

FACULTY PUBLICATIONS

2016

AKAVIA, U.D.

Arabzadeh A, Dupaul-Chicoine J, Breton V, Haftchenary S, Yumeen S, Turbide C, Saleh M, McGregor K, Greenwood CM, Akavia UD, Blumberg RS, Gunning PT, Beauchemin N. Carcinoembryonic Antigen Cell Adhesion Molecule 1 long isoform modulates malignancy of poorly differentiated colon cancer cells. *Gut*. 2016 May;65(5):821-9. doi: 10.1136/gutjnl-2014-308781. Epub 2015 Feb 9. PubMed PMID: 25666195; PubMed Central PMCID: PMC4826327.

BEAUCHEMIN N.

Arabzadeh A, Dupaul-Chicoine J, Breton V, Haftchenary S, Yumeen S, Turbide C, Saleh M, McGregor K, Greenwood CM, Akavia UD, Blumberg RS, Gunning PT, Beauchemin N. Carcinoembryonic Antigen Cell Adhesion Molecule 1 long isoform modulates malignancy of poorly differentiated colon cancer cells. *Gut*. 2016 May;65(5):821-9. doi: 10.1136/gutjnl-2014-308781. Epub 2015 Feb 9. PubMed PMID: 25666195; PubMed Central PMCID: PMC4826327.

Felfoul O, Mohammadi M, Taherkhani S, de Lanauze D, Zhong Xu Y, Loghin D, Essa S, Jancik S, Houle D, Lafleur M, Gaboury L, Tabrizian M, Kaou N, Atkin M, Vuong T, Batist G, Beauchemin N, Radzioch D, Martel S. Magneto-aerotactic bacteria deliver drug-containing nanoliposomes to tumour hypoxic regions. *Nat Nanotechnol*. 2016 Nov;11(11):941-947. doi: 10.1038/nnano.2016.137. Epub 2016 Aug 15. PubMed PMID: 27525475.

Li N, Ngo CT, Aleynikova O, Beauchemin N, Richard S. The p53 status can influence the role of Sam68 in tumorigenesis. *Oncotarget*. 2016 Nov 1;7(44):71651-71659. doi: 10.18632/oncotarget.12305. PubMed PMID: 27690217; PubMed Central PMCID: PMC5342108.

Wegwitz F, Lenfert E, Gerstel D, von Ehrenstein L, Einhoff J, Schmidt G, Logsdon M, Brandner J, Tiegs G, Beauchemin N, Wagener C, Deppert W, Horst AK. CEACAM1 controls the EMT switch in murine mammary carcinoma in vitro and in vivo. *Oncotarget*. 2016 Sep 27;7(39):63730-63746. doi: 10.18632/oncotarget.11650. PubMed PMID: 27572314; PubMed Central PMCID: PMC5325399.

Koritzinsky M, Koch CA, Riley B, Beauchemin N, Johnston G, Johnston M, Koropatnick J, Loiselle CG, Maslowska M, McCormick C, Miller WH Jr, Mulligan L, Tsao MS. From Solo in the Silo to Strategic Training Programs. *CBE Life Sci Educ*. 2016 Spring;15(1):le1. PubMed PMID: 27290740; PubMed Central PMCID: PMC4803099.

Chen J, Raju GS, Jogunoori W, Menon V, Majumdar A, Chen JS, Gi YJ, Jeong YS, Phan L, Belkin M, Gu S, Kundra S, Mistry NA, Zhang J, Su X, Li S, Lin SH, Javle M, McMurray JS, Rahlfs TF, Mishra B, White J, Rashid A, Beauchemin N, Weston BR, Shafi MA, Stroehlein JR, Davila M, Akbani R, Weinstein JN, Wu X, Mishra L.

Department of Biochemistry 2016

Mutational Profiles Reveal an Aberrant TGF- β -CEA Regulated Pathway in Colon Adenomas. *PLoS One*. 2016 Apr 21;11(4):e0153933. doi: 10.1371/journal.pone.0153933. eCollection 2016. PubMed PMID: 27100181; PubMed Central PMCID: PMC4839765.

Huang YH, Zhu C, Kondo Y, Anderson AC, Gandhi A, Russell A, Dougan SK, Petersen BS, Melum E, Pertel T, Clayton KL, Raab M, Chen Q, Beauchemin N, Yazaki PJ, Pyzik M, Ostrowski MA, Glickman JN, Rudd CE, Ploegh HL, Franke A, Petsko GA, Kuchroo VK, Blumberg RS. Corrigendum: CEACAM1 regulates TIM-3-mediated tolerance and exhaustion. *Nature*. 2016 Aug 18;536(7616):359. doi: 10.1038/nature17421. Epub 2016 Mar 16. PubMed PMID: 26982724; PubMed Central PMCID: PMC5110397.

Van Der Kraak L, Langlais D, Jothy S, Beauchemin N, Gros P. Mapping hyper-susceptibility to colitis-associated colorectal cancer in FVB/NJ mice. *Mamm Genome*. 2016 Jun;27(5-6):213-24. doi: 10.1007/s00335-016-9625-z. Epub 2016 Mar 15. PubMed PMID: 26979842.

Josie Ursini-Siegel and Nicole Beauchemin, co-editors. *The Tumor Microenvironment - Methods and Protocols*. *Methods in Molecular Biology*. 24 chapters. Published in September 2016. ISBN 978-1-4939-3801-8

BERGHUIS, A.M.

Yachnin, B.J., Lau, P.C.K. & Berghuis, A.M. (2016) The role of conformational flexibility in Baeyer-Villiger Monooxygenase catalysis and structure. *Biochim. Biophys. Acta – Proteins and Proteomics*. 1864, 1641-1648. PMID: 27570148; DOI: 10.1016/j.bbapap.2016.08.015

Beattig, O.M., Shi, K., Yachnin, B.J., Burk, D.L. & Berghuis, A.M. (2016) Comprehensive characterization of ligand-induced plasticity changes in a dimeric enzyme. *FEBS J*. 283, 3029-3038. PMID: 27333541; PMCID: PMC5053276; DOI: 10.1111/febs.13788

Avila, E.E., Rodriguez, O.I., Marquez, J.A. & Berghuis, A.M. (2016) An *Entamoeba histolytica* ADP-ribosyl transferase from the diphtheria toxin family modifies the bacterial elongation factor Tu. *Mol. Biochem. Parasitol*. 207, 68-74. PMID: 27234208; DOI: 10.1016/j.molbiopara.2016.05.012

Caldwell, S.J., Huang, Y. & Berghuis, A.M. (2016) Antibiotic binding drives catalytic activation of aminoglycoside kinase APH(2^{III})-Ia. *Structure*. 24, 935-945. PMID: 27161980; DOI: 10.1016/j.str.2016.04.002
Commentary: Ngo & Garneau-Tsodikova, *Structure*, 24, 1011-1013. PMID: 27387794; DOI: 10.1016/j.str.2016.06.006

Bassenden, A.V., Rodionov, D., Shi, K. & Berghuis, A.M. (2016) Structural analysis of the tobramycin and gentamicin clinical resistome reveals limitations for next-generation aminoglycoside design. *ACS Chem. Biol*. 11, 1339-1346. PMID: 26900880; DOI: 10.1021/acscchembio.5b01070

Rivera, B. Gayden, T., Carrot-Zhang, J., Nadaf, J., Boshari, T., Faury, D., Zeinieh, M., Blanc, R., Burk, D.L., Fahiminiya, S., Bareke, E., Schüller, U., Monoranu, C.M., Sträter, R., Kerl, K., Niederstadt, T., Kurlemann, G., Ellezam, B., Michalak, S., Thom, M., Lockhart, P.J., Leventer,

Department of Biochemistry 2016

R.J., Ohm, M., MacGregor, D., Jones, D., Karamchandani, J., Greenwood, C.M.T., Berghuis, A.M., Bens, S., Siebert, R., Zakrzewska, M., Liberski, P.P., Zakrzewski, K., Sisodiya, S.M., Paulus, W., Albrecht, S., Hasselblatt, M., Jabado, N., Foulkes, W.D. & Majewski, J. (2016) Germline and somatic FGFR1 abnormalities in dysembryoplastic neuroepithelial tumors. *Acta Neuropathol.* 131, 847-863. PMID: 26920151; PMCID: PMC5039033; DOI: 10.1007/s00401-016-1549-x

Bacot-Davis, V.R., Bassenden, A.V. & Berghuis, A.M. (2016) Drug-target networks in aminoglycoside resistance: hierarchy of priority in structural drug design. *Med. Chem. Commun.* 7, 103-113. DOI: 10.1039/C5MD00384A

BOUCHARD, M.

Stewart, K., Gaitan, Y., Shafer, M. E. R., Aoujit, L., Hu, D., Sharma, R., Tremblay, M., Ishii, H, Marcotte, M., Stanga, D., Tang, Y.C., Boualia, S. K., Nguyen, A.H.T., Lamarche-Vane, N., Takano, T., Vidal, S. and Bouchard, M. A point mutation in p190A RhoGAP affects ciliogenesis and leads to glomerulocystic kidney defects. *PLOS Genetics* February 9, 2016, DOI: 10.1371/journal.pgen.1005785

BRANTON, P.E.

Gilson T, Blanchette P, Ballmann MZ, Papp T, Péntzes JJ, Benkő M, Harrach B, Branton PE. Using the E4orf6-Based E3 Ubiquitin Ligase as a Tool To Analyze the Evolution of Adenoviruses. *J Virol.* 2016 Jul 27;90(16):7350-67. doi: 10.1128/JVI.00420-16. Print 2016 Aug 15. PubMed PMID: 27252531; PubMed Central PMCID: PMC4984651.

BROUHARD, G.J.

Bendre S, Rondelet A, Hall C, Schmidt N, Lin YC, Brouhard GJ, Bird AW. GTSE1 tunes microtubule stability for chromosome alignment and segregation by inhibiting the microtubule depolymerase MCAK. *J Cell Biol.* 2016 Dec 5;215(5):631-647. Epub 2016 Nov 23. PubMed PMID: 27881713; PubMed Central PMCID: PMC5147003.

Wieczorek M, Tcherkezian J, Bernier C, Prota AE, Chaaban S, Rolland Y, Godbout C, Hancock MA, Arezzo JC, Ocal O, Rocha C, Olieric N, Hall A, Ding H, Bramoullé A, Annis MG, Zogopoulos G, Harran PG, Wilkie TM, Brekken RA, Siegel PM, Steinmetz MO, Shore GC, Brouhard GJ, Roulston A. The synthetic diazonamide DZ-2384 has distinct effects on microtubule curvature and dynamics without neurotoxicity. *Sci Transl Med.* 2016 Nov 16;8(365):365ra159. PubMed PMID: 27856798; PubMed Central PMCID: PMC5291303.

CYGLER, M.

Grochulski P, Cygler M, Yates B. Designing a synchrotron micro-focusing beamline for macromolecular crystallography. *Postepy Biochem.* 2016;62(3):395-400. Review. PubMed PMID: 28132495.

Department of Biochemistry 2016

Xu C, Kozlov G, Wong K, Gehring K, Cygler M. Crystal Structure of the Salmonella Typhimurium Effector GtgE. *PLoS One*. 2016 Dec 6;11(12):e0166643. doi: 10.1371/journal.pone.0166643. eCollection 2016. PubMed PMID: 27923041; PubMed Central PMCID: PMC5140068.

Beyrakhova KA, van Straaten K, Li L, Boniecki MT, Anderson DH, Cygler M. Structural and Functional Investigations of the Effector Protein LpiR1 from *Legionella pneumophila*. *J Biol Chem*. 2016 Jul 22;291(30):15767-77. doi: 10.1074/jbc.M115.708701. Epub 2016 May 17. PubMed PMID: 27226543; PubMed Central PMCID: PMC4957058.

DOSTIE, J.

Wang XQ, Dostie J. Chromosome folding and its regulation in health and disease. *Curr Opin Genet Dev*. 2016 Dec 8;43:23-30. doi: 10.1016/j.gde.2016.10.006. [Epub ahead of print] Review. PubMed PMID: 27940207.

Wang XQ, Dostie J. Reciprocal regulation of chromatin state and architecture by HOTAIRM1 contributes to temporal collinear HOXA gene activation. *Nucleic Acids Res*. 2016 Oct 26. pii: gkw966. [Epub ahead of print] PubMed PMID: 27789700.

Dubé JC, Wang XQ, Dostie J. Spatial Organization of Epigenomes. *Curr Mol Biol Rep*. 2016 Mar;2(1):1-9. Epub 2016 Feb 4. PubMed PMID: 26986719; PubMed Central PMCID: PMC4723270.

DROUIN, J.

Sheth R, Barozzi I, Langlais D, Osterwalder M, Nemec S, Carlson HL, Stadler HS, Visel A, Drouin J, Kmita M. Distal Limb Patterning Requires Modulation of cis-Regulatory Activities by HOX13. *Cell Rep*. 2016 Dec 13;17(11):2913-2926. doi: 10.1016/j.celrep.2016.11.039. PubMed PMID: 27974206.

Bifsha P, Balsalobre A, Drouin J. Specificity of Pitx3-Dependent Gene Regulatory Networks in Subsets of Midbrain Dopamine Neurons. *Mol Neurobiol*. 2016 Aug 11. [Epub ahead of print] PubMed PMID: 27514757.

Drouin J. 60 YEARS OF POMC: Transcriptional and epigenetic regulation of POMC gene expression. *J Mol Endocrinol*. 2016 May;56(4):T99-T112. doi: 10.1530/JME-15-0289. Epub 2016 Jan 20. Review. PubMed PMID: 26792828.

Roussel-Gervais A, Couture C, Langlais D, Takayasu S, Balsalobre A, Rueda BR, Zukerberg LR, Figarella-Branger D, Brue T, Drouin J. The Cables1 Gene in Glucocorticoid Regulation of Pituitary Corticotrope Growth and Cushing Disease. *J Clin Endocrinol Metab*. 2016 Feb;101(2):513-22. doi: 10.1210/jc.2015-3324. Epub 2015 Dec 22. PubMed PMID: 26695862.

Department of Biochemistry 2016

DUCHAINE, T.F.

Wu E, Vashisht AA, Chapat C, Flamand MN, Cohen E, Sarov M, Tabach Y, Sonenberg N, Wohlschlegel J, Duchaine TF. A continuum of mRNP complexes in embryonic microRNA-mediated silencing. *Nucleic Acids Res.* 2016 Oct 3. pii: gkw872. [Epub ahead of print] PubMed PMID: 27701073.

Izreig S, Samborska B, Johnson RM, Sergushichev A, Ma EH, Lussier C, Loginicheva E, Donayo AO, Poffenberger MC, Sagan SM, Vincent EE, Artyomov MN, Duchaine TF, Jones RG. The miR-17~92 microRNA Cluster Is a Global Regulator of Tumor Metabolism. *Cell Rep.* 2016 Aug 16;16(7):1915-28. doi: 10.1016/j.celrep.2016.07.036. Epub 2016 Aug 4. PubMed PMID: 27498867.

Flamand MN, Wu E, Vashisht A, Jannot G, Keiper BD, Simard MJ, Wohlschlegel J, Duchaine TF. Poly(A)-binding proteins are required for microRNA-mediated silencing and to promote target deadenylation in *C. elegans*. *Nucleic Acids Res.* 2016 Jul 8;44(12):5924-35. doi: 10.1093/nar/gkw276. Epub 2016 Apr 19. PubMed PMID: 27095199; PubMed Central PMCID: PMC4937315.

FON, E.A.

Roberts RF, Fon EA. Presenting mitochondrial antigens: PINK1, Parkin and MDVs steal the show. *Cell Res.* 2016 Nov;26(11):1180-1181. doi: 10.1038/cr.2016.104. Epub 2016 Sep 2. PubMed PMID: 27585536; PubMed Central PMCID: PMC5099861.

McLelland GL, Lee SA, McBride HM, Fon EA. Syntaxin-17 delivers PINK1/parkin-dependent mitochondrial vesicles to the endolysosomal system. *J Cell Biol.* 2016 Aug 1;214(3):275-91. doi: 10.1083/jcb.201603105. Epub 2016 Jul 25. PubMed PMID: 27458136; PubMed Central PMCID: PMC4970327.

Roberts RF, Tang MY, Fon EA, Durcan TM. Defending the mitochondria: The pathways of mitophagy and mitochondrial-derived vesicles. *Int J Biochem Cell Biol.* 2016 Oct;79:427-436. doi: 10.1016/j.biocel.2016.07.020. Epub 2016 Jul 19. Review. PubMed PMID: 27443527.

Munoz DP, Fon EA, Chen R. A New Collaboration Between the Canadian Association for Neuroscience and CJNS. *Can J Neurol Sci.* 2016 Jan;43(1):2. doi: 10.1017/cjn.2015.362. PubMed PMID: 27182568.

Klionsky DJ, Fon EA, et al Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). *Autophagy.* 2016;12(1):1-222. doi: 10.1080/15548627.2015.1100356. Erratum in: *Autophagy.* 2016;12(2):443. Selliez, Iban [corrected to Seiliez, Iban]. PubMed PMID: 26799652; PubMed Central PMCID: PMC4835977.

Schreij AM, Fon EA, McPherson PS. Endocytic membrane trafficking and neurodegenerative disease. *Cell Mol Life Sci.* 2016 Apr;73(8):1529-45. doi: 10.1007/s00018-015-2105-x. Epub 2015 Dec 31. Review. PubMed PMID: 26721251.

Department of Biochemistry 2016

FORTIN, A.

Moradin N, Torre S, Gauthier S, Tam M, Hawari J, Vandercruyssen K, De Spiegeleer B, Fortin A, Stevenson MM, Gros P. Cysteamine broadly improves the anti-plasmodial activity of artemisinins against murine blood stage and cerebral malaria. *Malar J*. 2016 May 6;15(1):260. doi: 10.1186/s12936-016-1317-3. PubMed PMID: 27150250; PubMed Central PMCID: PMC4858922.

Fortin A, Dorlo TP, Hendrickx S, Maes L. Pharmacokinetics and pharmacodynamics of oleylphosphocholine in a hamster model of visceral leishmaniasis. *J Antimicrob Chemother*. 2016 Jul;71(7):1892-8. doi: 10.1093/jac/dkw089. Epub 2016 Apr 15. PubMed PMID: 27084920.

GEHRING, K.

Xu C, Kozlov G, Wong K, Gehring K, Cygler M. Crystal Structure of the Salmonella Typhimurium Effector GtgE. *PLoS One*. 2016 Dec 6;11(12):e0166643. doi: 10.1371/journal.pone.0166643. eCollection 2016. PubMed PMID: 27923041; PubMed Central PMCID: PMC5140068.

Gulerez I, Funato Y, Wu H, Yang M, Kozlov G, Miki H, Gehring K. Phosphocysteine in the PRL-CNNM pathway mediates magnesium homeostasis. *EMBO Rep*. 2016 Dec;17(12):1890-1900. Epub 2016 Nov 17. PubMed PMID: 27856537; PubMed Central PMCID: PMC5283600.

Trempe JF, Šašková KG, Sivá M, Ratcliffe CD, Veverka V, Hoegl A, Ménade M, Feng X, Shenker S, Svoboda M, Kožíšek M, Konvalinka J, Gehring K. Structural studies of the yeast DNA damage-inducible protein Ddi1 reveal domain architecture of this eukaryotic protein family. *Sci Rep*. 2016 Sep 20;6:33671. doi: 10.1038/srep33671. PubMed PMID: 27646017; PubMed Central PMCID: PMC5028754.

Usha V, Lloyd AJ, Roper DI, Dowson CG, Kozlov G, Gehring K, Chauhan S, Imam HT, Blindauer CA, Besra GS. Reconstruction of diaminopimelic acid biosynthesis allows characterisation of Mycobacterium tuberculosis N-succinyl-L,L-diaminopimelic acid desuccinylase. *Sci Rep*. 2016 Mar 15;6:23191. doi: 10.1038/srep23191. PubMed PMID: 26976706; PubMed Central PMCID: PMC4791643.

GIGUÈRE, V.

Tahmasebi S, Jafarnejad SM, Tam IS, Gonatopoulos-Pournatzis T, Matta-Camacho E, Tsukumo Y, Yanagiya A, Li W, Atlasi Y, Caron M, Braunschweig U, Pearl D, Khoutorsky A, Gkogkas CG, Nadon R, Bourque G, Yang XJ, Tian B, Stunnenberg HG, Yamanaka Y, Blencowe BJ, Giguère V, Sonenberg N. Control of embryonic stem cell self-renewal and differentiation via coordinated alternative splicing and translation of YY2. *Proc Natl Acad Sci U S A*. 2016 Nov 1;113(44):12360-12367. Epub 2016 Oct 24. PubMed PMID: 27791185; PubMed Central PMCID: PMC5098618.

Deblois G, Smith HW, Tam IS, Gravel SP, Caron M, Savage P, Labbé DP, Bégin LR, Tremblay ML, Park M, Bourque G, St-Pierre J, Muller WJ, Giguère V. *ERR α* mediates metabolic

Department of Biochemistry 2016

adaptations driving lapatinib resistance in breast cancer. *Nat Commun.* 2016 Jul 12;7:12156. doi: 10.1038/ncomms12156. PubMed PMID: 27402251; PubMed Central PMCID: PMC4945959.

Yan M, Audet-Walsh É, Manteghi S, Dufour CR, Walker B, Baba M, St-Pierre J, Giguère V, Pause A. Chronic AMPK activation via loss of FLCN induces functional beige adipose tissue through PGC-1 α /ERR α . *Genes Dev.* 2016 May 1;30(9):1034-46. doi: 10.1101/gad.281410.116. PubMed PMID: 27151976; PubMed Central PMCID: PMC4863735.

Audet-Walsh É, Papadopoli DJ, Gravel SP, Yee T, Bridon G, Caron M, Bourque G, Giguère V, St-Pierre J. The PGC-1 α /ERR α Axis Represses One-Carbon Metabolism and Promotes Sensitivity to Anti-folate Therapy in Breast Cancer. *Cell Rep.* 2016 Feb 2;14(4):920-31. doi: 10.1016/j.celrep.2015.12.086. Epub 2016 Jan 21. PubMed PMID: 26804918.

Tam IS, Giguère V. There and back again: The journey of the estrogen-related receptors in the cancer realm. *J Steroid Biochem Mol Biol.* 2016 Mar;157:13-9. doi: 10.1016/j.jsbmb.2015.06.009. Epub 2015 Jul 4. Review. PubMed PMID: 26151739.

GÖTTE, M.

Götte M, Joppe M, Dahm T. Pure spin current devices based on ferromagnetic topological insulators. *Sci Rep.* 2016 Oct 26;6:36070. doi: 10.1038/srep36070. PubMed PMID: 27782187; PubMed Central PMCID: PMC5080548.

Ngure M, Issur M, Shkriabai N, Liu HW, Cosa G, Kvaratskhelia M, Götte M. Interactions of the Disordered Domain II of Hepatitis C Virus NS5A with Cyclophilin A, NS5B, and Viral RNA Show Extensive Overlap. *ACS Infect Dis.* 2016 Nov 11;2(11):839-851. Epub 2016 Oct 5. PubMed PMID: 27676132.

Götte M, Feld JJ. Direct-acting antiviral agents for hepatitis C: structural and mechanistic insights. *Nat Rev Gastroenterol Hepatol.* 2016 Jun;13(6):338-51. doi: 10.1038/nrgastro.2016.60. Epub 2016 May 5. Review. PubMed PMID: 27147491.

Kulkarni AS, Damha MJ, Schinazi RF, Mo H, Doehle B, Sagan SM, Götte M. A Complex Network of Interactions between S282 and G283 of Hepatitis C Virus Nonstructural Protein 5B and the Template Strand Affects Susceptibility to Sofosbuvir and Ribavirin. *Antimicrob Agents Chemother.* 2016 Mar 25;60(4):2018-27. doi: 10.1128/AAC.02436-15. Print 2016 Apr. PubMed PMID: 26824949; PubMed Central PMCID: PMC4808174.

GROS, P.

Torre S, Polyak MJ, Langlais D, Fodil N, Kennedy JM, Radovanovic I, Berghout J, Leiva-Torres GA, Krawczyk CM, Ilangumaran S, Mossman K, Liang C, Knobloch KP, Healy LM, Antel J, Arbour N, Prat A, Majewski J, Lathrop M, Vidal SM, Gros P. Erratum: USP15 regulates type I interferon response and is required for pathogenesis of neuroinflammation. *Nat Immunol.* 2016 Nov 16;17(12):1479. doi: 10.1038/ni1216-1479c. PubMed PMID: 27849203.

Department of Biochemistry 2016

Moradin N, Torre S, Gauthier S, Tam M, Hawari J, Vandercruyssen K, De Spiegeleer B, Fortin A, Stevenson MM, Gros P. Cysteamine broadly improves the anti-plasmodial activity of artemisinins against murine blood stage and cerebral malaria. *Malar J.* 2016 May 6;15(1):260. doi: 10.1186/s12936-016-1317-3. PubMed PMID: 27150250; PubMed Central PMCID: PMC4858922.

Langlais D, Barreiro LB, Gros P. The macrophage IRF8/IRF1 regulome is required for protection against infections and is associated with chronic inflammation. *J Exp Med.* 2016 Apr 4;213(4):585-603. doi: 10.1084/jem.20151764. Epub 2016 Mar 21. PubMed PMID: 27001747; PubMed Central PMCID: PMC4821649.

Van Der Kraak L, Langlais D, Jothy S, Beauchemin N, Gros P. Mapping hyper-susceptibility to colitis-associated colorectal cancer in FVB/NJ mice. *Mamm Genome.* 2016 Jun;27(5-6):213-24. doi: 10.1007/s00335-016-9625-z. Epub 2016 Mar 15. PubMed PMID: 26979842.

Fodil N, Langlais D, Gros P. Primary Immunodeficiencies and Inflammatory Disease: A Growing Genetic Intersection. *Trends Immunol.* 2016 Feb;37(2):126-40. doi: 10.1016/j.it.2015.12.006. Epub 2016 Jan 12. Review. PubMed PMID: 26791050; PubMed Central PMCID: PMC4738049.

Belle, JI., Petrov, JC., Langlais, D., Robert, F., Cencic, R., Shen, S., Pelletier, J., Gros, P. and Nijnik, A. “Repression of p53-target gene Bbc3/PUMA by MYSM1 is essential for the survival of hematopoietic multipotent progenitors and contributes to stem cell maintenance” *Cell Death Differentiation* 23(5):759-75, 2016. PMID:26768662

HALLETT, M.

Lesurf R, Aure MR, Mørk HH, Vitelli V; Oslo Breast Cancer Research Consortium (OSBREAC)., Lundgren S, Børresen-Dale AL, Kristensen V, Wärnberg F, Hallett M, Sørli T. Molecular Features of Subtype-Specific Progression from Ductal Carcinoma In Situ to Invasive Breast Cancer. *Cell Rep.* 2016 Jul 26;16(4):1166-79. doi: 10.1016/j.celrep.2016.06.051. Epub 2016 Jul 7. PubMed PMID: 27396337.

Cyr-Depauw C, Northey JJ, Tabariès S, Annis MG, Dong Z, Cory S, Hallett M, Rennhack JP, Andrechek ER, Siegel PM. Chordin-Like 1 Suppresses Bone Morphogenetic Protein 4-Induced Breast Cancer Cell Migration and Invasion. *Mol Cell Biol.* 2016 May 2;36(10):1509-25. doi: 10.1128/MCB.00600-15. Print 2016 May 15. PubMed PMID: 26976638; PubMed Central PMCID: PMC4859683.

Boulay PL, Mitchell L, Turpin J, Huot-Marchand JÉ, Lavoie C, Sanguin-Gendreau V, Jones L, Mitra S, Livingstone JM, Campbell S, Hallett M, Mills GB, Park M, Chodosh L, Strathdee D, Norman JC, Muller WJ. Rab11-FIP1C Is a Critical Negative Regulator in ErbB2-Mediated Mammary Tumor Progression. *Cancer Res.* 2016 May 1;76(9):2662-74. doi: 10.1158/0008-5472.CAN-15-2782. Epub 2016 Mar 1. PubMed PMID: 26933086; PubMed Central PMCID: PMC5070470.

Boucher B, Lee AY, Hallett M, Jenna S. Structural and Functional Characterization of a *Caenorhabditis elegans* Genetic Interaction Network within Pathways. *PLoS Comput Biol.* 2016

Department of Biochemistry 2016

Feb 12;12(2):e1004738. doi: 10.1371/journal.pcbi.1004738. eCollection 2016 Feb. PubMed PMID: 26871911; PubMed Central PMCID: PMC4752231.

Jones LM, Broz ML, Ranger JJ, Ozcelik J, Ahn R, Zuo D, Ursini-Siegel J, Hallett MT, Krummel M, Muller WJ. STAT3 Establishes an Immunosuppressive Microenvironment during the Early Stages of Breast Carcinogenesis to Promote Tumor Growth and Metastasis. *Cancer Res.* 2016 Mar 15;76(6):1416-28. doi: 10.1158/0008-5472.CAN-15-2770. Epub 2015 Dec 30. PubMed PMID: 26719528; PubMed Central PMCID: PMC5052827.

HUANG, S.

Jandaghi P, Najafabadi HS, Bauer AS, Papadakis AI, Fassan M, Hall A, Monast A, von Knebel Doeberitz M, Neoptolemos JP, Costello E, Greenhalf W, Scarpa A, Sipos B, Auld D, Lathrop M, Park M, Büchler MW, Strobel O, Hackert T, Giese NA, Zogopoulos G, Sangwan V, Huang S, Riazalhosseini Y, Hoheisel JD. Expression of DRD2 Is Increased in Human Pancreatic Ductal Adenocarcinoma and Inhibitors Slow Tumor Growth in Mice. *Gastroenterology.* 2016 Dec;151(6):1218-1231. doi: 10.1053/j.gastro.2016.08.040. Epub 2016 Aug 28. PubMed PMID: 27578530.

LUKACS, G.L.

Ilie A, Gao AY, Reid J, Boucher A, McEwan C, Barrière H, Lukacs GL, McKinney RA, Orlowski J. A Christianson syndrome-linked deletion mutation ($\Delta(287)ES(288)$) in SLC9A6 disrupts recycling endosomal function and elicits neurodegeneration and cell death. *Mol Neurodegener.* 2016 Sep 2;11(1):63. doi: 10.1186/s13024-016-0129-9. PubMed PMID: 27590723; PubMed Central PMCID: PMC5010692.

Schnür A, Hegyi P, Rousseau S, Lukacs GL, Veit G. Epithelial Anion Transport as Modulator of Chemokine Signaling. *Mediators Inflamm.* 2016;2016:7596531. doi: 10.1155/2016/7596531. Epub 2016 Jun 12. Review. PubMed PMID: 27382190; PubMed Central PMCID: PMC4921137.

Faure G, Bakouh N, Lourdel S, Odolczyk N, Premchandrar A, Servel N, Hatton A, Ostrowski MK, Xu H, Saul FA, Moquereau C, Bitam S, Pranke I, Planelles G, Teulon J, Herrmann H, Roldan A, Zielenkiewicz P, Dadlez M, Lukacs GL, Sermet-Gaudelus I, Ollero M, Corringier PJ, Edelman A. Rattlesnake Phospholipase A2 Increases CFTR-Chloride Channel Current and Corrects $\Delta F508$ CFTR Dysfunction: Impact in Cystic Fibrosis. *J Mol Biol.* 2016 Jul 17;428(14):2898-915. doi: 10.1016/j.jmb.2016.05.016. Epub 2016 May 27. PubMed PMID: 27241308.

Lukacs GL. Proteostasis: Chaperoning for hearing loss. *Nat Chem Biol.* 2016 May 18;12(6):388-9. doi: 10.1038/nchembio.2091. PubMed PMID: 27191645.

Gakhal AK, Jensen TJ, Bozoky Z, Roldan A, Lukacs GL, Forman-Kay J, Riordan JR, Sidhu SS. Development and characterization of synthetic antibodies binding to the cystic fibrosis conductance regulator. *MAbs.* 2016 Aug-Sep;8(6):1167-76. doi: 10.1080/19420862.2016.1186320. Epub 2016 May 16. PubMed PMID: 27185291; PubMed Central PMCID: PMC4968092.

Department of Biochemistry 2016

Veit G, Oliver K, Apaja PM, Perdomo D, Bidaud-Meynard A, Lin ST, Guo J, Icyuz M, Sorscher EJ, Hartman Iv JL, Lukacs GL. Ribosomal Stalk Protein Silencing Partially Corrects the Δ F508-CFTR Functional Expression Defect. *PLoS Biol.* 2016 May 11;14(5):e1002462. doi: 10.1371/journal.pbio.1002462. eCollection 2016 May. Erratum in: *PLoS Biol.* 2016 Nov 2;14(11):e1002574. PubMed PMID: 27168400; PubMed Central PMCID: PMC4864299.

Hegy P, Wilschanski M, Muallem S, Lukacs GL, Sahin-Tóth M, Uc A, Gray MA, Rakonczay Z Jr, Maléth J. CFTR: A New Horizon in the Pathomechanism and Treatment of Pancreatitis. *Rev Physiol Biochem Pharmacol.* 2016;170:37-66. doi: 10.1007/112_2015_5002. Review. PubMed PMID: 26856995; PubMed Central PMCID: PMC5232416.

Veit G, Avramescu RG, Chiang AN, Houck SA, Cai Z, Peters KW, Hong JS, Pollard HB, Guggino WB, Balch WE, Skach WR, Cutting GR, Frizzell RA, Sheppard DN, Cyr DM, Sorscher EJ, Brodsky JL, Lukacs GL. From CFTR biology toward combinatorial pharmacotherapy: expanded classification of cystic fibrosis mutations. *Mol Biol Cell.* 2016 Feb 1;27(3):424-33. doi: 10.1091/mbc.E14-04-0935. PubMed PMID: 26823392; PubMed Central PMCID: PMC4751594.

Gong X, Ahner A, Roldan A, Lukacs GL, Thibodeau PH, Frizzell RA. Non-native Conformers of Cystic Fibrosis Transmembrane Conductance Regulator NBD1 Are Recognized by Hsp27 and Conjugated to SUMO-2 for Degradation. *J Biol Chem.* 2016 Jan 22;291(4):2004-17. doi: 10.1074/jbc.M115.685628. Epub 2015 Dec 1. PubMed PMID: 26627832; PubMed Central PMCID: PMC4722474.

Ehrhardt A, Chung WJ, Pyle LC, Wang W, Nowotarski K, Mulvihill CM, Ramjeesingh M, Hong J, Velu SE, Lewis HA, Atwell S, Aller S, Bear CE, Lukacs GL, Kirk KL, Sorscher EJ. Channel Gating Regulation by the Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) First Cytosolic Loop. *J Biol Chem.* 2016 Jan 22;291(4):1854-65. doi: 10.1074/jbc.M115.704809. Epub 2015 Dec 1. PubMed PMID: 26627831; PubMed Central PMCID: PMC4722463.

MULLER, W.J.

Li J, Luco AL, Ochietti B, Fadhil I, Camirand A, Reinhardt TA, St-Arnaud R, Muller W, Kremer R. Tumoral Vitamin D Synthesis by CYP27B1 1- α -Hydroxylase Delays Mammary Tumor Progression in the PyMT-MMTV Mouse Model and Its Action Involves NF- κ B Modulation. *Endocrinology.* 2016 Jun;157(6):2204-16. doi: 10.1210/en.2015-1824. Epub 2016 Apr 27. PubMed PMID: 27119753.

Wellberg EA, Johnson S, Finlay-Schultz J, Lewis AS, Terrell KL, Sartorius CA, Abel ED, Muller WJ, Anderson SM. The glucose transporter GLUT1 is required for ErbB2-induced mammary tumorigenesis. *Breast Cancer Res.* 2016 Dec 20;18(1):131. doi: 10.1186/s13058-016-0795-0. PubMed PMID: 27998284; PubMed Central PMCID: PMC5168867.

Kim J, Siverly AN, Chen D, Wang M, Yuan Y, Wang Y, Lee H, Zhang J, Muller WJ, Liang H, Gan B, Yang X, Sun Y, You MJ, Ma L. Ablation of miR-10b Suppresses Oncogene-Induced Mammary Tumorigenesis and Metastasis and Reactivates Tumor-Suppressive Pathways. *Cancer Res.* 2016 Nov 1;76(21):6424-6435. Epub 2016 Aug 28. PubMed PMID: 27569213; PubMed Central PMCID: PMC5093036.

Department of Biochemistry 2016

Deblois G, Smith HW, Tam IS, Gravel SP, Caron M, Savage P, Labbé DP, Bégin LR, Tremblay ML, Park M, Bourque G, St-Pierre J, Muller WJ, Giguère V. ERR α mediates metabolic adaptations driving lapatinib resistance in breast cancer. *Nat Commun.* 2016 Jul 12;7:12156. doi: 10.1038/ncomms12156. PubMed PMID: 27402251; PubMed Central PMCID: PMC4945959.

Morrison Joly M, Hicks DJ, Jones B, Sanchez V, Estrada MV, Young C, Williams M, Rexer BN, Sarbassov dos D, Muller WJ, Brantley-Sieders D, Cook RS. Rictor/mTORC2 Drives Progression and Therapeutic Resistance of HER2-Amplified Breast Cancers. *Cancer Res.* 2016 Aug 15;76(16):4752-64. doi: 10.1158/0008-5472.CAN-15-3393. Epub 2016 Apr 25. PubMed PMID: 27197158.

Turpin J, Ling C, Crosby EJ, Hartman ZC, Simond AM, Chodosh LA, Rennhack JP, Andrechek ER, Ozcelik J, Hallett M, Mills GB, Cardiff RD, Gray JW, Griffith OL, Muller WJ. The ErbB2 Δ Ex16 splice variant is a major oncogenic driver in breast cancer that promotes a prometastatic tumor microenvironment. *Oncogene.* 2016 Nov 24;35(47):6053-6064. doi: 10.1038/onc.2016.129. Epub 2016 May 9. PubMed PMID: 27157621; PubMed Central PMCID: PMC5102823.

Boulay PL, Mitchell L, Turpin J, Huot-Marchand JÉ, Lavoie C, Sanguin-Gendreau V, Jones L, Mitra S, Livingstone JM, Campbell S, Hallett M, Mills GB, Park M, Chodosh L, Strathdee D, Norman JC, Muller WJ. Rab11-FIP1C Is a Critical Negative Regulator in ErbB2-Mediated Mammary Tumor Progression. *Cancer Res.* 2016 May 1;76(9):2662-74. doi: 10.1158/0008-5472.CAN-15-2782. Epub 2016 Mar 1. PubMed PMID: 26933086; PubMed Central PMCID: PMC5070470.

Credon H, Balderstone LA, Muir M, Balla J, Gomez-Cuadrado L, Tracey N, Loane J, Klinowska T, Muller WJ, Brunton VG. Use of a genetically engineered mouse model as a preclinical tool for HER2 breast cancer. *Dis Model Mech.* 2016 Feb;9(2):131-40. doi: 10.1242/dmm.023143. Epub 2015 Dec 31. PubMed PMID: 26721874; PubMed Central PMCID: PMC4770148.

Jones LM, Broz ML, Ranger JJ, Ozcelik J, Ahn R, Zuo D, Ursini-Siegel J, Hallett MT, Krummel M, Muller WJ. STAT3 Establishes an Immunosuppressive Microenvironment during the Early Stages of Breast Carcinogenesis to Promote Tumor Growth and Metastasis. *Cancer Res.* 2016 Mar 15;76(6):1416-28. doi: 10.1158/0008-5472.CAN-15-2770. Epub 2015 Dec 30. PubMed PMID: 26719528; PubMed Central PMCID: PMC5052827.

Cheng H, Liu P, Ohlson C, Xu E, Symonds L, Isabella A, Muller WJ, Lin NU, Krop IE, Roberts TM, Winer EP, Arteaga CL, Zhao JJ. PIK3CA(H1047R)- and Her2-initiated mammary tumors escape PI3K dependency by compensatory activation of MEK-ERK signaling. *Oncogene.* 2016 Jun 9;35(23):2961-70. doi: 10.1038/onc.2015.377. Epub 2015 Dec 7. PubMed PMID: 26640141; PubMed Central PMCID: PMC4896860.

Department of Biochemistry 2016

NAGAR, B.

Gorelik A, Heinz LX, Illes K, Superti-Furga G, Nagar B. Crystal Structure of the Acid Sphingomyelinase-like Phosphodiesterase SMPDL3B Provides Insights into Determinants of Substrate Specificity. *J Biol Chem.* 2016 Nov 11;291(46):24054-24064. Epub 2016 Sep 28. PubMed PMID: 27687724; PubMed Central PMCID: PMC5104931.

Gorelik A, Illes K, Heinz LX, Superti-Furga G, Nagar B. Crystal structure of mammalian acid sphingomyelinase. *Nat Commun.* 2016 Jul 20;7:12196. doi: 10.1038/ncomms12196. PubMed PMID: 27435900; PubMed Central PMCID: PMC4961792.

Gorelik A, Illes K, Superti-Furga G, Nagar B. Structural Basis for Nucleotide Hydrolysis by the Acid Sphingomyelinase-like Phosphodiesterase SMPDL3A. *J Biol Chem.* 2016 Mar 18;291(12):6376-85. doi: 10.1074/jbc.M115.711085. Epub 2016 Jan 20. PubMed PMID: 26792860; PubMed Central PMCID: PMC4813564.

NEPVEU, A.

Revandkar A, Perciato ML, Toso A, Alajati A, Chen J, Gerber H, Dimitrov M, Rinaldi A, Delaleu N, Pasquini E, D'Antuono R, Pinton S, Losa M, Gnetti L, Arribas A, Fraering P, Bertoni F, Nepveu A, Alimonti A. Inhibition of Notch pathway arrests PTEN-deficient advanced prostate cancer by triggering p27-driven cellular senescence. *Nat Commun.* 2016 Dec 12;7:13719. doi: 10.1038/ncomms13719. PubMed PMID: 27941799; PubMed Central PMCID: PMC5159884.

Kaur S, Coulombe Y, Ramdzan ZM, Leduy L, Masson JY, Nepveu A. Special AT-rich Sequence-binding Protein 1 (SATB1) Functions as an Accessory Factor in Base Excision Repair. *J Biol Chem.* 2016 Oct 21;291(43):22769-22780. Epub 2016 Sep 2. PubMed PMID: 27590341; PubMed Central PMCID: PMC5077210.

PARK, M.

Jandaghi P, Najafabadi HS, Bauer AS, Papadakis AI, Fassan M, Hall A, Monast A, von Knebel Doeberitz M, Neoptolemos JP, Costello E, Greenhalf W, Scarpa A, Sipos B, Auld D, Lathrop M, Park M, Büchler MW, Strobel O, Hackert T, Giese NA, Zogopoulos G, Sangwan V, Huang S, Riazalhosseini Y, Hoheisel JD. Expression of DRD2 Is Increased in Human Pancreatic Ductal Adenocarcinoma and Inhibitors Slow Tumor Growth in Mice. *Gastroenterology.* 2016 Dec;151(6):1218-1231. doi: 10.1053/j.gastro.2016.08.040. Epub 2016 Aug 28. PubMed PMID: 27578530.

Du Y, Yamaguchi H, Wei Y, Hsu JL, Wang HL, Hsu YH, Lin WC, Yu WH, Leonard PG, Lee GR 4th, Chen MK, Nakai K, Hsu MC, Chen CT, Sun Y, Wu Y, Chang WC, Huang WC, Liu CL, Chang YC, Chen CH, Park M, Jones P, Hortobagyi GN, Hung MC. Blocking c-Met-mediated PARP1 phosphorylation enhances anti-tumor effects of PARP inhibitors. *Nat Med.* 2016 Feb;22(2):194-201. doi: 10.1038/nm.4032. Epub 2016 Jan 18. PubMed PMID: 26779812; PubMed Central PMCID: PMC4754671.

Department of Biochemistry 2016

Rajadurai CV, Havrylov S, Coelho PP, Ratcliffe CD, Zaoui K, Huang BH, Monast A, Chughtai N, Sangwan V, Gertler FB, Siegel PM, Park M. 5'-Inositol phosphatase SHIP2 recruits Mena to stabilize invadopodia for cancer cell invasion. *J Cell Biol.* 2016 Sep 12;214(6):719-34. doi: 10.1083/jcb.201501003. Epub 2016 Sep 5. PubMed PMID: 27597754; PubMed Central PMCID: PMC5021089.

Bertos NR, Park M. Laser Capture Microdissection as a Tool to Study Tumor Stroma. *Methods Mol Biol.* 2016;1458:13-25. doi: 10.1007/978-1-4939-3801-8_2. PubMed PMID: 27581011.

Deblois G, Smith HW, Tam IS, Gravel SP, Caron M, Savage P, Labbé DP, Bégin LR, Tremblay ML, Park M, Bourque G, St-Pierre J, Muller WJ, Giguère V. ERR α mediates metabolic adaptations driving lapatinib resistance in breast cancer. *Nat Commun.* 2016 Jul 12;7:12156. doi: 10.1038/ncomms12156. PubMed PMID: 27402251; PubMed Central PMCID: PMC4945959.

Ratcliffe CD, Sahgal P, Parachoniak CA, Ivaska J, Park M. Regulation of Cell Migration and β 1 Integrin Trafficking by the Endosomal Adaptor GGA3. *Traffic.* 2016 Jun;17(6):670-88. doi: 10.1111/tra.12390. Epub 2016 Apr 5. PubMed PMID: 26935970.

Boulay PL, Mitchell L, Turpin J, Huot-Marchand JÉ, Lavoie C, Sanguin-Gendreau V, Jones L, Mitra S, Livingstone JM, Campbell S, Hallett M, Mills GB, Park M, Chodosh L, Strathdee D, Norman JC, Muller WJ. Rab11-FIP1C Is a Critical Negative Regulator in ErbB2-Mediated Mammary Tumor Progression. *Cancer Res.* 2016 May 1;76(9):2662-74. doi: 10.1158/0008-5472.CAN-15-2782. Epub 2016 Mar 1. PubMed PMID: 26933086; PubMed Central PMCID: PMC5070470.

PAUSE, A.

Possik E, Pause A. Glycogen: A must have storage to survive stressful emergencies. *Worm.* 2016 Mar 4;5(2):e1156831. doi: 10.1080/21624054.2016.1156831. eCollection 2016 Apr-Jun. PubMed PMID: 27383221; PubMed Central PMCID: PMC4911973.

Manteghi S, Gingras MC, Kharitidi D, Galarneau L, Marques M, Yan M, Cencic R, Robert F, Paquet M, Witcher M, Pelletier J, Pause A. Haploinsufficiency of the ESCRT Component HD-PTP Predisposes to Cancer. *Cell Rep.* 2016 May 31;15(9):1893-900. doi: 10.1016/j.celrep.2016.04.076. Epub 2016 May 19. PubMed PMID: 27210750.

Yan M, Audet-Walsh É, Manteghi S, Dufour CR, Walker B, Baba M, St-Pierre J, Giguère V, Pause A. Chronic AMPK activation via loss of FLCN induces functional beige adipose tissue through PGC-1 α /ERR α . *Genes Dev.* 2016 May 1;30(9):1034-46. doi: 10.1101/gad.281410.116. PubMed PMID: 27151976; PubMed Central PMCID: PMC4863735.

Klionsky DJ et al. (Pause A.). Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). *Autophagy.* 2016;12(1):1-222. doi: 10.1080/15548627.2015.1100356. Erratum in: *Autophagy.* 2016;12(2):443. Selliez, Iban [corrected to Seiliez, Iban]. PubMed PMID: 26799652; PubMed Central PMCID: PMC4835977.

Department of Biochemistry 2016

PELLETIER, J.

Lee T, Paquet M, Larsson O, Pelletier J. Tumor cell survival dependence on the DHX9 DExH-box helicase. *Oncogene*. 2016 Sep 29;35(39):5093-105. doi:10.1038/onc.2016.52. Epub 2016 Mar 14. PubMed PMID: 26973242; PubMed Central PMCID: PMC5023453.

Marco, M., Deyou, T., Gruhonjic, A., Holleran, J., Duffy, S., Heydenreich, M., Firtzpatrick, P.A., Landberg, G., Koch, A., Derese, S., Pelletier, J., Avery, V., Erdélyi, M, and Yenesew, A. (2016) Pterocarpan and isoflavones from the roots of *Millettia micans* and of *Millettia dura*. *Adv. Drug Discovery and Development* 1: 1- 8.

Belle JI, Petrov JC, Langlais D, Robert F, Cencic R, Shen S, Pelletier J, Gros P, Nijnik A. Repression of p53-target gene Bbc3/PUMA by MYSM1 is essential for the survival of hematopoietic multipotent progenitors and contributes to stem cell maintenance. *Cell Death Differ*. 2016 May;23(5):759-75. doi: 10.1038/cdd.2015.140. Epub 2016 Jan 15. PubMed PMID: 26768662; PubMed Central PMCID: PMC4832099.

Steinberger J, Chu J, Maïga RI, Sleiman K, Pelletier J. Developing anti-neoplastic biotherapeutics against eIF4F. *Cell Mol Life Sci*. 2017 May;74(9):1681-1692. doi: 10.1007/s00018-016-2430-8. Epub 2016 Dec 21. Review. PubMed PMID: 28004147.

Katigbak A, Cencic R, Robert F, Sénécha P, Scuoppo C, Pelletier J. A CRISPR/Cas9 Functional Screen Identifies Rare Tumor Suppressors. *Sci Rep*. 2016 Dec 16;6:38968. doi: 10.1038/srep38968. PubMed PMID: 27982060; PubMed Central PMCID: PMC5159885.

Chu J, Cargnello M, Topisirovic I, Pelletier J. Translation Initiation Factors: Reprogramming Protein Synthesis in Cancer. *Trends Cell Biol*. 2016 Dec;26(12):918-933. doi: 10.1016/j.tcb.2016.06.005. Epub 2016 Jul 15. Review. PubMed PMID: 27426745.

Wang W, Cencic R, Whitesell L, Pelletier J, Porco JA Jr. Synthesis of Aza-Rocaglates via ESIPT-Mediated (3+2) Photocycloaddition. *Chemistry*. 2016 Aug 16;22(34):12006-10. doi: 10.1002/chem.201602953. Epub 2016 Jul 15. PubMed PMID: 27338157; PubMed Central PMCID: PMC5224829.

Cencic R, Pelletier J. Hippuristanol - A potent steroid inhibitor of eukaryotic initiation factor 4A. *Translation (Austin)*. 2016 Jan 4;4(1):e1137381. doi: 10.1080/21690731.2015.1137381. eCollection 2016 Jan-Jun. Review. PubMed PMID: 27335721; PubMed Central PMCID: PMC4909409.

Chu J, Galicia-Vázquez G, Cencic R, Mills JR, Katigbak A, Porco JA Jr, Pelletier J. CRISPR-Mediated Drug-Target Validation Reveals Selective Pharmacological Inhibition of the RNA Helicase, eIF4A. *Cell Rep*. 2016 Jun 14;15(11):2340-7. doi: 10.1016/j.celrep.2016.05.005. Epub 2016 May 26. PubMed PMID: 27239032; PubMed Central PMCID: PMC5315212.

Henry S, Kidner R, Reisenauer MR, Magedov IV, Kiss R, Mathieu V, Lefranc F, Dasari R, Evidente A, Yu X, Ma X, Pertsemlidis A, Cencic R, Pelletier J, Cavazos DA, Brenner AJ, Aksenov AV, Rogelj S, Kornienko A, Frolova LV. 5,10b-Ethanophenanthridine amaryllidaceae alkaloids inspire the discovery of novel bicyclic ring systems with activity against drug resistant

Department of Biochemistry 2016

cancer cells. *Eur J Med Chem.* 2016 Sep 14;120:313-28. doi: 10.1016/j.ejmech.2016.05.004. Epub 2016 May 6. PubMed PMID: 27218860; PubMed Central PMCID: PMC4943583.

Manteghi S, Gingras MC, Kharitidi D, Galarneau L, Marques M, Yan M, Cencic R, Robert F, Paquet M, Witcher M, Pelletier J, Pause A. Haploinsufficiency of the ESCRT Component HD-PTP Predisposes to Cancer. *Cell Rep.* 2016 May 31;15(9):1893-900. doi: 10.1016/j.celrep.2016.04.076. Epub 2016 May 19. PubMed PMID: 27210750.

Bohne F, Langer D, Martiné U, Eider CS, Cencic R, Begemann M, Elbracht M, Bülow L, Eggermann T, Zechner U, Pelletier J, Zabel BU, Enklaar T, Prawitt D. Kaiso mediates human ICR1 methylation maintenance and H19 transcriptional fine regulation. *Clin Epigenetics.* 2016 May 4;8:47. doi: 10.1186/s13148-016-0215-4. eCollection 2016. PubMed PMID: 27152123; PubMed Central PMCID: PMC4857248.

Lee T, Pelletier J. The biology of DHX9 and its potential as a therapeutic target. *Oncotarget.* 2016 Jul 5;7(27):42716-42739. doi: 10.18632/oncotarget.8446. Review. PubMed PMID: 27034008; PubMed Central PMCID: PMC5173168.

Gandin V, Masvidal L, Hulea L, Gravel SP, Cargnello M, McLaughlan S, Cai Y, Balanathan P, Morita M, Rajakumar A, Furic L, Pollak M, Porco JA Jr, St-Pierre J, Pelletier J, Larsson O, Topisirovic I. nanoCAGE reveals 5' UTR features that define specific modes of translation of functionally related MTOR-sensitive mRNAs. *Genome Res.* 2016 May;26(5):636-48. doi: 10.1101/gr.197566.115. Epub 2016 Mar 16. PubMed PMID: 26984228; PubMed Central PMCID: PMC4864462.

Chu J, Cencic R, Wang W, Porco JA Jr, Pelletier J. Translation Inhibition by Rocaglates Is Independent of eIF4E Phosphorylation Status. *Mol Cancer Ther.* 2016 Jan;15(1):136-41. doi: 10.1158/1535-7163.MCT-15-0409. Epub 2015 Nov 19. PubMed PMID: 26586722; PubMed Central PMCID: PMC4707080.

PURISIMA, E.

Henry KA, Sulea T, van Faassen H, Hussack G, Purisima EO, MacKenzie CR, Arbabi-Ghahroudi M. A Rational Engineering Strategy for Designing Protein A-Binding Camelid Single-Domain Antibodies. *PLoS One.* 2016 Sep 15;11(9):e0163113. doi: 10.1371/journal.pone.0163113. eCollection 2016. PubMed PMID: 27631624; PubMed Central PMCID: PMC5025174.

Sulea T, Vivcharuk V, Corbeil CR, Deprez C, Purisima EO. Assessment of Solvated Interaction Energy Function for Ranking Antibody-Antigen Binding Affinities. *J Chem Inf Model.* 2016 Jul 25;56(7):1292-303. doi: 10.1021/acs.jcim.6b00043. Epub 2016 Jul 14. PubMed PMID: 27367467.

Shaneh A, Purisima EO, Salavati R, Sulea T. Structural Studies of *Trypanosoma brucei* RNA Editing Ligases and Their Binding Partner Proteins. *Biochemistry.* 2016 Apr 26;55(16):2319-31. doi: 10.1021/acs.biochem.5b01257. Epub 2016 Apr 13. PubMed PMID: 27031688.

Hogues H, Sulea T, Purisima EO. Evaluation of the Wilma-SIE Virtual Screening Method in Community Structure-Activity Resource 2013 and 2014 Blind Challenges. *J Chem Inf Model.*

Department of Biochemistry 2016

2016 Jun 27;56(6):955-64. doi: 10.1021/acs.jcim.5b00278. Epub 2015 Aug 24. PubMed PMID: 26282162.

RAK, J.

Laverdière I, Boileau M, Herold T, Rak J, Berdel WE, Wörmann B, Hiddemann W, Spiekermann K, Bohlander SK, Eppert K. Complement cascade gene expression defines novel prognostic subgroups of acute myeloid leukemia. *Exp Hematol.* 2016 Nov;44(11):1039-1043.e10. doi: 10.1016/j.exphem.2016.07.012. Epub 2016 Jul 26. PubMed PMID: 27473565.

Westphal K, Skotnicki K, Bobrowski K, Rak J. Radiation damage to single stranded oligonucleotide trimers labelled with 5-iodopyrimidines. *Org Biomol Chem.* 2016 Oct 4;14(39):9331-9337. PubMed PMID: 27714271.

Zdrowowicz M, Wityk P, Michalska B, Rak J. 5-Bromo-2'-deoxycytidine-a potential DNA photosensitizer. *Org Biomol Chem.* 2016 Oct 4;14(39):9312-9321. PubMed PMID: 27714178.

Meehan B, Rak J, Di Vizio D. Oncosomes - large and small: what are they, where they came from? *J Extracell Vesicles.* 2016 Sep 27;5:33109. doi: 10.3402/jev.v5.33109. eCollection 2016. PubMed PMID: 27680302; PubMed Central PMCID: PMC5040817.

D'Asti E, Meehan B, Rak J. Studies on the Tumor Vasculature and Coagulant Microenvironment. *Methods Mol Biol.* 2016;1458:39-58. doi: 10.1007/978-1-4939-3801-8_4. PubMed PMID: 27581013.

Lee TH, Chennakrishnaiah S, Meehan B, Montermini L, Garnier D, D'Asti E, Hou W, Magnus N, Gayden T, Jabado N, Eppert K, Majewska L, Rak J. Barriers to horizontal cell transformation by extracellular vesicles containing oncogenic H-ras. *Oncotarget.* 2016 Aug 9;7(32):51991-52002. doi: 10.18632/oncotarget.10627. PubMed PMID: 27437771; PubMed Central PMCID: PMC5239530.

Wiczek J, Westphal K, Rak J. Quantitative assay of photoinduced DNA strand breaks by real-time PCR. *J Pharm Biomed Anal.* 2016 Sep 5;128:480-4. doi: 10.1016/j.jpba.2016.06.023. Epub 2016 Jun 18. PubMed PMID: 27371921.

Lefebvre FA, Benoit Bouvrette LP, Perras L, Blanchet-Cohen A, Garnier D, Rak J, Lécuyer É. Comparative transcriptomic analysis of human and Drosophila extracellular vesicles. *Sci Rep.* 2016 Jun 10;6:27680. doi: 10.1038/srep27680. PubMed PMID: 27282340; PubMed Central PMCID: PMC4901365.

Storoniak P, Rak J, Ko YJ, Wang H, Bowen KH. Excess Electron Attachment to the Nucleoside Pair 2'-Deoxyadenosine (dA)-2'-Deoxythymidine (dT). *J Phys Chem B.* 2016 Jun 9;120(22):4955-62. doi: 10.1021/acs.jpbc.6b03450. Epub 2016 May 26. PubMed PMID: 27176500.

Makurat S, Chomicz-Mańka L, Rak J. Electrophilic 5-Substituted Uracils as Potential Radiosensitizers: A Density Functional Theory Study. *Chemphyschem.* 2016 Aug 18;17(16):2572-8. doi: 10.1002/cphc.201600240. Epub 2016 May 24. PubMed PMID:

Department of Biochemistry 2016

27156191.

D'Asti E, Rak J. Biological basis of personalized anticoagulation in cancer: oncogene and oncomir networks as putative regulators of coagulopathy. *Thromb Res.* 2016 Apr;140 Suppl 1:S37-43. doi: 10.1016/S0049-3848(16)30096-2. Review. PubMed PMID: 27067976.

D'Asti E, Chennakrishnaiah S, Lee TH, Rak J. Extracellular Vesicles in Brain Tumor Progression. *Cell Mol Neurobiol.* 2016 Apr;36(3):383-407. doi: 10.1007/s10571-015-0296-1. Epub 2016 Mar 18. Review. PubMed PMID: 26993504.

Unruh D, Ünlü B, Lewis CS, Qi X, Chu Z, Sturm R, Keil R, Ahmad SA, Sovershaev T, Adam M, Van Dreden P, Woodhams BJ, Ramchandani D, Weber GF, Rak JW, Wolberg AS, Mackman N, Versteeg HH, Bogdanov VY. Antibody-based targeting of alternatively spliced tissue factor: a new approach to impede the primary growth and spread of pancreatic ductal adenocarcinoma. *Oncotarget.* 2016 May 3;7(18):25264-75. doi: 10.18632/oncotarget.7955. PubMed PMID: 26967388; PubMed Central PMCID: PMC5041902.

D'Asti E, Huang A, Kool M, Meehan B, Chan JA, Jabado N, Korshunov A, Pfister SM, Rak J. Tissue Factor Regulation by miR-520g in Primitive Neuronal Brain Tumor Cells: A Possible Link between Oncomirs and the Vascular Tumor Microenvironment. *Am J Pathol.* 2016 Feb;186(2):446-59. doi: 10.1016/j.ajpath.2015.10.020. Epub 2015 Dec 12. PubMed PMID: 26687818.

Fang Y, Garnier D, Lee TH, D'Asti E, Montermini L, Meehan B, Rak J. PML-RAR α modulates the vascular signature of extracellular vesicles released by acute promyelocytic leukemia cells. *Angiogenesis.* 2016 Jan;19(1):25-38. doi: 10.1007/s10456-015-9486-1. Epub 2015 Sep 15. PubMed PMID: 26374632.

RICHARD, S.

Li N, Ngo CT, Aleynikova O, Beauchemin N, Richard S. The p53 status can influence the role of Sam68 in tumorigenesis. *Oncotarget.* 2016 Nov 1;7(44):71651-71659. doi: 10.18632/oncotarget.12305. PubMed PMID: 27690217; PubMed Central PMCID: PMC5342108.

Darbelli L, Vogel G, Almazan G, Richard S. Quaking Regulates Neurofascin 155 Expression for Myelin and Axoglial Junction Maintenance. *J Neurosci.* 2016 Apr 6;36(14):4106-20. doi: 10.1523/JNEUROSCI.3529-15.2016. PubMed PMID: 27053216.

Neault M, Mallette FA, Richard S. miR-137 Modulates a Tumor Suppressor Network-Inducing Senescence in Pancreatic Cancer Cells. *Cell Rep.* 2016 Mar 1;14(8):1966-78. doi: 10.1016/j.celrep.2016.01.068. Epub 2016 Feb 18. PubMed PMID: 26904954.

Blanc RS, Vogel G, Chen T, Crist C, Richard S. PRMT7 Preserves Satellite Cell Regenerative Capacity. *Cell Rep.* 2016 Feb 16;14(6):1528-39. doi: 10.1016/j.celrep.2016.01.022. Epub 2016 Feb 4. PubMed PMID: 26854227.

Department of Biochemistry 2016

ROY, R.I

Roy R, Murphy PV, Gabius HJ. Multivalent Carbohydrate-Lectin Interactions: How Synthetic Chemistry Enables Insights into Nanometric Recognition. *Molecules*. 2016 May 13;21(5). pii: E629. doi: 10.3390/molecules21050629. Review. PubMed PMID: 27187342.

Goyette-Desjardins G, Calzas C, Shiao TC, Neubauer A, Kempker J, Roy R, Gottschalk M, Segura M. Protection against *Streptococcus suis* Serotype 2 Infection Using a Capsular Polysaccharide Glycoconjugate Vaccine. *Infect Immun*. 2016 Jun 23;84(7):2059-75. doi: 10.1128/IAI.00139-16. Print 2016 Jul. PubMed PMID: 27113360; PubMed Central PMCID: PMC4936365.

Shiao TC, Rej R, Rose M, Pavan GM, Roy R. Synthesis of Dense and Chiral Dendritic Polyols Using Glyconanosynthon Scaffolds. *Molecules*. 2016 Apr 4;21(4):448. doi: 10.3390/molecules21040448. PubMed PMID: 27049377.

Van Calsteren MR, Goyette-Desjardins G, Gagnon F, Okura M, Takamatsu D, Roy R, Gottschalk M, Segura M. Explaining the Serological Characteristics of *Streptococcus suis* Serotypes 1 and 1/2 from Their Capsular Polysaccharide Structure and Biosynthesis. *J Biol Chem*. 2016 Apr 15;291(16):8387-98. doi: 10.1074/jbc.M115.700716. Epub 2016 Feb 24. PubMed PMID: 26912653; PubMed Central PMCID: PMC4861414.

Sharma R, Zhang I, Shiao TC, Pavan GM, Maysinger D, Roy R. Low generation polyamine dendrimers bearing flexible tetraethylene glycol as nanocarriers for plasmids and siRNA. *Nanoscale*. 2016 Mar 7;8(9):5106-19. doi: 10.1039/c5nr06757j. PubMed PMID: 26868181.

Waller DD, Jansen G, Golizeh M, Martel-Lorion C, Dejgaard K, Shiao TC, Mancuso J, Tsantrizos YS, Roy R, Sebag M, Sleno L, Thomas DY. A Covalent Cysteine-Targeting Kinase Inhibitor of Ire1 Permits Allosteric Control of Endoribonuclease Activity. *Chembiochem*. 2016 May 3;17(9):843-51. doi: 10.1002/cbic.201500485. Epub 2016 Mar 7. PubMed PMID: 26792008.

ST-PIERRE, J.

Gravel SP, Avizonis D, St-Pierre J. Metabolomics Analyses of Cancer Cells in Controlled Microenvironments. *Methods Mol Biol*. 2016;1458:273-90. doi: 10.1007/978-1-4939-3801-8_20. PubMed PMID: 27581029.

Deblois G, Smith HW, Tam IS, Gravel SP, Caron M, Savage P, Labbé DP, Bégin LR, Tremblay ML, Park M, Bourque G, St-Pierre J, Muller WJ, Giguère V. ERR α mediates metabolic adaptations driving lapatinib resistance in breast cancer. *Nat Commun*. 2016 Jul 12;7:12156. doi: 10.1038/ncomms12156. PubMed PMID: 27402251; PubMed Central PMCID: PMC4945959.

St-Pierre J, Topisirovic I. Nucleus to Mitochondria: Lost in Transcription, Found in Translation. *Dev Cell*. 2016 Jun 20;37(6):490-2. doi: 10.1016/j.devcel.2016.06.003. PubMed PMID:

Department of Biochemistry 2016

27326927.

Yan M, Audet-Walsh É, Manteghi S, Dufour CR, Walker B, Baba M, St-Pierre J, Giguère V, Pause A. Chronic AMPK activation via loss of FLCN induces functional beige adipose tissue through PGC-1 α /ERR α . *Genes Dev.* 2016 May 1;30(9):1034-46. doi: 10.1101/gad.281410.116. PubMed PMID: 27151976; PubMed Central PMCID: PMC4863735.

Gandin V, Masvidal L, Hulea L, Gravel SP, Cargnello M, McLaughlan S, Cai Y, P, Morita M, Rajakumar A, Furic L, Pollak M, Porco JA Jr, St-Pierre J, Pelletier J, Larsson O, Topisirovic I. nanoCAGE reveals 5' UTR features that define specific modes of translation of functionally related MTOR-sensitive mRNAs. *Genome Res.* 2016 May;26(5):636-48. doi: 10.1101/gr.197566.115. Epub 2016 Mar 16. PubMed PMID: 26984228; PubMed Central PMCID: PMC4864462.

Audet-Walsh É, Papadopoli DJ, Gravel SP, Yee T, Bridon G, Caron M, Bourque G, Giguère V, St-Pierre J. The PGC-1 α /ERR α Axis Represses One-Carbon Metabolism and Promotes Sensitivity to Anti-folate Therapy in Breast Cancer. *Cell Rep.* 2016 Feb 2;14(4):920-31. doi: 10.1016/j.celrep.2015.12.086. Epub 2016 Jan 21. PubMed PMID: 26804918.

SALAVATI, R.

Shaneh A, Purisima EO, Salavati R, Sulea T. Structural Studies of Trypanosoma brucei RNA Editing Ligases and Their Binding Partner Proteins. *Biochemistry.* 2016 Apr 26;55(16):2319-31. doi: 10.1021/acs.biochem.5b01257. Epub 2016 Apr 13. PubMed PMID: 27031688.

Gazestani VH, Nikpour N, Mehta V, Najafabadi HS, Moshiri H, Jardim A, Salavati R. A Protein Complex Map of Trypanosoma brucei. *PLoS Negl Trop Dis.* 2016 Mar 18;10(3):e0004533. doi: 10.1371/journal.pntd.0004533. eCollection 2016 Mar. PubMed PMID: 26991453; PubMed Central PMCID: PMC4798371.

Gazestani VH, Hampton M, Abrahante JE, Salavati R, Zimmer SL. circTAIL-seq, a targeted method for deep analysis of RNA 3' tails, reveals transcript-specific differences by multiple metrics. *RNA.* 2016 Mar;22(3):477-86. doi: 10.1261/rna.054494.115. Epub 2016 Jan 12. PubMed PMID: 26759453; PubMed Central PMCID: PMC4748824.

SALEH, M.

Dagenais M, Saleh M. Linking cancer-induced Nlrp3 inflammasome activation to efficient NK cell-mediated immunosurveillance. *Oncoimmunology.* 2016 Apr 22;5(5):e1129484. doi: 10.1080/2162402X.2015.1129484. eCollection 2016 May. PubMed PMID: 27467946; PubMed Central PMCID: PMC4910718.

Skeldon AM, Morizot A, Douglas T, Santoro N, Kursawe R, Kozlitina J, Caprio S, Mehal WZ, Saleh M. Caspase-12, but Not Caspase-11, Inhibits Obesity and Insulin Resistance. *J Immunol.* 2016 Jan 1;196(1):437-47. doi: 10.4049/jimmunol.1501529. Epub 2015 Nov 18. PubMed PMID: 26582949.

Department of Biochemistry 2016

SCHMEING, T.M.

Reimer JM, Aloise MN, Powell HR, Schmeing TM. Manipulation of an existing crystal form unexpectedly results in interwoven packing networks with pseudo-translational symmetry. *Acta Crystallogr D Struct Biol.* 2016 Oct 1;72(Pt 10):1130-1136. Epub 2016 Sep 20. PubMed PMID: 27710934; PubMed Central PMCID: PMC5053139.

Bloudoff K, Alonzo DA, Schmeing TM. Chemical Probes Allow Structural Insight into the Condensation Reaction of Nonribosomal Peptide Synthetases. *Cell Chem Biol.* 2016 Mar 17;23(3):331-9. doi: 10.1016/j.chembiol.2016.02.012. PubMed PMID: 26991102.

Alonzo DA, Schmeing TM. Translation: Ribosomes make sweeping arrests. *Nat Chem Biol.* 2016 Mar;12(3):127-8. doi: 10.1038/nchembio.2027. PubMed PMID: 26881763.

Reimer JM, Aloise MN, Harrison PM, Schmeing TM. Synthetic cycle of the initiation module of a formylating nonribosomal peptide synthetase. *Nature.* 2016 Jan 14;529(7585):239-42. doi: 10.1038/nature16503. PubMed PMID: 26762462.

Argyropoulos P, Bergeret F, Pardin C, Reimer JM, Pinto A, Boddy CN, Schmeing TM. Towards a characterization of the structural determinants of specificity in the macrocyclizing thioesterase for deoxyerythronolide B biosynthesis. *Biochim Biophys Acta.* 2016 Mar;1860(3):486-97. doi: 10.1016/j.bbagen.2015.11.007. Epub 2015 Nov 22. PubMed PMID: 26592346.

Schmeing TM. Visualizing A Natural Antibiotic Nanofactory. *Clin Invest Med.* 2016 Dec 1;39(6):E220-E226. PubMed PMID: 27917781.

SCHURR, E.

Gaschignard J, Grant AV, Thuc NV, Orlova M, Cobat A, Huong NT, Ba NN, Thai VH, Abel L, Schurr E, Alcaïs A. Pauci- and Multibacillary Leprosy: Two Distinct, Genetically Neglected Diseases. *PLoS Negl Trop Dis.* 2016 May 24;10(5):e0004345. doi: 10.1371/journal.pntd.0004345. eCollection 2016 May. Review. PubMed PMID: 27219008; PubMed Central PMCID: PMC4878860.

Fava VM, Manry J, Cobat A, Orlova M, Van Thuc N, Ba NN, Thai VH, Abel L, Alcaïs A, Schurr E; Canadian Lrrk2 in Inflammation Team (CLINT).. A Missense LRRK2 Variant Is a Risk Factor for Excessive Inflammatory Responses in Leprosy. *PLoS Negl Trop Dis.* 2016 Feb 4;10(2):e0004412. doi: 10.1371/journal.pntd.0004412. eCollection 2016 Feb. PubMed PMID: 26844546; PubMed Central PMCID: PMC4742274.

Fox GJ, Orlova M, Schurr E. Tuberculosis in Newborns: The Lessons of the "Lübeck Disaster" (1929-1933). *PLoS Pathog.* 2016 Jan 21;12(1):e1005271. doi: 10.1371/journal.ppat.1005271. eCollection 2016 Jan. Review. PubMed PMID: 26794678; PubMed Central PMCID: PMC4721647.

Jabot-Hanin F, Cobat A, Feinberg J, Grange G, Remus N, Poirier C, Boland-Auge A, Besse C,

Department of Biochemistry 2016

Bustamante J, Boisson-Dupuis S, Casanova JL, Schurr E, Alcaïs A, Hoal EG, Delacourt C, Abel L. Major Loci on Chromosomes 8q and 3q Control Interferon γ Production Triggered by *Bacillus Calmette-Guerin* and 6-kDa Early Secretory Antigen Target, Respectively, in Various Populations. *J Infect Dis.* 2016 Apr 1;213(7):1173-9. doi: 10.1093/infdis/jiv757. Epub 2015 Dec 21. PubMed PMID: 26690346; PubMed Central PMCID: PMC4779307.

A.V. Grant, A. Sabri, A. El Azbaoui, K. Alaoui-Tahiri, I. Abderrahmani Rhorfi, Y. Gharbaoui, A. Abid, M. Benkirane, A. Belkaid, M. Orlova, A. Boland-Auge, C. Deswartes, L. Amar, J. Bustamante, J.L. Casanova, S. Boisson-Dupuis, E. Schurr, J. El Baghdadi, L. Abel A genome-wide association study of pulmonary tuberculosis in Morocco *Hum Genet* 135(3):299-307, 2016

S. El Azbaoui, A. Sabri, S. Ouraini, A. Hassani, A. Asermouh, A. Agadr, R. Abilkassem, N. Dini, M. Kmari, A. Akhaddar, Z. Laktati, S. Aieche, N. El Hafidi, F. Ben Brahim, A. Bousfiha, F. Ailal, C. Deswarte, E. Schurr, L. Amar, J. Bustamante, S. Boisson-Dupuis, J.L. Casanova, L. Abel, J. El Baghdadi Utility of the QuantiFERON-TB Gold In-Tube assay for the diagnosis of tuberculosis in Moroccan children *Int J Tub Lung Dis*, 20(12):1639-1646, 2016

V. M. Fava, E. Schurr The complexity of the host genetic contribution to the human response to *Mycobacterium leprae* in the International Textbook of Leprosy (ITL), <http://www.internationaltextbookofleprosy.org>

SHORE, G.C.

Wieczorek M, Tcherkezian J, Bernier C, Prota AE, Chaaban S, Rolland Y, Godbout C, Hancock MA, Arezzo JC, Ocal O, Rocha C, Olieric N, Hall A, Ding H, Bramoullé A, Annis MG, Zogopoulos G, Harran PG, Wilkie TM, Brekken RA, Siegel PM, Steinmetz MO, Shore GC, Brouhard GJ, Roulston A. The synthetic diazonamide DZ-2384 has distinct effects on microtubule curvature and dynamics without neurotoxicity. *Sci Transl Med.* 2016 Nov 16;8(365):365ra159. PubMed PMID: 27856798; PubMed Central PMCID: PMC5291303.

Klionsky DJ, Shore et al Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). *Autophagy.* 2016;12(1):1-222. doi: 10.1080/15548627.2015.1100356. Erratum in: *Autophagy.* 2016;12(2):443. Selliez, Iban [corrected to Seiliez, Iban]. PubMed PMID: 26799652; PubMed Central PMCID: PMC4835977.

SIEGEL, P.M.

Wieczorek M, Tcherkezian J, Bernier C, Prota AE, Chaaban S, Rolland Y, Godbout C, Hancock MA, Arezzo JC, Ocal O, Rocha C, Olieric N, Hall A, Ding H, Bramoullé A, Annis MG, Zogopoulos G, Harran PG, Wilkie TM, Brekken RA, Siegel PM, Steinmetz MO, Shore GC, Brouhard GJ, Roulston A. The synthetic diazonamide DZ-2384 has distinct effects on microtubule curvature and dynamics without neurotoxicity. *Sci Transl Med.* 2016 Nov 16;8(365):365ra159. PubMed PMID: 27856798; PubMed Central PMCID: PMC5291303.

Rose AA, Annis MG, Frederick DT, Biondini M, Dong Z, Kwong L, Chin L, Keler T, Hawthorne T, Watson IR, Flaherty KT, Siegel PM. MAPK Pathway Inhibitors Sensitize BRAF-Mutant Melanoma to an Antibody-Drug Conjugate Targeting GPNMB. *Clin Cancer Res.* 2016 Dec 15;22(24):6088-6098. Epub 2016 Aug 11. PubMed PMID: 27515299.

Department of Biochemistry 2016

Rajadurai CV, Havrylov S, Coelho PP, Ratcliffe CD, Zaoui K, Huang BH, Monast A, Chughtai N, Sangwan V, Gertler FB, Siegel PM, Park M. 5'-Inositol phosphatase SHIP2 recruits Mena to stabilize invadopodia for cancer cell invasion. *J Cell Biol.* 2016 Sep 12;214(6):719-34. doi: 10.1083/jcb.201501003. Epub 2016 Sep 5. PubMed PMID: 27597754; PubMed Central PMCID: PMC5021089.

Lehuédé C, Dupuy F, Rabinovitch R, Jones RG, Siegel PM. Metabolic Plasticity as a Determinant of Tumor Growth and Metastasis. *Cancer Res.* 2016 Sep 15;76(18):5201-8. doi: 10.1158/0008-5472.CAN-16-0266. Epub 2016 Sep 1. Review. PubMed PMID: 27587539.

Pedanou VE, Gobeil S, Tabariès S, Simone TM, Zhu LJ, Siegel PM, Green MR. The histone H3K9 demethylase KDM3A promotes anoikis by transcriptionally activating pro-apoptotic genes BNIP3 and BNIP3L. *Elife.* 2016 Jul 29;5. pii: e16844. doi: 10.7554/eLife.16844. PubMed PMID: 27472901; PubMed Central PMCID: PMC4991936.

Ha JR, Siegel PM, Ursini-Siegel J. The Tyrosine Kinome Dictates Breast Cancer Heterogeneity and Therapeutic Responsiveness. *J Cell Biochem.* 2016 Sep;117(9):1971-90. doi: 10.1002/jcb.25561. Epub 2016 Apr 14. PubMed PMID: 27392311.

Cyr-Depauw C, Northey JJ, Tabariès S, Annis MG, Dong Z, Cory S, Hallett M, Rennhack JP, Andrechek ER, Siegel PM. Chordin-Like 1 Suppresses Bone Morphogenetic Protein 4-Induced Breast Cancer Cell Migration and Invasion. *Mol Cell Biol.* 2016 May 2;36(10):1509-25. doi: 10.1128/MCB.00600-15. Print 2016 May 15. PubMed PMID: 26976638; PubMed Central PMCID: PMC4859683.

Ursini-Siegel J, Siegel PM. The influence of the pre-metastatic niche on breast cancer metastasis. *Cancer Lett.* 2016 Sep 28;380(1):281-8. doi: 10.1016/j.canlet.2015.11.009. Epub 2015 Nov 11. PubMed PMID: 26577808.

Singh SR, Rameshwar P, Siegel P. Targeting tumor microenvironment in cancer therapy. *Cancer Lett.* 2016 Sep 28;380(1):203-4. doi: 10.1016/j.canlet.2016.04.009. Epub 2016 Apr 7. PubMed PMID: 27060765.

Fernandes R, Siegel P, Komarova S, Hilton J, Addison C, Ibrahim MF, Werier J, Dennis K, Singh G, Amir E, Jarvis V, Emmenegger U, Mazzarello S, Clemons M. Future directions for bone metastasis research - highlights from the 2015 bone and the Oncologist new updates conference (BONUS). *J Bone Oncol.* 2016 Feb 23;5(2):57-62. doi: 10.1016/j.jbo.2016.02.004. eCollection 2016 Jun. Review. PubMed PMID: 27335772; PubMed Central PMCID: PMC4908181.

SONENBERG, N.

Kauwe G, Tsurudome K, Penney J, Mori M, Gray L, Calderon MR, Elazouzzi F, Chicoine N, Sonenberg N, Haghghi AP. Acute Fasting Regulates Retrograde Synaptic Enhancement through a 4E-BP-Dependent Mechanism. *Neuron.* 2016 Dec 21;92(6):1204-1212. doi: 10.1016/j.neuron.2016.10.063. Epub 2016 Dec 1. PubMed PMID: 27916456.

Department of Biochemistry 2016

Siddiqui N, Sonenberg N. Proposing a mechanism of action for ataluren. *Proc Natl Acad Sci U S A*. 2016 Nov 1;113(44):12353-12355. Epub 2016 Oct 19. PubMed PMID: 27791186; PubMed Central PMCID: PMC5098668.

Tahmasebi S, Jafarnejad SM, Tam IS, Gonatopoulos-Pournatzis T, Matta-Camacho E, Tsukumo Y, Yanagiya A, Li W, Atlasi Y, Caron M, Braunschweig U, Pearl D, Khoutorsky A, Gkogkas CG, Nadon R, Bourque G, Yang XJ, Tian B, Stunnenberg HG, Yamanaka Y, Blencowe BJ, Giguère V, Sonenberg N. Control of embryonic stem cell self-renewal and differentiation via coordinated alternative splicing and translation of YY2. *Proc Natl Acad Sci U S A*. 2016 Nov 1;113(44):12360-12367. Epub 2016 Oct 24. PubMed PMID: 27791185; PubMed Central PMCID: PMC5098618.

Khoutorsky A, Sorge RE, Prager-Khoutorsky M, Pawlowski SA, Longo G, Jafarnejad SM, Tahmasebi S, Martin LJ, Pitcher MH, Gkogkas CG, Sharif-Naeini R, Ribeiro-da-Silva A, Bourque CW, Cervero F, Mogil JS, Sonenberg N. eIF2 α phosphorylation controls thermal nociception. *Proc Natl Acad Sci U S A*. 2016 Oct 18;113(42):11949-11954. Epub 2016 Oct 3. PubMed PMID: 27698114; PubMed Central PMCID: PMC5081582.

Wu E, Vashisht AA, Chapat C, Flamand MN, Cohen E, Sarov M, Tabach Y, Sonenberg N, Wohlschlegel J, Duchaine TF. A continuum of mRNP complexes in embryonic microRNA-mediated silencing. *Nucleic Acids Res*. 2016 Oct 3. pii: gkw872. [Epub ahead of print] PubMed PMID: 27701073.

Tsukumo Y, Sonenberg N, Alain T. Transcriptional induction of 4E-BP3 prolongs translation repression. *Cell Cycle*. 2016 Dec 16;15(24):3325-3326. doi: 10.1080/15384101.2016.1224786. Epub 2016 Aug 26. PubMed PMID: 27565030; PubMed Central PMCID: PMC5224453.

Signer RA, Qi L, Zhao Z, Thompson D, Sigova AA, Fan ZP, DeMartino GN, Young RA, Sonenberg N, Morrison SJ. The rate of protein synthesis in hematopoietic stem cells is limited partly by 4E-BPs. *Genes Dev*. 2016 Aug 1;30(15):1698-703. doi: 10.1101/gad.282756.116. Epub 2016 Aug 4. PubMed PMID: 27492367; PubMed Central PMCID: PMC5002975.

Chio II, Jafarnejad SM, Ponz-Sarvise M, Park Y, Rivera K, Palm W, Wilson J, Sangar V, Hao Y, Öhlund D, Wright K, Filippini D, Lee EJ, Da Silva B, Schoepfer C, Wilkinson JE, Buscaglia JM, DeNicola GM, Tiriach H, Hammell M, Crawford HC, Schmidt EE, Thompson CB, Pappin DJ, Sonenberg N, Tuveson DA. NRF2 Promotes Tumor Maintenance by Modulating mRNA Translation in Pancreatic Cancer. *Cell*. 2016 Aug 11;166(4):963-76. doi: 10.1016/j.cell.2016.06.056. Epub 2016 Jul 28. PubMed PMID: 27477511; PubMed Central PMCID: PMC5234705.

Bhat M, Yanagiya A, Graber T, Razumilava N, Bronk S, Zammit D, Zhao Y, Zakaria C, Metrakos P, Pollak M, Sonenberg N, Gores G, Jaramillo M, Morita M, Alain T. Metformin requires 4E-BPs to induce apoptosis and repress translation of Mcl-1 in hepatocellular carcinoma cells. *Oncotarget*. 2016 Jul 18. doi: 10.18632/oncotarget.10671. [Epub ahead of print] PubMed PMID: 27447552.

Penney J, Tsurudome K, Liao EH, Kauwe G, Gray L, Yanagiya A, R Calderon M, Sonenberg N, Haghghi AP. LRRK2 regulates retrograde synaptic compensation at the *Drosophila*

Department of Biochemistry 2016

neuromuscular junction. *Nat Commun.* 2016 Jul 19;7:12188. doi: 10.1038/ncomms12188. PubMed PMID: 27432119; PubMed Central PMCID: PMC4960312.

Zuberek J, Kuchta K, Hernández G, Sonenberg N, Ginalski K. Diverse cap-binding properties of *Drosophila* eIF4E isoforms. *Biochim Biophys Acta.* 2016 Oct;1864(10):1292-303. doi: 10.1016/j.bbapap.2016.06.015. Epub 2016 Jun 29. PubMed PMID: 27374989.

Tsukumo Y, Alain T, Fonseca BD, Nadon R, Sonenberg N. Translation control during prolonged mTORC1 inhibition mediated by 4E-BP3. *Nat Commun.* 2016 Jun 20;7:11776. doi: 10.1038/ncomms11776. PubMed PMID: 27319316; PubMed Central PMCID: PMC4915159.

Hinnebusch AG, Ivanov IP, Sonenberg N. Translational control by 5'-untranslated regions of eukaryotic mRNAs. *Science.* 2016 Jun 17;352(6292):1413-6. doi: 10.1126/science.aad9868. Review. PubMed PMID: 27313038.

So L, Lee J, Palafox M, Mallya S, Woxland CG, Arguello M, Truitt ML, Sonenberg N, Ruggero D, Fruman DA. The 4E-BP-eIF4E axis promotes rapamycin-sensitive growth and proliferation in lymphocytes. *Sci Signal.* 2016 May 31;9(430):ra57. doi: 10.1126/scisignal.aad8463. PubMed PMID: 27245614; PubMed Central PMCID: PMC4924540.

Blandino-Rosano M, Scheys JO, Jimenez-Palomares M, Barbaresso R, Bender AS, Yanagiya A, Liu M, Rui L, Sonenberg N, Bernal-Mizrachi E. 4E-BP2/SH2B1/IRS2 Are Part of a Novel Feedback Loop That Controls β -Cell Mass. *Diabetes.* 2016 Aug;65(8):2235-48. doi: 10.2337/db15-1443. Epub 2016 May 23. PubMed PMID: 27217487; PubMed Central PMCID: PMC4955981.

Wang F, Alain T, Szretter KJ, Stephenson K, Pol JG, Atherton MJ, Hoang HD, Fonseca BD, Zakaria C, Chen L, Rangwala Z, Hesch A, Chan ES, Tuinman C, Suthar MS, Jiang Z, Ashkar AA, Thomas G, Kozma SC, Gale M Jr, Fitzgerald KA, Diamond MS, Mossman K, Sonenberg N, Wan Y, Lichty BD. S6K-STING interaction regulates cytosolic DNA-mediated activation of the transcription factor IRF3. *Nat Immunol.* 2016 May;17(5):514-22. doi: 10.1038/ni.3433. Epub 2016 Apr 4. PubMed PMID: 27043414; PubMed Central PMCID: PMC4917298.

Skalecka A, Liszewska E, Bilinski R, Gkogkas C, Khoutorsky A, Malik AR, Sonenberg N, Jaworski J. mTOR kinase is needed for the development and stabilization of dendritic arbors in newly born olfactory bulb neurons. *Dev Neurobiol.* 2016 Dec;76(12):1308-1327. doi: 10.1002/dneu.22392. Epub 2016 Apr 7. PubMed PMID: 27008592; PubMed Central PMCID: PMC5132010.

TEODORO, J.G.

Kucharski TJ, Ng TF, Sharon DM, Navid-Azarbaijani P, Tavassoli M, Teodoro JG. Activation of the Chicken Anemia Virus Apoptin Protein by Chk1/2 Phosphorylation Is Required for Apoptotic Activity and Efficient Viral Replication. *J Virol.* 2016 Sep 29;90(20):9433-45. doi: 10.1128/JVI.00936-16. Print 2016 Oct 15. PubMed PMID: 27512067; PubMed Central PMCID: PMC5044837.

Zagani R, Gamache I, Teodoro JG. Deletion of the putative tumor suppressor gene, G0s2, does

Department of Biochemistry 2016

not affect progression of E μ -Myc driven lymphomas in mice. *Leuk Res.* 2016 Jan;40:100-2. doi: 10.1016/j.leukres.2015.11.011. Epub 2015 Dec 2. PubMed PMID: 26654706.

THOMAS, D.Y.

Carlile GW, Robert R, Matthes E, Yang Q, Solari R, Hatley R, Edge CM, Hanrahan JW, Andersen R, Thomas DY, Birault V. Latonduine Analogs Restore F508del-Cystic Fibrosis Transmembrane Conductance Regulator Trafficking through the Modulation of Poly-ADP Ribose Polymerase 3 and Poly-ADP Ribose Polymerase 16 Activity. *Mol Pharmacol.* 2016 Aug;90(2):65-79. doi: 10.1124/mol.115.102418. Epub 2016 May 18. PubMed PMID: 27193581.

Stevens LM, Lam CV, Leysen SF, Meijer FA, van Scheppingen DS, de Vries RM, Carlile GW, Milroy LG, Thomas DY, Brunsveld L, Ottmann C. Characterization and small-molecule stabilization of the multisite tandem binding between 14-3-3 and the R domain of CFTR. *Proc Natl Acad Sci U S A.* 2016 Mar 1;113(9):E1152-61. doi: 10.1073/pnas.1516631113. Epub 2016 Feb 17. PubMed PMID: 26888287; PubMed Central PMCID: PMC4780605.

Waller DD, Jansen G, Golizeh M, Martel-Lorion C, Dejgaard K, Shiao TC, Mancuso J, Tsantrizos YS, Roy R, Sebag M, Sleno L, Thomas DY. A Covalent Cysteine-Targeting Kinase Inhibitor of Ire1 Permits Allosteric Control of Endoribonuclease Activity. *Chembiochem.* 2016 May 3;17(9):843-51. doi: 10.1002/cbic.201500485. Epub 2016 Mar 7. PubMed PMID: 26792008.

Turner MJ, Matthes E, Billet A, Ferguson AJ, Thomas DY, Randell SH, Ostrowski LE, Abbott-Banner K, Hanrahan JW. The dual phosphodiesterase 3 and 4 inhibitor RPL554 stimulates CFTR and ciliary beating in primary cultures of bronchial epithelia. *Am J Physiol Lung Cell Mol Physiol.* 2016 Jan 1;310(1):L59-70. doi: 10.1152/ajplung.00324.2015. Epub 2015 Nov 6. PubMed PMID: 26545902.

Matthes E, Goepf J, Carlile GW, Luo Y, Dejgaard K, Billet A, Robert R, Thomas DY, Hanrahan JW. Low free drug concentration prevents inhibition of F508del CFTR functional expression by the potentiator VX-770 (ivacaftor). *Br J Pharmacol.* 2016 Feb;173(3):459-70. doi: 10.1111/bph.13365. Epub 2016 Jan 13. PubMed PMID: 26492939; PubMed Central PMCID: PMC4728415.

TOPISIROVIC, I.

Song J, Perreault JP, Topisirovic I, Richard S. RNA G-quadruplexes and their potential regulatory roles in translation. *Translation (Austin).* 2016 Oct 4;4(2):e1244031. doi: 10.1080/21690731.2016.1244031. eCollection 2016. Review. PubMed PMID: 28090421; PubMed Central PMCID: PMC5173311.

Carbonneau M, M Gagné L, Lalonde ME, Germain MA, Motorina A, Guiot MC, Secco B, Vincent EE, Tumber A, Hulea L, Bergeman J, Oppermann U, Jones RG, Laplante M, Topisirovic I, Petrecca K, Huot MÉ, Mallette FA. The oncometabolite 2-hydroxyglutarate activates the mTOR signalling pathway. *Nat Commun.* 2016 Sep 14;7:12700. doi: 10.1038/ncomms12700. PubMed PMID: 27624942; PubMed Central PMCID: PMC5027283.

Department of Biochemistry 2016

Chu J, Cargnello M, Topisirovic I, Pelletier J. Translation Initiation Factors: Reprogramming Protein Synthesis in Cancer. *Trends Cell Biol.* 2016 Dec;26(12):918-933. doi: 10.1016/j.tcb.2016.06.005. Epub 2016 Jul 15. Review. PubMed PMID: 27426745.

St-Pierre J, Topisirovic I. Nucleus to Mitochondria: Lost in Transcription, Found in Translation. *Dev Cell.* 2016 Jun 20;37(6):490-2. doi: 10.1016/j.devcel.2016.06.003. PubMed PMID: 27326927.

Gandin V, Masvidal L, Cargnello M, Gyenis L, McLaughlan S, Cai Y, Tenkerian C, Morita M, Balanathan P, Jean-Jean O, Stambolic V, Trost M, Furic L, Larose L, Koromilas AE, Asano K, Litchfield D, Larsson O, Topisirovic I. mTORC1 and CK2 coordinate ternary and eIF4F complex assembly. *Nat Commun.* 2016 Apr 4;7:11127. doi: 10.1038/ncomms11127. PubMed PMID: 27040916; PubMed Central PMCID: PMC4822005.

Gandin V, Masvidal L, Hulea L, Gravel SP, Cargnello M, McLaughlan S, Cai Y, Balanathan P, Morita M, Rajakumar A, Furic L, Pollak M, Porco JA Jr, St-Pierre J, Pelletier J, Larsson O, Topisirovic I. nanoCAGE reveals 5' UTR features that define specific modes of translation of functionally related MTOR-sensitive mRNAs. *Genome Res.* 2016 May;26(5):636-48. doi: 10.1101/gr.197566.115. Epub 2016 Mar 16. PubMed PMID: 26984228; PubMed Central PMCID: PMC4864462.

Hulea L, Markovic Z, Topisirovic I, Simmet T, Trajkovic V. Biomedical Potential of mTOR Modulation by Nanoparticles. *Trends Biotechnol.* 2016 May;34(5):349-53. doi: 10.1016/j.tibtech.2016.01.005. Epub 2016 Feb 15. PubMed PMID: 26900005.

Klionsky DJ, Topisirovic I, et al Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). *Autophagy.* 2016;12(1):1-222. doi: 10.1080/15548627.2015.1100356. Erratum in: *Autophagy.* 2016;12(2):443. Selliez, Iban [corrected to Seiliez, Iban]. PubMed PMID: 26799652; PubMed Central PMCID: PMC4835977.

TREMBLAY, M.L.

Giménez-Mascarell P, Oyenarte I, Hardy S, Breiderhoff T, Stuver M, Kostantin E, Diercks T, Pey AL, Ereño-Orbea J, Martínez-Chantar ML, Khalaf-Nazzal R, Claverie-Martin F, Müller D, Tremblay ML, Martínez-Cruz LA. Structural Basis of the Oncogenic Interaction of Phosphatase PRL-1 with the Magnesium Transporter CNNM2. *J Biol Chem.* 2017 Jan 20;292(3):786-801. doi: 10.1074/jbc.M116.759944. Epub 2016 Nov 29. PubMed PMID: 27899452; PubMed Central PMCID: PMC5247653.

Johns N, Stretch C, Tan BH, Solheim TS, Sørhaug S, Stephens NA, Gioulbasanis I, Skipworth RJ, Deans DA, Vigano A, Ross JA, Bathe OF, Tremblay ML, Kaasa S, Strasser F, Gagnon B, Baracos VE, Damaraju S, Fearon KC. New genetic signatures associated with cancer cachexia as defined by low skeletal muscle index and weight loss. *J Cachexia Sarcopenia Muscle.* 2017 Feb;8(1):122-130. doi: 10.1002/jcsm.12138. Epub 2016 Aug 5. PubMed PMID: 27897403; PubMed Central PMCID: PMC5356227.

Department of Biochemistry 2016

Tremblay ML, Xu L, Sarker M, Liu XQ, Rainey JK. Characterizing Aciniform Silk Repetitive Domain Backbone Dynamics and Hydrodynamic Modularity. *Int J Mol Sci.* 2016 Aug 10;17(8). pii: E1305. doi: 10.3390/ijms17081305. PubMed PMID: 27517921; PubMed Central PMCID: PMC5000702.

Deblois G, Smith HW, Tam IS, Gravel SP, Caron M, Savage P, Labbé DP, Bégin LR, Tremblay ML, Park M, Bourque G, St-Pierre J, Muller WJ, Giguère V. ERR α mediates metabolic adaptations driving lapatinib resistance in breast cancer. *Nat Commun.* 2016 Jul 12;7:12156. doi: 10.1038/ncomms12156. PubMed PMID: 27402251; PubMed Central PMCID: PMC4945959.

Yang T, Xie Z, Li H, Yue L, Pang Z, MacNeil AJ, Tremblay ML, Tang JT, Lin TJ. Protein tyrosine phosphatase 1B (PTP1B) is dispensable for IgE-mediated cutaneous reaction in vivo. *Cell Immunol.* 2016 Aug-Sep;306-307:9-16. doi: 10.1016/j.cellimm.2016.05.005. Epub 2016 May 27. PubMed PMID: 27311921.

Sarker M, Orrell KE, Xu L, Tremblay ML, Bak JJ, Liu XQ, Rainey JK. Tracking Transitions in Spider Wrapping Silk Conformation and Dynamics by (19)F Nuclear Magnetic Resonance Spectroscopy. *Biochemistry.* 2016 May 31;55(21):3048-59. doi: 10.1021/acs.biochem.6b00429. Epub 2016 May 18. PubMed PMID: 27153372.

Yue L, Xie Z, Li H, Pang Z, Junkins RD, Tremblay ML, Chen X, Lin TJ. Protein Tyrosine Phosphatase-1B Negatively Impacts Host Defense against *Pseudomonas aeruginosa* Infection. *Am J Pathol.* 2016 May;186(5):1234-44. doi: 10.1016/j.ajpath.2016.01.005. PubMed PMID: 27105736.

Labbé DP, Uetani N, Vinette V, Lessard L, Aubry I, Migon E, Sirois J, Haigh JJ, Bégin LR, Trotman LC, Paquet M, Tremblay ML. PTP1B Deficiency Enables the Ability of a High-Fat Diet to Drive the Invasive Character of PTEN-Deficient Prostate Cancers. *Cancer Res.* 2016 Jun 1;76(11):3130-5. doi: 10.1158/0008-5472.CAN-15-1501. Epub 2016 Mar 28. PubMed PMID: 27020859; PubMed Central PMCID: PMC4891239.

Gungabeesoon J, Tremblay ML, Uetani N. Localizing PRL-2 expression and determining the effects of dietary Mg(2+) on expression levels. *Histochem Cell Biol.* 2016 Jul;146(1):99-111. doi: 10.1007/s00418-016-1427-6. Epub 2016 Mar 25. PubMed PMID: 27015884.

Kostantin E, Hardy S, Valinsky WC, Kompatscher A, de Baaij JH, Zolotarov Y, Landry M, Uetani N, Martínez-Cruz LA, Hoenderop JG, Shrier A, Tremblay ML. Inhibition of PRL-2-CNNM3 Protein Complex Formation Decreases Breast Cancer Proliferation and Tumor Growth. *J Biol Chem.* 2016 May 13;291(20):10716-25. doi: 10.1074/jbc.M115.705863. Epub 2016 Mar 11. PubMed PMID: 26969161; PubMed Central PMCID: PMC4865918.

Penafuerte CA, Gagnon B, Sirois J, Murphy J, MacDonald N, Tremblay ML. Identification of neutrophil-derived proteases and angiotensin II as biomarkers of cancer cachexia. *Br J Cancer.* 2016 Mar 15;114(6):680-7. doi: 10.1038/bjc.2016.3. Epub 2016 Mar 8. PubMed PMID: 26954714; PubMed Central PMCID: PMC4800302.

Pike KA, Tremblay ML. TC-PTP and PTP1B: Regulating JAK-STAT signaling, controlling lymphoid malignancies. *Cytokine.* 2016 Jun;82:52-7. doi: 10.1016/j.cyto.2015.12.025. Epub 2016 Jan 23. PubMed PMID: 26817397.

Department of Biochemistry 2016

Mansour M, Nievergall E, Gegenbauer K, Llerena C, Atapattu L, Hallé M, Tremblay ML, Janes PW, Lackmann M. PTP-PEST controls EphA3 activation and ephrin-induced cytoskeletal remodelling. *J Cell Sci.* 2016 Jan 15;129(2):277-89. doi: 10.1242/jcs.174490. Epub 2015 Dec 7. PubMed PMID: 26644181.

TSANTRIZOS, Y.S.

Fader LD, Bailey M, Beaulieu E, Bilodeau F, Bonneau P, Bousquet Y, Carson RJ, Chabot C, Coulombe R, Duan J, Fenwick C, Garneau M, Halmos T, Jakalian A, James C, Kawai SH, Landry S, LaPlante SR, Mason SW, Morin S, Rioux N, Simoneau B, Surprenant S, Thavonekham B, Thibeault C, Trinh T, Tsantrizos Y, Tsoung J, Yoakim C, Wernic D. Aligning Potency and Pharmacokinetic Properties for Pyridine-Based NCINIs. *ACS Med Chem Lett.* 2016 Jun 9;7(8):797-801. doi: 10.1021/acsmchemlett.6b00194. eCollection 2016 Aug 11. PubMed PMID: 27563405; PubMed Central PMCID: PMC4983734.

Waller DD, Jansen G, Golizeh M, Martel-Lorion C, Dejgaard K, Shiao TC, Mancuso J, Tsantrizos YS, Roy R, Sebag M, Sleno L, Thomas DY. A Covalent Cysteine-Targeting Kinase Inhibitor of Ire1 Permits Allosteric Control of Endoribonuclease Activity. *Chembiochem.* 2016 May 3;17(9):843-51. doi: 10.1002/cbic.201500485. Epub 2016 Mar 7. PubMed PMID: 26792008.

Matralis, AN and Tsantrizos, YS. Synthesis of Benzothiophene-Containing 10- and 11-Member Cyclic Phostones *Eur. J. Org. Chem.* **2016**, 22, 3728-3736

URSINI-SIEGEL, J.

Ha JR, Siegel PM, Ursini-Siegel J. The Tyrosine Kinome Dictates Breast Cancer Heterogeneity and Therapeutic Responsiveness. *J Cell Biochem.* 2016 Sep;117(9):1971-90. doi: 10.1002/jcb.25561. Epub 2016 Apr 14. PubMed PMID: 27392311.

Jones LM, Broz ML, Ranger JJ, Ozcelik J, Ahn R, Zuo D, Ursini-Siegel J, Hallett MT, Krummel M, Muller WJ. STAT3 Establishes an Immunosuppressive Microenvironment during the Early Stages of Breast Carcinogenesis to Promote Tumor Growth and Metastasis. *Cancer Res.* 2016 Mar 15;76(6):1416-28. doi: 10.1158/0008-5472.CAN-15-2770. Epub 2015 Dec 30. PubMed PMID: 26719528; PubMed Central PMCID: PMC5052827.

Ursini-Siegel J, Siegel PM. The influence of the pre-metastatic niche on breast cancer metastasis. *Cancer Lett.* 2016 Sep 28;380(1):281-8. doi: 10.1016/j.canlet.2015.11.009. Epub 2015 Nov 11. PubMed PMID: 26577808.

WATSON, I.R.

Rose AA, Annis MG, Frederick DT, Biondini M, Dong Z, Kwong L, Chin L, Keler T, Hawthorne T, Watson IR, Flaherty KT, Siegel PM. MAPK Pathway Inhibitors Sensitize BRAF-Mutant

Department of Biochemistry 2016

Melanoma to an Antibody-Drug Conjugate Targeting GPNMB. *Clin Cancer Res.* 2016 Dec 15;22(24):6088-6098. Epub 2016 Aug 11. PubMed PMID: 27515299.

Rajkumar S, Watson IR. Molecular characterisation of cutaneous melanoma: creating a framework for targeted and immune therapies. *Br J Cancer.* 2016 Jul 12;115(2):145-55. doi: 10.1038/bjc.2016.195. Epub 2016 Jun 23. PubMed PMID: 27336610; PubMed Central PMCID: PMC4947706.

WING, S.S.

Sareen-Khanna K, Papillon J, Wing SS, Cybulsky AV. Role of the deubiquitinating enzyme ubiquitin-specific protease-14 in proteostasis in renal cells. *Am J Physiol Renal Physiol.* 2016 Nov 1;311(5):F1035-F1046. doi: 10.1152/ajprenal.00252.2016. Epub 2016 Sep 14. PubMed PMID: 27630065.

Attaix D, Wing SS. Proteolysis - A master regulator in health and disease. *Int J Biochem Cell Biol.* 2016 Oct;79:402. doi: 10.1016/j.biocel.2016.09.001. Epub 2016 Sep 3. PubMed PMID: 27596809.

Bilodeau PA, Coyne ES, Wing SS. The ubiquitin proteasome system in atrophying skeletal muscle: roles and regulation. *Am J Physiol Cell Physiol.* 2016 Sep 1;311(3):C392-403. doi: 10.1152/ajpcell.00125.2016. Epub 2016 Aug 10. PubMed PMID: 27510905.

Wing SS. Deubiquitinating enzymes in skeletal muscle atrophy-An essential role for USP19. *Int J Biochem Cell Biol.* 2016 Oct;79:462-468. doi: 10.1016/j.biocel.2016.07.028. Epub 2016 Jul 27. Review. PubMed PMID: 27475983.

Coyne ES, Wing SS. The business of deubiquitination - location, location, location. *F1000Res.* 2016 Feb 11;5. pii: F1000 Faculty Rev-163. doi: 10.12688/f1000research.7220.1. eCollection 2016. Review. PubMed PMID: 26918171; PubMed Central PMCID: PMC4755399.

YANG, X.J.

Kim GW, Li L, Ghorbani M, You L, Yang XJ. Mice lacking α -tubulin acetyltransferase 1 are viable but display α -tubulin acetylation deficiency and dentate gyrus distortion. *J Biol Chem.* 2016 Nov 25;291(48):25279. PubMed PMID: 27888237; PubMed Central PMCID: PMC5122794.

Tahmasebi S, Jafarnejad SM, Tam IS, Gonatopoulos-Pournatzis T, Matta-Camacho E, Tsukumo Y, Yanagiya A, Li W, Atlasi Y, Caron M, Braunschweig U, Pearl D, Khoutorsky A, Gkogkas CG, Nadon R, Bourque G, Yang XJ, Tian B, Stunnenberg HG, Yamanaka Y, Blencowe BJ, Giguère V, Sonenberg N. Control of embryonic stem cell self-renewal and differentiation via coordinated alternative splicing and translation of YY2. *Proc Natl Acad Sci U S A.* 2016 Nov 1;113(44):12360-12367. Epub 2016 Oct 24. PubMed PMID: 27791185; PubMed Central PMCID: PMC5098618.

Department of Biochemistry 2016

Weiss K, Terhal PA, Cohen L, Bruccoleri M, Irving M, Martinez AF, Rosenfeld JA, Machol K, Yang Y, Liu P, Walkiewicz M, Beuten J, Gomez-Ospina N, Haude K, Fong CT, Enns GM, Bernstein JA, Fan J, Gotway G, Ghorbani M; DDD Study., van Gassen K, Monroe GR, van Haaften G, Basel-Vanagaite L, Yang XJ, Campeau PM, Muenke M. De Novo Mutations in CHD4, an ATP-Dependent Chromatin Remodeler Gene, Cause an Intellectual Disability Syndrome with Distinctive Dysmorphisms. *Am J Hum Genet.* 2016 Oct 6;99(4):934-941. doi: 10.1016/j.ajhg.2016.08.001. Epub 2016 Sep 8. PubMed PMID: 27616479; PubMed Central PMCID: PMC5065651.

You L, Li L, Zou J, Yan K, Belle J, Nijnik A, Wang E, Yang XJ. BRPF1 is essential for development of fetal hematopoietic stem cells. *J Clin Invest.* 2016 Sep 1;126(9):3247-62. doi: 10.1172/JCI80711. Epub 2016 Aug 8. PubMed PMID: 27500495; PubMed Central PMCID: PMC5004949.

Li L, Yang XJ. Molecular and Functional Characterization of Histone Deacetylase 4 (HDAC4). *Methods Mol Biol.* 2016;1436:31-45. doi: 10.1007/978-1-4939-3667-0_4. PubMed PMID: 27246207.

Shi S, Liu K, Chen Y, Zhang S, Lin J, Gong C, Jin Q, Yang XJ, Chen R, Ji Z, Han A. Competitive Inhibition of Lysine Acetyltransferase 2B by a Small Motif of the Adenoviral Oncoprotein E1A. *J Biol Chem.* 2016 Jul 1;291(27):14363-72. doi: 10.1074/jbc.M115.697300. Epub 2016 May 2. PubMed PMID: 27143356; PubMed Central PMCID: PMC4933189.

an K, You L, Degerny C, Ghorbani M, Liu X, Chen L, Li L, Miao D, Yang XJ. The Chromatin Regulator BRPF3 Preferentially Activates the HBO1 Acetyltransferase but Is Dispensable for Mouse Development and Survival. *J Biol Chem.* 2016 Feb 5;291(6):2647-63. doi: 10.1074/jbc.M115.703041. Epub 2015 Dec 16. PubMed PMID: 26677226; PubMed Central PMCID: PMC4742735.

Feng Y, Vlassis A, Roques C, Lalonde ME, González-Aguilera C, Lambert JP, Lee SB, Zhao X, Alabert C, Johansen JV, Paquet E, Yang XJ, Gingras AC, Côté J, Groth A. BRPF3-HBO1 regulates replication origin activation and histone H3K14 acetylation. *EMBO J.* 2016 Jan 18;35(2):176-92. doi: 10.15252/embj.201591293. Epub 2015 Nov 30. PubMed PMID: 26620551; PubMed Central PMCID: PMC4718456.

YOUNG, J.C.

Zanphorlin LM, Lima TB, Wong MJ, Balbuena TS, Minetti CA, Remeta DP, Young JC, Barbosa LR, Gozzo FC, Ramos CH. Heat Shock Protein 90 kDa (Hsp90) Has a Second Functional Interaction Site with the Mitochondrial Import Receptor Tom70. *J Biol Chem.* 2016 Sep 2;291(36):18620-31. doi: 10.1074/jbc.M115.710137. Epub 2016 Jul 8. PubMed PMID: 27402847; PubMed Central PMCID: PMC5009240.

Shrestha L, Young JC. Function and Chemotypes of Human Hsp70 Chaperones. *Curr Top Med Chem.* 2016;16(25):2812-28. Review. PubMed PMID: 27072695.

Department of Biochemistry 2016

Foo B, Williamson B, Young JC, Lukacs G, Shrier A. hERG quality control and the long QT syndrome. *J Physiol*. 2016 May 1;594(9):2469-81. doi: 10.1113/JP270531. Epub 2016 Feb 9. PubMed PMID: 26718903; PubMed Central PMCID: PMC4850197.