



From the Director:

It seems we have arrived here in the final weeks of summer. It is my hope that you have had time to recharge your batteries, finish some of those tasks (or publications!) that had been put on the back burner during the academic year, and prepare for the upcoming year. As mentioned in our last newsletter as an Institute we will be focusing this year on a number of areas, with more detail provided below:

- Collaborations with departments in an effort to recruit faculty, and perhaps more ambitiously, senior faculty will be a main focus of this academic year. We have received information from a number of you regarding department recruiting, please keep the information coming.
- As you can see below, we will be hosting a 1-day symposium for postdocs and graduate students, faculty are certainly welcome and encouraged to attend. This is part of a larger initiative to increase the support and opportunity for training through the Institute. While this is the first endeavor, we expect to build our student/postdoc experiences throughout the school year.
- This past March (2016) PI4D held a "Kickoff Symposium" to expose members to the variety of research that is a part of the Institute. Our future plans include two Annual Symposiums, with one scheduled to be in the fall semester with external participation (which is not the case with the Internal Spring Symposium).
- Seminars: in order to promote interdisciplinary collaborations, we will team up with departments scheduled to host seminars with speakers who align with our program area. If you would like to propose a speaker and/or need help with the visit, please contact us.
- Equipment investments - we have already purchased a mass spec to reside in the Bindley Bioscience Center, and will continue to grow the facilities available to faculty.

Finally, we have done our best to gather the students and postdocs associated with PI4D. If you feel someone in your lab is missing, please have them reach out to PI4D@purdue.edu to be added to our

list.

On a personal note, I stepped down on July 31st as department head of Biological Sciences. After 12 years as head, I am looking forward to re-engaging my laboratory and building on our research progress. I am most enthusiastic about focusing my efforts as Director of PI4D and making this a world-class institute!

- Dr. Richard Kuhn
Director, PI4D

Please join us for a Graduate Student/Postdoc Symposium on **Wednesday, August 10th** in Burton Morgan. The symposium will consist of presentations by students/postdocs and faculty/professional staff to provide career development information as well as break out sessions to allow time for more in-depth questions and discussion. The agenda can be found below. Please contact us at pi4d@purdue.edu with any questions.

9:00 -9:15	Breakfast and Check In
9:15-9:45	Intro to PI4D and Program Areas
9:45 – 10:15	Fellowship/Grant Opportunities for Graduate Students: What you should be applying for?
10:15 – 10:30	Questions and Coffee Break
10:30 – 11:30	10:30 – Calvin (Nic) Steussy - Developing an antibiotic effective against multi-drug resistant bacteria 10:50 – Heather Osswald - Probing Lipophilic Adamantyl Group as the P1-Ligand for HIV-1 Protease Inhibitors: Design, synthesis, protein x-ray structural studies, and biological evaluation 11:10 – Bikash Shakya - Anchoring Plasmodium falciparum exported proteins to erythrocyte cytoskeleton and understanding their function
11:30 – 12:30	Lunch and Poster Session
12:30 – 1:45	Breakout groups with assigned mentor to discuss fellowships/grant options and a definitive course of action/timeline
1:45 – 2:45	1:45 - Kai-Chih Huang - Stimulated Raman Scattering Flow Cytometry for Label-free Single-Particle Analysis 2:05 - Chi Zhang - Spatial-temporal dynamics of lipid droplets as a new marker to differentiate cellular states 2:25 - Rosemary Morman - Identification of BATF target genes critical to its function in immune responses
2:45 – 3:00	Closing remarks & Announcement of Best Poster Winners

Did you know?

Located in the sub-basement of Whistler, the Purdue University Genomics Core Facility provides several services for Purdue University researchers, as well as external contacts. The core facility currently provides [high throughput sequencing](#), [low throughput sequencing](#), [Affymetrix arrays](#) and [informatics](#) to support these services. If you would like more information, please [visit their website](#).

Funding Opportunitites:

NIH Biological Comparisons in Patient-Derived Models of Cancer (U01) The purpose of this FOA is to encourage applications wherein similarities and differences in the underlying biological mechanisms that drive cancer phenotype and response to perturbations between two or more patient-derived models of cancer originating from a common patient sample are delineated and compared. Deadline: September 14

NIH Resource-Related Research Projects for Development of Animal Models and Related Materials (R24) This FOA encourages grant applications aimed at developing, characterizing or improving animal models of human diseases; improving access to data and information about or generated from the use of animal models of human disease; or improving diagnosis and control of diseases of laboratory animals. The animal models and related materials to be developed must address the research interests of two or more of the categorical NIH Institutes and Centers (ICs). Deadline: September 25.

NIH Initiative to Maximize Research Education in Genomics: Diversity Action Plan (R25) The overarching goal of this program is to support educational activities that enhance the diversity of the biomedical, behavioral and clinical research workforce in genomics. This FOA seeks to expose underrepresented students at the undergraduate, post-baccalaureate and graduate levels to the foundational sciences relevant to genomics to enable them to pursue careers that span all areas of interest to NHGRI-genome sciences, genomic medicine and genomics and society. Deadline: September 25

NIH Informatics Methodology and Secondary Analyses to Explore Shared Immunology Study Data in ImmPort (UH2) The goals of this FOA are to support the development of new or improved informatics tools and methods for the reuse of shared data in the immunology study repository, ImmPort; and to support secondary analyses of existing immunology datasets to address basic and clinical immunology questions. Deadline: October 4.

NIH The Role of Mobile Genetic Elements in Cancer This FOA encourages applications to investigate mechanisms regulating the expression and activity of mobile genetic elements, including long terminal repeat (LTR) and non-LTR retroelements, in cancer. Research proposals should specifically investigate mechanisms regulating the expression and activity of mobile genetic elements in the context of cell transformation and assess the impact of their activity on tumor heterogeneity, cancer evolution, and response to therapy.

· *R01* Deadline: October 5

· *R21* Deadline: October 16

NIH Metabolic Reprogramming to Improve Immunotherapy The overall goal of this FOA is to encourage grant applications to (a) generate a mechanistic understanding of the metabolic processes that support robust anti-tumor immune responses in vivo, (b) determine how the metabolic landscape of the tumor microenvironment affects immune effector functions, and (c) then use this information to manipulate (reprogram) the metabolic pathways used by the tumor, the immune response, or both to improve cancer immunotherapy.

· *R01* Deadline: October 5

· *R21* Deadline: October 16

NIH Exploratory/Developmental Investigations on Primary Immunodeficiency Diseases (R21) This FOA will support innovative exploratory/developmental investigations on primary immunodeficiency diseases focusing on ex vivo studies with human specimens and on studies with current or new animal models including novel clinical strategies for detecting, identifying the molecular basis of, or developing innovative therapies for primary immunodeficiency diseases. In addition, this FOA aims to encourage analyses of clinical data and samples maintained in primary immunodeficiency registries, consortium databases and repositories to address questions relevant to primary immunodeficiency research. Deadline: October 16

NIH Small Grants on Primary Immunodeficiency Diseases (R03) FOA will support small grants on primary immunodeficiency diseases focusing on ex vivo studies with human specimens and on studies with current or new animal models including novel clinical strategies for detecting, identifying the molecular basis of, or developing innovative therapies for primary immunodeficiency diseases. The R03 is intended to support small research projects that can be carried out in a short period of time with limited resources. Deadline: October 16

NIH Systems Approach to Immunity and Inflammation (U19) This FOA seeks to develop a comprehensive understanding of innate and adaptive immune responses triggered by pathogens, adjuvants, or vaccines using a systems biology approach. The basis of the research program will be to conduct forward genetic screens of mutant or genetically diverse mice, combined with systems level analysis, to identify previously unappreciated key immune regulatory genes, signaling pathways, or mechanisms; and will include validation of these pathways in human cells and tissues. Deadline: November 2.

Send us your images and news stories! Images and stories can be deposited [here](#), or email us at pi4d@purdue.edu

