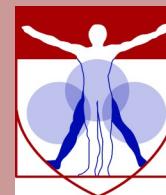


# Musculoskeletal Messenger



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*University of Pennsylvania Penn Center for Musculoskeletal Disorders*

## **A Look Back at the PCMD Annual Scientific Symposium – November 13, 2013**

We are thrilled to announce that we had 246 registrants for the 10th Annual Penn Center for Musculoskeletal Disorders Scientific Symposium in the BRB Auditorium/Lobby on November 13, 2013!

The keynote speaker, Joan A. McGowan, Ph.D., Director, Division of Musculoskeletal Diseases, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) at the National Institutes of Health (NIH) gave a well-received lecture titled “Managing Science and Innovating in Challenging Times.” Symposium attendees enjoyed several scientific presentations from new Cen-

ter members Drs. Joshua F. Baker, Patricia A. Miguez and Hyun-Duc Nah-Cederquist and PCMD Pilot Grant recipients Drs. Struan Grant, Jason A. Burdick and James Carey. While at the symposium, attendees had the opportunity to view 71 posters which were judged in five categories. The following poster winners received prizes:

Abhishek Chandra (1st place), Allison Altman (2nd place), and Corinne Rigglin (3rd place) for their winning posters in the Imaging Category; Dave Dingal (1st place), Brianne Connizzo (2nd place), and Tristan Driscoll (3rd place) for their winning posters in the

Biomechanics Category; Joe Swift (1st place), Michael Convente (2nd place), and Tarapore Rohinton (3rd place), for their winning posters in the Molecular Profiling Category; Chantal de Bakker (1st place), Rebekah Decker (2nd place), and Maria Elena Candela (3rd place) for their winning posters in the Histology Category; Natalie Shainsky (tied 1st place), Julianne Holloway (tied 1st place), and Agnese di Rocco (3rd place), for their winning posters in the Miscellaneous Category. Pictures from the Symposium are available at [https://www.med.upenn.edu/pcmd/Pictures\\_2013.shtml](https://www.med.upenn.edu/pcmd/Pictures_2013.shtml)

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If you have any news or information that you would like included in the next issue of this newsletter, please email us at:  
[pcmd@mail.med.upenn.edu](mailto:pcmd@mail.med.upenn.edu)

## **PCMD Pilot and Feasibility Grant Program Opportunity**

The Penn Center for Musculoskeletal Disorders is once again accepting applications for its Pilot and Feasibility Grant Program. Submissions should be related to musculoskeletal tissue injury and repair which is the broad focus of the Center and Grants are only eligible for Full Members (if you are not a Full member but would like to become one, please contact us at [pcmd@mail.med.upenn.edu](mailto:pcmd@mail.med.upenn.edu)).

Pilot grants will be due on

February 28, 2014 with a planned start date of July 1, 2014 and we are expecting to award 3 new grants in this round. At least 1 of these grants will be awarded at \$50,000 per year. This grant will be co-sponsored by the IRM Program in Musculoskeletal Regeneration.

Submissions should be related to musculoskeletal tissue injury and repair which is the broad focus of the Center. For more information on our Cores and Center in general,

please see our web site at [www.med.upenn.edu/pcmd/Eligibility](http://www.med.upenn.edu/pcmd/Eligibility)

- Only Full Members are eligible. If you are not a member, please visit our website at [www.med.upenn.edu/pcmd/memberinfo.shtml](http://www.med.upenn.edu/pcmd/memberinfo.shtml)

• Categories of applicants are:

- 1) Established investigators with a proposal to test the feasibility of a new or innovative idea  
*(continued on page 2)*

**Pilot Grant  
Deadline  
02/28/14**

## Pilot and Feasibility Grant Program (cont'd)

- in musculoskeletal tissue injury and repair representing a clear and distinct departure from their ongoing research
- 2) Established investigators with no previous work in musculoskeletal tissue injury and repair interested in testing the applicability of their expertise on a problem in this area, and
  - 3) New investigators without significant extramural grant support as a Principal Investigator to develop a new project.
- Pilot and Feasibility Grants should use at least one of the Center's Research Cores.
    - Pilot project awardees are eligible for one year, with a second year to be considered (budgets will be for \$25-50,000 per year and timelines should be for one or two years).
    - A second year of funding, the dollar amount of which would only be for up to half the year one budget, will be considered based on the progress report submitted after the first year of funding and funding availability in the Center. Please note that second year funding will most often not be awarded, and when awarded, will be done so primarily to new investigators; second year funding to senior investigators will be quite rare.
  - It is expected that these Pilot grants will lead to funding through other independent, extramural mechanisms. Therefore, the likelihood of future extramural funding will enter into the evaluation of these proposals. For format guidelines, please visit our website [www.med.upenn.edu/pcmd/pilotgrants.shtml](http://www.med.upenn.edu/pcmd/pilotgrants.shtml)

## PCMD FUNDS AVAILABLE: Summary Statement Driven Funding Request

If you have a recent summary statement from an NIH grant (eligible NIH mechanisms include all "R" grants such as R03, R21 and R01 and "P" grants such as P20, P50, P60 on their first submission – please inquire regarding eligibility of other proposal mechanisms) which requires you to run additional experiments, gather additional data, provide feasibility for an approach, or similar, we can provide small funds (\$1,000-\$15,000) with a very short turn-around time in order to allow you to complete these experiments and resubmit your proposal with the best chance of success. Requests for funding will be evaluated on a rolling basis and priority will be given to Assistant Professors with encouraging initial review priority scores better than ~30-35%. The format of the "Summary Statement Driven Funding Request", which is limited to one page, is as follows.

- ◇ Name of PI (must be a PCMD full member);
- ◇ Title of Project Request
- ◇ Specific Purpose of Request with Stated Outcome/Goal Referring Explicitly to the Summary Statement for Justification
- ◇ Research Design and Methods
- ◇ Budget with Brief Justification

Funding through this mechanism is available by submitting the one page proposal to [pcmd@mail.med.upenn.edu](mailto:pcmd@mail.med.upenn.edu).

## New Orthopaedic Research Club Sponsored by PCMD

We are pleased to announce the launch of Orthopaedic Research Club (ORC), supported by the PCMD. Musculoskeletal disorders and diseases are leading causes of disability in the United States and their resulting burden is expected to escalate in the next decade because of an aging population and our modern lifestyle. Traditionally, these diseases are studied at individual tissue levels, such as bone, cartilage, tendon, intervertebral disc, etc. However, research in the past decade has demonstrated the critical connection and interdependence of bone, joint, muscle, the immune and vascular systems and therefore, as research scientists, we are compelled to move beyond our individual small fields and collaborate with scien-

tists in other fields to gain more in-depth understanding of disease processes.

This club is being run as a platform for promoting cooperative interaction among investigators who engage in musculoskeletal research not only at the University of Pennsylvania but also in neighboring institutions. The club meets once in the middle of each month at 4-5pm except in the summer on the Penn campus. Invited regional speakers will give a 45-minute talk followed by an interactive discussion.

The next seminar titled, "Regeneration - ASK1, can it provide some answers?" will be delivered by Dr. Theresa Freeman, Associate Professor of Orthopaedic Surgery from Thomas Jefferson University on

February 26, 2014 at 4:00pm at CHOP Abramson Research Center (ARC) Room 124.

We appreciate your participation in ORC. Please send us your nominations for speakers. We particularly encourage self-nominations from postdoctoral fellows and graduate students as we have 2-3 spots for them in 2014.

### ORC Directors

Ling Qin, PhD ([qinling@mail.med.upenn.edu](mailto:qinling@mail.med.upenn.edu)),  
Motomi Enomoto-Iwamoto, DDS, PhD ([iwamotom1@email.chop.edu](mailto:iwamotom1@email.chop.edu)), and  
X. Sherry Liu, PhD. ([xiaoweil@mail.med.upenn.edu](mailto:xiaoweil@mail.med.upenn.edu)).

## Introducing New Imaging Core Director – Alex Wright, Ph.D. and New Imaging Associate Core Director – X. Sherry Liu, Ph.D.

Alex Wright, Ph.D., has been appointed Director of the Imaging Core. Dr. Wright is Associate Professor of Radiology, Deputy Director of the Laboratory for Structural NMR Imaging and Technical Director of the Micro-CT Scanner in the Radiology Department.

He received his Ph.D from Georgia Institute of Technology and completed his fellowship training in Functional MRI, Electrical Engineering, and Physics, Beckman Institute for Advanced Science and Technology, at the University of Illinois at Urbana-Champaign.

Dr. Wright brings significant experience and expertise to the Imaging Core. His own research is focused on identifying the development of micro-MRI and micro-CT hardware, acquisition strategies and quantitative methods for the purpose of imaging the microstructure of

biological tissues at cellular resolution. This includes the design and construction of novel and optimized radio-frequency and gradient coils for micro-MRI, and the development of quantitative image acquisition and analysis techniques for the characterization of tissue micro-architecture using both micro-MRI and micro-CT. Current focus is on developing micro-MRI methods for imaging the intervertebral disc *ex vivo* in order to measure collagen fiber architecture in the annulus fibrosus of the disc. In addition, micro-CT techniques are being developed for imaging and characterizing structural phenotypes in both soft-tissue and calcified specimens at extremely high resolution (1-10  $\mu\text{m}$  isotropic). Another research effort involves the design, construction and implementation of transmit-receive RF coils for *in vivo* MRI of bone in the human tibia, using a whole-body 7 Tesla MRI scanner.

X. Sherry Liu, Ph.D, has been appointed Associate Director of the Imaging Core. Dr. Liu is Assistant Professor of Orthopaedic Surgery.

Dr. Liu received her Ph.D. from Columbia University and completed her postdoctoral fellowship at Columbia University.

Dr. Liu's research is focused on biological processes in bone and on how they influence bone material, microstructural, and biomechanical properties with aging, disease, and therapies.

She uses state-of-the-art imaging, image analysis, and mechanical modeling techniques to explore the mechanisms affecting mechanical functions of skeletons at different length scales in both animal models and clinical investigations.

## PCMD Ingenuity Pathways Analysis Award Announcement

The Bioinformatics Group of the Penn Molecular Profiling Facility is pleased to announce that Lachlan Smith of the Med School and Co PIs Kurt Hankenson and Jaimo Ahn of the Vet and Med Schools are each recipients of 1 year of access to Ingenuity Pathways Analysis. Thanks to all who submitted applications for PCMD supported access.

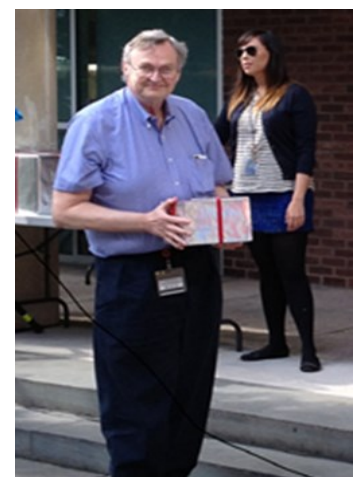
If you would like to include IPA in your own research program, please contact John Tobias ([jtobias@upenn.edu](mailto:jtobias@upenn.edu)) for available options and discounted pricing.

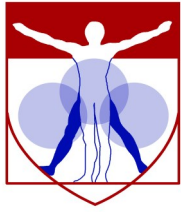
## An Announcement Regarding PCMD Member, Dr. Ellis Golub

Dr. Ellis Eckstein Golub, Professor of Biochemistry, and long-serving Chair (1996-2003) and later Interim Chair of the Department, passed away unexpectedly on January 22, 2014. Denis F. Kinane, BDS, PhD, Morton Amsterdam Dean released the following statement, "After joining the University of Pennsylvania School of Dental Medicine standing faculty as an Assistant Professor in 1977, Dr. Golub's career quickly flourished and he spent the next 37 years rising through the ranks as a productive scholar and valuable citizen of the School, University and scientific community. His warm personality and affable manner endeared him to all who knew him. He was an outstanding scien-

tist and teacher to all, I will always remember his constructive and thoughtful questions at research seminars. He told me a lot about his extended family to which he was completely devoted, and as we come to terms with how much he meant to us we cannot begin to imagine how dearly missed he will be by them. Our thoughts are with them."

*Pictured Ellis this summer receiving his 35th Year Service Award. Photo supplied by Angela Golub.*





**PENN**  
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**MUSCULOSKELETAL**  
**DISORDERS**



U.S. Department of Health  
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**Remember to include reference to support from the Center** in your abstracts and publications. Cite Grant NIH/NIAMS P30AR050950 from the National Institute of Arthritis and Musculoskeletal And Skin Diseases of the NIH. Support has also been provided by the Perelman School of Medicine at the University of Pennsylvania.

## Upcoming Events

### **Tuesday, March 25, 2014, 1:30-2:30pm/CRB Austrian Auditorium**

*Title: TBD*

James C. Iatridis, Ph.D.

Professor and Vice Chair for Orthopaedic Research

Mount Sinai School of Medicine

### **Tuesday, April 08, 2014, 1:30-2:30pm/CRB Austrian Auditorium**

*Dissecting the mechanisms of anabolic signaling in bone*

Fanxin Long, Ph.D.

Professor of Internal Medicine Endocrinology, Metabolism & Lipid Research

Washington University in Saint Louis

### **Tuesday, May 13, 2014, 1:30-2:30/CRB Austrian Auditorium**

*A translational approach to development of novel treatments for osteoarthritis-associated pain and joint tissue structural failure*

Gloria Matthews, D.V.M, Ph.D., DACVS

Senior Director of Orthopaedic/Regenerative Medicine Research & Early Development

Genzyme, a Sanofi Company

## **PCMD Annual Scientific Symposium Scheduled for November 12, 2014**

The PCMD is looking forward to the 11th Annual Scientific Symposium which will take place on November 12, 2014 in the BRB auditorium/lobby. The keynote speaker will be **Henry M. Kronenberg, M.D., Chief of the Endocrine Unit at the Massachusetts General Hospital and Professor of Medicine at the Harvard Medical School.** The symposium will include moderated scientific sessions, lunch, and poster sessions. The day will conclude with Dr. Kronenberg's lecture, the presentation of poster awards and a reception. Last year's event featured ~70 posters and ~250 registrants. We are expecting another successful event this coming November. Please mark your calendar and be sure to check the PCMD website in the upcoming months for more information.