu JL, Soudeyns H. Studying the role of ARFP in HCV pathogenesis using transgenic zebrafish. FRQS AIDS and Infectious Disease Network Symposium, Montréal, Canada, November 2009. *[Talk, provincial]*

Quesnel-Vallières M*, Kouzayha I, Tran E, Barry I, Lasgi C, Soudeyns H. Identification of 4 novel HIV-1 recombinants by full-length genome analysis. 2009 CHU Sainte-Justine Students Conference, Montréal, Canada, June 2009. *[Poster, institutional]*

Quesnel-Vallières M*, Kouzayha I, Tran E, Barry I, Lasgi C, Bertrand O, Mérindol N, Soudeyns H. Full-length genomic analysis of 4 novel HIV-1 recombinants. FRQS AIDS and Infectious Disease Network Symposium, Montréal, Canada, November 2008. *[Talk, provincial]*

Quesnel-Vallières M*, Soudeyns H. Functional study of the F protein of the hepatitis C virus using zebrafish as an animal model. 2008 CHU Sainte-Justine Students Conference, Montréal, Canada, June 2008. *[Poster, institutional]*

Quesnel-Vallières M*, Soudeyns H. Study of the biological function of the F protein of hepatitis C virus in zebrafish. FRQS AIDS and Infectious Disease Network Symposium. Montréal, Canada, November 2007. *[Poster, provincial]*

Quesnel-Vallières M*, Mérindol N, Kouzayha I, Barry I, Boucher M, Soudeyns H. Identification of two novel recombinant forms of HIV-1. 17th Graduate Students Symposium of the Department of Biological Sciences, Université de Montréal. Montréal, Canada, January 2007. *[Talk, institutional]*

PATENT

Blencowe BJ, **Quesnel-Vallières M**, Irimia M, Raj B, Cordes SP. “Modulation and detection of a neuronal alternative splicing regulatory network for treatment and diagnosis of neurological disorders” 2015, US Patent No. 10,772,928

PEER-REVIEWING ACTIVITIES

Reviewer for PLoS Genetics (since 2018), Nature Communications (since 2019), Nucleic Acids Research (since 2019), Genome Research (since 2019), Cell Reports (since 2019), Molecular Psychiatry (since 2019), Cellular and Molecular Gastroenterology and Hepatology (since 2020), Genomic Medicine (since 2022).

TEACHING AND MENTORING

Direct mentoring, guidance or training of 7 undergraduate students, 5 graduate students and 2 postdoctoral fellows	09/2006-present
Teaching Assistant, General Microbiology MCB1979 Department of Microbiology and Immunology, Université de Montréal	01/2010-04/2010
Teaching Assistant, Microbiology and Virology MCB3094 Department of Microbiology and Immunology, Université de Montréal	11/2009
Teaching Assistant, Microbiology for Nutritional Sciences MCB3050 Department of Microbiology and Immunology, Université de Montréal	10/2009-11/2009
Teaching Assistant, General Microbiology MCB1979 Department of Microbiology and Immunology, Université de Montréal	01/2007-04/2007

NON PEER-REVIEWED PUBLICATIONS

Doctoral thesis

Quesnel-Vallières M. (2017) Role of an alternative splicing regulatory program in nervous system development and disorders. Ph.D., University of Toronto, Canada. 180 pages.

Master's thesis

Quesnel-Vallières M. (2010) Développement de lignées de poissons zébrés transgéniques pour l'étude du rôle de la protéine F dans la pathogénèse de l'hépatite C. M.Sc., Université de Montréal, Canada. 116 pages.

Research report produced for a government

Quesnel-Vallières M., Liu W., Wu J.L., and Soudeyns H. (2009) Study of the biological function of the hepatitis C virus ARFP in transgenic zebrafish. Report submitted to the National Science Council of Taiwan. September 2009. 11 pages.

Article in a cultural journal

Quesnel-Vallières M. (2007) Le virus de l'hépatite C: défis complexes et perspectives encourageantes. Dire. 17:36-39.

EXTRACURRICULAR ACTIVITIES

In charge of the online activities of the integrative RNA research group of the International Society for Computational Biology (iRNA COSI; https://irnacosi.org/)	02/2020-current
Invited lecturer at La Salle University	09/2019
Representative, Donnelly Centre Graduate Student Association	07/2012-07/2013
Executive member of the Academic Affairs Committee of the CHU Sainte-Justine Research Centre	05/2009-06/2010
Master's students representative <i>The Academic Affairs Committee is an executive committee composed of one student representing each post-graduate level, principal investigators, physicians, and administrative members of the CHU Sainte-Justine Research Centre.</i>	
Representative, CHU Sainte-Justine Graduate Students Association	05/2008-06/2010
Mentoring of eight teams participating to the 2009 and 2010 Bell Science Fairs	2009-2010
Ambassador; Canadian Institutes of Health Research Synapse Program Sensibilisation aux Études, à l'Université et à la Recherche (Université de Montréal) Innovateurs à l'école (Société pour la Promotion de la Science et de la Technologie)	2008-2010
Judging for science fairs BioTalent Sanofi-Aventis Challenge (2008, 2009 and 2010) Bell Science Fair (regional and provincial finals 2008, provincial finals 2010)	2008-2010

Touring high schools and hosting seminars to
promote graduate studies and health research, reaching over 500 students

2008-2010

CAREER INTERRUPTIONS

09/2015-12/2015 Paternity leave

06/2013-07/2013 Paternity leave