

Dr. BAPTISTE LACOSTE

The University of Ottawa, Faculty of Medicine, Dept. of Cellular and Molecular Medicine. blacoste@uottawa.ca

A) EMPLOYMENT HISTORY:

2025-present	Director, Regenerative Medicine Program, Ottawa Hospital Research Institute.
2022-present	Associate Professor, Dept. of Cellular and Molecular Medicine, uOttawa.
2021-present	Senior Scientist, Neuroscience Program, Ottawa Hospital Research Institute.
2016-2022	Assistant Professor, Dept. of Cellular and Molecular Medicine, uOttawa.
2016-2021	Scientist, Neuroscience Program, Ottawa Hospital Research Institute.

B) EDUCATION:

2012-2015	2 nd Post-doctoral training, Dept. of Neurobiology, Harvard Medical School
2009-2012	1 st Post-doctoral training, Montreal Neurological Institute, McGill University
2003-2009	MSc + PhD, Neurological Sciences, University of Montreal
2000-2002	MSc, Neuropharmacology, University of Bordeaux
1997-2000	BSc, Cellular Biochemistry & Neurophysiology, University of Bordeaux

C) DISTINCTIONS AND HONOURS:

12/2024	Nominated for election in the Royal Society of Canada's College of New Scholars, Artists, and Scientists
12/2023	Nominated for University-wide Early Career Researcher of the Year Award
10/2023	Educator of the Year Award, Faculty of Medicine, uOttawa
06/2023	Nominated for Mentor of the Year Award, Faculty of Medicine, uOttawa
03/2023	Chairs 's Choice Award (best scientific session) ASN 2023, Lexington, USA
09/2022	Early Career Researcher of the Year Award, Faculty of Medicine, uOttawa
05/2022	Promotion to Associate Professor (with tenure), Faculty of Medicine, uOttawa
08/2021	Promotion to Senior Scientist, Ottawa Hospital Research Institute
10/2020	Publication of the Year Award, Faculty of Medicine. University of Ottawa
2014-2015	Goldenson post-doctoral Fellowship, Harvard Medical School (\$50,000 USD)
2013-2014	Mahoney post-doctoral Fellowship, Harvard Medical School (\$30,000 USD)
06/2012	Prize for best poster, International Symposium on Kinins, Paris, France
2009-2011	Alzheimer Society of Canada post-doctoral Fellowship (\$81,000 CAD)
2006-2008	Ph.D. Excellence Awards (one each year), Université de Montréal
05/2005	Prize for best student presentation, Université de Montréal
11/2004	Young Neuroscientist Award, Canadian Association for Neuroscience

D) ACADEMIC SERVICE, SCHOLARLY AND PROFESSIONAL ACTIVITIES:

2025-present	Member, uOttawa Metabolomics Core Facility user committee
2024-present	Editorial Board Member, Glial Health Research, Elsevier
2024-present	Founding Member & Steering committee, CANGlia (Canadian Association of Neuroscientists who study Glia)
2024-2025	Member, CIHR-CAN Brain Star Awards selection committee
2023-2025	Member, Departmental Teaching Personal Committee, uOttawa, CMM
2022-2025	Pillar Lead, Neurodegeneration, uOttawa Brain & Mind Research Institute
2022-2025	Elected member, Ontario Autism Scholar Awards selection committee
2021-present	Member, OHRI Scientific Appointment Review committee
2021	Deputy Chair, SRC-III panel, Heart & Stroke Foundation of Canada
2021-2023	Early Career Researcher representative, Canadian Brain Research Strategy

2020-present	Founder & Scientific Director, uOttawa Electron Microscopy Core Facility
2019-2022	Member, Faculty Awards committee
2019-2025	Member, Translational Molecular Medicine program committee
2019-2023	Member, OHRI scientific retreat organizing committee
2019-2021	External reviewer, Scottish Rite Charitable Foundation of Canada
2018-2024	Reviewing Editor, Frontiers in Molecular Neuroscience
2018-present	Member, review panels, Canadian Institutes of Health Research
2018-2021	Co-chair, Organizing Committee, David Park Seminar Series
2018-2020	Co-chair, Organizing Committee, Brain Health Research Day
2018-2019	External reviewer, Alberta Prion Institute
2018-2019	Member, OGS/CIHR student scholarships review committee
2017-2021	Member, SRC-III review panel, Heart & Stroke Foundation of Canada
2017-present	External reviewer, Agence Nationale de la Recherche (France)
2016-present	Member, uOttawa Cell Biology & Image Acquisition Core Facility committee

E) GRADUATE SUPERVISION:

In progress (n=6):

Pavel Kotchetkov. Ph.D. candidate.

Nicole Blakeley. Ph.D. candidate.

Abagael Hudak. Ph.D. candidate. In co-supervision with Dr. Katey Rayner.

Leya Aubert-Tandon. Ph.D. candidate.

Taj Matthews. M.Sc. candidate. In co-supervision with Dr. Ian Lorimer.

Muath Huamid. M.Sc. candidate.

Completed (n=4):

Dr. Sozerko Yandiev [Graduated Ph.D. in November 2025]

Dr. Julie Ouellette [Graduated Ph.D. in September 2024]

Joanna Raman-Nair, M.Sc. [Graduated M.Sc. in May 2022]

Caitlin Menzies, M.Sc. [Graduated M.Sc. in May 2021]

F) POST-GRADUATE SUPERVISION:

In progress (n=1):

Dr. Moises Freitas-Andrade, Lab Manager. *Role of astrocytes in the control of postnatal cerebrovascular development.*

Completed (n=2):

Dr. Matthew McDonald, Post-doctoral Fellow (co-supervised with Dr. Dale Corbett), *Engaging skeletal muscle and vascular plasticity to promote hindlimb functional recovery in a rat model of ischemic stroke.*

Dr. Xavier Toussay, Research Associate. *Dr. Toussay was instrumental in assisting me with lab start-up, initiating projects and supervising new trainees.*

G) UNDERGRADUATE SUPERVISION:

In progress (n=2):

Amber E. Morton (Undergraduate student, 4th year B.Sc. Hons. project).

Paniz Akbari (Undergraduate student, 4th year B.Sc. Hons. project).

Completed (n=32):

James Lee, Elyes Meddeb, Sara Kawtharani, Maheen Khanotia, Nour El Khatib, Abbey Gibb, Kassandre Kelly, Nathalie Masry, Alexandre Savard, Nicole Dranitsaris, Karan Thakur, Cédric Gravel, Sandrine Thomassin, Katya Godard, Aditya Prashar, Dalia Ibrahim, Claire Simada, Andjela Orozovic, Bassam Thermos, Sofia Zelko, Carlie Boisvert, Peter Van Dyken, Eloïse Deschênes, Kaelen Gobeil, Alyson Jiang, Ilian Vargas, Valeria Koveza, Ryan Daniel, Michelle Murphy, Kaitlyn Brethour, Jasmine Yu, Nicolas Toex.

H) GRADUATE TEACHING (English)

2023-present	CMM5302	Comprehensive Pharmacology
2019-present	NSC8103	Developmental Neuroscience
2018-present	NSC8105	Molecular Biology of the Neuron
2016-present	NSC5102	Cellular & Molecular Neuroscience
2016-present	CMM5360	Imaging in Cell Biology

I) UNDERGRADUATE TEACHING (French & English)

2021-present	TMM3506	Introduction à la neurobiologie
2020-present	TMM3504	Bases cellulaires des maladies
2018-present	TMM3106	Fundamentals of Neuroscience

J) EXTERNAL RESEARCH FUNDING: Total to date: \$5.3M

*G, government; F, foundation; O, other.

Year	Source <i>Title of project</i>	Type*	Direct costs (CAD)	Purpose
2016-2017	Canadian Foundation for Innovation <i>Remodeling of the cerebral vasculature in health and disease</i>	G	\$535,000	Equipment
2016-2017	Canadian Partnership for Stroke Recovery <i>Engaging skeletal muscle and vascular plasticity to promote hindlimb functional recovery in a rat model of ischemic stroke. Co-PI: Dr. Dale Corbett</i>	O	\$50,000	Operating
2017-2020	Heart and Stroke Foundation of Canada <i>Rho-kinase2 inhibition as an early intervention after ischemic stroke to modulate cerebrovascular plasticity and promote functional recovery.</i>	F	\$260,000	Operating
2017	J.P. Bickell Foundation <i>Pathophysiology of autism during postnatal development: role of the brain vasculature.</i>	F	\$65,000	Operating
2017-2020	Scottish Rite Charitable Found. of Canada <i>Contribution of cerebrovascular deficits to the pathophysiology of autism spectrum disorders.</i>	F	\$105,000	Operating
2018-2023	Canadian Institutes of Health Research <i>Role of cerebrovascular abnormalities in the pathophysiology of autism spectrum disorders.</i>	G	\$906,000	Operating
2018-2024	National Science and Engineering Research Council of Canada <i>Role of astrocytes in the control of cerebrovascular patterning during postnatal development.</i>	G	\$230,000	Operating

Year	Source <i>Title of project</i>	Type*	Direct costs (CAD)	Purpose
2020-2023	New Frontiers Research Fund - Exploration <i>Cellular and molecular mechanisms underlying neurovascular deficiencies in autism.</i> Co-PI: Dr. Cesar H. Comin	G	\$273,000	Operating
2020-2021	Heart and Stroke Foundation of Canada <i>Sex differences in cerebral blood flow regulation following experimental ischemic stroke.</i>	F	\$40,000	Operating
2022-2025	Department of Defence - Autism Research Program: Ideal Development Award (USA) <i>Cellular and Molecular Mechanisms of Altered Brain Metabolism in Autism Mice: Toward Earlier Diagnosis and Treatment.</i>	G	\$560,000	Operating
2024-2026	SynGap Research Fund (USA) <i>Investigation of cerebrovascular deficits in animal and cellular models of SYNGAPI deficiency.</i>	F	\$178,000	Operating
2024-2029	Canadian Institutes of Health Research <i>Defective endothelial metabolism and mitochondrial biogenesis in autism spectrum disorders.</i>	G	\$961,000	Operating
2025-2030	Canadian Institutes of Health Research <i>Astrocyte-derived HMGB1: a developmental switch for stroke recovery.</i>	G	\$1,113,000	Operating

K) INTERNAL FUNDING:

2019-2020	U. of Ottawa EM Core Facility Catalyst Funds (\$40,000 CAD)
2020-present	U. of Ottawa, Faculty of Medicine Core Facility Support Funds (\$25,000 CAD/year)
2020-present	University of Ottawa - EM Core Facility Support Funds (\$30,000 CAD/year)
2023-2026	Brain Heart Interconnectome - EM Core Facility Support Funds (\$82,000 CAD/year)
2025	BIG IDEA grant, U. of Ottawa (\$11,500 CAD)

L) PUBLICATIONS: **Lacoste lab trainees in red*

Full publication list: [PubMed](#)

- Manuscripts ***in revision*** for refereed journals (n=3):

3. Dion-Albert L., Cadoret A., Lopez J.S., **Kotchetkov P.**, Pancotti L., Paton S.E.J., VanderZwaag J., Collignon A., Binder L.B., Linville R.M., Richer E., Lebel M., Signature Consortium, Heiman M., Tremblay M-È., Proulx C., Turecki G., Mechawar N., **Lacoste B.** and Ménard C. (2025) Pericytes modulate brain vascular integrity in social stress and depression. Revisions submitted to *Nature Neuroscience*. [Preprint](#)
2. **Ouellette J.**, Warsi S., Khare P., Naz S., **Aubert-Tandon L.**, Pileggi C., Yandiev S., **Freitas-Andrade M.**, Comin C.H., Harper M-E., Manickam D.S., Saghatelian A. and **Lacoste B.** (2025) Purinergic receptor activation rectifies autism-associated endothelial dysfunction. Revisions requested at *Neuron*. [Preprint](#)
1. Manceau R., Majeur D., Cherian C.M., Miller; C.J., Wat L.W., Fisher J.D., Labarre A.; Hollman S., Prakash S., Audet S., Chao C.; Depaauw-Holt L., Rogers B., Bosson A., Xi J.J.Y., Callow C.A.S., Yoosefi N., Shahraki N., Xia Y.H., Hui A., VanderZwaag J.; Bouyakdan K.; Rodaros D., **Kotchetkov P.**; Daneault C., Fallahpour G., Tetreault M., Tremblay M-E.; Ruiz M., **Lacoste B.**, Parker A.J.; Murphy-Royal C., Huan T.; Fulton S.; Rideout E.J. and Alquier T (2025). Neuronal lipid droplets play a conserved and sex-biased role in maintaining whole-body energy homeostasis. Revisions submitted to *Nature Metabolism*. [Preprint](#)

- Manuscripts **published** (or accepted) in refereed journals (n=51):

51. **Kotchetkov P.** and **Lacoste B.** (2025) Volumetric analysis of the blood-brain barrier after ischemic stroke by electron tomography in mice. *Microcirculation*. 2(7):e70025. [PMID: 40975889](#)
50. Kasongo A.A., Vijithakumar V., Abd-Elrahman K.S., Prabhune R., Gharibeh L., Nadeau R., Robillard I., Spring S., Robichaud S., Asif S., Gibbings D., Moore K.J., Sled J.G., Ruiz M., Lavallée-Adam M., Ferguson S.S.G., **Lacoste B.**, Lagace D.C. and Ouimet M. (2025) Oxysterol-Binding Protein ORP6 Regulates Lipid Metabolism and Brain A β Production. *J Lipid Res.* [Epub] [PMID: 40716750](#)
49. Ramljak M., **Freitas-Andrade M.**, **Lacoste B.**, Aguilar-Valles A., Salmaso N. (2025) Glial cell interactions in neonatal hypoxic-ischemic injury. *Glial Health Research*. [Link](#)
48. da Silva M.W., de Carvalho Santos N., **Ouellette J.**, **Lacoste B.** and Comin C.H. (2025) A new dataset for measuring the performance of blood vessel segmentation methods under distribution shifts. *PLOS One*. 20(5):e0322048. [PMID: 40424440](#)
47. Gall L.G., Stains C.M., **Freitas-Andrade M.**, Jia B.Z., Patel N., Megason S.G., **Lacoste B.** and O'Brown N.M. (2024) Zebrafish glial-vascular interactions progressively expand over the course of brain development. *iScience*, 28(1): 111549. [PMID: 39811646](#)
46. **Lacoste B.** (2024) Sensors in the microvascular bed: vital but vulnerable. *Proc Natl Acad Sci USA*. 121(43):e2417137121. [PMID: 39401368](#)
45. **Ouellette J.** and **Lacoste B.** (2024) *Rock2* heterozygosity improves recognition memory and endothelial function in a mouse model of 16p11.2 deletion autism syndrome. *Neuroscience Letters*, 837:137904. [PMID: 39029613](#)
44. **Ouellette J.**, Crouch E.E., Morel J-L., Coelho-Santos V. and **Lacoste B.** (2024) A vascular-centric approach to autism spectrum disorders. *Neuroscience Insights*, 19:1-4. [PMID: 38476695](#)
43. **Raman-Nair J.**, Cron G., McLeod K. and **Lacoste B.** (2024) Sex-specific acute cerebrovascular response to photothrombotic stroke in mice. *eNeuro* 11(1):0400-22.2023. [PMID: 38164600](#)
42. **Kotchetkov P.**, **Blakeley N.** and **Lacoste B.** (2023) Involvement of brain metabolism in neurodevelopmental disorders. *International Review of Neurology*, 173:67-113. [PMID: 37993180](#)
41. Peyman Ghorbani P., Sang Yong Kim S.Y., Smith T.K.T., Minarrieta L., Robert-Gostlin V., Kilgour M.K., Ilijevaska M., Irina Alecu I., Shayne A., Snider S.A., Margison K.D., Julia R.C. Nunes J.R.C., Woo D., Pember C., O'Dwyer C., **Ouellette J.**, **Kotchetkov P.**, St-Pierre J., Bennett S.A.L., **Lacoste B.**, Blais A., Nair M.G. and Fullerton M.D. (2023) Choline metabolism underpins macrophage IL-4 polarization and RELM α up-regulation in helminth infection. *PLoS Pathogens* 19(9):e1011658. [PMID: 37747879](#)
40. **Freitas-Andrade M.**, Comin C.H., **Van Dyken P.**, **Ouellette J.**, **Raman-Nair J.**, **Blakeley N.**, Liu Q.Y., Leclerc S., Pan Y., Liu Z., Carrier M., **Thakur K.**, **Savard A.**, Rurak G.M., Tremblay M-È., Salmaso N., Da F. Costa L., Coppola G. and **Lacoste B.** (2023) Astroglial *Hmgbl* regulates postnatal astrocyte morphogenesis and cerebrovascular maturation. *Nature Communications* 14(1):4965. [PMID: 37587100](#)
39. **Béland-Millar A.**, Truong Y., Kirby A., **Ouellette J.**, Yandiev S., Bouyakdan K., Pileggi C., Naz S., Yin M., Carrier M., **Kotchetkov P.**, St-Pierre K-M., Tremblay M-È., Courchet J., Harper M-E., Alquier T., Messier C., Shuhendler A.J. and **Lacoste B.** (2023) 16p11.2 haploinsufficiency reduces mitochondrial biogenesis in endothelial cells and alters brain metabolism in adult mice. *Cell Reports* 42(5):112485. [PMID: 37149866](#)
38. Lithopoulos M.A., **Toussay X.**, Zhong S., Xu L., Mustafa S.B., **Ouellette J.**, Comin C.H., Bassam H.A., Baker A.N., Moreira A., Blanco C., Vadivel A., Tsilfidis C., Seidner S., Slack R., Lagace D., Wang J., **Lacoste B.** and Thébaud B. (2022) Neonatal hyperoxia in mice impairs cerebrovascular function, neurogenesis, and behavior into adulthood. *Journal of Clinical Investigation* 132(22):e146095. [PMID: 36136598](#)

37. da Silva M.W., **Ouellette J.**, **Lacoste B.** and Comin C.H. (2022) An analysis of the influence of transfer learning when measuring the tortuosity of blood vessels. *Comput Methods Programs Biomed* 225:107021. [PMID: 35914440](#)
36. **Freitas-Andrade M.**, Comin C.H. Viana da Silva M., Luciano Da F. Costa L. and **Lacoste B.** (2022) Unbiased analysis of mouse brain endothelial networks from two- or three-dimensional fluorescence images. *Neurophotonics* 9(3), 031916. [PMID: 35620183](#)
35. Martin M., Bostaille N., Eubelen M., Spitzer D., Profaci C.P., Pozuelo E., Vermeiren S., **Toussay X.**, **Raman-Nair J.**, Tebabi P., America M., Sandersson L., Cabochette P., Germano R.F.V., Torres D., Boutry S., Kerckhove A., Bellefroid E., Devraj K., **Lacoste B.**, Daneman R., Liebner S. and Vanhollebeke B. (2022) Engineered Wnt ligands enable blood-brain barrier repair in neurological disorders. *Science* 375(6582): eabm4459. [PMID: 35175798](#)
34. Bordeleau M., Comin C.H., Fernández de Cossío L., Lacabanne C., daF. Costa F., **Raman-Nair J.**, **Freitas-Andrade M.**, **Lacoste B.*** and Tremblay M-È.* (2022) Maternal high-fat diet induces cerebrovascular and behavioural changes in mouse offspring. *Commun. Biology* 5(1):26 *Co-senior [PMID: 35017640](#)
33. Rurak G.M., Simard S., **Freitas-Andrade M.**, **Lacoste B.**, Charih F., Van Geel A., Stead J., Woodside B., Green J.R., Coppola G. and Salmaso N. (2022). Translational database of cortical astroglia across male and female mouse development reveals two distinct developmental phenotypes. *Cell Reports* 38(5):110310. [PMID: 35108542](#)
32. **Ouellette J.** and **Lacoste B.** (2021) Isolation and functional characterization of primary endothelial cells from mouse cerebral cortex. *STAR Protocols* 2(4):101019. [PMID: 34950893](#)
31. Cheng H., Sebaa R., Malholtra N., **Lacoste B.**, El Hankouri Z., Kirby A., Bennett N.C., van Jaarveld B., Hart D.W., J Tattersall G.J., Harper M-E. and Pamenter M.E. (2021) Brown fat thermogenesis is diminished by hypoxia in naked mole-rats through a fission-mediated decrease in thermogenic protein expression. *Nature Communications* 12(1):6801. [PMID: 34815412](#)
30. **Ouellette J.** and **Lacoste B.** (2021) From neurodevelopmental to neurodegenerative disorders: the vascular continuum. *Front. Aging Neurosci.* 13:749026. [PMID: 34744690](#)
29. **McDonald M.W.**, Jeffers M.S., Issa L., Carter A., Ripley A., Kuhl L., **Morse C.J.**, Comin C.H., Jasmin B.J., **Lacoste B.*** and Corbett D.* (2021) An exercise mimetic approach to reduce poststroke deconditioning and enhance stroke recovery. *Neurorehabil. Neural Repair* 35(6):471-485. *Co-senior Editor's Choice for June 2021 issue. [PMID: 33825581](#)
28. **Menzies C.**, Naz S., Patten D., Alquier T., Bennet B.M. and **Lacoste B.** (2021) Distinct basal metabolism in three mouse models of neurodevelopmental disorders. *eNeuro* 8(2):0292-20.2021. [PMID: 33820803](#)
27. **Freitas-Andrade M.**, **Raman-Nair J.** and **Lacoste B.** (2020) Structural and functional remodeling of the brain vasculature following stroke. *Frontiers in Physiology* 11:948. [PMID: 32848875](#)
26. **Ouellette J.**, **Toussay X.**, Comin C.H., da F. Costa L., Ho M., Lacalle-Aurioles M., **Freitas-Andrade M.**, Liu Q.Y., Leclerc S., Pan Y., Liu Z., Thibodeau J-F., Yin M., Carrier M., **Morse C.J.**, **Van Dyken P.**, Bergin C.J., Baillet S., Kennedy C.R., Tremblay M-E., Benoit Y.D., Stanford W.L., Burger D., Stewart D.J. and **Lacoste B.** (2020) Vascular contributions to 16p11.2 deletion autism syndrome modeled in mice. *Nature Neuroscience* 23:1090-1101. [PMID: 32661394](#)
25. Livingston-Thomas J.M., **McDonald M.W.**, Gagnon T., Jeffers M.S., Gomez-Smith M., Antonescu S., Cron G.O., **Boisvert C.**, **Lacoste B.** and Corbett D. (2020) Influence of metabolic syndrome on cerebral perfusion and cognition. *Neurobiology of Disease* 137:104756. [PMID: 31978604](#)
24. Tian W., Alsaadi R., Guo Z., Kalinina A., Carrier M., Tremblay M.E., **Lacoste B.**, Lagace D. and Russell R.C. (2019) An antibody for analysis of autophagy induction. *Nature Methods* 17(2):232-239. [PMID: 31768061](#)

23. **Van Dyken P.** and **Lacoste B.** (2018) Impact of Metabolic Syndrome on Neuroinflammation and the Blood-brain Barrier. *Frontiers in Neuroscience* 12(930):1-19. [PMID: 30618559](#)
22. Sadeghian H.*, **Lacoste B.*[‡]**, Qin T., **Toussay X.**, Rosa R., Chung D.Y., Oka F, Takizawa T., Gu C. and Ayata C.[‡], (2018). Spreading depolarizations trigger caveolin-1-dependent endothelial transcytosis. *Annals of Neurology* 84(3):409-23. *Co-first, [‡] Co-corresponding [PMID: 30014540](#)
21. Boisvert N.C., Holterman C.E., Thibodeau J.F., Nasrallah R., Kamto E., Comin C.H., da F. Costa L., Carter A., Hébert R.L., Gutsol A., Cron G.O., **Lacoste B.**, Gray DA. and Kennedy C.R. (2018) Hyperfiltration in Ubiquitin C Terminal Hydrolase L1-Deleted Mice. *Clinical Science* 132(13):1453-1470. [PMID: 29739827](#)
20. Gouveia A., Seegobin M., Kannangara T.S., He L., Wondisford F., Comin C.H., daF.Costa L., Béïque J.C., Lagace D.C., **Lacoste B.** and Wang J. (2017) The aPKC-CBP Pathway Regulates Post-stroke Neurovascular Remodeling and Functional Recovery. *Stem Cell Reports* 9(6):1735-44. [PMID: 29173896](#)
19. Andreone, B. J., Chow, B. W., Tata, A., **Lacoste B.**, Ben-Zvi, A., Bullock, K., Deik, A. A., Ginty, D. D., Clish, C. B., & Gu, C. (2017) Blood-Brain Barrier Permeability Is Regulated by Lipid Transport-Dependent Suppression of Caveolae-Mediated Transcytosis. *Neuron* 94(3):581-594.e5. [PMID: 28416077](#)
18. Almasi S., Ben-Zvi A., **Lacoste B.**, Gu C., Miller E.L. and Xu X. (2017) Joint volumetric extraction and enhancement of vasculature from low-SNR 3-D fluorescence microscopy images. *Pattern recognition* 63:710-718. [PMID: 28566796](#)
17. Bisht K., Sharma K., **Lacoste B.** and Tremblay M.-È. (2016) Dark microglia: Why are they dark? *Communicative & Integrative Biology* 9(6):e1230575. [PMID: 28042375](#)
16. **Lacoste B.** and Gu C. (2015) Control of cerebrovascular patterning by neural activity during postnatal development. *Mechanisms of Development* 138 Pt 1, 43-49. [PMID: 26116138](#)
15. Andreone B. J., **Lacoste B.** and Gu C. (2015) Neuronal and vascular interactions. *Annual review of Neuroscience* 38:25-46. [PMID: 25782970](#)
14. **Lacoste B.**, Angeloni D., Dominguez-Lopez S., Calderoni S., Mauro A., Fraschini F., Descarries L. and Gobbi G. (2015) Anatomical and cellular localization of melatonin MT1 and MT2 receptors in the adult rat brain. *Journal of Pineal Research* 58(4):397-417. [PMID: 25726952](#)
13. Bambico F. R., **Lacoste B.**, Hattan P. R. and Gobbi, G. (2015) Father absence in the monogamous californica mouse impairs social behavior and modifies dopamine and glutamate synapses in the medial prefrontal cortex. *Cerebral Cortex* 25(5):1163-1175. [PMID: 24304503](#)
12. Lopez-Canul M., Palazzo E., Dominguez-Lopez S., Luongo L., **Lacoste B.**, Comai S., Angeloni D., Fraschini F., Boccella S., Spadoni G., Bedini A., Tarzia G., Maione S., Granados-Soto V. and Gobbi G. (2015) Selective melatonin MT2 receptor ligands relieve neuropathic pain through modulation of brainstem descending antinociceptive pathways. *Pain* 156(2):305-317. [PMID: 25599452](#)
11. Almasi S., Xu X., Ben-Zvi A., **Lacoste B.**, Gu C. and Miller E.L. (2015) A novel method for identifying a graph-based representation of 3-D microvascular networks from fluorescence microscopy image stacks. *Medical Image Analysis* 20(1):208-223. [PMID: 25515433](#)
10. Gupta A., **Lacoste B.**, Pistell P.J., Ingram D.K., Hamel E., Alaoui-Jamali M.A., Szarek W.A., Vlahakis J.Z., Jie S., Song W. and Schipper H.M. (2014) Neurotherapeutic effects of novel HO-1 inhibitors in vitro and in a transgenic mouse model of Alzheimer's disease. *Journal of Neurochemistry* 131(6):778-790. [PMID: 25111043](#)
9. Gelfand M.V., Hagan N., Tata A., Oh W.J., **Lacoste B.**, Kang K.T., Kopycinska J., Bischoff J., Wang J.H. and Gu C. (2014) Neuropilin-1 functions as a VEGFR2 co-receptor to guide developmental angiogenesis independent of ligand binding. *eLife* 3, e03720. [PMID: 25244320](#)
8. **Lacoste B.**, Comin C.H., Ben-Zvi A., Kaeser P.S., Xu X., daF Costa L. and Gu C. (2014) Sensory-related neural activity regulates the structure of vascular networks in the cerebral cortex. *Neuron* 83(5):1117-1130. [PMID: 25155955](#)

7. Ben-Zvi A., **Lacoste B.**, Kur E., Andreone B.J., Mayshar Y., Yan H. and Gu, C. (2014) Mfsd2a is critical for the formation and function of the blood-brain barrier. *Nature* 509(7501):507-511. [PMID: 24828040](#)
6. **Lacoste B.**, Tong X.K., Lahjouji K., Couture R. and Hamel E. (2013) Cognitive and cerebrovascular improvements following kinin B1 receptor blockade in Alzheimer's disease mice. *Journal of Neuroinflammation* 10, 57. [PMID: 23642031](#)
5. Toussay X., Basu K., **Lacoste B.** and Hamel E. (2013) Locus coeruleus stimulation recruits a broad cortical neuronal network and increases cortical perfusion. *The Journal of Neuroscience* 33(8):3390-3401. [PMID: 23426667](#)
5. Ochoa-Sanchez R., Comai S., **Lacoste B.**, Bambico F.R., Dominguez-Lopez S., Spadoni G., Rivara S., Bedini A., Angeloni D., Fraschini F., Mor M., Tarzia G., Descarries L. and Gobbi G. (2011) Promotion of non-rapid eye movement sleep and activation of reticular thalamic neurons by a novel MT2 melatonin receptor ligand. *The Journal of Neuroscience* 31(50):18439-18452. [PMID: 22171046](#)
3. **Lacoste B.**, Riad M., Ratté M.O., Boye S.M., Lévesque D. and Descarries L. (2009) Trafficking of neurokinin-1 receptors in serotonin neurons is controlled by substance P within the rat dorsal raphe nucleus. *The European Journal of Neuroscience* 29(12):2303-2314. [PMID: 19490080](#)
2. Mechawar N., **Lacoste B.**, Yu W.F., Srivastava L.K. and Quirion R. (2007) Developmental profile of neuregulin receptor ErbB4 in postnatal rat cerebral cortex and hippocampus. *Neuroscience* 148(1):126-139. [PMID: 17630218](#)
1. **Lacoste B.**, Riad M. and Descarries L. (2006) Immunocytochemical evidence for the existence of substance P receptor (NK1) in serotonin neurons of rat and mouse dorsal raphe nucleus. *The European Journal of Neuroscience* 23(11):2947-2958. [PMID: 16819984](#)

- Book chapters (n=2):

2. **Lacoste B.**, Prat A., **Freitas-Andrade M.** and Gu C. (2025) The Blood-Brain Barrier: Composition, Properties, and Roles in Brain Health. *Cold Spring Harb. Perspect. Biol.* a041422. In “Glia”, Cold Spring Harbour Laboratory Press. Freeman M.R. & Stevens B. Eds. [PMID: 38951020](#)
1. **Toussay X.**, Tiberi M. and **Lacoste B.** (2019) Laser Doppler Flowmetry to Study the Regulation of Cerebral Blood Flow by G Protein-coupled Receptors in Rodents. *Methods Mol. Biol.* 1947:377-387. In “G-Protein-Coupled Receptor Signaling: Methods and Protocols”. Springer Nature. [PMID: 30969429](#)

- Conference abstracts for conferences: selected from past 5 years (n=30); lifetime n=95.

30. Phinea Romero P., **Ouellette J.**, **Lacoste B.** and Dabertrand F. (2025) Activation of P2 purinergic receptors rescues sex-dependent neurovascular uncoupling in an autism model. Brain and Brain PET 2025, Seoul, South Korea. Conference date: 2025/06, trainee poster.
29. **Freitas-Andrade M.**, **Nasry N.**, **Van Dyken P.** and **Lacoste B.** (2025) Astroglial VEGF regulates postnatal cerebrovascular development in mice. Brain and Brain PET 2025, Seoul, South Korea. Conference date: 2025/06, trainee poster.
28. **Kotchetkov P.**, **Raman-Nair J.** and **Lacoste B.** (2025) 16p11.2 microdeletion compromises blood-brain barrier integrity in mice. Brain and Brain PET 2025, Seoul, South Korea. Conference date: 2025/06, trainee poster.
27. **Ouellette J.**, Warsi S., Khare P., Naz S., **Aubert-Tandon L.**, Pileggi C., Yandiev S., **Freitas-Andrade M.**, Comin C.H., Harper M-E., Manickam D.S., Saghatelian A. and **Lacoste B.** (2025) P2 purinergic receptor activation rectifies autism-associated brain endothelial dysfunction. Brain and Brain PET 2025, Seoul, South Korea. Conference date: 2025/06, PI poster.
26. **Kotchetkov P.**, **Raman-Nair J.** and **Lacoste B.** (2025) 16p11.2 microdeletion compromises blood-brain barrier integrity in mice. Canadian Association for Neuroscience. Conference date: 2025/05, trainee poster.

25. **Freitas-Andrade M., Nasry N., Van Dyken P. and Lacoste B.** (2025) Astroglial VEGF regulates postnatal cerebrovascular development in mice. Canadian Association for Neuroscience. Conference date: 2025/05, trainee poster.
24. Matthews T. and **Lacoste B.** (2025) Characterizing the subventricular zone in a *16p11.2^{df/+}* mouse model of autism. Canadian Association for Neuroscience. Conference date: 2025/05, trainee poster.
23. **Blakeley N.,** Naz S., Liu Q.Y., Leclerc S., Pan Y., Liu Z. and **Lacoste B.** (2025) Identifying molecular alterations in astrocytes from a 16p11.2 deletion mouse model of autism. Canadian Association for Neuroscience. Conference date: 2025/05, trainee poster.
22. **Aubert-Tandon L., Freitas-Andrade M., Ouellette J. and Lacoste B.** (2025) Investigation of cerebrovascular deficits in animal and cellular models of SYNGAP1 deficiency. Canadian Association for Neuroscience. Conference date: 2025/05, trainee poster.
21. **Ouellette J.,** Warsi S., Khare P., Naz S., **Aubert-Tandon L.,** Pileggi C., Yandiev S., **Freitas-Andrade M.,** Comin C.H., Harper M-E., Manickam D.S., Saghatelian A. and **Lacoste B.** (2025) P2 purinergic receptor activation rectifies autism-associated brain endothelial dysfunction. Canadian Association for Neuroscience. Conference date: 2025/05, trainee poster.
20. **Hudak A.,** Stotts C., **Freitas-Andrade M., Lacoste B.** and Rayner K. (2025) Assessing cerebrovascular inflammation and cognitive function in a mouse model of pneumonia infection. Brain Barriers, Cold Spring Harbor Laboratories, USA. Conference date: 2025/04, trainee poster.
19. **Kotchetkov P., Raman-Nair J. and Lacoste B.** (2025) 16p11.2 microdeletion compromises blood-brain barrier integrity in mice. Brain Barriers, Cold Spring Harbor Laboratories, USA. Conference date: 2025/04, trainee poster.
18. Gall L., Stains C., Jia B.Z., **Freitas-Andrade M.,** Nandagopal N., **Lacoste B.,** Megason S.G. and O’Brown N.M. (2024) Untangling the functional role of astrocytes in the blood-brain barrier. Barriers of the CNS Gordon Research Conference. Conference date: 2024/10, trainee poster.
17. Khare P., **Ouellette J., Lacoste B.** and Manickam D.S. (2024) Lipidoid nanoparticles (LNPs) deliver ATP to brain endothelial cells and increase functional responses in an experimental model of brain disorder. AAPS 2024 conference. Conference date: 2024/10, trainee poster.
16. **Hudak A.,** Stotts C., **Freitas-Andrade M.,** Leon J.S., **Lacoste B.** and Katey R. (2024) Assessing neuroinflammation and cognitive function in a mouse model of pneumonia infection. CANGlia meeting. Conference date: 2024/05, trainee poster.
15. **Blakeley N., Ouellette J.,** Naz S. and **Lacoste B.** (2024) Identifying metabolic alterations in astrocytes from a 16p11.2 deletion mouse model. Canadian Association for Neuroscience. Conference date: 2024/05, trainee poster.
14. **Béland-Millar A.,** Truong Y., Kirby A., **Ouellette J.,** Yandiev S., Bouyakdan K., Pileggi C., Naz S., Yin M., Carrier M., **Kotchetkov P.,** St-Pierre K-M., Tremblay M-È., Courchet J., Harper M-E., Alquier T., Messier C., Shuhendler A.J. and **Lacoste B.** (2023) Altered brain metabolism in a mouse model of 16p11.2 deletion syndrome. Brain & PET, ISCBFM. Conference date: 2023/06, PI talk.
13. **Blakeley N., Ouellette J.,** Naz S. and **Lacoste B.** (2023) Investigating the effect of 16p11.2 haploinsufficiency on astroglial metabolism. Canadian Association for Neuroscience. Conference date: 2023/05, trainee poster.
12. **Freitas-Andrade M.,** Comin C.H., **Van Dyken P., Ouellette J., Raman-Nair J., Blakeley N.,** Liu Q.Y., Leclerc S., Pan Y., Liu Z., Carrier M., **Thakur K., Savard A.,** Rurak G.M., Tremblay M-È., Salmaso N., Da F. Costa L., Coppola G. and **Lacoste B.** (2023) HMGB1 regulates astrocyte morphogenesis and cerebrovascular maturation. Canadian Association for Neuroscience. Conference date: 2023/05, trainee poster.
11. **Kotchetkov P., Thakur K., Dranitsaris N. and Lacoste B.** (2023) Increased vulnerability of the blood-brain barrier to injury in a mouse model of autism. CNS Barriers, Cold Spring Harbor Laboratories, USA. Conference date: 2023/03, trainee poster.

10. **Freitas-Andrade M.**, Comin C.H., **Van Dyken P.**, **Ouellette J.**, **Raman-Nair J.**, **Blakeley N.**, Liu Q.Y., Leclerc S., Pan Y., Liu Z., Carrier M., **Thakur K.**, **Savard A.**, Rurak G.M., Tremblay M-È., Salmaso N., Da F. Costa L., Coppola G. and **Lacoste B.** (2023) Astrocytic HMGB1 regulates cerebrovascular maturation in the postnatal mouse brain. CNS Barriers, Cold Spring Harbor Laboratories, USA. Conference date: 2023/03, trainee talk.
9. **Ouellette J.**, Naz S., Pileggi S., **Raman-Nair J.**, **Yandiev S.**, Comin C.H., da F. Costa L., Patten D., Harper M-E. and **Lacoste B.** (2023) Metabolic abnormalities in 16p11.2-deficient mouse brain endothelial cells. CNS Barriers, Cold Spring Harbor Laboratories, USA. Conference date: 2023/03, trainee poster.
8. **Ouellette J.**, Naz S., Patten D. and **Lacoste B.** (2022) Metabolic defects in 16p11.2-deficient primary mouse brain endothelial cells. FENS Forum 2022, Paris, France. Conference date: 2022/7, trainee poster.
7. **Freitas-Andrade M.**, Comin C.H., **Van Dyken P.**, Carrier M., Gong J., **Raman-Nair J.**, **Thakur K.**, Tremblay M-E., Salmaso N., Da F. Costa L. and **Lacoste B.** (2022) Astrocyte-derived HMGB1 regulates gliovascular maturation in the postnatal mouse brain. FENS Forum 2022, Paris, France. Conference date: 2022/7, trainee poster.
6. **Blakeley N.** and **Lacoste B.** (2022) Assessment of vascularization and neurogenesis in an iPSC-derived 16p11.2 deletion organoid model. FENS Forum 2022, Paris, France. Conference date: 2022/7, trainee poster.
5. **Ouellette J.**, Naz S., Patten D. and **Lacoste B.** (2022) Investigating metabolic defects in 16p11.2-deficient primary mouse brain endothelial cells. Canadian Association for Neuroscience. Conference date: 2022/5, trainee poster.
4. **Raman-Nair J.**, Cron G. and **Lacoste B.** (2021) Sex-specific modulation of acute cerebrovascular responses to photothrombotic stroke in mice requires rho-kinase. Canadian Association for Neuroscience. Conference date: 2021/8, trainee poster [virtual].
3. **Ouellette J.**, Naz S., Patten D. and **Lacoste B.** (2021). Metabolic defects in brain endothelial cells from 16p11.2 deletion autism mice. Canadian Association for Neuroscience. Conference date: 2021/8, trainee poster [virtual].
2. **Freitas-Andrade M.**, **Van Dyken P.**, Rurak G., Coppola G., Salmaso N. and **Lacoste B.** (2021) Role of astrocytes in postnatal cerebrovascular development. Brain Barriers, Cold Spring Harbor Laboratories. Conference date: 2021/04, trainee poster [virtual].
1. **Raman-Nair J.** and **Lacoste B.** (2021) Modulation of the Acute Cerebrovascular Response to Ischemic Stroke by Sex Hormones is Dependent on Rho-kinase. Experimental Biology Conference 2021. Conference date: 2021/04, trainee talk [virtual].

- Book authored:

Baptiste Lacoste (July 5, 2010) Substance P, récepteurs NK1 et neurones à sérotonine: Relations anatomiques et fonctionnelles dans le noyau raphe dorsalis. EUE editions, VDM Publishing (Sarbruck, Germany). 148pp. [ISBN-10:6131500924](https://www.vdm-publishing.com/ISBN-10-6131500924).

M) INVITED LECTURES - INTERNATIONAL (n=27)

27. Cerebrovascular and metabolic alterations in autism (December 2025). Department of Neurobiology, Harvard Medical School, Boston, MA, **U.S.A.**
26. Cerebrovascular underpinnings of autism modeled in mice (September 2025). University of South Florida, Morsani College of Medicine, Tampa, FL, **U.S.A.**
25. Role of the brain endothelium in autism (August 2025) Synchrony Symposium, Brain Foundation, Monterey, CA, **U.S.A.**

24. Purinergic switch to unlock the regenerative potential of brain endothelial cells in autism (April 2025). Cold Spring Harbour Laboratory CNS Barriers meeting, Long Island, NY, **U.S.A.**
23. Role of the brain endothelium in autism (April 2025). Harvard University - McLean Hospital, Belmont, **U.S.A.**
22. Role of the brain endothelium in autism (November 2024). Cerebrovascular Development and Maintenance Mini-Symposium, Paris Brain Institute, Paris, **France.**
21. Astroglial HMGB1 regulates postnatal astrocyte morphogenesis and cerebrovascular maturation (October 2024). Korean Society of Brain and Neural Sciences annual meeting, Gyeongju, **South Korea.**
20. Role of astrocytes in cerebrovascular maturation (September 2024). International Society of Developmental Neuroscience annual meeting, Montpellier, **France.**
19. Electron microscopy: from tools to applications (August 2024). Korean Brain Research Institute, Daegu, **South Korea.**
18. Non-neuronal players in neurodevelopment (August 2024). Korean Brain Research Institute, Daegu, **South Korea.**
17. Non-neuronal players in neurodevelopment (June 2024). University of California San Francisco, Newborn Brain Research Seminar Series. San Francisco, CA, **U.S.A.**
16. Role of the brain endothelium in autism (April 2024). American Society of Physiology Summit. Long Beach, CA, **U.S.A.**
15. Vascular and glial determinants of brain development (October 2023). University of Vermont, Department of Pharmacology. Burlington, VT, **U.S.A.**
14. Non-neuronal underpinnings of altered brain development (July 2023). University of Bordeaux, NeuroCampus. Bordeaux, **France.**
13. Involvement of the brain endothelium in neurodevelopmental disorders (May 2023). Syngap1 Research Foundation, webinar (videoconference), **Worldwide.**
12. Non-neuronal determinants of brain development (April 2023). Columbia University, Departments of Neurology, Pathology and Cell Biology, New York, NY, **U.S.A.**
11. Cerebrovascular and metabolic alterations in autism (July 2022). Inserm U1034 Biology of Cardiovascular Diseases. Bordeaux, **France.**
10. Gliovascular interactions during postnatal brain development (May 2022). NeuroZoom. Organizers: Stanford University, Chinese Academy of Sciences (Videoconference). **Worldwide.**
9. Postnatal control of cerebrovascular maturation by astrocytes (April 2022). University of Bordeaux, Inserm U1034 Biology of Cardiovascular Diseases. Bordeaux, **France** (Videoconference).
8. Cerebrovascular and metabolic alterations in autism (November 2020). Korean Brain Research Institute. Daegu, **South Korea** (Videoconference).
7. Cerebrovascular and metabolic alterations in autism spectrum disorders (September 2020). Zilkha Neurogenetic Institute, University of Southern California. Los Angeles, **U.S.** (Videoconference).
6. Vascular contribution to a neurodevelopmental disorder (September 2019). Neuroscience Institute, Université libre de Bruxelles. Bruxelles, **Belgium.**
5. Role of cerebrovascular abnormalities in neurodevelopmental disorders (September 2019). Institut Neuromyogène, Université Claude Bernard Lyon 1. Lyon, **France.**
4. What if the 16p11.2 deletion syndrome had a vascular component? (July 2019). Simons Foundation for Autism Research Initiative (SFARI), 16p11.2 Family Gathering. Denver, CO, **U.S.A.**
3. Cerebrovascular remodeling in neurological disorders (July 2018). World Preclinical Congress. Boston, MA, **U.S.A.**

2. Neuro-vascular interactions in the healthy and diseased brain (July 2015). Department of Neurobiology, University of Pittsburgh. Pittsburgh, PA, **U.S.A.**
1. Regulation of cerebrovascular patterning by neural activity during postnatal development (May 2015). Massachusetts General Hospital. Boston, MA, **U.S.A.**

N) INVITED LECTURES - NATIONAL (n=22) * *Keynote address*

22. A purinergic switch to unlock the regenerative potential of brain endothelial cells in autism (September 2025). Ottawa Hospital Research Institute, Neuroscience Program, Ottawa, **Canada.**
21. Role of the brain endothelium in autism (January 2025). Krembil Brain Institute, Toronto, **Canada.**
20. * Thinking out of the (neuronal) the box: challenges and rewards (May 2024) Canadian Medical Hall of Fame, Discovery Days in Health Sciences. Ottawa, **Canada.**
19. Functional brain activity and blood flow in models of autism (February 2024). Eastern association of electroencephalographers, 77th Annual Meeting. Quebec City, **Canada** (Videoconference).
18. Vascular and glial determinants of brain development (November 2023). Western University, Department of Physiology and Pharmacology. London, **Canada.**
17. Autism and vascular bases of neurodevelopmental disorders (June 2023). ACRE Canada Scientific Meeting. Ottawa, **Canada.**
16. Cerebrovascular remodeling in health and disease (May 2022). Queen's University, Dept. of Biomedical and Molecular Sciences. Kingston, **Canada.**
15. * Neurovascular and metabolic alterations associated with autism in mice (03/2022). Neuroscience Students Association Convention, University of Montreal. Montréal, **Canada.**
14. Postnatal control of cerebrovascular maturation by astrocytes (February 2022). University of Calgary, Hotchkiss Brain Institute. Calgary, **Canada** (Videoconference).
13. Cerebrovascular and metabolic alterations in autism mouse models (February 2021). University of Montreal, Dept. of Pharmacology. Montréal, **Canada** (Videoconference).
12. Cerebrovascular and metabolic alterations in autism (November 2020). University of Manitoba, Department of Pharmacology & Therapeutics. Winnipeg, **Canada** (Videoconference).
11. Contributions of neurovascular abnormalities to autism spectrum disorders (November 2020). International Symposium on retinal and choroidal angiogenesis. Satellite scientific meeting. Montreal, **Canada** (Videoconference).
10. Vascular contributions to autism (January 2020). Department of Neuroscience, Carleton University. Ottawa, **Canada.**
- 9.* Neurovascular interactions and remodeling: sex differences (August 2019). Summer School, Canadian Vascular Network, McGill University. Montreal, **Canada.**
- 8.* Cerebrovascular contribution to a neurodevelopmental disorder (September 2018). Queen's University-OHRI 3rd Annual Joint Research Day. Ottawa, **Canada.**
7. Cerebrovascular underpinnings of a neurodevelopmental disorder (September 2018). CERVO Brain Research Centre, Laval University. Québec, **Canada.**
6. See the invisible, Repair the invisible (March 2018). March for Concussion, Ottawa rain and Mind Research Institute. Ottawa, **Canada.**
5. Stroke and the vascular niche of neurogenesis (March 2018). Stem Cell Talks Symposium. Ottawa, **Canada.**
4. Remodeling of the brain vasculature during normal and pathological development (November 2017). Douglas Mental Health University Research Institute. Montreal, **Canada.**

3. Remodeling of the brain vasculature during normal and pathological development (March 2017). National Research Council of Canada. Ottawa, **Canada**.
2. Why we should focus on brain vessels (October 2017) University of Ottawa Concussion Injury Group. Ottawa, **Canada**.
1. Régulation de la structure des réseaux cérébrovasculaires par l'activité neuronale (2014) CHU de Québec Research Center, Laval University. Québec, **Canada**.

O) OTHER ORAL PRESENTATIONS (n=14)

14. How to treat your brain to age well (December 2025). Chartwell Rockcliffe Retirement Residence, Ottawa, **Canada**.
13. Metabolic switches to unlock the regenerative potential of brain endothelial cells in autism (September 2025). Neuroscience Seminar Series, Ottawa Hospital Research Institute, Ottawa, **Canada**.
12. Role of the brain endothelium in autism (May 2024). Blood-Brain Barrier Symposium, uOttawa Brain and Mind Research Institute. Ottawa, **Canada**.
11. Altered glucose metabolism in the brain of adult 16p11.2 haplodeficient male mice (June 2023). Brain PET Conference. Brisbane, **Australia**.
10. Role of cerebrovascular abnormalities in the pathophysiology of autism spectrum disorders (April 2019). Cold Spring Harbor Laboratories Meeting - Blood brain barrier meeting. Cold Spring Harbor, **U.S.**
9. Assessing pathological cerebrovascular remodelling (May 2017). Canadian Association for Neuroscience annual meeting. Montreal, **Canada**.
8. An animal model of vascular cognitive impairment (October 2016). Canadian Vascular Network meeting. Montreal, **Canada**.
7. Control of cerebrovascular network formation by neural activity (2014). Harvard Medical School, Departmental seminar. Boston, **U.S.A.**
6. An integrated approach to elucidate neurovascular unit formation and plasticity in mouse S1 cortex (2012). Harvard Medical School, Departmental seminar. Boston, **U.S.A.**
5. Bradykinin B1 receptor blockade in the treatment of Alzheimer's disease: improvement of cognitive and cerebrovascular functions, and reduction of amyloidosis (2011). International Conference on Alzheimer's disease (ICAD). Paris, **France**.
4. Blockade of the bradykinin B1 receptor in a mouse model of Alzheimer's disease (2011). 9th Scientific Day, Quebec Network for Research on Aging. Orford, **Canada**.
3. Rapports anatomiques entre les systèmes SP/NK1 et 5-HT dans le cerveau du rat et de la souris (2007). Université de Montréal, Dept. of Pathology and Cell Biology, departmental seminar. Montréal, **Canada**.
2. Localisation neuronale du récepteur ErbB4 des neurégulines dans le cortex cérébral en développement chez le rat (2006). Annual research day, Dept. of Pathology and Cell Biology. Montréal, **Canada**.
1. Présence de récepteurs NK1 de la substance P dans les neurones à sérotonine du noyau Raphe dorsalis chez le rat et la souris (2005). GRSNC scientific retreat. Orford, **Canada**.

P) ACTIVE SOCIETY MEMBERSHIPS:

Society for Neuroscience (2004-present); Canadian Association for Neuroscience (2007-present); International Society of Cerebral Blood flow & Metabolism (2018-present).

Q) AD HOC REVIEWS FOR SCIENTIFIC JOURNALS:

Nature, Cell, Neuron, Nature Communications, Cell Reports, PNAS, Trends in Neuroscience, Molecular Psychiatry, Science Signaling, Translational Psychiatry, eNeuro, Journal of Cerebral Blood Flow & Metabolism, Circulation Research, Neurobiology of Aging, Neurophotonics, FASEB Journal, European Journal of Neuroscience, British Journal of Pharmacology, European Neuropsychopharmacology, Scientific Reports, Neuroscience, iScience, Research in Autism.

R) PRESENCE IN THE MEDIA:

- Podcasts and radio interviews:

“*The Autism Connection You Haven’t Heard of*.” BEaTS Research Radio

<https://beatsresearchradio.buzzsprout.com/591520/episodes/16228739-the-autism-connection-you-haven-t-heard-of>

“*Neurovascular system & Neurodevelopmental disorders*.” Dendrite Podcast, Spotify

<https://open.spotify.com/episode/56CIExRKduLIYEV7wmyYd2>

“*Autisme : la piste des vaisseaux*”. RadioCanada, Années Lumières

<https://ici.radio-canada.ca/ohdio/premiere/emissions/les-anneeslumiere/segments/entrevue/189257/autisme-cerveau-baptiste-lacoste>

“*De nouvelles recherches sur les cerveaux des personnes autiste*”. RadioCanada, Jonction 11-17

<https://ici.radio-canada.ca/ohdio/premiere/emissions/jonction-11-17/segments/rattrapage/2035000/recherches-sur-vascularisation-dans-cerveau-autistes>

- For funding by the US-based organization SynGap Research Fund (SRF) in 2024:

<https://www.eurekalert.org/news-releases/1057386>

- For Freitas-Andrade et al. 2023, *Nature Communications*:

<https://can-acn.org/identification-of-a-previously-unknown-mechanism-controlling-the-interaction-between-astrocytes-and-blood-vessels-in-the-brain/>

- For Beland-Millar et al. 2023, *Cell Reports*:

<https://can-acn.org/with-autism-the-brain-adapts-to-blood-vessel-problems-by-changing-how-it-uses-energy/#more-62337>

- For Menzies et al. 2021, *eNeuro*:

https://www.eurekalert.org/pub_releases/2021-04/sfn-mmo033021.php

<https://www.news-medical.net/news/20210401/Metabolic-dysfunction-found-in-mouse-models-of-neurodevelopmental-disorders.aspx>

- For Ouellette et al. 2020, *Nature Neuroscience*:

<https://www.autism.org/cells-that-line-blood-vessels-implicated-in-one-form-of-autism/>

<https://ici.radio-canada.ca/premiere/emissions/les-annees-lumiere/segments/entrevue/189257/autisme-cerveau-baptiste-lacoste>

<https://can-acn.org/fr/le-developpement-vasculaire-pourrait-etre-affecte-par-lautisme/>

- For Lacoste et al. 2014, *Neuron*:

<https://hms.harvard.edu/news/sensory-sensitivity>

- For Lacoste et al. 2013, *Journal of Neuroinflammation*:

<https://ici.radio-canada.ca/nouvelle/619072/alzheimer-memoire-recepteur>

<https://neurosciencenews.com/neuroinflammation-blr-receptor-memory-alzheimers-222/>

S) INTELLECTUAL PROPERTY:

1. NEURODEVELOPMENTAL DISORDER TREATMENT. Patent Cooperation Treaty Application No. PCT/CA2025/050486, filed 2025/04/03. *Patent Status: Pending*