E-MAIL NEWSLETTER

Penn State MD/PhD Program

9/5/2012

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Welcome Incoming Class of 2012!

- **Max Castruita** – rotated with Mark Kester, PhD

- **Eunice Chen** – continued her research at UCSD

  Publications
  - Yoon IS, **Chen E**, Busse T, Repetto E, Lakshmana MK, Koo EH, Kang DE (2007) Low-density lipoprotein receptor-related protein promotes amyloid precursor protein trafficking to lipid rafts in the endocytic pathway *FASEB*
  - Greninger AL, **Chen EC**, Sittler T, Scheinerman A, Roubinian N, Yu G, Kim E, Pillai DR, Guyard C, Mazzulli T, Isa P, Arias CF, Hackett J, Schochetman G, Miller S, Tang P, Chiu CY (2010) A metagenomic analysis of pandemic influenza A (2009 H1N1) infection in patients from North America *PLoS ONE* 5(10):e13381
  - Chiu CY, Greninger AL, **Chen EC**, Haggerty TD, Parsonnet J, Delwart E, Derisi JL, Ganem D (2010) Cultivation and serological characterization of a human Theiler's-like cardiovirus associated with diarrheal disease *J Virol* 94(9):4407-14 PMCID: PMC2863762
  - **Chen EC**, Yagi S, Kelly KR, Mendoza SP, Maninger N, Rosenthal A, Spinner A, Bales KL, Schnurr DP, Lerche NW, Chiu CY (2011) Cross-species transmission of a novel adenovirus associated with a fulminant pneumonia outbreak in a new world monkey colony *PLoS Pathogens*Jul;7(7):e1002155. Epub 2011 Jul 14. Erratum in: PLoS Pathog. 2011 Aug;7(8)
  - **Chen EC**, Miller SA, DeRisi JL, Chiu CY (2011) Using a pan-viral microarray assay (Virochip) to screen clinical samples for viral pathogens *J Vis Exp* Apr 27 (50). pii: 2536 doi: 10.3791/2536 PMCID: PMC3169278

- **RJ Dhami** – rotated with Akif Undar, PhD

  Publications
  - Wai WS, **Dhami RS,** Gelaye B, Girma B, Lemma S, Berhane Y, Bekele T, Khali A, Williams MA (2011) Comparison of Measures of Adiposity in Identifying Cardiovascular Disease Risk Among Ethiopian Adults Obesity *[Epub ahead of print]*

Welcome Incoming Class of 2012! (Cont.)

- **Yifu Ding** – rotated with Wafik El-Deiry, MD, PhD

  Publications
  - Zbijewski W, De Jean P, Prakash P, **Ding Y**, Stayman JW, Siewerdsen JH (2011) A dedicated cone-beam CT system for musculoskeletal extremities imaging: Design, optimization, and initial performance characterization *Med Phys* 38, 4700
  - Prakash P, Zbijewski W, Grace J, Gang J, **Ding Y**, Stayman JW, Yorkston J, Carrino JA, Siewerdsen JH (2011) Task-Based Modeling and Optimization of a Cone-Beam CT Scanner for Musculoskeletal Imaging *Med Phys (accepted)*

- **Nicole Gong** – continued her research at Yale

- **Sarah Jefferson** – rotated with Faoud Ishmael, MD, PhD

  Publications
  - Lancaster TS, **Jefferson SJ**, Korazick DH (2011) Local Delivery of a PKCepsilon-activating Peptide Limits Ischemia Reperfusion Injury in the Aged Female Rat Heart *Am J of Physiology Regulatory, Integrative & Comparative Physiology* 301(5):R1242-9
  - Tuckow AP, **Jefferson SJ**, Kimball SR, Jefferson LS (2011) Simvastatin represses protein synthesis in the muscle-derived CC cell line with a concomitant reduction in eukaryotic initiation factor 2B expression *Am J of Physiology Endocrinology & Metabolism* 300(3):E564-70

This year's class consists of 9 students and has published 12 articles

- **Brian Kinsman** – rotated with James Connor, PhD

  Publications
  - Khan SA, Nanduri J, Yuan G, **Kinsman B**, Kumar GK, Joseph J, Kalyanaraman B, Prabhakar NR (2011) NADPH oxidase 2 mediates intermittent hypoxia-induced mitochondrial complex I inhibition: relevance to blood pressure changes in rats *Antioxidants & Redox Signaling*14(4):533-542
  - Peng YJ, Nanduri J, Khan SA, Yuan G, Wang N, **Kinsman B**, Vaddi DR, Kumar GK,, Garcia JA, Semenza GL, Prabhakar NR (2011) Hypoxia-inducible factor 2 (HIF-2) heterozygous-null mice exhibit exaggerated carotid body sensitivity to hypoxia, breathing instability, and hypertension *Proc Natl Acad Sci* 108(7):3065-70

- **Derek Nye** – rotated with Jose Stoute, MD

- **Aditya Pisupati** – rotated with Timothy Jegla, PhD

Entering Class of 2011 Research Advisor & Graduate Program Choices

- Rich Albertson
  - Melissa Rolls, PhD (University Park)
    - Neuroscience
- Tulasi Khandan
  - Thomas Loughran, MD
    - Biomedical Sciences
- Michal Kidacki
  - Kevin Staveley-O'Carroll, MD, PhD
    - Biomedical Sciences
- Ron Panganiban
  - Faoud Ishmael, MD, PhD
    - Biomedical Sciences
- Yanli Wang
  - Istvan Albert, PhD and Colin Barnstable, PhD
    - Bioinformatics & Genomics

This year's G1s research program choices included Neuroscience, Biomedical Sciences, and Bioinformatics & Genomics

Student Awards

- Jay Jin, graduated May 2012; advisor was Robert Levenson, PhD
  - Dean's Award for Graduate Education
  - John W. Kreider Award for research and academic excellence
- Travel Awards
  - Melanie Dispenza, M4; advisor is Diane Thiboutot, MD
    - Travel Award to APSA Conference, Chicago, IL
    - Travel Award for AAAAI Conference, Orlando, FL
  - Carolina Pinzon-Guzman, M4; advisor is Colin Barnstable, PhD
    - Travel Award to the MD/PhD National Student Conference, Keystone, CO
  - Kathryn Erickson-Ridout, M4; advisor is Philip Lazarus, PhD
    - The Doctors Kienle Center for Humanistic Medicine Grant for Underserved Medicine for Global Health Elective in Nepal
    - Graham and Elizabeth Jeffries International Health Fund Scholarship for Global Health Elective in Nepal
  - Darrin Bann, G3; advisor is Leslie Parent, MD
    - Travel Award to the MD/PhD National Student Conference, Keystone, CO
- Grants/Funding
  - Bill Su, G2; advisor is James Connor, PhD
    - CTSI TL1 career development award
      - $65,000 for 18 months
  - Shane Lloyd, G3; advisor is Henry Donahue, PhD
    - NASA/NSBRI grant (Co-Investigator)
      - $1.2 million (2012-2014)

Student Travel (May – August, 2012)

- Darrin Bann, G3
  - Cold Spring Harbor, NY
  - Retrovirus meeting
  - Keystone, CO
  - MD/PhD National Student Conference
- Allison Cleary, G3
  - Lucca, Italy
  - Gordon Research Conference
- Carolina Pinzon-Guzman, M4
  - Bar Harbor, MN
  - Jackson's Lab Human Medical Genetics Symposium
  - Keystone, CO
  - MD/PhD National Student Conference

6 travel awards, 5 publications and over $1.8million in research funding has been obtained by MD/PhD students

Schreyer's Honors College Summer Research Internship/MD/PhD Early Assurance Program

New for the summer of 2012, 2 students from the Schreyer's Honors College at Penn State main campus were chosen to participate in a research and clinical experience during the summer. Each student spent time in a research lab and also in clinic to learn more about our MD/PhD Program. These 2 students will be invited back again next summer and in addition to them, 2 new students will be chosen. This summer, our 2 students were:

- Abby Talbert
  - Lab – Keith Cheng, MD, PhD
  - Clinical Experience – Dennis Gingrich, MD and Diane Thiboutot, MD
- Kristin Lambert
  - Lab – Leslie Parent, MD
  - Clinical Experience – Cynthia Whitener, MD and Kathleen Julian, MD

Entering Class visit to University Park

On July 13, 2012, our new students traveled to State College for research talks and a campus tour to acquaint them with our main campus and faculty research opportunities at University Park

Recent Student Publications (June – August, 2012)

- **Bann DV**, Parent LJ (2012) Application of Live-Cell RNA Imaging Techniques to the Study of Retroviral RNA Trafficking *Viruses* 4(6):963-979

- 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

- **Hasanali Z**, Sharma K, Epner E. (2012) Flipping the cyclin D1 switch in mantle cell lymphoma *Best Pract Res Clin Haematol* 25(2):143-152

- Fleming JM, Miller TC, **Kidacki M**, Ginsburg E, Stuelten CH, Stewart DA, Troester MA, Vonderhaar BK (2012) Paracrine interactions between primary human macrophages and human fibroblasts enhance murine mammary gland humanization *in vivo Breast Cancer Res* 14(3):R97 [Epub ahead of print]

- **Su XW**, Lee SY, Mitchell RM, Stephens HE, Simmons Z, Connor JR (2012) H63D HFE polymorphisms are associated with decreased SOD1 expression in the muscle of amyotrophic lateral sclerosis patients *J Muscle and Nerve* (submitted)

Program Events

- A Welcome Picnic was held on Sunday August 12 at the home of Dr. Parent to welcome our new students. Food, conversation, swimming & fun was enjoyed by all. Attendance included MD/PhD students & their guests, MD/PhD advisors and training faculty. Plenty of sunshine helped to make the day very enjoyable and pleasant.

Training Faculty/Steering Committee News

Steering Committee Addition:

- Melik Demirel, PhD is associate professor in Engineering Science and Mechanics and Bioengineering at University Park. His research includes understanding the nanoscale interfaces of biological and synthetic systems for designing novel engineering materials.

Training Faculty/Steering Committee News (Cont.)

Training Faculty additions:

- Reka Albert, PhD is professor of physics and biology at University Park. Her research includes biological physics and network modeling

- James Broach, PhD is professor & chair of Biochemistry & Molecular Biology, succeeding Judith Bond, Ph.D., who retired in fall of 2011. His research includes understanding cell-environment interactions and cellular regulation at the molecular level, using the yeast Saccharomyces cerevisiae as a model system.

- Kevin Staveley-O'Carroll, MD, PhD is professor of surgery/oncology; microbiology & immunology. His research includes therapeutic strategy for hepatocellular carcinoma by combination of chemotherapy with immunotherapy.

Program Leadership

- Steering Committee
  - Co-Directors
    - Robert Levenson, PhD
    - Leslie Parent, MD
  - Jennifer Baccon, MD, PhD
  - Keith Cheng, MD, PhD
  - James Connor, PhD
  - Melik Demirel, 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

Future Events

- Reminder: External Advisors will be visiting on October 30, 2012 to review our MD/PhD Program. Students and faculty will be asked to meet with them sometime during that day.
- 2013 MD/PhD Retreat
  - April 6 & 7, 2013
  - University Park
    - Nittany Lion Inn
    - Millennium Science Complex