E-MAIL NEWSLETTER

Penn State MD/PhD News

May 2012

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This year 189 applications were received, 30 applicants were offered positions, and 9 are confirmed in the 2012 class

Incoming Class of 2012 Applications and Admissions

- 189 applications received
- 164 completed their application and were screened
- 58 interviewed
- 30 offered (so far)
  - Those that either declined or withdrew were accepted at other MD/PhD Programs such as:
    - Boston
    - Case Western Reserve
    - Dartmouth
    - Drexel
    - Duke
    - Einstein
    - New York University
    - Ohio State
    - SUNY Stony Brook
    - Tufts
    - UCLA
    - University of Cincinnati
    - University of Iowa
    - University of Michigan
    - University of North Carolina
    - University of Pennsylvania
    - Washington University, St. Louis
    - Yale
- 9 in class (as of 5/18/2012)
  - Castruita, Max - U of AZ; currently doing research at NIH/NIDDK
  - Chen, Eunice – UCSD; currently doing research at UCSD
  - Dhami, Ranjodh (RJ) – U of Washington, Seattle; currently an ER scribe at Swedish Healthcare System Highlands Hospital, Issaquah, WA
  - Ding, Yifu – Johns Hopkins; currently doing research at Johns Hopkins
  - Gong, Nicole – Washington U, St. Louis; currently doing research at Yale
  - Jefferson, Sarah – Penn State; currently doing research at U of PA
  - Kinsman, Brian – Lake Forest, IL; currently doing research at U of Chicago
  - Nye, Derek – Wilkes; currently an advisor for Science Olympiad Team & shadowing in cardiology
  - Pisupati, Aditya – Penn State University, Shreyer Honors College; graduated in May 2012

This year's graduates matched at Mayo School of Medicine and Penn State College of Medicine

Congratulations 2012 Graduates!

- Jay Jin
  - PhD in 2010
    - CMB graduate program
    - Bob Levenson advisor
  - Residency
    - Mayo School of Graduate Medical Education, Rochester, MN
    - Internal Medicine
- Kristin Plichta
  - PhD in 2010
    - CMB graduate program
    - Ed Gunther advisor
  - Residency
    - Preliminary Year at PSHMC
    - Medicine

Incoming G1s

- Albertson, Richard
  - Melissa Rolls, PhD, (UP)
  - Neuroscience graduate program
- Khandan, Tulasi
  - Thomas Loughran, MD
  - BMS
- Kidacki, Michal
  - Kevin Staveley-O'Carroll, MD, PhD
  - BMS
- Panganiban, Ron
  - Faoud Ishmael, MD, PhD
  - BMS
- Wang, Yanli
  - Istvan Albert, PhD (UP) and Colin Barnstable, PhD
  - Bioinformatics & Genomics

Student News

- APSA Annual Meeting in Chicago, IL April 27-29, 2012
  - Attended by
    - Shane Lloyd, G2
    - Cody Weston, G2
    - Melanie Dispenza, M3
- National MD/PhD Student Conference in Keystone, CO July 6-8, 2012
  - Darrin Bann, G3
  - Carolina Pinzon-Guzman, M3
- Recent Grant Awards
  - Allison Cleary, G3
    - DOD pre-doctoral traineeship
    - $110,212
  - Theresa Carr, G4
    - NIH F30
    - $158,937
  - Steven Steinway, G1
    - NIH F30
    - $161,474

Student News (cont.)

- Darrin Bann, G3
  - NIH/NCI F30
  - $162,072
- Emilie Muelly, M3
  - RSNA Research Medical Student Grant
  - $6,000

- Recent Travel
  - Gene Cozza
    - Cancer Immunology & Chemotherapy Buidling on Success, Bethesda, MD
    - Translational Research Cancer Center Consortium, Seven Springs, PA
  - Theresa Carr
    - AACR, Chicago, IL
- Graduate Student Research Forum (Hershey) participants
  - Oral Presentations
    - Shane Lloyd, G2
    - Olivier Noel, M1
    - Darrin Bann, G3
  - Poster Presentations
    - Gene Cozza, G2
    - Katrina Heyrana, G2
    - Steven Steinway, G1
    - Theresa Carr, G4
- Penn State Pediatric Research Day
  - Bill Su presented a poster

During 2011-2012, 22 publications and over $500,000 in research funding has been obtained by MD/PhD students

Recent Publications (2011-2012)

Lumsden KR, Nelson AM, **Dispenza MC**, Gillilan KL, Cong Z, Zaenglein AL, Thiboutot DM (2011) Isotretinoin increases skin surface levels of neutrophil gelatinase-associated lipocalin in patients treated for severe acne *Br J of Derm* [Epub April 2011] PMID: 21466536

Dispenza MC, Wolpert EB, Gilliland KL, Dai JP, Cong Z, Nelson AM, Thiboutot DM (2012) Systemic Isotretinoin therapy normalizes exaggerated TLR-2-mediated innate immune responses in acne patients *J of Invest Dermatol* [Epub ahead of print] PMID: 22513780

Dispenza M, Craig T (2012) Discrepancies between guidelines and international practice in treatment of hereditary angioedema *Allergy and Asthma Proceedings* (in press)

Muelly ER, Berlin C (2011) Tourette Syndrome, Pregnancy, and Breastfeeding. In: Walkup J, Mink J, McNaught K (Eds) A Family's Guide to Tourette Syndrome. Tourette Syndrome Association (book chapter)

Pinzon-Guzman C, Zhang S S-M, and Barnstable CJ (2011) Specific Protein Kinase C Isoforms Are Required for Rod Photoreceptor Differentiation *J Neurosci* 31:18606-18617

Origanti S, Nowotarski SL, **Carr TD**, Sass-Kuhn S, Xiao L, Wang JY, Shantz LM (2012) Ornithine decarboxylase mRNA is stabilized in an mTORC1-dependent manner in Ras-transformed cells *Biochem J* 442(1):199-207 PMID: 22070140

Erickson-Ridout, K.K., Sun, D., Lazarus, P. Glucuronidation of the second-generation antipsychotic clozapine and its active metabolite N-desmethylclozapine. Potential importance of the UGT1A1 A$(TA)_7$TAA and UGT1A4 L48V polymorphisms. Accepted 3/23/12 Pharmacogenetics and Genomics.

Erickson-Ridout, K.K., Zhu, J., Lazarus, P. Olanzapine metabolism and the significance of the UGT1A4^{48V} and UGT2B10^{67Y} variants. Pharmacogenetics and Genomics. 2011, Sep;21(9):539-51.

Student News (cont.)

Publications (cont):

Huber-Keener KJ, Yang JM (2011) The impact of metabolic and therapeutic stresses on glioma progression and therapy. In CC Chen (Ed.), *Advances in the Biology, Imaging, and Therapies for Glioblastoma* (pp.23-52). Rejeka, Croatia: Intech Open Access Publisher ISBN 979-953-307-197-7

Cheng Y, Zhang Y, Zhang L, Ren X, **Huber-Keener KJ**, Liu X, Zhou L, Liao J, Keihack H, Yan L, Rubin E, Yang JM (2012) MK-2206, a novel allosteric inhibitor of Akt, synergizes with gefitinib against malignant glioma via modulating both autophagy and apoptosis *Mol Cancer Ther* 11:154-164 PMID: 22057914

Zhang Y, Cheng Y, Zhang L, Ren X, **Huber-Keener KJ**, Lee S, Yun J, Wang HG, Yang JM (2011) Inhibition of eEF-2 kinase sensitizes human glioma cells to TRAIL and down-regulates Bci-xL expression *Biochem Biophys Res Commun* 414:129-134 PMID: 21945617

Huber-Keener KJ, Liu X, Wang Z, Freeman W, Wu S, Planas-Silva M, Ren X, Cheng Y, Zhang Y, Vrana K, Liu CG, Yang JM, Wu R (2012) Differential gene expression in tamoxifen-resistant breast cancer cells revealed by a new analytical model of RNA-Seq data *PLoS One* (in revision)

Dluzen D, Li G, **Tacelosky D**, Moreau M, Liu DX (2011) Bcl-2 is a downstream target of ATF5 that mediates ATF5' pro-survival function in a cell type-dependent manner *JBC* 286(9):7705-13 PMCID: PMC3045024

Woll MP, De Cotiis Da, Bewley MC, **Tacelosky DM**, Levenson R, Flanagan JM (2011) Interaction between the D2 Dopamine Receptor and Neuronal Calcium Sensor-1 analyzed by fluorescence anisotropy *Biochemistry* 50(41): 8780-91 PMID: 21875085

Lloyd SA, Simske SJ, Bogren LK, Olesiak SE, Bateman TA, Ferguson VF (2011) Effects of Combined Insulin-Like Growth Factor 1 and Macrophage Colony-Stimulating Factor on the Skeletal Properties of Mice *In Vivo* 25(3):297-305 PMID: 21576402

Willey JS, **Lloyd SA**, Nelson GA, Bateman TA (2011) Ionizing Radiation and Bone Loss: Space Exploration and Clinical Therapy Applications *Clin Rev in Bone and Miner Metab* 9(1):54-62

Willey JS, **Lloyd SA**, Nelson GA, Bateman TA (2011) Space Radiation and Bone Loss *Gravit Space Biol* 25(1):14-21

Willey JS, **Lloyd SA**, Bateman TA (2012) Radiation Therapy-Induced Osteoporosis in Primer on the Metabolic Bone Diseases and Disorders of Mineral Metabolism, *98th Edition edited by Justin Jeffryews. John Wiley & Sons* (accepted)

Weston CL, Glantz MJ, Connor JR (2011) Detection of cancer cells in the cerebrospinal fluid: current methods and future directions *Fluids Barriers CNS* 3:8(1):14 PMCID: 3059292

LeBlanc F, Zhang D, Liu X, Loughran Jr. TP (2012) LGL leukemia: From dysregulated pathways to therapeutic targets *Future Oncology* (submitted)

Su XW, Feng Q, Undar A (2011) Brain Protection During Pediatric CPB *Chin J ECC* 9(1): 40-47

Su XW, Guan Y, Barnes M, Clark JB, Myers JL, Undar A (2011) Improved cerebral oxygen saturation and blood flow pulsatility with pulsatile perfusion during pediatric cardiopulmonary bypass *Ped Res* 70(2):181-85

Program Updates

- Thesis Committee meeting requirement
  - Effective April 1, 2012, MD/PhD students are required to have a thesis committee meeting every 6 months
  - MD/PhD students must complete the newly created committee form after the meeting
- Joint ESM MD/PhD Program
  - Beginning with the Fall 2012 semester, MD/PhD students will be able to choose this joint program with ESM which includes shared credits between the medical and graduate schools
- Schreyer Honors College Early Assurance Program Summer Research Internship
  - Beginning summer 2012; follows the SURIP schedule
  - 2 students chosen
    - Kristin Lambert
    - Abigail Talbert
  - Spend ½ day per week with a preceptor in clinic
    - Cynthia Whitener
    - Kathleen Julian
    - Diane Thiboutot
    - Dennis Gingrich
  - Research labs
    - Keith Cheng
    - Leslie Parent

Training Faculty/Steering Committee News

- Recently added Aaron Lukacher, MD, PhD to our Steering Committee to replace C. Barth Rountree, MD.
  Aron E. Lukacher, MD, PhD, is professor and chair of the Department of Microbiology and Immunology, succeeding Richard Courtney, Ph.D., who retired at the end of 2011.

  Dr. Lukacher was previously professor of pathology and laboratory medicine at Emory University School of Medicine, where he held clinical appointments in cardiac pathology and autopsy services. He is a distinguished physician-scientist whose virology and immunology research has been continuously funded by the NIH since 1996. His research focuses on the immune response to oncogenic DNA viruses, with a particular interest in the mechanisms controlling induction, regulation, and maintenance of immunosurveillance against persistent viral infections and defining mechanisms of diseases caused by polyomaviruses in humans. In 1994, Lukacher joined the faculty of Emory University School of Medicine, where his responsibilities included serving as co-director of the MD/PhD program and as director of the graduate program in immunology and molecular pathogenesis. He has served on numerous review panels and study sections for the NIH and other organizations, and serves on the editorial boards of Viral Immunology and Biology Direct, and is a manuscript reviewer for more than a dozen other journals. Lukacher is a frequent invited speaker both nationally and internationally and has twice spoken on the Penn State Hershey campus as an invited guest lecturer in the Department of Microbiology and Immunology.

Future Plans

- MSTP application
  - target date spring 2013

Program Leadership

- Steering Committee
  - Co-Directors
    - Robert Levenson, PhD
    - Leslie Parent, MD
  - Jennifer Baccon, MD, PhD
  - Keith Cheng, MD, PhD
  - James Connor, PhD
  - Edward Gunther, MD
  - Kenneth Keiler, PhD (UP)
  - Aaron Lukacher, MD, PhD
  - Daniel Notterman, MD
  - Melissa Rolls, PhD (UP)
  - Steven Schiff, MD, PhD (UP)
  - Christopher Siedlecki, PhD
  - Diane Thiboutot, MD
  - John Wills, PhD
- Internal Advisors
  - Chair
    - Michael Verderame, PhD
  - Wafik El-Deiry, MD, PhD
  - Ross Hardison, PhD (UP)
  - Thomas Loughran, MD
  - Barbara Miller, MD
  - Scott Selleck, MD/PhD (UP)
  - Lawrence Sinoway, MD
  - Judith Todd, PhD (UP)
- External Advisors
  - Lawrence Brass, MD, PhD, University of Pennsylvania
  - Michael Frohman, MD, PhD, SUNY Stony Brook
  - M. Kerry O'Banion, MD, PhD, University of Rochester
  - *Next meeting date has been set for October 30, 2012*
- Administrator
  - Barbara Koch

Annual MD/PhD Retreat

- Held March 17 & 18 at The Nittany Lion Inn, State College, PA
- Attended by MD/PhD students, MD/PhD Steering Committee and Training Faculty

MD/PhD Annual Retreat, 2012