2013 Anatomy & Cell Biology Publications, Conferences, and Book chapters

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Autexier, Chantale

D'Souza, Y., *Lauzon, C.*, Chu, T.W., and **Autexier, C.** 2013. Regulation of human telomere length and homeostasis by telomerase enzyme processivity. J. Cell Science. 126, 676-87. Epub 2012 Nov 23.
D'Souza, Y., Chu, T.W., **Autexier, C.** 2013. A translocation-defective telomerase with low levels of activity and processivity stabilizes short telomeres and confers immortalization**.** Mol. Biol. Cell. 24, 1469-79. Epub 2013 Feb 27.

Brault, M.E., *Lauzon, C.*, and **Autexier, C.** 2013. Dyskeratosis congenita mutations in dyskerin SUMOylation consensus sites lead to impaired telomerase RNA accumulation and telomere defects. Hum. Mol. Genet. 22, 3498-507. Epub 2013 May 8.

Shawi, M., Chu, T.W., Martinez-Marignac, V., Yu, Y., Gryaznov, S., Johnson, J.B. , Lees-Miller, S.P. Assouline, S.E., **Autexier, C.** and Aloyz, R. 2013. Telomerase contributes to fludarabine resistance in quiescent human primary leukemic lymphocytes. PLoS One, Jul 29;8(7):e70428.

Zhu, S., Rousseau, P.*, Lauzon, C.*, Gandin, V., Topisirovic, I. and **Autexier, C.** 2014. Inactive C-terminal Telomerase Reverse Transcriptase Insertion Splicing Variants are Dominant-Negative Inhibitors of Telomerase. Biochimie, in press, http://dx.doi.org/10.1016/j.biochi.2013.12.023

Presentations

Chu, T.W., D'Souza, Y. and **Autexier, C.** The human telomerase 'Insertion in Fingers Domain' regulates enzyme processivity and recruitment to telomeres. Telomeres and Telomerase, Cold Spring Harbor, New York April 30-May 4, 2013. Invited oral presentation by Chu, T.W.

Mancini, J, Fakhoury, J, Castor, K., Sleiman, H. and **Autexier, C.** Regulation and targeting of telomere maintenance. Telomeres and Telomerase, Cold Spring Harbor, New York April 30-May 4, 2013. Refereed poster presentation by Mancini, J.

Kwan, R. and **Autexier, C.** The investigation of the TET family of RNA binding proteins as telomeraseassociated proteins. Telomeres and Telomerase, Cold Spring Harbor, New York April 30-May 4, 2013. Refereed poster presentation by Kwan, R.

Kwan, R. and **Autexier, C.** The Investigation of EWS as a Telomerase Associated Protein. RiboClub Monthly Meeting, Sherbrooke, June 3, 2013. Oral presentation by Kwan, R.

Zhu, S., Rousseau, P.*, Lauzon, C.,* Gandin, V., Topisirovic, I. and **Autexier, C.** Inactive C-terminal Telomerase Reverse Transcriptase Insertion Splicing Variants are Dominant-negative Inhibitors of Telomerase. RiboClub Monthly Meeting, Sherbrooke, December 2, 2013. Oral presentation by Rousseau, P.

Blaschuk, Orest

Merkwitz, C., Blaschuk, O.W., Schulz, A., Lochhead, P., Meister, J., Ehrlich, A., Ricken, A.M. The ductal origin of structural and functional heterogeneity between pancreatic islets. Progress in Histochemistry and Cytochemistry 48:103-40. Epub 2013 Oct 4

Daniels, Eugene

Toh, Huishi., Cao, Mingju., Daniels, E., Bateman, A. (2013) Expression of the Growth Factor Progranulin in Endothelial Cells Influences Growth and Development of blood Vessels: A Novel Mouse Model. ***PLoS ONE 8(5):*** **e64989.** Doi:10.1371/journal.pone.0064989.

Odobescu, A., Harris, Patrick, Bourmerhi, J., Daniels, E., Danino, Michel Alain (2013 in press) A new microsurgical research model using Thiel embalmed arteries and comparison of two suture techniques. ***J. of Plastic, Reconstructive & Aesthetic Surgery*** Ms. Ref. No.: JPRAS-D-13-01006

David, Samuel

Gresle, M., *Schulz, K., Jonas, A., Perreau, V., Cipriani, T., Baxter, A., Miranda-Hernandez, S., Field, J., Jokubiaits, V., Cherny, R., Volitakis, I., David, S., Kilpatrick, T. and Butzkueven, H. (2013) Ceruloplasmin gene deficient mice with experimental autoimmune encephalomyelitis show attenuated early disease evolution. ***J. Neurosci. Res***. (in press).

David, S. and Popovich, P.G . Microglial responses to spinal cord and brain trauma. In: Microglia in health and disease (Eds. Marie-Ève Tremblay and Amanda Sierra), Springer (In press)

David, S. and **Kroner, A. Inflammation and secondary damage after spinal cord injury. In: Neural Regeneration (Editors: Kwok-Fai So and Xiao-Ming Xu), Science Publishing House Shanghai Branch. (In press).

Conferences/presentations

PhD Training Program Workshop - "Bridging the Gap 2013", ***Vienna, Austria***. Title of talk:"Iron efflux mechanisms in glia and their role in neural damage and repair." 14 February 2013.
Symposium on "Current Advances in Spinal Cord Injury Research", Neurological Institute of New Jersey, New Jersey Medical School, ***Newark, New Jersey***; Title of talk: Targeting inflammation in Spinal cord injury. 8 May 2013.

International Collaboration on Repair Discoveries (ICORD) Trainee Symposium, Plenary Lecture, Title of talk: "Targeting inflammation in Spinal cord Injury"; ***Vancouver, BC***. 30-31 May 2013
Plenary Speaker, EndMS Conference, ***Saint Saveur, Quebec***. Title of talk: Mechanisms underlying iron accumulation in EAE and MS. December 11-3, 2013.

Davis, Elaine

Callewaert, B., C.-T. Su, T.V. Damme, P. Vlummens, F. Malfait, O. Vanakker, B. Schulz, M. Mac Neal, **E.C. Davis**, J.G.H. Lee, A. Salhi, S. Unger, K. Heimdal, S. De Almeida, U. Kornak, H. Gaspar, J-L. Bresson, K. Prescott, M.E. Gosendi, S. Mansour, G.E. Pierard, S. Madan-Khetarpal, PAGE 2 F.C. Sciurba, L. Van Maldergem, Z. Urban and A. De Paepe (2013) Comprehensive clinical and molecular analysis of 12 families with type 1 recessive cutis laxa. *Hum. Mutat.* 34:111-121.
Schwarze, U., T. Cundy, S.M. Pyott, H.E. Christiansen, M.R. Hegde, R.A. Bank, G. Pals, A. Ankala, K. Conneely, L. Seaver, S.M. Yandow, E. Raney, D. Babovic-Vuksanovic, J. Stoler, Z. Ben-Neriah, R. Segel, S. Lieberman, A. Al-Aqeel, M. Hannibal, L. Hudgins, E. McPherson, M.

Clemens, M.D. Sussman, R.D. Steiner, J. Mahan, R. Smith, K. Anyane-Yeboa, J. Wynn, K. Chong, T. Uster, S. Aftimos, V.R. Sutton, **E.C. Davis**, L.S. Kim, M.A. Weis, D. Eyre and P.H. Byers (2013) Mutations in *FKBP10*, which result in Bruck syndrome and recessive forms of osteogenesis imperfecta, inhibit the hydroxlyation of telopeptide lysines in bone collagen. *Hum. Mol. Genet.* 22:1-17.

Quinn, M.C.J.*, P.M. Wojnarowicz*, A.E. Pickett, D.M. Provencher, A.M. Mes-Masson, **E.C. Davis** and P.N. Tonin (2013) *FKBP10*/FKBP65 expression in high-grade ovarian serous carcinoma and its association with patient outcome. *Int. J. Oncol.* 42:912-920.

Gambaro, K., M.C.J. Quinn, P.M. Wojnarowicz, S.L. Arcand, M. de Ladurantaye, V. Barres, J.S. Ripeau, A.M. Killary, **E.C. Davis**, J. Lavoie, D.M. Provencher, A.M. Mes-Masson, M. Chevrette and P.N. Tonin (2013) *VGLL3* expression is associated with a tumor suppressor phenotype in epithelial ovarian cancer. *Mol. Oncol.* 7:513-530.

Khavandgar, Z.*, H. Roman*, J. Li, S. Lee, H. Vali, J. Brinckmann, **E.C. Davis** and M. Murshed (2013) Elastin haploinsufficiency impedes the progression of arterial calcification in MGPdeficient mice. *J. Bone Mineral Res.* Jul 15 [Epub ahead of print]

Mofarrahi, M., Y. Guo, J.A. Haspel, A.M. Choi, **E.C. Davis**, G. Gouspillou, R.T. Hepple, R. Godin, Y. Burelle and S.N.A. Hussain (2013) Autophagic flux and oxidative capacity of skeletal muscles during acute starvation. *Autophagy* 15:9 (10).

Urban Z. and **E.C. Davis** (2013) Cutis laxa: Intersection of elastic fiber biogenesis, TGF signaling, the secretory pathway and metabolism. *Matrix Biol.* Aug 16 [Epub ahead of print]
Gerber, E.E., E.M. Gallo, S.C. Fontana, **E.C. Davis**, F.M. Wigley, D.L. Huso and H.C. Dietz (2013) Integrin-modulating therapy prevents fibrosis and autoimmunity in mouse models of scleroderma. *Nature* 503:126-130.

Gabehart, K.E., S.G. Royce, D.J. Maselli, S. Miyasato, **E.C. Davis**, M.L.K. Tang and C. Jourdan-Le Saux (2013) Airway hyperresponsiveness is associated with airway remodeling but not inflammation in aging caveolin-1 deficient mice. *Respir. Res.* 14:110.

Habibzadeh, S., L. Li, S. Omanovic and **E.C. Davis** (2013) Biocompatibility of Ir/Ti-oxide coating in stent application: Interaction with platelet, endothelial and smooth muscle cells. *Appl. Surf. Sci.* In Revision.

Hinderer S., N. Shen, L.J. Ringuette, J. Hansmann, D.P. Reinhardt, **E.C. Davis** and K. Schenke-Layland (2013) *In vitro* elastogenesis - Tackling a major challenge in regenerative medicine. *Nature Biotechnol.* In Revision.

Conferences:

Invited Keynote Speaker - Gordon Research Seminar on Elastin, Elastic Fibers & Microfibrils, University of New England, ME - July 20, 2013

Kennedy, Timothy

Roy J, **Kennedy TE**, Costantino S. Engineered cell culture substrates for axon guidance studies: moving beyond proof of concept. Lab on a Chip, 13(4):498-508. (2013) Featured on cover. *6 citations.*

Horn KE*, Glasgow SD, Gobert D, Bull SJ*, Luk T*, Girgis J*, Tremblay ME, McEachern D*, Bouchard JF*, Haber M, Hamel E, Krimpenfort P, Murai KK, Berns A, Doucet G, Chapman CA, Ruthazer ES, **Kennedy TE**. DCC expression by neurons regulates synaptic plasticity in the adult brain. Cell Reports, 3(1):173-85. *6 citations.*

Binet F, Mawambo G, Sitaras N, Tetreault N, Lapalme E, Favret S, Cerani A, Leboeuf D, Tremblay S, Rezende F, Juan AM, Stahl A, Joyal JS, Milot E, Kaufman RJ, Guimond M, **Kennedy TE**, Sapieha P (2013) Neuronal ER stress impedes myeloid-cell-induced vascular regeneration through IRE1α degradation of netrin-1, Cell Metabolism, 17(3):353-371. *1 citation.*

Wu C, Leong SY, Moore CS, Cui QL, Gris P*, Bernier LP, Johnson TA, Séguéla P, **Kennedy TE**, Bar-Or A, Antel JP (2013) Dual effects of daily FTY720 on human astrocytes *in vitro*: relevance for neuroinflammation. Journal of Neuroinflammation,10:41. *1 citation.*

Ricoult SG*, Pla-Roca M, Safavieh R, Lopez-Ayon GM, Grütter P, **Kennedy TE**, Juncker D (2013) Large dynamic range digital nanodot gradients of biomolecules for cell haptotaxis made by low-cost nanocontact printing. Small, 9: 3308-3313.

Cui QL, Kuhlmann T, Miron VE, Leong SY, Fang J, Gris P*, **Kennedy TE**, Almazan G, Antel J (2013) Oligodendrocyte progenitor cell susceptibility to injury in multiple sclerosis. American Journal of Pathology, 183(2):516-25. *1 citation.*

Bin JM*, Rajasekharan S*, Kuhlmann T, Hanes I*, Marcal N*, Han D*, Rodrigues SP*, Leong SY*, Newcombe J, Antel JP, **Kennedy TE** (2013) Full-Length and Fragmented Netrin-1 in Multiple Sclerosis Plaques are Inhibitors of Oligodendrocyte Precursor Cell Migration. American Journal of Pathology, 183(3):673-80.

Durko M*, Koty Z, Zhu L, Marçal N*, **Kennedy TE**, Nalbantoglu J (2013) Rat C6 glioma cell motility and glioma growth are regulated by netrin and netrin receptors unc5B and DCC. J. Cancer Therapeutics and Research, **2**:18. http://dx.doi.org/10.7243/2049-7962-2-18.

de Faria Jr O*, Moore CS, **Kennedy TE**, Antel JP, Bar-Or A, Dhaunchak AS (2013) MicroRNA dysregulation in multiple sclerosis. Frontiers in Genetics 22;3:311.

Goldman JS*, Ashour MA*, Magdesian MH, Tritsch NX*, Harris SN*, Gris P*, Glasgow SD*, Thompson-Steckel G*, Christofi N*, Chemali R*, Stern YE*, Grutter P*, Bouchard JF*, Ruthazer ES, Stellwagen D, and **Kennedy TE** (2013) Netrin-1 Promotes Excitatory Synaptogenesis

Between Cortical Neurons by Initiating Synapse Assembly. Journal of Neuroscience, 33(44):17278-89.

Conferences

06.13 NeuroPhysics Conference, Foret Montmorency, Quebec

07.13 School of Life Sciences and Biotechnology, Institute of Natural Sciences, Shanghai Jiao Tong University, Shangahi, China

08.13 Symposium on Neural Circuit Development and Function, The Rockefeller University, NYC, NY, USA.

10.13 "Catch the Brain Wave" Series, Lester Pearson School Board, Montreal.

11.13 Neuroscience Center, University of North Carolina, Chapel Hill.

Kollman, JM

Polka JK, **Kollman JM**, Mullins RD (2013) Accessory factors promote AlfA-dependent plasmid segregation by regulating filament nucleation, disassembly, and bundling. *Proc. Natl. Acad. Sci. USA* (in press)

Ozyamak E, **Kollman JM**, Komeili A (2013) Bacterial actins and their diversity. *Biochemistry* 52, 6928-6939 [PMID 24015924]

Ozyamak E, **Kollman JM**, Agard DA, Komeili A (2013) The bacterial actin MamK: *in vitro* assembly behavior and filament architecture. *J. Biol. Chem.* 288, 4265-4277 [PMID 23204522]

Presentations

Invited Talk, "Building high resolution models of large macromolecular complexes" *Barbados Workshop on Quantitative Biosciences: bridging experiment and theory*, Barbados April 2013

Lamarche, Nathalie

DeGeer*, J., Boudeau*, J., Schmidt, S., Bedford, F., **Lamarche-Vane, N***., and Debant, A*., (2013) Tyrosine phosphorylation of the RhoGEF Trio regulates netrin-1/DCC-dependent cortical axon outgrowth. Mol. Cell Biol. 33, 739-751 *, co-first authors, co-corresponding authors (CIHR MOP-14701)

DeGeer, J. and **Lamarche-Vane, N.** (2013) Rho GTPases and neurodegeneration diseases. Exp. Cell Res. 319, 2384-2394. (CIHR MOP-14701)

Conferences

May 2013: ARHGAP31/CdGAP, an important Rac1/Cdc42 regulator during early development and cancer, ACFAS 2013, Quebec

Mandato, Craig

Lawrence, E.J and **C. A. Mandato.** 2013. Mitochondria localize to the cleavage furrow in Mammalian cytokinesis. PLoS One. 8(8):e72886.

Eid, R., S. Sheibani, N. Gharib, *J.F. Lapointe, *A. Horowitz, H. Vali H, **C. A. Mandato** and M.T. Greenwood. 2103. Human ribosomal protein L9 is a Bax suppressor that promotes cell survival in yeast. FEMS Yeast Res. 1567-1364.12121.

Mandato, M.T. Greenwood. 2013. The human septin7 and the yeast CDC10 septin prevent Bax and copper mediated cell death in yeast. Biochim Biophys Acta. 1833(12):3186-94.

Miller, Sandra

Durairaj, P., and Miller, S.C. (2013) Neoplasm prevention and immuno-enhancement mediated by daily consumption of a proprietary extract from North American ginseng by elderly mice of a cancer-prone strain. Phytotherapy Res. 27: 1339-1344.

Durairaj, P., Breda, M., and Miller, S.C. (2013)Quantitative augmentation of immune cells in elderly, normal mice by short-term daily consumption of an extract of North American ginseng (*Panax quinquefolium*) Biomed. Res. 24(2):199-205.

Morales, Carlos

Yang M., Virassamy B., Lekha S., Saadipour, K., Lim Y., Zhong Y., Gai W., Wang Y., Morales C.R., Xin-Fu, Z. 2012 The intracellular domain of sortilin interacts with amyloid precursor protein and regulates its lysosomal and lipid raft trafficking. PLoS One. 2013 8(5):e63049. PMID: 23704887.

Presentations

Lysosomal trafficking and Lysosomal Storage Disorders. Universidad Complutense de Madrid.

McKee, Mark

Foster BL, Nagatomo KJ, Tso HW, Tran AB, Nociti FH, Narisawa S, Yadav MC, **McKee MD**, Millan JL and Somerman MJ (2013) Tooth root dentin mineralization defects in a mouse model of hypophosphatasia. *J. Bone Miner. Res*. 28:271–282. (journal cover). PMID: 22991301

Barros NMT, Hoac B, Neves RL, Addison WN, Assis DM, Murshed M, Carmona AK and **McKee MD** (2013) Proteolytic processing of osteopontin by PHEX and accumulation of osteopontin fragments in Hyp mouse bone, the murine model of X-linked hypophosphatasia. *J. Bone Mineral Res*. 28:688-699. PMID: 22991293

Khayer Dastjerdi A, Pagano M, Kaartinen MT, **McKee MD** and Barthelat F (2013) Direct measurements of the cohesive behavior of soft biological interfaces. *In: Mechanics of Biological Systems and Materials, Volume 5: Proc. 2012 Annual Conf. on Experimental and Applied Mechanics*. Eds. Prorok BC et al. The Society for Experimental Mechanics (Series 37 Conference Proceedings), Inc., Costa Mesa, CA, USA. pp. 207-215.

McKee MD, Hoac B, Addison WN, Barros NMT, Millan JL and Chaussain C (2013) Extracellular matrix mineralization in periodontal tissues: Noncollagenous matrix proteins, enzymes, and relationship to hypophosphatasia and X-linked hypophosphatemia. *Perio. 2000*. 63:102-122. PMID: 23931057

Mohazab L, Koivisto L, Jiang G, Kytomaki L, Haapasalo M, Owen GR, Wiebe C, Xie Y, Heikinheimo K, Yoshida T, Smith CE, Heino J, Hakkinen L, **McKee MD** and Larjava H (2013) Critical role for αvβ6 integrin in enamel biomineralization. *J. Cell Sci*. 126:732-744. PMID: 23264742

Hoac B, Kiffer-Moreira T, Millan JL and **McKee MD** (2013) Polyphosphates inhibit extracellular matrix mineralization in MC3T3-E1 osteoblast cultures. *Bone* 53:478-486. PMID: 23337041

Salmon B, Bardet C, Khaddam M, Naji J, Coyac BR, Baroukh B, Letourneur F, Lesieur J, Decup F, Le-Denmat D, Nicoletti A, Poliard A, Rowe PS, Huet E, Opsahl Vital S, Linglart A, **McKee MD** and Chaussain C (2013) MEPE-derived ASARM peptide inhibits odontogenic differentiation of dental pulp stem cells and impairs mineralization in tooth models of X-linked hypophosphatemia. *PLOS ONE* 8(2):e56749. PMID: 23451077

Khavandgar Z, Alebrahim S, Eimar H, Tamimi F, **McKee MD** and Murshed M (2013) Local regulation of tooth mineralization by sphingomyelin phosphodiesterase 3. *J. Dent Res*. 92:358-364. PMID: 23428435

Coyac BR, Chicatun F, Hoac B, Nelea V, Chaussain C, Nazhat SN and **McKee MD** (2013) Mineralization of dense collagen hydrogel scaffolds by human pulp cells. *J. Dent. Res*. 92:648-654.. PMID: 23632809

McKee MD, Yadav MC, Foster BL, Somerman MJ, Farquharson C and Millan JL (2013) Compounded PHOSPHO1/ALPL deficiencies reduce dentin mineralization. *J. Dent. Res*. 92:721-727. (journal cover). PMID: 23694930

Chicatun F, Pedraza CE, Muja N, Ghezzi CE, **McKee MD** and Nazhat SN (2013) Effect of chitosan incorporation and scaffold geometry on chondrocyte function in dense collagen type I hydrogels. *Tissue Engineering (Part A)* 19:2553-2564. (journal cover). PMID: 23859275

Conferences

Amer. Soc. for Bone and Mineral Research Annual Mtg., *Translational Meet-the-Professor: X-linked Hypophosphatemia* (with Tom Carpenter). Baltimore, MD, USA. October.

11th Intl. Conf. on the Chemistry and Biology of Mineralized Tissues. Session co-chair for *Structure and function of dentinal proteins*. Lake Geneva, WI, USA. October.

Fifth Montreal Problem-solving Workshop, *The role of PEDF in bone mineralization*, Montreal. Invited Participant. Montreal. September.

Baylor College of Dentistry, Dallas, Texas, USA. *Regulation of bone and tooth extracellular matrix mineralization*. Seminar. February.

Book Chapters

Goldberg HA, Hunter GK, Mundy MA, Warner KJ and McKee MD (1999). Nature of hydroxyapatite crystals formed in the presence of bone sialoprotein, osteopontin and synthetic homopolymer analogues. In: Chemistry and Biology of Mineralized Tissues. Eds. Robinson C, Boskey A, and Goldberg M,. American Academy of Orthopaedic Surgeons. New York. Chapter 36, pp 225-228

McPherson, Peter

Thiffault I, Dicaire MJ, Tetreault M, Huang KN, Demers-Lamarche J, Bernard G, Duquette A, Larivière R, Gehring K, Montpetit A, **McPherson PS**, Richter A, Montermini L, Mercier J, Mitchell GA, Dupré N, Prévost C, Bouchard JP, Mathieu J, Brais B (2013). Diversity of ARSACS Mutations in French-Canadians. *Can. J. Neurol. Sci*. **40**, 61-66.

Allaire, P.D., Seyed Sadr, M., Chaineau, M., Seyed Sadr, E., Konefal, S., Maret, D., Fotouhi, M., Ritter, B. Del Maestro, R.F. and **McPherson, P.S**. (2013) Interplay between Rab35 and Arf6 controls cargo recycling to coordinate cell adhesion and migration. *J. Cell Sci*. **126**, 722-731. (**Highlighted in the "In This Issue" feature of the *Journal of Cell Science***).

Chaineau, M., Ioannou, M.S., and **McPherson, P.S**. (2013) Rab35: GEFs, GAPs and effectors. *Traffic*. **14**, 1109-1117.

Ritter, B, Murphy, S., Dokainish, H., Girard, M., Gudheti, M.V., Koslov, G., Halin, M., Philie, J., Jorgensen, E.M., Gehring, K., and **McPherson, P.S**. (2013) NECAP 1 regulates AP-2 interactions to control vesicle size, number and cargo during clathrin-mediated endocytosis *PLoS Biology*. **11**, e1001670.

Conferences

Invited Speaker, 9th Annual Bellairs Research Workshop: Personalized Treatment of Liver Disease with Advanced Technology, Bellairs Research Institute, Holetown, Barbados, January 18th – 25th
Invited Speaker, FASEB Summer Research Conference on "Arf and Rab Family G Proteins". Snowmass, CO, July 28-Aug 2, 2013

Invited Speaker, Synaptic Vesicle Biogenesis, Janelia Farm Research Campus, October 13-16, 2013

Presley, John

Shiba Y, Kametaka S, Waguri S, Presley JF, Randazzo PA (2013) "ArfGAP3 regulates the transport of cation-independent mannose 6-phosphate receptor in the post- Golgi compartment", Current Biology

23(19):1945-51.

Kumar R., Srivastava A, Presley JF (in revision) "New microtubule-flow-based method for cell segmentation in high throughput screens" PLOS ONE.

Reinhardt, Dieter

Beene LC, Wang LW, Hubmacher D, Keene DR, **Reinhardt DP**, Mecham RP, Traboulsi EI, & Apte SS (2013) Non-selective assembly of fibrillin-1 and fibrillin-2 in the rodent ocular zonule and in cultured cells: Implications for Marfan syndrome. *Investigative Ophthalmology & Visual Science*. *In press.*

Djokic J, Fagotto-Kaufmann C, Bartels R, Nelea V, & **Reinhardt DP** (2013) Fibulin-3, -4, and -5 are highly susceptible to proteolysis, interact with cells and heparin, and form multimers. *Journal of Biological Chemistry*, 288, 22821-22835.

Hinderer S, Shen N, Ringuette L-J, Hansmann J, **Reinhardt DP**, Davis EC, & Schenke-Layland K (2013) In vitro elastogenesis - Three-dimensional hybrid scaffolds and a customized bioreactor system instruct human vascular smooth muscle cells to generate an elastic fiber-containing extracellular matrix. Nature Communications. *Submitted*.

Hubmacher D, Bergeron E, Fagotto-Kaufmann C, Sakai LY, & **Reinhardt DP** (2013) Early fibrillin-1 assembly monitored through a modifiable recombinant cell approach. *Biomacromolecules*. *In revision*.

Hummitzsch K, Irving-Rodgers HF, Hatzirodos N, Bonner W, Sabatier L, **Reinhardt DP**, Sado Y, Ninomiya Y, Wilhelm D, & Rodgers RJ (2013) A new model of development of the mammalian ovary and follicles. *PLoS ONE*, 8, e55578.

Marek I, Volkert G, Hilgers KF, Bieritz B, Rascher W, **Reinhardt DP**, & Hartner A (2013) Fibrillin-1 and alpha8 integrin are co-expressed in the glomerulus and interact to convey firm adhesion of mesangial cells. Cell Adhesion & Migration. *In revision*.

Sabatier L, Djokic J, Fagotto-Kaufmann C, Chen M, Annis DS, Mosher DF, & **Reinhardt DP** (2013) Complex contributions of fibronectin to initiation and maturation of microfibrils. *Biochem. J.* , 456, 283-295.

Tiedemann K, Boraschi-Diaz I, Rajakumar I, Kaur J, Roughley P, **Reinhardt DP***, & Komarova SV* (2013) Fibrillin-1 directly regulates osteoclast formation and function by a dual mechanism. *J. Cell Sci.*, 126, 4187-4194. *** indicates co-senior authors and common supervision**.

Votteler M, Carvaja Berrio DA, Horke A, Sabatier L, **Reinhardt DP**, Nsair A, Aikawa E, & Schenke-Layland K (2013) Elastogenesis occurs at the early onset of human cardiac valve development. *Development*, 140, 2345-2353.

Kaur J & **Reinhardt DP** (2013) Extracellular Matrix Molecules. In *Stem Cell Biology and Tissue Engineering in Dental Science* (Vishwakarma A, Sharpe PT, Shi S, Wang X, & Ramalingam M, eds), Elsevier. *In press.*

Conferences

16th Annual Canadian Marfan Association Conference, Vancouver, BC, Canada (September 27-28, 2013). "*What's new in research?*" Invited speaker

16th Annual Canadian Marfan Association Conference, Vancouver, BC, Canada (September 27-28, 2013). "*What is the fibrillin abnormality?*" Invited speaker

NAVBO Vascular Matrix Biology and Bioengineering Workshop 2013, Cape Cod, USA (October 20-24, 2013). "*Fibronectin-mediated homeostasis of blood vessels*". Invited speaker

Ribeiro-da Silva, A

I. Daou, A. H. Tuttle, G. Longo, J. S. Wieskopf, R. P. Bonin, A. R. Ase, J. N. Wood, Y. De Koninck, A. Ribeiro-da-Silva, J. S. Mogil, and P. Seguela. Remote optogenetic activation and sensitization of pain pathways in freely moving mice. J.Neurosci. 33 (47):18396-18401, 2013.

G. Longo, M. Osikowicz, and A. Ribeiro-da-Silva (2013) Sympathetic fiber sprouting in inflamed joints and adjacent skin contributes to pain-related behavior in arthritis. J.Neurosci. 33 (24):10066-10074, 2013.

M. Osikowicz, G. Longo, S. Allard, A. C. Cuello, and A. Ribeiro-da-Silva (2013) Inhibition of endogenous NGF degradation induces mechanical allodynia and thermal hyperalgesia in rats. Mol.Pain 9 (1):37. A correction for this article has been published in Molecular Pain 2013, 9:55, 2013.

S. Pawlowski, S. Gaillard, I. Ghorayeb, A. Ribeiro-da-Silva, R. Schlichter, and M. Cordero-Erausquin (2013) A novel population of cholinergic neurons in the macaque spinal dorsal horn of potential clinical relevance for pain therapy. J.Neurosci. 33 (9):3727-3737.

A. W. Saeed, and A. Ribeiro-da-Silva (2013) De novo expression of neurokinin-1 receptors by spinoparabrachial lamina I pyramidal neurons following a neuropathic lesion. J.Comp.Neurol. 521 (8):1915-1928.

G. Mo, J. C. Peleshok, C. Q. Cao, A. Ribeiro-da-Silva, and P. Seguela (2013) Control of P2X3 Channel Function by Metabotropic P2Y2 UTP Receptors in Primary Sensory Neurons. Mol.Pharmacol., 83 (3):640-647.

A. Charrua, R. Pinto, A. Taylor, A. Canelas, A. Ribeiro-da-Silva, C. D. Cruz, L. A. Birder, and F. Cruz. Can the adrenergic system be implicated in the pathophysiology of bladder pain syndrome/interstitial cystitis? A clinical and experimental study. Neurourol.Urodyn., 2013, 10.1002/nau.22542 [doi].

Rouiller, Isabelle

Andrey M. Grishin, Eunice Ajamian, Limei Tao, Mihnea Bostina, Linhua Zhang, Jean-Francois Trempe, Robert Menard, **Isabelle Rouiller**, Miroslaw Cygler. Family of phenylacetyl-CoA monooxygenases differs in subunit organization from other monooxygenases. ***J Struct Biol* 2013**; 184(2):147-54.

Huan Bao, Kush Dalal, Victor Wang, **Isabelle Rouiller**, Franck Duong. The maltose ABC transporter: action of membrane lipids on the transporter stability, coupling and ATPase activity. ***Biochem Biophys Acta* 2013**; 1828(8):1723-1730.

Krisztina Kovács, Kaustuv Basu, **Isabelle Rouiller**, Attila Sík. Regional differences in the expression of K(+)-Cl (-) 2 cotransporter in the developing rat cortex**.** ***Brain Struct Funct* 2013** Feb 19. [Epub ahead of print]. **CIHR MOP-81105**.

Sossin, Wayne

Dunn TW and **Sossin, WS** (2013) Inhibition of the Aplysia sensory neuron calcium current with dopamine and serotonin. J. Neurophysiology 2013 Nov;110(9):2071-81

Dyer J and **Sossin WS** (2013) Characterization of the role of eIF4G in stimulating cap- and IRES-dependent translation in Aplysia neurons. PLOS One. Sep 3;8(9):e74085.

Graber TE, McCamphill PK, **Sossin WS** (2013) A recollection of mTOR signalling in learning and memory. Learning and Memory 2013 Sep 16;20(10):518-30 (COVER of issue).

Graber TE, Hebert-Seropian S, Khoutorsky A, David, A Yewdell JW, Lacaille J-C, **Sossin WS**. Reactivation of stalled polyribosomes in synaptic plasticity. **PNAS.** 2013 Oct 1;110 (40):16205-10.

Book Chapters

Weatherill DB, Dunn TW, McCamphill PK and **Sossin WS** (2013) Exploring mechanisms of synaptic plasticity using exogenous expression of proteins at the sensory-to-motor neuron synapse of *Aplysia* . **Neuromethods: Multidisciplinary Tools for Investigating Synaptic Plasticity.**

Hastings MA, Farah CA and Sossin WS (2013) Role of Protein Kinase C and Protein Kinase M in Aplysia Learning. In Menzel (Ed). Invertebrate Learning, Elsevier Press

Conferences

Winter conference on Neural Plasticity Curacao Feb. 9-16, 2013 **(Invited Speaker) Role of PKMs in Aplysia**

Stifani, Stefano

Verginelli, F., Perin, A., Dali, R., Fung, K.H., Lo, R., Longatti, P., Guiot, M.C., Del Maestro, R.F., Rossi. S., di Porzio, U., Stechishin, O., Weiss, S., Stifani, S. (2013) Transcription factors FOXG1 and Groucho/TLE promote glioblastoma growth. *Nature Commun*. Dec 20;4:2956. doi: 10.1038/ncomms3956.

Perez-Campo, F.M., Costa, G., Lie-a-Ling, M., Stifani, S., Kouskoff, V., and Lacaud, G. (2013) MOZmediated repression of p16INK4a is critical for the self-renewal of neural and hematopoietic stem cells. *Stem Cells*. Dec 4. doi: 10.1002/stem.1606.

Ciarapica, R., Methot, L., Tang, Y., Lo, R., **Dali, R., Buscarlet, M**., Locatelli, F., Del Sal, G., Rota, R., and Stifani, S. (2013) Prolyl isomerase Pin1 and protein kinase HIPK2 cooperate to promote cortical neurogenesis by suppressing Groucho/TLE:Hes1-mediated inhibition of neuronal differentiation. *Cell Death Differ*. Nov 22. doi: 10.1038/cdd.2013.160.

Ciarapica R., Bracaglia G., De Salvo M., Carcarino, E., Adesso, L., Leoncini P., Dall'Agnese A., Walters, Z., Verginelli F., De Sio L., Boldrini R., Inserra A, Bisogno G., Rosolen A., Alaggio R., Ferrari A., Collini P., Locatelli M., Stifani S., Screpanti I., Rutella S., Yu, Q., Marquez V., Shipley, J., Valente, S., Mai, A., Miele L., Puri P.L., Locatelli F., Palacios D., and Rota, S. (2013) Polycomb group (PcG) protein EZH2 supports the survival of PAX3-FOXO1 alveolar rhabdomyosarcoma by repressing *FBXO32* (*Atrogin1/MAFbx*). *Oncogene*. Nov 11. doi: 10.1038/onc.2013.471.

Methot, L., Hermann, R., Tang, Y., Lo, R., **Al-Jehani, H., Jhas,** S., Svoboda, D., Slack, R.S., Barker, P.A., and Stifani, S. (2013) Functional Interaction and Antagonistic Roles of NF-kappaB and Hes6 in the Regulation of Cortical Neurogenesis. *Mol Cell Biol*. 33:2797-2808.
Article highlighted in Spotlight section: http://mcb.asm.org/content/33/14/2649.full.

Conferences

Montreal International Symposium on Angiogenesis and Metastasis. Montreal, Quebec, Canada. 13 June 2013. Invited speaker.

19th International Runx Workshop. Wilsede, Germany. 16-19 June 2013. Invited speaker

Walker, Dominique

Naef L, Moquin L, Gratton A, Walker CD 2013 Blunted anticipatory dopamine responses to food in animals exposed to high-fat during early development. Int J Obes (Lond). 2013 Jun;37(6):885-8. doi: 10.1038/ijo.2012.153. Epub 2012 Sep 11.

Buwembo A, Long H, Walker CD 2013 Participation of endocannabinoids in rapid suppression of stress responses by glucocorticoids in neonates.Neuroscience. 2013 Sep 26;249:154-61. Epub 2012 Nov 3.

Naef L, Gratton A, Walker CD.2013 Exposure to high fat during early development impairs adaptations in dopamine and neuroendocrine responses to repeated stress.Stress. 2013 Sep;16(5):540-8. doi: 10.3109/10253890.2013.805321. Epub 2013 Jun 20.

Johnston C, Campbell-Yeo M, Rich B, Whitley J, Filion F, Cogan J, Walker CD. 2013 Therapeutic touch is not therapeutic for procedural pain in very preterm neonates: a randomized trial. Clin J Pain. 2013 Sep;29(9):824-9. doi: 10.1097/AJP.Ob013e3182757650

Campbell-Yeo M, Johnston C, Benoit B, Latimer M, Vincer M, Walker CD, Streiner D, Inglis D, Caddell K. 2013 Trial of repeated analgesia with Kangaroo Mother Care (TRAKC Trial). BMC Pediatr. 2013 Nov 9;13:182

Campbell-Yeo ML, Johnston CC, Joseph KS, Feeley N, Chambers CT, Barrington KJ, Walker CD. 2013 Co-bedding Between Preterm Twins Attenuates Stress Response Following Heel Lance: Results of a Randomized Trial. Clin J Pain. 2013 Nov 28. [Epub ahead of print

Conferences

2013: Invited Chair, Hot Topics symposium, 5th Parental Brain Conference, Regensburg, Germany July 14-18

Vali, Hojatollah

Haddad, M., **Vali, H.,** Paquette, J., & Guiot. S.R. (2014) The role of *Carboxydothermus hydrogenoformans* in the conversion of calcium phosphate from amorphous to crystalline state. *PLOS ONE.* (in press).

Liang, B., Wu, T.D., Guerquin-Kern, J.L., **Vali, H.,** Sun, H.-J., Sim, M.S., Wang, C.-H., & Bosak, T. (2014) Cyanophycin mediates the accumulation and storage of fixed carbon in non-heterocystous filamentous cyanobacteria from coniform mats. *PLOS ONE*. DOI: 10.1371/journal.pone.0088142.

Karimi, B., Mobaraki, A.M., Mirzaei, H., Zareyee, D., & **Vali, H.** (2014) Improving the selectivity toward three-component Biginelli versus Hantzsch reactions by controlling the catalyst hydrophobic/hydrophilic surface balance. *Chem. Cat. Chem. 6*, 212-219.

Hosseini, S., Naderi-Manesh, H., **Vali, H.,** & Faghihi, S. (2014) Improved surface bioactivity of stainless steel substrates using osteocalcin mimetic peptide. *Mat. Chem. Phys.* 143, 1364-1371.

Hosseini, M., Bocher, P., Shahryari, A., Azari, F., Szpunar, J.A., & **Vali, H.** (2013) On the importance of crystallographic texture in the biocompatibility of titanium based substrate. *J. Biomed. Mat. Res. A.* doi: 10.1002/jbm.a.35028. 24254817

Eid, R., ***Sheibani, S.***, Gharib, N., Lapointe, J.F., Horowitz, A., **Vali, H.,** Mandato, C.A., Greenwood, M.T. (2013) Human ribosomal protein L9 is a Bax suppressor that promotes cell survival in yeast. *FEMS Yeast Res.* doi: 10.1111/1567-1364.12121

Sheibani, S., Richard, V.R., Beach, A., Leonov, A., Feldman, R., Mattie, S., Khelghatybana, L., Piano, A., Greenwood, M., **Vali, H**., Titorenko, V.I. (2013) Macromitophagy, neutral lipids synthesis, and peroxisomal fatty acid oxidation protect yeast from "liponecrosis", a previously unknown form of programmed cell death. *Cell Cycle*. 13, 138-147. doi: 10.4161/cc.26885

Horowitz, A., Lapointe, J.F., Eid, R., ***Sheibani, S.,*** Gharib, N., ***Jones, N.K.,*** **Vali, H.,** Mandato, C.A., & Greenwood, M.T. (2013) The human septin7 and the yeast CDC10 septin prevent Bax and copper mediated cell death in yeast. *Biochim. Biophys. Acta.* 1833, 3186-9314. doi: 10.1016/j.bbamcr.2013.09.004.

Richard, V.R., Leonov, A., Beach, A., Burstein, M.T., Koupaki, O., Gomez-Perez, A., Levy, S., Pluska, L., ***Mattie, S.,*** Rafesh, R., Louk, T., ***Sheibani, S.***, Greenwood, M., **Vali, H.**, & Titorenko, V.I. (2013) Macromitophagy is a longevity assurance process that in chronologically aging yeast limited in calorie supply sustains functional mitochondria and maintains cellular lipid homeostasis. *Aging*. 5, 234-269.

Ghadimi, E., Eimar, H., Marelli, B., Nazhat, S.N., Asgharian, M**., Vali, H.,** & Tamimi, F. (2013) Trace elements can influence the physical properties of tooth enamel. SpringerPlus. :499. doi: 10.1186/2193-1801-2-499

Schumann, D., Hartman, H., Eberl, D.D., Sears, S.K., Hesse, R. & **Vali, H**. (2013) The influence of oxalate-promoted growth of saponite and talc crystals on rectorite: Testing the intercalation-synthesis hypothesis of 2:1 layer silicates*. Clays Clay Min.* (in press)

Khavandgar, Z., ***Roman, H.,*** Li, J., Lee, S., **Vali, H.,** Brinckmann. J., Davis, E.C., & Mushed, M. (2013) Elastin haploinsufficiency impedes the progression of arterial calcification in MGP-deficient mice*. J. Bone Mineral. Res.* DOI: 10.1002/jbmr.2039

Rafiee, M., Karimi., B., Farrokhzadeh, S., & **Vali, H.** (2013) Hydroquinone functionalized oriented MCM-41 mesochannels at the electrode surface. *Electrochim. Acta*, 94, 198-205.

Richard, V.R., Leonov, A., Beach, A., Burstein, M.T., Koupaki, O., Gomexz-Perez, A., Levy, S., Pluska, L., Mattie, S., Rafeh, R., Iouk, T., ***Sheibani, S.,*** Greenwood, M, **Vali, H.,** & Titorenko, V.I. (2013) Macromitophagy is a longevity assurance process that in chronologically aging yeast limited in calorie supply sustains functional mitochondria and maintains cellular lipid homeostasis. *Aging-US*, 5, 234-69.

Hosseini, S., Naderi-Manesh, H., Mountassif, D., Cerruti, M., **Vali, H.** & Faghihi, S. (2013) C-terminal amidation of an osteocalcin-derived peptide promotes hydroxyapatite crystallization. *J. Biol. Chem.* 288, 7885-93.

Rad, A.T., Novin, M., Solati-Hashjin, M., **Vali, H.**, & Faghihi, S. (2013) The effect of crystallographic orientation of titanium substrate on the structure and bioperformance of hydroxyapatite coatings. *Colloids Surf. B – Biointerf*. 103, 200-8.

Sharafi, H., Maleki, H., Ahmadian, G., Zahiri, H.S., Sajedinejad, N., Houshmand, B., **Vali, H.** & Noghabi, K.A. (2013) Antibacterial activity and probiotic potential of Lactobacillus plantarum HKN01: A new insight into the morphological changes of antibacterial compound-treated Escherichia coli by electron microscopy. *J. Microbiol. Biotech*. 23, 225-36.

Rafiee, M., Karimi., B., Asl, Y.A. & **Vali, H.** (2013) Electrochemical fabrication of electroactive ordered mesoporous electrode. *Analyst*, 138, 1740-1744.

Bosak, T., Liang, B., Wu, T. -D., Templer, S.P., Evans, A., **Vali, H.,** Guerquin-Kern, J.-L., Klepac-Ceraj, V., Friedman, J., Sim, M.S., & Mui, J. (2013) Cyanobacterial diversity and activity in modern conical microbialites. Geobiology, 11, DOI: **10.1111/gbi.12016.**

Abedi, S., Karimi, B., Kazemi, F., Bostina, M. & **Vali, H.** (2012) Amorphous TiO(2) coated into periodic mesoporous organosilicate channels as a new binary photocatalyst for regeneration of carbonyl compounds from oximes under sunlight irradiation. *Org. Biomolecul. Chem*., 11, 416-419.

Wang, P., Lutton, A., Olesik, J., **Vali, H**., & Li, X. (2012) A novel iron- and copper-binding protein in the Lyme disease spirochaete. *Molecul. Microbiol*., 86, 1441-1451.

Mahmoudi, M., Quinlan-Pluck, F., Monopoli, M.P., ***Sheibani, S.*, Vali, H.,** Dawson, K.A. & Lynch, I. (2013) Influence of the physiochemical properties of superparamagnetic iron oxide nanoparticles on amyloid beta protein fibrillation in solution. *ACS Chem. Neurosci.* 4, 475-