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ACADEMIC DEGREES AND APPOINTMENTS:

Sept 2021-	Director, Donnelly Centre for Cellular + Biomolecular Research University of Toronto www.thedonnellycentre.utoronto.ca
2019-2021	Founding Co-Director PRiME – <u>P</u> recision <u>M</u> edicine Strategic Initiative at the University of Toronto https://www.prime.utoronto.ca
July 2017-	Professor Leslie Dan Faculty of Pharmacy, Department of Pharmaceutical Sciences Department of Biochemistry, University of Toronto University of Toronto
2015-2021	Associate Dean of Research Leslie Dan Faculty of Pharmacy, University of Toronto
2012-2017	Associate Professor Leslie Dan Faculty of Pharmacy, Department of Pharmaceutical Sciences Department of Biochemistry, University of Toronto University of Toronto
2013-2015	Graduate Coordinator Department of Pharmaceutical Sciences, Leslie Dan Faculty of Pharmacy
2006-2012	Assistant Professor Leslie Dan Faculty of Pharmacy, Department of Pharmaceutical Sciences Department of Biochemistry, University of Toronto University of Toronto
2002-2006	Post-doctoral Fellow, Howard Hughes Medical Institute University of Washington, Seattle Supervisor: Dr. Randall T. Moon
1998-2002	Ph.D, Biochemistry Université de Montréal Montréal, Qc Thesis supervisor: Dr. Michel Bouvier
1993- 1997	B. Sc. Biochemistry McGill University Montréal, Qc

AWARDS AND RECOGNITIONS

2021- Charles H. Best Chair in Medical Research

2007-2017 Canada Research Chair in Functional Architecture of Signal Transduction

INNOVATION AND STARTUP CREATION

2019 Scientific Founder AntlerA Therapeutics (acquired by Roche in July 2024)
Toronto, On, Canada

2018 Scientific Founder ModMab Therapeutics
Foster City, CA, USA

Patents.

id	title	inventor/author	status
US14/911,983	Antibodies against frizzled proteins and methods of use thereof	Stephane ANGERS, Amandeep GAKHAL, Jason MOFFAT, Guohua Pan, Melanie ROBITAILLE, Sachdev Sidhu	Granted 2018-09-18
US17/176,155	Frizzled5 protein-binding agents	Guohua Pan, Jason Moffat, Sachdev Sidhu, Stephane Angers, Zachary Steinhart, Xiaowei Wang	Filed 2021-02-15
PCT/IB2019/051174	Multivalent binding molecules activating wnt signaling and uses thereof	Yuyong TAO, Stephane ANGERS, Sachdev Sidhu	Filed 2019-02-14, Status Pending
WO-2020010471-A1	Microfluidic devices and methods of use	Shana Olwyn KELLEY, Edward Sargent, David PHILPOTT, Peter ALDRIDGE, Stephane ANGERS, Jason MOFFAT, Barbara MAIR, Sanna MASUD	2020-01-16
PCT/IB2020/055463	Multivalent fzd and wnt binding molecules and uses thereof	Stephane ANGERS, Sachdev Sidhu, Yuyong TAO	Filed 2020-06-10
PCT/CA2020/051119	Antibodies that bind to lrp5 proteins and methods of use	Sachdev S. Sidhu, Guohua Pan, Nish PATEL, Jason MOFFAT, Stephane ANGERS, Jarrett ADAMS, Jagath R. Junutula	Filed 2020-08-14
US18/501,589	Tetravalent fzd and wnt co-receptor binding antibody molecules and uses thereof	Stephane ANGERS, Sachdev Sidhu, Levi BLAZER, Jarrett ADAMS, Somasekar Seshagiri	Filed 2023-11-03, status Pending

PCT/CA2020/051103	Frizzled receptor antibodies and uses thereof	Jarrett ADAMS, Stephane ANGERS, Amandeep GAKHAL, Jason MOFFAT, Guohua Pan, Zvezdan PAVLOVIC, Sachdev Sidhu, Zachary STEINHART	Filed 2017-01-27, Status Pending
WO-2021108927-A1	Methods and compositions for treating cancers having f-box and wd-repeat protein 7 (fbxw7) alterations and/or cyclin I1 (ccn1) gain or amplification	Stephane ANGERS, Zachary STEINHART, Siobhan O'brien	2021-06-10
PCT/CA2020/051120	Antibodies that bind to LRP6 proteins and methods of use	Jarrett ADAMS, Stephane ANGERS, Jagath R. Junutula, Jason MOFFAT, Guohua Pan, Nish PATEL, Sachdev Sidhu	Filed 2020-08-14

SCIENTIFIC COMMUNICATIONS

Published peer-reviewed papers (Cited >21,800 citations)

- 1- Targeting synthetic lethality between non-homologous end joining and radiation in very-high-risk medulloblastoma.
DeCarlo A, MacLeod G, Fernandes da Silva C, Shen LQ, Povilaikaite J, Deane M, Aragao L, Sie M, Termini D, Magee J, Gudenas B, Sukumaran S, Charron F, Marcellus R, Al-Awar R, Aman A, Reynaud D, Trolat A, Wybenga-Groot L, Tabori U, Nör C, Harding SM, Moran MF, Northcott PA, Dirks P, Angers S, Ramaswamy V. Cell Rep Med. 2025 Jul 15;6(7):102202.
- 2- Targeting the Dependence on PIK3C3-mTORC1 Signaling in Dormancy-Prone Breast Cancer Cells Blunts Metastasis Initiation.
Elkholi IE, Robert A, Malouf C, Wu JL, Kuasne H, Drapela S, Macleod G, Hébert S, Pacis A, Calderon V, Kleinman CL, Gomes AP, Alvarez JV, Aguirre-Ghiso JA, Park M, Angers S, Côté JF. Cancer Res. 2025 May 15;OF1-OF20
- 3- PRMT5 promotes full-length HTT expression by repressing multiple proximal intronic polyadenylation sites.
Yadav M, AlQazzaz MA, Ciamponi FE, Ho JC, Maron MI, Sababi AM, MacLeod G, Ahmadi M, Bullivant G, Tano V, Langley SR, Sánchez-Osuna M, Sachamitr P, Kushida M, Bardile CF, Pouladi MA, Kurtz R, Richards L, Pugh T, Tyers M, Angers S, Dirks PB, Bader GD, Truant R, Massirer KB, Barsyte-Lovejoy D, Shechter D, Harding RJ, Arrowsmith CH, Prinos P. Nucleic Acids Res. 2025 Apr 22;53(8)
- 4- Mechanistic insights into Wnt- β -catenin pathway activation and signal transduction.
Maurice MM, Angers S. Nat Rev Mol Cell Biol. 2025 May;26(5):371-388
- 5- Selective activation of FZD2 and FZD7 reveals non-redundant function during mesoderm differentiation.
Chidiac R, Yang A, Kubarakos E, Mikolajewicz N, Han H, Almeida MP, Thibeault PE, Lin S, MacLeod G, Gratton JP, Moffat J, Angers S. Stem Cell Reports. 2025 Feb 11;20(2):102391

- 6- mRNA decay pre-complex assembly drives timely cell-state transitions during differentiation.
Komori H, Rastogi G, Bugay JP, Luo H, Lin S, Angers S, Smibert CA, Lipshitz HD, Lee CY.
Cell Rep. 2025 Jan 28;44(1):115138
- 7- The WAVE regulatory complex interacts with Boc and is required for Shh-mediated axon guidance.
Balekoglu N, Michaud JF, Sauvé R, Ayinde KS, Lin S, Liu Y, Kramer DA, Zhang K, Steffen A, Stradal T, Angers S, Chen B, Yam PT, Charron F.
iScience. 2024 Nov 6;27(12):111333
- 8- Identification of VISTA regulators in macrophages mediating cancer cell survival.
Abdrabou AM, Ahmed SU, Fan MJ, Duong BTV, Chen K, Lo PY, Mayes JM, Esmaeili F, GhavamiNejad A, Zargartalebi H, Atwal RS, Lin S, Angers S, Kelley SO.
Sci Adv. 2024 Nov 29;10(48)
- 9- TMCO1 is upregulated in breast cancer and regulates the response to pro-apoptotic agents in breast cancer cells.
Bong AHL, Robitaille M, Lin S, McCart-Reed A, Milevskiy M, Angers S, Roberts-Thomson SJ, Monteith GR.
Cell Death Discov. 2024 Oct 1;10(1):421. doi: 10.1038/s41420-024-02183-0.
- 10- Fitness Screens Map State-Specific Glioblastoma Stem Cell Vulnerabilities.
MacLeod G, Molaei F, Haider S, Almeida MP, Lin S, Kushida M, Sureshkumar H, Bhatti JK, Lu JQ, Schramek D, Dirks PB, Angers S.
Cancer Res. 2024 Aug 26. doi: 10.1158/0008-5472.CAN-23-4024. Online ahead of print.
- 11- Get your receptors in a knot with new Wnt signaling agonists.
Wolf L, Angers S.
Cell Chem Biol. 2024 Jun 20;31(6):1044-1046. doi: 10.1016/j.chembiol.2024.05.010.
- 12- ZO-1 interacts with YB-1 in endothelial cells to regulate stress granule formation during angiogenesis.
El Bakkouri Y, Chidiac R, Delisle C, Corriveau J, Cagnone G, Gaonac'h-Lovejoy V, Chin A, Lécuyer É, Angers S, Joyal JS, Topisirovic I, Hulea L, Dubrac A, Gratton JP.
Nat Commun. 2024 May 23;15(1):4405. doi: 10.1038/s41467-024-48852-7.
- 13- Phenotypic targeting using magnetic nanoparticles for rapid characterization of cellular proliferation regulators.
Wang Z, Wang H, Lin S, Angers S, Sargent EH, Kelley SO.
Sci Adv. 2024 May 10;10(19):eadj1468. doi: 10.1126/sciadv.adj1468. Epub 2024 May 8.
- 14- Exploiting spatiotemporal regulation of FZD5 during neural patterning for efficient ventral midbrain specification.
Yang A, Chidiac R, Russo E, Steenland H, Pauli Q, Bonin R, Blazer LL, Adams JJ, Sidhu SS, Goeva A, Salahpour A, Angers S
Development. 2024 Mar 1;151(5):
- 15- The CDK12 inhibitor SR-4835 functions as a molecular glue that promotes cyclin K degradation in melanoma.
Houles T, Boucher J, Lavoie G, MacLeod G, Lin S, Angers S, Roux PP.
Cell Death Discov. 2023 Dec 16;9(1):459. doi: 10.1038/s41420-023-01754-x.
- 16- CRISPR Screening in Tandem with Targeted mtDNA Damage Reveals WRNIP1 Essentiality.
Sack T, Dhavarasa P, Szames D, O'Brien S, Angers S, Kelley SO.
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- 17- FBXW7-loss Sensitizes Cells to ATR Inhibition Through Induced Mitotic Catastrophe.
O'Brien S, Ubhi T, Wolf L, Gandhi K, Lin S, Chaudary N, Dhani NC, Milosevic M, Brown GW, Angers S.
Cancer Res Commun. 2023 Dec 21;3(12):2596-2607
- 18- Identification of druggable regulators of cell secretion via a kinome-wide screen and high-throughput immunomagnetic cell sorting.
Labib M, Wang Z, Kim Y, Lin S, Abdrabou, Yousefi H, Lo PY, Angers S, Sargent EH, Kelley SO.
Nat Biomed Eng. 2023 Nov 27.
- 19- A Frizzled4-LRP5 agonist promotes blood-retina barrier function by inducing a Norrin-like transcriptional response.
Zhang L, Abedin M, Jo HN, Levey J, Dinh QC, Chen Z, Angers S, Junge HJ.
iScience. 2023 Jul 18;26(8):107415
- 20- Relative Biological Effectiveness (RBE) of [⁶⁴Cu]Cu and [¹⁷⁷Lu]Lu-NOTA-panitumumab F(ab')₂ radioimmunotherapeutic agents vs. γ-radiation for decreasing the clonogenic survival in vitro of human pancreatic ductal adenocarcinoma (PDAC) cells.
Boyle AJ, Cai Z, O'Brien S, Crick J, Angers S, Reilly RM.
Nucl Med Biol. 2023 Jul-Aug;122-123:108367
- 21- Targeted alveolar regeneration with Frizzled-specific agonists.
Nabhan AN, Webster JD, Adams JJ, Blazer L, Everett C, Eidenschenk C, Arlantino A, Fleming I, Brightbill HD, Wolters PJ, Modrusan Z, Seshagiri S, Angers S, Sidhu SS, Newton K, Arron JR, Dixit VM.
Cell. 2023 Jul 6;186(14):2995-3012.e15.
- 22- Pyruvate Kinase M (PKM) binds ribosomes in a poly-ADP ribosylation dependent manner to induce translational stalling.
Kejiou NS, Ilan L, Aigner S, Luo E, Tonn T, Ozadam H, Lee M, Cole GB, Rabano I, Rajakulendran N, Yee BA, Najafabadi HS, Moraes TF, Angers S, Yeo GW, Cenik C, Palazzo AF.
Nucleic Acids Res. 2023 May 24
- 23- Modulation of Wnt-β-catenin signaling with antibodies: therapeutic opportunities and challenges.
O'Brien S, Chidiac R, Angers S.
Trends Pharmacol Sci. 2023 Jun;44(6):354-365
- 24- Efficient Delivery of Biological Cargos into Primary Cells by Electrodeposited Nanoneedles via Cell-Cycle-Dependent Endocytosis.
Wang Z, Wang H, Lin S, Labib M, Ahmed S, Das J, Angers S, Sargent EH, Kelley SO.
Nano Lett. 2023 Apr 11.
- 25- Mechanical nanosurgery of chemoresistant glioblastoma using magnetically controlled carbon nanotubes.
Wang X, Gong Z, Wang T, Law J, Chen X, Wanggou S, Wang J, Ying B, Francisco M, Dong W, Xiong Y, Fan JJ, MacLeod G, Angers S, Li X, Dirks PB, Liu X, Huang X, Sun Y.
Sci Adv. 2023 Mar 29;9(13)
- 26- Wnt signaling in stem cells during development and cell lineage specification.
Chidiac R, Angers S.
Curr Top Dev Biol. 2023;153:121-143
- 27- nuPRISM: Microfluidic Genome-Wide Phenotypic Screening Platform for Cellular Nuclei.
Abdrabou AM, Duong BTV, Chen K, Atwal RS, Labib M, Lin S, Angers S, Kelley SO.
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- 28- Crystal structure of the CDK11 kinase domain bound to the small-molecule inhibitor OTS964.
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- 29- CDK12 is hyperactivated and a synthetic-lethal target in BRAF-mutated melanoma.
Houles T, Lavoie G, Nourreddine S, Cheung W, Vaillancourt-Jean É, Guérin CM, Bouttier M, Grondin B, Lin S, Saba-El-Leil MK, Angers S, Meloche S, Roux PP.
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- 32- Genome-wide in vivo screen of circulating tumor cells identifies SLIT2 as a regulator of metastasis.
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Sci Adv. 2022 Sep 2;8(35)
- 33- Frizzled does not get bent out of shape by Wnt.
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- 34- Identification of Drug Resistance Mechanisms Using Genome-Wide CRISPR-Cas9 Screens.
MacLeod G, Rajakulendran N, Angers S.
Methods Mol Biol. 2022;2535:141-156
- 35- Nanoparticle Amplification Labeling for High-Performance Magnetic Cell Sorting.
Wang Z, Wang H, Lin S, Ahmed S, Angers S, Sargent EH, Kelley SO.
Nano Lett. 2022 Jun 22;22(12):4774-4783
- 36- Rapid On-Cell Selection of High-Performance Human Antibodies.
Philpott DN, Gomis S, Wang H, Atwal R, Kelil A, Sack T, Morningstar B, Burnie C, Sargent EH, Angers S, Sidhu S, Kelley SO.
ACS Cent Sci. 2022 Jan 26;8(1):102-109
- 37- The F-box protein Bard (CG14317) targets the Smaug RNA-binding protein for destruction during the Drosophila maternal-to-zygotic transition.
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Genetics. 2022 Jan 4;220(1)
- 38- A Norrin/Wnt surrogate antibody stimulates endothelial cell barrier function and rescues retinopathy.
R. Chidiac , Md. Abedin , G. Macleod , A. Yang , P.Thibault , L. Blazer , J. Adams , L. Zhang , H. Roehrich , H. Jo , S. Seshagiri , S. Sidhu , H. Junge, S. Angers
EMBO Mol Med. 2021
- 39- Wnt signaling inhibition confers induced synthetic lethality to PARP inhibitors.

Angers S.
EMBO Mol Med. 2021 Apr 9;13(4):e14002.

- 40- The RanBP2/RanGAP1-SUMO complex gates β -arrestin2 nuclear entry to regulate the Mdm2-p53 signaling axis.
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- 41- Single-cell chromatin accessibility profiling of glioblastoma identifies an invasive cancer stem cell population associated with lower survival.
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- 43- Copper bioavailability is a KRAS-specific vulnerability in colorectal cancer.
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- 46- Metabolic Regulation of the Epigenome Drives Lethal Infantile Ependymoma.
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- 47- Nanostructured Architectures Promote the Mesenchymal-Epithelial Transition for Invasive Cells.

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- 53- Identifying chemogenetic interactions from CRISPR screens with drugZ.
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- 56- Wnt and Notch signaling govern self-renewal and differentiation in a subset of human glioblastoma stem cells.
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- 57- Agonist-induced desensitisation of $\beta 3$ -adrenoceptors: Where, when, and how?
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SCIENCE OUTREACH

1. The GPCR podcast
Ep. 92:
Nov 3, 2022 <https://podcasters.spotify.com/pod/show/dr-gpcr/episodes/92-with-Dr--Stephane-Angers-e1pite0>
2. The Stem Cell Podcast
Ep. 153: "Signal Transduction in Stem Cells and Cancer"
October 15, 2019 <https://stemcellpodcast.com/?s=stephane+angers>
3. The Star
Doctors' Notes: Cancer treatment might be turning a corner
Sun., Feb. 10, 2019.
<https://www.thestar.com/life/2019/02/10/doctors-notes-cancer-treatment-might-be-turning-a-corner.html>
4. The Globe and Mail
Canadian researchers hope new drugs possible for hardest-to-treat brain cancer
April 16, 2019
<https://www.theglobeandmail.com/canada/british-columbia/article-canadian-researchers-hope-new-drugs-possible-for-hardest-to-treat/>
5. L'Actualité
Des chercheurs canadiens font avancer la lutte contre le glioblastoma
<https://lactualite.com/actualites/des-chercheurs-canadiens-font-avancer-la-lutte-contre-le-glioblastome/>
6. Research2Reality
Taking Apart the 'Engine' of Aggressive Brain Cancer
September 2019
<https://research2reality.com/health-medicine/cancer/reverse-engineer-brain-cancer-cells-treatment-glioblastoma-multiforme/>

GRANT SUPPORT AWARDED

1. Title: Precise modulation of the Wnt signalling pathway for endogenous tissue regeneration, cell therapy and tissue engineering
Source: ORF-RE11

Funds awarded: \$ 2.0 million (\$790K to Angers) Dates: 2023-2027
P.I. S. Angers & Jeff Wrana

2. Title: Response of the Osteoporotic Skeleton to Mechanical Loading
Source: NIH- R01AR047867
Funds awarded: \$ 3.457 million USD (\$590K to Angers) Dates: 2023-2028
P.I. M. Silva, collaborator S. Angers
3. Title: Investigation of a first-in-class Frizzled4/LRP5 agonist in retinal disease models
Source: NIH- R01EY033316
Funds awarded: \$ 2.281 million USD (\$567K to Angers) Dates: 2022-2027
P.I. H. Junge, co-PI S. Angers
4. Title: Development of microfluidic enabled CRISPR-CAS9 functional genetic screening technologies for target discovery in cancer immunotherapy
Source: NIH- 1R01CA260170-01
Funds awarded: \$ 1.06 million (\$234K to Angers) Dates: 2021-2026
P.I. S. Kelley, S. Angers, J. Moffat
5. Title: Assessing the efficacy of novel synthetic Wnt ligands to promote endothelial cell barrier function in diseases,
Source: CIHR – Project - PJT-175160
Funds awarded: \$841,500 Dates: 2021-2026
P.I. S. Angers
6. Title: Targeting Glioblastoma Heterogeneity through identification of subtype-specific genetic vulnerabilities
Source: CIHR – Project - PJT-169054
Funds awarded: \$818,550 Dates: 2020-2025
P.I. S. Angers
7. Title: Targeting Mesoderm Differentiation Bottlenecks for Regenerative Therapies
Source: CFREF – Medicine by Design – Round 2
Funds awarded: \$3,500,000 (total) / \$720,000 to Angers Dates 2019-2022
P.I.: S. Kelley
Co-Applicants: S. Angers, J. Moffat, S. Sidhu, A. Wheeler, B. Blencowe, A. McGuigan, K. Pardee
8. Title: Epigenetic reorganization and differentiation of glioblastoma
Source: CIHR - Canadian Epigenetics, Environment and Health Research Consortium
Funds awarded: \$1,500,000 (total) / \$500,000 to Angers Dates 2018-2022
P.I.: P. Dirks
Co-Applicants: S. Angers, M. Lupien
9. Title: Brain Cancer TRI: Cellular and Genetic Heterogeneity as a Therapeutic Hurdle and Opportunity for Ontarians with Brain Cancer
Source: OICR
Funds awarded: \$4,800,000 (total) / \$236,460 to Angers Dates: 2017-2019
P.I.s: P. Dirks, M. Taylor
Co-Applicants: S. Angers, T. Pugh, S. Singh, X. Huang
10. Title: Targeting Wnt pathway in cancer with therapeutic antibodies.
Source: Canadian Cancer Society Research Institute – IMPACT grant
Funds awarded: \$3,600,000 (total) / \$974,976 to Angers Dates: 2017-2022
P.I.s: S. Angers
Co-Applicants: J. Moffat, S. Sidhu,

11. Title: Targeting Frizzled proteins in RNF43 mutant cancers.
 Source: Canadian Institute for Health Research, Project 1st Pilot
 Funds awarded: \$1,005,320 (total) / \$880,320 to Angers Dates: 2016-2021
 P.I.s: S. Angers, S. Sidhu
 Co-Applicants: J. Moffat, D. Hedley

12. Title: Systems level analysis of blood progenitor development from human pluripotent stem cells.
 Source: CFREF - Medicine by Design
 Funds awarded: \$1,584,900 (total) / \$300,000 to Angers Dates: 2016-2019
 P.I.s: J. Moffat
 Co-Applicants: S. Angers, G. Keller, B. Andrews, C. Boone

13. Title: Identification of GBM genetic wiring vulnerabilities.
 Source: Canadian Institute for Health Research, Targeting High Fatality Cancers - Innovation Grant
 Funds awarded: \$100,000 Date: April 2016
 P.I.: S. Angers
 Co-Applicants: P. Dirks, J. Moffat

14. Title: Development and characterization of anti Fzd4 antibodies for the treatment of cancer.
 Source: Northern Biologics
 Funds awarded: \$100,000 (direct costs) Date: 2015
 P.I.: S. Angers

15. Title: Pharmacological and Biochemical basis of Smoothed functional selectivity.
 Source: Canadian Institute for Health Research
 Funds awarded: \$100,000 Date: July 2015
 P.I.: S. Angers
 Co-Applicant: B. Shoichet,

16. Title: A comprehensive antibody platform for targeting tumour heterogeneity
 Source: Ministry of Research and Innovation (MRI) – Ontario Research Fund-Research Excellence round 7 (ORF-RE7)
 Funds Awarded: \$2,539,523 (total) / \$260,000 (to Angers) Dates of Project: Apr 2015-Mar 2019
 P.I.s: S. Sidhu, B. Neel
 Co-Applicants: R. Rottapel, B. Wouters, S. Angers, C. O'Brien, J. Moffat
 The major goal of this project is to develop antibodies to fight cancer and advance biological knowledge.

17. Title: Confocal Microscopy Suite
 Source: Canadian Foundation for Innovation (CFI), Ontario Research Fund
 Funds awarded: \$375,000 Sept 2014
 P.I.: S. Angers

18. Title: Role of the KIF14-Radil protein complex in breast cancer cells migration
 Source: Canadian Breast Cancer Foundation
 Funds awarded: \$449,346 Dates: 05-2014 – 09-2017
 P.I.: S. Angers

19. Title: Wnt signalling circuitries in development and breast cancer
 Source: Canadian Institute for Health Research
 Funds awarded: \$622,335 Dates: 10/2012 – 09/2017

P.I.: S. Angers

20. Title: Role of the KIF14-Radil protein complex in breast cancer cells migration
Source: Canadian Breast Cancer Foundation
Funds awarded: \$413,028 Dates: 05-2011 – 05-2014
P.I.: S. Angers
21. Title: Role of the P42.3 protein in mitotic spindle orientation
Source: NSERC
Funds awarded: \$200,000 Dates: 05/2011 – 05/2017
P.I.: S. Angers
22. Title: Synthetic antibody program: novel therapeutics and reagents
Source: Genome Canada (GC) - Large-Scale Applied Research Project
Funds Awarded: \$4,849,413 (total) / \$300,000 (to Angers) Dates of Project: Jul 2011-Dec 2014
P.I.s: S. Sidhu, C. Boone
Co-Applicants: J. Moffat, S. Angers, K. Bowman, I. Stagljar, B. Andrews, J. Dick, R. Rottapel, T. Pawson
Large-scale collaborative grant for the identification of new antibody targets for cancer therapy and the development of antibodies against these targets.
23. Title: Molecular characterization of the key regulatory process controlling the Wnt pathway.
Source: Canadian Institute for Health Research
Funds awarded \$627,065 Dates: 03/2007 – 03/2012
P.I.: S. Angers
24. Title: Proximal signal transduction mechanisms of Wnt and Hedgehog receptors.
Source: Canadian Cancer Research Society
Funds awarded \$120,000 Dates: 09/2007 – 09/2009
P.I. S. Angers
25. CRC chair Tier II, Functional Architecture of Signal Transduction
\$1,000,000, Awarded 2007-2017
P.I.: S. Angers
26. Title: Establishment of a proteomic platform at the University of Toronto
Source: Canadian Foundation for Innovation, Ontario Research Fund
Funds awarded: \$434,360, 2007
P.I.: S. Angers
27. Title: Pharmacological manipulation of β -catenin protein stability for cancer therapy.
Source: Connaught grant, University of Toronto
Funds awarded: 30,000\$, March 2007
P.I.: S. Angers

AWARDS

- 1- 2013 Professor of the year award, Leslie Dan Faculty of Pharmacy
- 2- 2009 Canadian Society for Pharmaceutical Sciences, GSK Early Career Award
- 3- 2008 Early Researcher Award, Ministry of Research and Innovation Ontario
- 4- 2007-2017 Canada Research Chair Tier II – Functional Architecture of Signal Transduction

- 5- 2000 Bernard Belleau Award- Awarded by L'Association Canadienne Francaise pour l'Avancement des Sciences (ACFAS)

INVITED SEMINARS

- 1- 2025 Wnt Signaling Conference Gordon Research Conference, June 22-27, 2025, Bates College, Maine
"Manipulating Cell Fate with Frizzled Agonists" Invited by Ken Cadigan
- 2- 23rd GPCR retreat, May 15-17 2025, Bromont, Qc
"A New Lens on Wnt Receptor Activation Drives a First-in-Class Therapy for Retinal Diseases".
- 3- Duke-NUS, Singapore, May 8 2025
"Restoring tissue homeostasis with tailored control of Wnt signaling activity" Invited by Nick Tolwinsky
- 4- ASIP annual meeting, Portland Oregon, April 2025
"Manipulating Wnt signaling with antibody agonists to restore tissue homeostasis" Invited by Paul Monga
- 5- Department of Immunology, University of Toronto, January 6 2025
"Restoring tissue homeostasis with tailored control of Wnt signaling activity". Invited by Alberto Martin
- 6- Wnt Meeting 2024, Heidelberg Sept 25-27 2024
"Restoring tissue homeostasis with tailored control of Wnt signaling activity." Invited by Michael Boutros
- 7- 18th Annual Bellairs meeting, The cell and systems biology of disease, Barbados Feb 2024
"A drug discovery journey in academia"
- 8- Two decades of research at IRIC Symposium, Montreal, Oct 19-20 2023
Promoting tissue regeneration through modulation of Wnt signalling. Invited by Michel Bouvier
- 9- Advances in Biomedical Research V, Split Croatia, September 15th -19th, 2023.
Promoting tissue regeneration through modulation of Wnt signalling. Invited by Igor Stajlar
- 10- Wnt 2022, EMBO Workshop, Awaji island, Hyogo, Japan, November 2022
"Manipulating stem cell fate using selective Frizzled agonists"
- 11- NIH, National Cancer Institute, Neuro-oncology branch, Sept 14, 2022
"Charting genetic vulnerabilities of brain tumours." Invited by Chunzhang Zhang
- 12- 16th Annual Bellairs meeting - The Cell and Systems Biology of Disease, Barbados April 2022
Treatment of retinopathies and Parkinson Disease with Frizzled antibody agonists
- 13- PRiME-HUJI Mini-Symposium – Feb 24 2021 – Virtual Talk
Promoting stem cell activity using proximity-inducing antibodies for tissue regeneration

- 14- Proxidrugs Network, University of Frankfurt – September 2020 – Virtual talk
Manipulating developmental pathways using proximity-inducing antibody modalities. Invited by Ivan Dikic
- 15- Cancer Research Center of Laval University (Québec, Canada). Plenary speaker annual Journée Scientifique des Étudiants (JSE) August 2020
“Therapeutic targeting of Wnt signaling in Cancer and tissue regeneration”
- 16- Dept of Pharmacology & Therapeutics, Faculty of Medicine, McGill University, May 2020
“Targeting of Stem Cell Developmental Signals for Cancer Therapy and Regenerative Medicine” Invited by JF Trempe
- 17- Wnt 2020, EMBO Workshop, Awaji island, Hyogo, Japan, September 2020
“Manipulating stem cell fate using selective Frizzled agonists” (postponed Covid Pandemic)
- 18- Van Andel Institute Seminar Series, Grand Rapids Michigan, June 2020
“Therapeutic targeting of Wnt signaling in Cancer and tissue regeneration” Invited by Bart Williams (postponed Covid Pandemic)
- 19- Insitro Therapeutics, April 2020
“Identification of therapeutic targets in Glioblastoma using functional genomics” Invited by Ajamete Kaykas (postponed Covid Pandemic)
- 20- Genentech, April 2020
“Therapeutic targeting of Wnt signaling in Cancer and tissue regeneration” Invited by Vishva Dixit (postponed Covid Pandemic)
- 21- Institute of Research in Immunology and Cancer (IRIC) Distinguished Scientists Lecture, Jan 2020
“Therapeutic targeting of Wnt signaling in Cancer and tissue regeneration” Invited by Michel Bouvier
- 22- SunnyBrook Research Institute, January 2020
“Therapeutic targeting of the Wnt pathway in cancer and tissue regeneration”, Invited by Isabelle Aubert
- 23- 20th Annual GPCR Great Lake Retreat, Bromont, Quebec, September 2019
“Targeting Wnt signaling in Cancer and Regenerative Medicine”
- 24- Cincinnati Children's, Cincinnati, April 24th, 2019
“Targeting Wnt signaling in Cancer and Regenerative Medicine” Invited by Josh Waxman
- 25- UNC Lineberger Comprehensive Cancer, North Caroline, April 17th, 2019
“Targeting Wnt signaling in Cancer and Regenerative Medicine” Invited by Ben Major
- 26- Montreal Neurological Institute, March 21, 2019
“Targeting Wnt Signaling in Cancer and Tissue Regeneration” Invited by Ted Fon
- 27- 15th Annual International Bellairs Research Workshop on “The Cell and Systems Biology Of Disease: Concepts and Challenges. January 2019
“Wnt signalling in cancer and tissue regeneration” Invited by Drs. Heidi McBride, Morag Park and Anne-Claude Gingras
- 28- Emerging Data on the Role of Wnt Biology in Cancer, Banbury Center of Cold Spring Harbor, “Charting Wnt signaling networks in normal and cancer cells using CRISPR functional genomic screens” October 7-10, 2018, Invited by Hans Clevers

- 29- European Wnt meeting, Heidelberg, Germany, Sept 9-14 2018
"Identification of synthetic lethal interactions underlying cancer mutations within the Wnt signaling pathway" , Invited by Michael Boutros
- 30- Repare Therapeutics, Montreal, June 2018
"Leveraging CRISPR-Cas9 screens for identification of cancer vulnerabilities and new therapeutics."
- 31- Signalisation Quebec 2018, Bécancourt, Qc June 6-8th 2018
"Identification des gènes essentiels pour les cellules souches du glioblastome."
- 32- "XXIVe Journée scientifique des programmes de biologie moléculaire de l'Université de Montréal" May 18th, 2018
Plenary lecture: Drugging the Wnt pathway in Cancer and regenerative medicine.
- 33- Experimental Biology 2018 in San Diego, CA, April 21-25, 2018.
Genome-Wide CRISPR Screens Reveal Wnt-Frizzled Functional Selectivity in Pancreatic Cancer
Julius Axelrod Symposium: The Pluridimensionality of G Protein-Coupled Receptor (GPCR) Signaling, Invited by Michel Bouvier
- 34- 11th Conference on Signalling in Normal and Cancer Cells, Banff, AB, April 15-19, 2018
"Leveraging Parallel CRISPR-Cas9 screens for identification of new therapeutic targets in high-fatality cancers", Invited by Jean-Francois Cote
- 35- DNA Damage Response Therapeutics Summit 2018, Boston, January 30-Feb 1st 2018
Leveraging CRISPR-Cas9 screens for identification of PDAC and GBM cancer vulnerabilities and new therapeutics.
- 36- University of Toronto Mississauga, Department of Chemistry and Physical Sciences, November 22, 2017
Leveraging CRISPR-Cas9 screens for identification of cancer vulnerabilities and new therapeutics., Invited by Scott Prosser
- 37- GDR 3545 6th annual meeting "GPCR from physiology to drugs", Université Paris Descartes, Paris, France, Nov 9th 2017
Wnt-FZD5 signalling circuit as a druggable vulnerability of RNF43-mutant pancreatic tumours.
- 38- 2017 NextGen Genomics, Biology, Bioinformatics and Technologies (NGBT) Conference, October 2 - 4, 2017 Bhubaneswar, India.
Leveraging genome-wide CRISPR-Cas9 screens and synthetic lethal interactions for novel cancer therapeutics.
- 39- Gordon Research Conference, Wnt Signaling, August 5-10, 2017, Stowe, VT
Identification of FZD5 as a genetic vulnerability in RNF43 mutant cancers.
- 40- Meakins-Christie Laboratories, McGill University, May 1st 2017
Leveraging genome-wide CRISPR screens and synthetic lethal interactions for novel cancer therapeutics, Invited by Simon Rousseau
- 41- Institut Cochin, Paris, April 26 2017
Identification of new therapeutic opportunities in cancer using CRISPR screens.
Invited by Mark Scott

- 42- Université de Montréal, Department of Anatomy and Pathology, Annual Research Day, April 2017
"Identification des vulnérabilités génétiques dans le cancer au moyen de cribles CRISPR pour le développement de nouvelles thérapies", Invited by Jean-Claude Labbé and Phillipe Roux
- 43- AACR: Opportunities and Challenges of Exploiting Synthetic Lethality in Cancer, San Diego, Ca, January 2017
Leveraging genome-wide CRISPR screens and synthetic lethal interactions for novel cancer therapeutics, Invited by René Bernards
- 44- Terry Fox, Ontario Node Research Symposium – Toronto, Ontario, December 2016
Targeting cancer vulnerabilities uncovered using genome-wide CRISPR-Cas9 screens.
Invited by Dr. Sheila Sing
- 45- World Life Science Conference, Beijing, China, November 2016
Identification of new therapeutic opportunities in cancer using CRISPR screens.
Invited by C-c Hui
- 46- Wnt meeting conference 2016 – EMBO, Brno, Czech rep. Sept 14-17, 2016
CRISPR screens reveal a Wnt-FZD5 signaling circuit as a therapeutic opportunity in pancreatic cancer.
- 47- Signalisation Québec, Becancourt, Qc, June 2016
Identification de vulnérabilités génétiques dans les cellules cancéreuses au moyen de cribles CRISPR : nouvelles cibles thérapeutiques., Invited by Dr. Marie-Josée Boucher
- 48- Princess Margaret Hospital Research Seminar, May 5th 2016
Identification of cancer vulnerabilities using genome wide CRISPR-Cas9 screens.
Invited by Dr. Rob Rottapel
- 49- American Association for Cancer Research (AACR), Annual Meeting, Workshop on Functional Screening using CRISPR-Cas9, New Orleans, April 15-20 2016
Identification of new therapeutic opportunities in cancer using CRISPR screens.
Invited by Feng Zhang
- 50- Department of Laboratory Medicine and Pathology, Univ. of Toronto, Annual Research Day, April 13th, 2016
Finding new cancer therapeutic strategies using genome-wide CRISPR screens.
Invited by the Graduate Students
- 51- 12th Annual Bellairs Research Workshop, Cell Biology of Disease, Barbados, January 2016
Deciphering Wnt signalling and drug sensitivity using whole genome CRISPR-Cas9 screens
Invited by Dr. Peter McPherson
- 52- Developmental Biology and Cancer, American Association For Cancer Research (AACR), Nov 30 – Dec 3 2015
"Inhibiting the Wnt pathway with selective anti-Frizzled synthetic antibodies"
Invited by Hans Clevers
- 53- HUPO World Congress on Human Proteome Organization, Vancouver, Sept 27-30 2015
Study of Cancer Cell Signalling and Drug Sensitivity using CRISPR-Cas9 sgRNA libraries.
- 54- 2015 Canadian Society for Pharmaceutical Sciences (CSPS) Annual conference, May 26-28 2015
"Deciphering growth factor signalling mechanisms in Cancer using functional genomics and proteomics."

- 55- Department of Cell and Systems Biology, Graduate Research day, Plenary speaker, May 1st 2015. "Deciphering cell signalling mechanisms in development and cancer using functional OMICS approaches." Invited by the Graduate Students.
- 56- Graduate Medical School, National University Singapore, October 2014
The PPFIA1-PP2A protein complex promotes Kif7 ciliary tip trafficking and Hedgehog signaling. Invited by Dr. David Virshup
- 57- EMBO Workshop on Wnt signalling, Broome, Australia, October 2014
Systematic targeting of Wnt receptors using synthetic antibodies
Invited by Dr. Elizabeth Vincan
- 58- Signalisation Québec, Becancourt, Qc, June 2014
Régulation du transport intraflagellaire lors de l'activation de la voie Hedgehog.
Invited by Dr. Darren Richard
- 59- Cell Polarity Signaling, Gordon Research Conference, Waltham, MA, June 2014
SAPCD2 Negatively Regulates the Gai-LGN-NuMA Complex During Spindle Positioning and Asymmetric Cell Division, Invited by Dr. Ian Macara
- 60- Institut de Recherche en Immunologie et Cancer (IRIC), February 2013
Understanding the Many Roles of G protein Signalling in Cancer using Functional Proteomics
Invited by Dr. Pierre Thibeault
- 61- GPCR Great Lake Retreat, London, Ontario October 2012
Role of the Gbg-Rap1a-Radil complex in breast cancer, Invited by Dr. Steve Fergusson
- 62- Department of Biochemistry, McGill University, April 2012
Wnt-PCP signalling in development and disease,
Invited by Drs. Thomas Duchaine and Jose Teodoro
- 63- The Biotechnology Center of the Technische Universität Dresden, Germany, December 2011
Wnt-PCP signalling in development and disease, Invited by Dr. Gilbert Weidinger
- 64- Department of Biology at McMaster University, Hamilton, November 2011
Wnt-PCP signalling in development and disease., Invited by the graduate students
- 65- International Wnt 2011 meeting, UCLA, Los Angeles, June 2011
Mink1 regulates the trafficking and cellular localization of Prickle during β -catenin-independent Wnt signaling., Invited by Drs. Tim Lane and Marian Waterman
- 66- Department of Pharmacology, University of Rochester, NY, USA, April 2011
The G β γ -Radil-Rap1a complex in cell adhesion, migration and cancer.
Invited by Dr. Gregory Tall
- 67- Children's Health Research Institute, London, Ontario, Canada, April 2011
Beta-catenin Independent Wnt Signalling in Development and Disease.
Invited by Dr. Greg Kelley
- 68- 9th Conference on Signalling in Normal and Cancer Cells, Banff, Alberta, Canada, March 2011
A targeted siRNA screen reveals a role for the Frizzled-7 Wnt receptor in breast cancer cells migration., Invited by Dr. Andre Veillette
- 69- Department of Pharmacology, University of Toronto, December 2010

Beta-catenin Independent Wnt Signalling in Development and Disease.
Invited by David Riddick

- 70- Signalisation Québec 2010, June 2010
Étude de la logique moléculaire de la voie Wnt par protéomique fonctionnelle.
Invited by Dr. Marc Therrien
- 71- Centre de recherche de L'Hôtel-Dieu de Québec/CHUQ, May 2010
Étude de la logique moléculaire de la voie Wnt par protéomique fonctionnelle.
Invited by Dr. Josée Lavoie
- 72- Ottawa Research Institute, Ontario, Canada, April 2010
Study of Wnt signalling using functional proteomics., Invited by Dr. Lynn A. Megeney
- 73- University of Toronto, LMP seminar series, November 2009
Application of functional proteomics to cellular signalling., Invited by Dr. Maria Rozakis
- 74- Ubiquitin Drugs Discovery & Diagnostics, October 2009
USP34 controls the nuclear localization of Axin to positively regulate Wnt/b-catenin signaling.
Invited by Dr. Seth Goldenberg, Progenra Inc.
- 75- University of Toronto, Department of Physiology, September 2009
Investigating G Protein Signalling using functional proteomics, Invited by Dr. Sebastien Boltz
- 76- Robarts Institute, April 2009,
Functional proteomics of G protein signalling, Invited by Dr. Stephen Ferguson
- 77- Program in Cell Biology, Sick Kids, Toronto, February 2009
Characterization of Novel Actors in the Wnt Signalling Pathway Using Functional Proteomics
Invited by Dr. William Trimble
- 78- Molecular Pharmacology of GPCRs, Sydney Australia, November 2008
Investigating GPCR signal transduction using functional proteomics
Invited by Dr. Patrick Sexton
- 79- GPCR Great Lake Retreat, Bromont Quebec, October 2008
Investigating GPCR signal transduction using functional proteomics
Invited by Dr. Stephane Laporte
- 80- Citywide Endocrine Rounds, Mount Sinai Hospital, Toronto, March 2008
Defining the molecular logic of the Wnt signalling pathway using functional proteomics.
Invited by Dr. Susan George
- 81- Department of Pharmacology, Mcgill University, November 2007
Defining the molecular logic of the Wnt signalling pathway using functional proteomics.
Invited by Dr. Terry Hebert
- 82- Department of Cell and Systems Biology, University of Toronto, October 2007
Characterization of Novel Actors in the Wnt Signalling Pathway Using Functional Proteomics
Invited by Dr. Darrell Deveau
- 83- Department of Biochemistry, University of Toronto, June 2007
Targeted proteomic analyzes of the Wnt signalling pathway, Invited by Dr. Reinhart Reithmeir
- 84- Department of Biochemistry, Queens University, April 2007
Targeted proteomic analyzes of the Wnt signalling pathway, Invited by Dr. Glen Jones

85- CHUM & Department Pathology and Cell Biology, Université de Montréal, May 2006
Études protéomiques de la voie de signalisation Wnt.
Invited by Drs. Guy Rouleau & Pierre Drapeau

86- Leslie Dan Faculty of Pharmacy, University of Toronto, May 2006
Molecular dissection of the Wnt pathway using targeted proteomics
Invited by Dr. Wayne Hindmarsh

87- Stem Cells Research Institute, McMaster University, April 2006
Molecular dissection of the Wnt pathway using targeted proteomics
Invited by Dr. Mick Bathia

PEER REVIEW

2006-Present Ad hoc reviewer for Genes & Development, Molecular and Cellular Biology, FASEB Journal, Journal of Cell Biology, Genetics, Molecular Genetics and Genomics, PNAS, Biochemistry, American Journal of Cell Physiology, Oncogene, Biology Open, Journal of Neurochem, Journal of Neuroinflammation, Molecular Cell, Nature Medicine, Open Biology, Development, Developmental Cell, Nature, Elife, Cancer Discovery, Science Signaling, Journal of Clinical Investigation, Nature Communication, EMBOJ, Science Advance, Embo Molecular Medicine, Science

CONFERENCE ORGANIZER

2023 Gordon Research Conference – Wnt Signaling - Chair

August 2019 Gordon Research Conference - Wnt Signaling Networks in Development, Disease and Regeneration – Mount Snow, VT, USA Vice Chair

October 2015 16th Great Lakes GPCR Retreat – Hockley Valley, Ontario, Canada, Co-organizer

October 2010 11th Great Lakes GPCR Retreat - King City, Ontario. Canada, Co-organizer

PEER REVIEW COMMITTEES

2023 Canadian Cancer Research Society, CCS Challenge Grants – C4a - Therapeutics panel

2021 Connaught Awards, University of Toronto

2021 Project grant, Canadian Institute of Health Research, Molecular and Cellular Biology of Cancer Panel.

2018 IMPACT grant program reviewer, Canadian Cancer Society Research Institute

2018 Scientific Officer, CIHR, Cancer Biology & Therapeutics C2 Committee

2017 IMPACT grant program reviewer, Canadian Cancer Society Research Institute

2017 Scientific Officer for Cancer Therapeutics cluster, Canadian Institute of Health Research Program Grant Fall competition

2016	Reviewer Cancer Research Society, Panel A
2015-	Member of the College of Reviewers, Canadian Institute of Health Research
2015	Stg1 reviewer, Foundation grant, Canadian Institute of Health Research
2014	Stg1 reviewer, Foundation grant, Canadian Institute of Health Research
2014-2015	Invited Member, Canadian Institute of Health Research, Molecular and Cellular Biology of Cancer Panel.
2009-2013	Full member, Canadian Institute of Health Research, Molecular and Cellular Biology of Cancer Panel.
2008	Invited Member, Canadian Institute of Health Research, Molecular and Cellular Biology of Cancer Panel.
2007	Invited Member, Canadian Institute of Health Research, Pharmacology and Toxicology panel

TRAINEES

M.Sc.	Tenure	Present position
Tony Lui	01/07 – 10/09	MD, NUH Singapore
Meng Zhang	09/16 – 01/20	Trident Consulting
Elli Kubarakos	09/16 – 09/20	Research Associate at BlueRock Therapeutics
Sophia Zelko	09/20 – 08/23	
Sarah Moldaver	09/20 –	
Missy Kim	09/24 –	

Ph.D

Syed Mukhtar Ahmed	07/07 – 12/12	Research Asst. Prof., Vanderbilt University
Celine Lacroix	11/07 – 07/16	Sales Representative at Medtronic
Yulu Cherry Liu	01/09 – 08/15	Asst. Prof., Dept of Biology, Hood College
Catherine Chiu	09/11 – 01/18	Medical Information Manager at Amgen
Nishani Rajakulendran	09/12 – 04/19	R&D Associate at Edesa Biotech
Monika Mis	09/12 – 04/19	Scientist, Genentech
Zachary Steinhart	01/13 – 04/19	Post Doctoral Fellow, UCSF
Milena Kosic	01/16 – 10/23	Principal Scientist, CCRM, Toronto
Siobhan O'Brien	01/18 – 12/22	Post-Doctoral Fellow, Fred Hutch, Seattle
De Hua Yang	09/18 – 05/24	
Fatemeh Molaei	09/19 –	
Althea Xu	09/20 –	
Lillian Kim	09/20 –	
Frank Oteng	01/22 –	
Qiyu Yan	09/23 –	
Byuri Sim	01/24 –	

Post-doctoral Fellow

Dr. Avais Daulat	04/08 – 01/12	Technology specialist, Institut Paoli-Calmettes
Dr. Mélanie Robitaille	07/09 – 10/14	Research Professor, University of Queensland
Dr. Josiah Obiero	01/12 – 03/13	
Dr. Graham Macleod	09/13 – 07/17	Senior Research Associate

Dr. Keith Mascal	09/15 – 12/17	QA Complaint Manager at Sandoz
Dr. Moloud Ahmadi	09/16 – 04/20	Scientist at CCRM, Cell and Gene Therapy
Dr. Rony Chidiac	04/18 – 10/23	Assistant Professor, Université de Sherbrooke
Dr. Graham Macleod	07/17 – 09/20	Senior Research Associate, Angers Lab
Dr. Javier Koh	02/20 – 04/21	Scientist, Singapore
Dr. Maira Pedroso De Almeida	11/20 –	
Dr. Pierre Thibeault	01/21 –	
Dr. Lucie Wolf	05/22 –	

Research Associate

Dr. Graham Macleod	09/20 –	
Dr. Nancy Chang	07/17 – 07/18	Clinical Res Coord., Hospital for Sick Children
Dr. Sophia Wang	02/18 – 12/18	RA, Univ. of Texas Southwestern

Research Technician

Nathalie Lavine	2006- 2008	RA, University of Manitoba
Andrew Chang	2008- 2010	PharmD Candidate, University of Waterloo
Sichun Lin	2016-	
Yun Hye Kim	2018-2024	