

# Medical Scientist Training Program

## Publications 2011-2012

- Bayat V**, Thiffault I, Jaiswal M, Tetreault M, Donti T, Sasarman F, Bernard G, Demers-Lamarche J, Dicaire MJ, Mathieu J, Vanasse M, Bouchard JP, Rioux MF, Lesage J, Lourenco CM, Li Z, Haueter C, Shoubridge EA, Graham BH, Brais B, and Bellen HJ. (2012). Mutations in the mitochondrial methionyl-tRNA synthetase in *Drosophila melanogaster* and *Homo sapiens* cause neurodegeneration. *PLoS Biology*. [Epub Ahead of Print]
- Jaiswal M, Sandoval H, Zhang K, **Bayat V**, and Bellen HJ. (2012). Probing mechanisms that underlie human neurodegenerative diseases in *Drosophila*. *Annual Review of Genetics*. [Epub Ahead of Print]
- Bear AS**, Morgan RA, Cornetta K, June CH, Binder-Scholl G, Dudley ME, Feldman SA, Rosenberg SA, Shurtleff SA, Rooney CM, Heslop HE, Dotti G. (2012). Replication-competent retroviruses in gene-modified T cells used in clinical trials: is it time to revise the testing requirements?. *Mol Ther* 20, 246-249. PMID: 22297819
- Kennedy LC, **Bear AS**, Young JK, Lewinski NA, Kim J, Foster AE, Drezek RA. (2011). T cells enhance gold nanoparticle delivery to tumors *in vivo*. *Nanoscale Res Lett* 6, 283. \* These authors contributed equally to the manuscript. PMID: 21711861
- Bear AS**, Cruz CR, Foster AE. (2011). T cells as vehicles for cancer vaccination. *J Biomed Biotechnol* 2011, 417403. PMID: 22131805
- McCauley MD, Wang T, Mike E, Herrera J, **Beavers DL**, Huang TW, Ward CS, Skinner S, Percy AK, Glaze DG, Wehrens XH, Neul JL. (2011). Pathogenesis of lethal cardiac arrhythmias in *Mecp2* mutant mice: implication for therapy in Rett syndrome. *Sci Transl Med* 3, 113-125. PMID: 22174313
- Boone PM**, Wiszniewski W, Lupski JR. (2011). Genomic medicine and neurological disease. *Hum Genet* 130, 103-121. PMID: 21594611
- Boone PM**, Reiter RJ, Glaze DG, Tan D-X, Lupski JR, Potocki L. (2011). Abnormal circadian rhythm of melatonin in Smith-Magenis syndrome patients with *RAI1* point mutations. *Am J Med Genet* 155A, 2024-7. PMID: 21739587
- Lin L, Saha PK, Ma X, Henshaw IO, Shao L, Chang BH, **Buras ED**, Tong Q, Chan L, McGuinness OP, Sun Y. (2011). Ablation of ghrelin receptor reduces adiposity and improves insulin sensitivity during aging by regulating fat metabolism in white and brown adipose tissues. *Aging Cell* 10:996-1010. PMID: 21895961
- Campbell IM**, Kolodziejska KE, Quach MM, Wolf VL, Cheung SW, Lalani SR, Ramocki MB, Stankiewicz P. (2011). *TGFBR2* deletion in a 20-month-old female with developmental delay and microcephaly. *Am J Med Genet A* 155, 1442-7. PMID: 21567932
- Chao HT**, Zoghbi HY. (2012). MeCP2: only 100% will do. *Nature Neuroscience* 15:176-7. PMID: 22281712
- Wagnon JL, Mahaffey CL, Sun W, Yang Y, **Chao HT**, Frankel WN. (2011). Etiology of a genetically complex seizure disorder in *Celf4* mutant mice. *Genes Brain Behav* 10:765-77. PMID: 21745337
- Connell PS**, Han RI, Grande-Allen KJ. (2012). Differentiating the aging of the mitral valve from human and canine myxomatous degeneration. *J Vet Cardiol*. [Epub Ahead of Print] PMID: 22364720
- Doherty JE**, Huye LE, Yusa K, Zhou L, Craig NL, Wilson MH. (2011). Hyperactive PiggyBac gene transfer in human cells and *in vivo*. *Hum Gene Ther* 23, 311-320. PMID: 21992617
- Eleswarapu SV**, Chen JA, Athanasiou KA. (2011). Temporal assessment of ribose treatment on self-assembled articular cartilage constructs. *Biochem Biophys Res Commun* 414, 431-436. PMID: 21971556
- Eleswarapu SV\***, Responde DJ\*, Athanasiou KA. (2011). Tensile properties, collagen content, and crosslinks in connective tissues of the immature knee joint. *PLoS ONE* 6, e26178. [Epub Ahead of Print] \* These authors contributed equally to the manuscript. PMID: 22022553

# Medical Scientist Training Program

## Publications 2011-2012

- Folick A**, Min W, Wang MC. (2011). Label-free imaging of lipid dynamics using Coherent Anti-stokes Raman Scattering (CARS) and Stimulated Raman Scattering (SRS) microscopy. *Curr Opin Genet Dev* 21, 585-90. PMID: 21945002
- Campbell MR, **Garbino A**. (2011). History of suborbital spaceflight: medical and performance issues. *Aviat Space Environ Med* 82, 469-74. PMID: 21485407
- van Oort RJ, **Garbino A**, Wang W, Dixit SS, Landstrom AP, Gaur N, De Almeida AC, Skapura DG, Rudy Y, Burns AR, Ackerman MJ, Wehrens XH. (2011). Disrupted junctional membrane complexes and hyperactive ryanodine receptors after acute junctophilin knockdown in mice. *Circulation* 123, 979-88. \* These authors contributed equally to the manuscript. PMID: 21339484
- Gould DJ**, Salmans JA, Lassinger BK, Contreras A, Gutierrez C, Bonefas E, Liscum KR, Silberfein EJ. (2012). Factors associated with phyllodes tumor of the breast after core needle biopsy identifies fibroepithelial neoplasm. *Journal of Surgical Research*. [Epub Ahead of Print]
- Roth FS\*, **Gould DJ**\*, Chike-Obi CJ, Bullocks JM. (2011). Late seroma during pregnancy, a rare complication in prosthetic breast augmentation: Case report. *J Plast Reconstr Aesthet Surg*. [Epub Ahead of Print] \* These authors contributed equally to the manuscript. PMID: 22119792
- Gould DJ**, Roth FS, Soparkar CN. (2011). The diagnosis and treatment of thyroid-associated ophthalmopathy. *Aesthetic Plast Surg*. [Epub Ahead of Print] PMID: 22083413
- Saik JE, **Gould DJ**, Keswani AH, Dickinson ME, West JL. (2011). Biomimetic hydrogels with immobilized ephrinA1 for therapeutic angiogenesis. *Biomacromolecules* 12, 2715-22. \* These authors contributed equally to the manuscript. PMID: 21639150
- Leslie-Barbick JE, Saik JE, **Gould DJ**, Dickinson ME, West JL. (2011). The promotion of microvasculature formation in poly(ethylene glycol) diacrylate hydrogels by an immobilized VEGF-mimetic peptide. *Biomaterials* 32, 5782-9. PMID: 21612821
- Gould DJ**, Vadakkan TJ, Poché RA, Dickinson ME. (2011). Multifractal and lacunarity analysis of microvascular morphology and remodeling. *Microcirculation* 18, 136-51. PMID: 21166933
- Saik JE\*, **Gould DJ**\*, Watkins EM, Dickinson ME, West JL. (2011). Covalently immobilized platelet-derived growth factor- BB promotes angiogenesis in biomimetic poly(ethylene glycol) hydrogels. *Acta Biomater* 7, 133-43. \* These authors contributed equally to the manuscript. PMID: 20801242
- Gould DJ**. (2012). Tissue Engineering. *Anaplastology*. [Epub Ahead of Print]
- Gould DJ**, Morrison CA, Liscum KR, and Silberfein EJ. (2011). A lipoma of the transverse colon causing intermittent obstruction. *Gastroenterol Hepatol* 7, 487-490.
- Kemnade JO**, Seethammagari M, Narayanan P, Levitt JM, McCormick AA, and Spencer DM. (2012). Off-the-shelf adenoviral-mediated immunotherapy via bicistronic expression of tumor antigen and iMyD88/CD40 adjuvant. *Molecular Therapy*. [Epub Ahead of Print]
- Young JK, Lewinski NA, Langsner RJ, **Kennedy LC**, Satyanarayan A, Nammalvar V, Lin AY, Drezek RA. (2011). Size-controlled synthesis of monodispersed gold nanoparticles via carbon monoxide gas reduction. *Nanoscale Res Lett* 6, 428. PMID: 21711955
- Koshelev M**. (2011). Scale- and shift-invariances explain two-player fehr-schmidt fairness utility function. *Applied Mathematical Sciences* 5, 3707-3714.

# Medical Scientist Training Program

## Publications 2011-2012

- Koshelev M**, Jalal-Kamali A, Longpre L. (2011). Estimating sample mean under interval uncertainty and constraint on sample variance. *International Journal of Approximate Reasoning* 52, 1136-1146.
- Koshelev M**. (2011). Trustees' and investors' behavior in the first two rounds of a trust game: overview and a (partial) explanation based on cooperative game theory. *Journal of Advanced Computational Intelligence and Intelligent Informatics* 15, 438-448.
- Koshelev M**. (2011). Extending efficient algorithms for bayesian regression and clustering with variable selection to a general (non-Gaussian) uncertainty. *International Journal of Innovative Management, Information & Production* 2, 47-60.
- Campeau PM, Kim JC, **Lu JT**, Schwartzentruber JA, Abdul-Rahman OA, Schlaubitz S, Murdock DM, Jiang MM, Lammer EJ, Enns GM, Rhead WJ, Rowland J, Robertson SP, Cormier-Daire V, Bainbridge MN, Yang XJ, Gingras MC, Gibbs RA, Rosenblatt DS, Majewski J, Lee BH. (2012). Mutations in *KAT6B*, Encoding a histone acetyltransferase, cause Genitopatellar Syndrome. *American Journal of Human Genetics* 90, 282-9. PMID: 22265014
- Lu JT**, Yi Wang Y, Gibbs RA, Yu F. (2012). Characterizing linkage disequilibrium and evaluating imputation power of human genomic insertion-deletion polymorphisms. *Genome Biology*. [Epub Ahead of Print]
- McGraw CM**, Samaco RC, Zoghbi HY. (2011). Adult neural function requires MeCP2. *Science* 333,186. PMID: 21636743
- Samaco RC, Mandel-Brehm C, **McGraw CM**, Shaw CA, McGill BE and Zoghbi HY. (2012). *Crb* and *Oprm1* mediate anxiety-related behavior and social approach in a mouse model of *MECP2* duplication syndrome. *Nature Genetics* 44,206-11. PMID: 22231481
- Mountziaris PM**, Spicer PP, Kasper FK, Mikos AG. (2011). Harnessing and modulating inflammation in strategies for bone regeneration. *Tissue Eng Part B Rev* 17, 393-402. PMID: 21615330
- Mountziaris PM**, Tzouanas SN, Mikos AG. (2012). The interplay of bone-like extracellular matrix and TNF- $\alpha$  signaling on *in vitro* osteogenic differentiation of mesenchymal stem cells. *J Biomed Mater Res Part A*[Epub Ahead of Print]
- Nelson AM**, Marshall KL, and Lumpkin EA. (2011). DEG/ENaCs lead by a nose: mechanotransduction in a polymodal sensory neuron. *Neuron* 71(5), 763-5. PMID: 21903069
- Nelson ND**, Bertuch AA. (2012). Dyskeratosis congenita as a disorder of telomere maintenance. *Mutation Research* 730, 43-51. PMID: 21745483
- Porter P, Polikepahad S, Qian Y, Knight JM, Lu W, Tai WM, Roberts L, **Ongeri V**, Yang T, Seryshev A, Abramson S, Delclos GL, Kheradmand F, Corry DB. (2011). Respiratory tract allergic disease and atopy: experimental evidence for a fungal infectious etiology. *Medical Mycology* Vol. 49, S158-S163. PMID: 20807032
- Preidis GA**, McCollum ED, Mwansambo C, Kazembe PN, Schutze GE, Kline MW. (2011). Pneumonia and malnutrition are highly predictive of mortality among African children hospitalized with human immunodeficiency virus infection or exposure in the era of antiretroviral therapy. *Journal of Pediatrics* 159, 484-489. PMID: 21489553
- Preidis GA**, Saulnier DM, Blutt SE, Mistretta TA, Riehle KP, Major AM, Venable SF, Finegold MJ, Petrosino JF, Conner ME, Versalovic J. (2012). Probiotics stimulate enterocyte migration and microbial diversity in the neonatal mouse intestine. *The FASEB Journal*. [Epub Ahead of Print] PMID: 22267340
- Preidis GA**, Saulnier DM, Blutt SE, Mistretta TA, Riehle KP, Major AM, Venable SF, Barrish JP, Finegold MJ, Petrosino JF, Guerrant RL, Conner ME, Versalovic J. (2012). Host Response to Probiotics Determined by Nutritional Status of Rotavirus-Infected Neonatal Mice. *Journal of Pediatric Gastroenterology and Nutrition*. [Epub Ahead of Print] PMID: 22343914

# Medical Scientist Training Program

## Publications 2011-2012

- Kim MH, Ahmed S, Buck WC, **Preidis GA**, Hosseinipour MC, Bhalakia A, Nanthuru D, Kazembe PN, Chimbwandira F, Giordano TP, Chiao EY, Schutze GE, Kline MW. (2012). The Tingathe program: A pilot intervention using community health workers to create a continuum of care in the Prevention of Mother to Child Transmission of HIV (PMTCT) cascade of services in Malawi. *Journal of the International AIDS Society*. [Epub Ahead of Print]
- Rochat RH**, Liu X, Murata K, Nagayama K, Rixon FJ, Chiu W. (2011). Seeing the portal in herpes simplex virus type 1 B capsids. *Journal of Virology* 85, 1871-1874. PMID: 21106752
- Bammes BE, **Rochat RH**, Jakana J, Chiu W. (2011). Practical performance evaluation of a 10k×10k CCD for electron cryo-microscopy. *Journal of Structural Biology* 175, 384-393. PMID: 21619932
- Bammes BE\*, **Rochat RH\***, Jakana J, Chen DH, Chiu W. (2012). Direct electron detection yields cryo-EM reconstructions at resolutions beyond 3/4 Nyquist frequency. *Journal of Structural Biology*. [Epub Ahead of Print] \* These authors contributed equally to the manuscript. PMID: 22285189
- Chang J\*, Liu X\*, **Rochat RH\***, Baker ML\*, Chiu W. (2012). Reconstructing virus structures from nanometer to near- atomic resolutions with cryo-electron microscopy and tomography. *Adv Exp Med Biol* 726, 49-90. \* These authors contributed equally to the manuscript. PMID: 22297510
- Rochat RH**, Chiu W. (2012). Cryo-Electron Microscopy and Tomography of Virus Particles. *Molecular Biophysics*. [Epub Ahead of Print]
- Clapp WC, Rubens MT, **Sabharwal J**, Gazzaley A. (2011). Deficit in switching between functional brain networks underlies the impact of multitasking on working memory in older adults. *Proc Natl Acad Sci USA* 108, 7212-7. PMID: 21482762
- Shim DJ**, Yang L, Reed JG, Noebels JL, Chiao PJ, Zheng H. (2011). Disruption of the NF- $\kappa$ B/I $\kappa$ B $\alpha$  autoinhibitory loop improves cognitive performance and promotes hyperexcitability of hippocampal neurons. *Molecular Neurodegeneration* 6, 42. PMID: 1663635
- Mountziaris PM, **Spicer PP**, Kasper FK, Mikos AG. (2011). Harnessing and modulating inflammation in strategies for bone regeneration. *Tissue Eng Part B* 17, 393-402. PMID: 21615330
- Henslee AM\*, **Spicer PP\***, Yoon DM, Nair MB, Meretoja VV, Witherel KE, Jansen JA, Mikos AG, Kasper FK. (2011). Biodegradable composite scaffold incorporating an intramedullary rod and delivering bone morphogenetic protein-2 for stabilization and bone regeneration in segmental long bone defects. *Acta Biomater* 7, 3627-3637. \* These authors contributed equally to the manuscript. PMID: 21757034
- Spicer PP**, Kretlow JD, Henslee AM, Shi M, Young S, Demian N, Jansen JA, Wong ME, Mikos AG, Kasper FK. (2012). *In situ* formation of porous space maintainers in a composite tissue defect. *J Biomed Mater Res A* 100, 827-833. PMID: 22241726
- Stephens EH\***, Cornwell LD\*, Simpson KH, Chu D, Coselli JS, Holman WL, Vaporciyan AA, Merrill WH, Bakaeen FG. (2012). Cardiothoracic training: Current perceptions and expectations of residents and attending surgeons. *Journal of Surgical Research*. \* These authors contributed equally to the manuscript. [Epub Ahead of Print]
- Stephens EH**, Preventza O, Sarateanu CS, LeMaire SA, Coselli JS. (2012). Emergent correction of pectus excavatum after aortic root replacement in Marfan patient. *Journal of Cardiac Surgery*. [Epub Ahead of Print]
- Itoh A,\* **Stephens EH\***, Ennis DB, Carlhall C-J, Bothe W, Nguyen TC, Swanson JC, Miller DC, Ingels NB, Jr. \*co-first authors. (2012). The myocardium overlying the papillary muscle contributes to the antero-lateral left ventricular wall deformation continuum. *American Journal of Physiology-Heart and Circulatory Physiology* 302, H180-187. \* These authors contributed equally to the manuscript.



# Medical Scientist Training Program

## Publications 2011-2012

- Bakaeen FG, **Stephens EH**, Chu D, Coselli JS, Holman WL, Vaporciyan AA, Cmolik BL, Merrill WH, Grover FL. (2011). Perceptions regarding the value of Veterans Affairs hospitals in cardiothoracic surgical training. *Journal of Thoracic and Cardiovascular Surgery* 141, 1107-13.
- Stephens EH**, Blackmon SH, Correa AM, Roth JA, Hofstetter W, Benjamin R, Swisher SG, Walsh GL, Vaporciyan AA. (2011). Progression following chemotherapy is a novel predictor of poor outcome following pulmonary metastasectomy in sarcoma patients. *Journal of the American College of Surgeons* 212, 821-6.
- Thomas CM**, Hong T, van Pijkeren JP, Hemarajata P, Trinh DV, Hu W, Britton RA, Kalkum M, Versalovic J. (2012). Histamine derived from probiotic *Lactobacillus reuteri* suppresses TNF via modulation of PKA and ERK signaling. *PLoS ONE* 7, e31951. [Epub Ahead of Print]
- Wat MJ**, Veenma D, Hogue J, Holder AM, Yu Z, Wat JJ, Hanchard N, Shchelochkov OA, Fernandes CJ, Johnson A, Lally KP, Slavotinek A, Danhaive O, Schaible T, Cheung SW, Rauken KA, Tonk VS, Tibboel D, de Klein A, Scott DA. (2011). Genomic alterations that contribute to the development of isolated and non-isolated congenital diaphragmatic hernia. *J Med Genet* 48, 299-307.
- Ziats MN** and Rennert OM. (2011). Expression profiling of autism candidate genes during human brain development implicates central immune signaling pathways. *PLoS One* 6, e24691. PMID: 21935439