



Musculoskeletal Messenger



University of Pennsylvania Penn Center for Musculoskeletal Disorders

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New Membership Categories and Center Email Address!

PCMD is pleased to announce that we are now offering membership to research staff, trainees, graduate students, fellows, postdoctoral researchers, affiliated Penn faculty, as well as non-Penn faculty located in Philadelphia or the immediate surrounding areas!

Membership Categories

• **Full Member**
Full-time faculty members of the University of Pennsylvania (tenure track, research track, clinician-educator track, academic clinician track) participating in research, education and/or clinical care related to musculoskeletal research are eligible for this membership category.

• **Associate Member**
Research staff, trainees, graduate students, fellows, postdoctoral researchers interested in musculoskeletal related research and educational programs of the PCMD are eligible for this membership.

• **Affiliate Member**
Faculty members outside of the University of Pennsylvania, but located in Philadelphia or the surrounding area, or faculty members who have an affiliated appointment with the University of Pennsylvania (not included in the Full Member category above such as an adjunct appointment) are eligible for this membership. For more information about membership, please visit our website at

www.med.upenn.edu/pcmd/memberinfo.shtml.

PCMD's new center email address is pcmd@mail.med.upenn.edu Please be sure to add us to your safe sender list!

We have also changed our Center Listserv to pcmdmail@lists.upenn.edu. If you have general announcements/funding opportunities/requests for help or similar that you would like to distribute to all PCMD members, please send to pcmdmail@lists.upenn.edu and it will automatically be distributed to our members!

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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

PCMD Pilot and Feasibility Grant Program

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) Pilot grants will be due on **March 30, 2012** with a planned start date of July 1, 2012 and we are expecting to award 3 new grants in this round.

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

• Only Full Members are eligible. If you are not currently a member, please visit our website at www.med.upenn.edu/pcmd/memberinfo.shtml

• Categories of applicants include: 1) Established investigators with a proposal to test the feasibility of a new or in-

novative idea 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.

(continued on page 4)

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.

Imaging Core Information

PCMD Imaging Core

Director: Felix Wehrli, PhD

Associate Director: Alexander Wright, PhD

Imaging is a critically important technology for clinical, translational, cadaveric, and in vivo studies of animal and human disease. Whether the ability to characterize tissue structure or visualize molecular markers in a non-invasive manner, advanced imaging methods have proven to be powerful tools specifically for musculoskeletal applications. A key objective of the PCMD Imaging Core is to

provide musculoskeletal researchers at the University of Pennsylvania access to technology for imaging of humans, large and small animals, and specimens, and to develop these technologies directed toward problems of musculoskeletal tissue injury and repair. The hope is to significantly enhance the environment and capabilities of researchers at Penn, leading to innovative and collaborative approaches to address musculoskeletal disorders. In light of this, we wish to remind the musculoskeletal research community at Penn of the availability of seed funds

for acquiring preliminary imaging data within the Imaging Core. Please contact Dr. Wehrli or visit the PCMD website for more information. Dr. Wright's core presentation on this Core at the PCMD Symposium can be found at www.med.upenn.edu/pcmd/imaging_core.shtml.

Excerpts from research partially supported by the PCMD Imaging Core are displayed below.

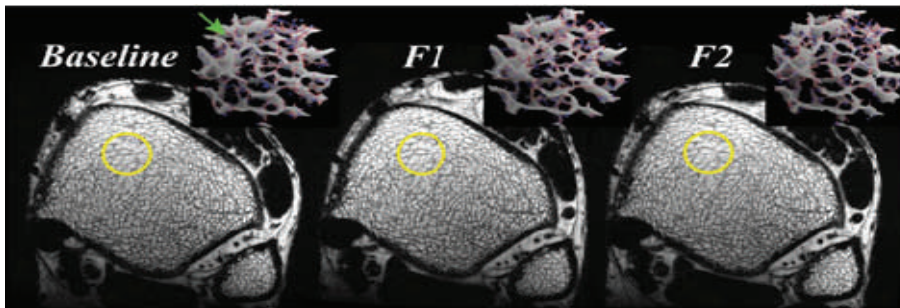


Fig. 1. MRI of trabecular bone morphology in patients. (YA Bhagat, CS Rajapakse, JF Magland, JH Love, AC Wright, MJ Wald, HK Song, FW Wehrli, Performance of μ MRI-Based Virtual Bone Biopsy for Structural and Mechanical Analysis at the Distal Tibia at 7T Field Strength, *J Magn Reson Imag* **33**, 372-381, 2011.)

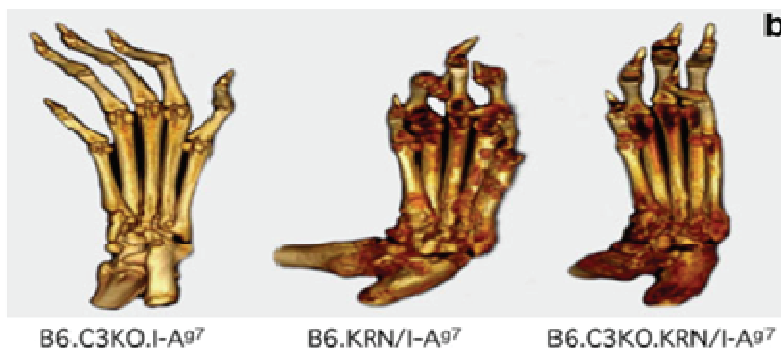


Fig. 2. Micro-CT of transgenic mice exhibiting rheumatoid arthritis. (PY Tsao, V Arora, MQ Ji, AC Wright, RA Eisenberg, KRN/I-Ag7 Mouse Arthritis Is Independent of Complement C3, *J Clin Immunol* **31**, 857-863, 2011.)

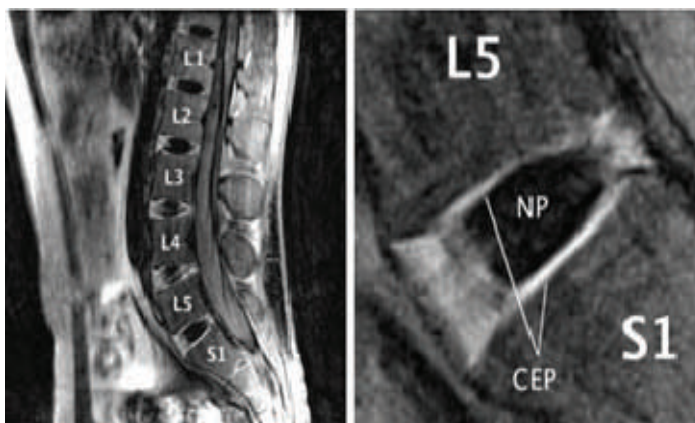


Fig. 3. MRI of the intervertebral disc cartilaginous endplate. (AC Wright, SM Moon, JH Yoder, EJ Vresilovic, DM Elliott, In Vivo T_1 -Selective MRI of the Intervertebral Disc Cartilaginous Endplate, *PCMD 8th Annual Scientific Symposium*, Philadelphia, 2011.)

Molecular Profiling Core Information

PCMD Molecular Profiling Core

Director: Don Baldwin, PhD

Associate Director: John Tobias, PhD

The Molecular Profiling Facility provides an integrated set of services for DNA and RNA profiling. These services are delivered by experienced genomics professionals, including a bioinformatics staff specializing in the analysis of large genomics data sets. Clients benefit from consultations and training available throughout their projects, including during experimental design and budget development, sample accrual, quality control assays and lab work, data management and analyses, and manuscript preparation. The Facility supports quantitative RNA profiling using microarrays, real-time PCR, massively parallel sequencing, Sequenom assays, and Fluidigm custom profiling. DNA profiling of custom panels of sequence polymorphisms are conducted by quantitative PCR, Sequenom assays, and Illumina GoldenGate genotyping, while whole-genome assays are available on Affymetrix SNP GeneChip, Illumina Infinium and sequencing platforms. Other services using these platforms include microRNA profiling, epigenetic DNA assays, and translational molecular diagnostics for clinical re-

search. The integration of these services facilitates gene discovery, functional characterization, biomarker identification, and other research efforts to understand the molecular biology underlying phenotypes.

Services

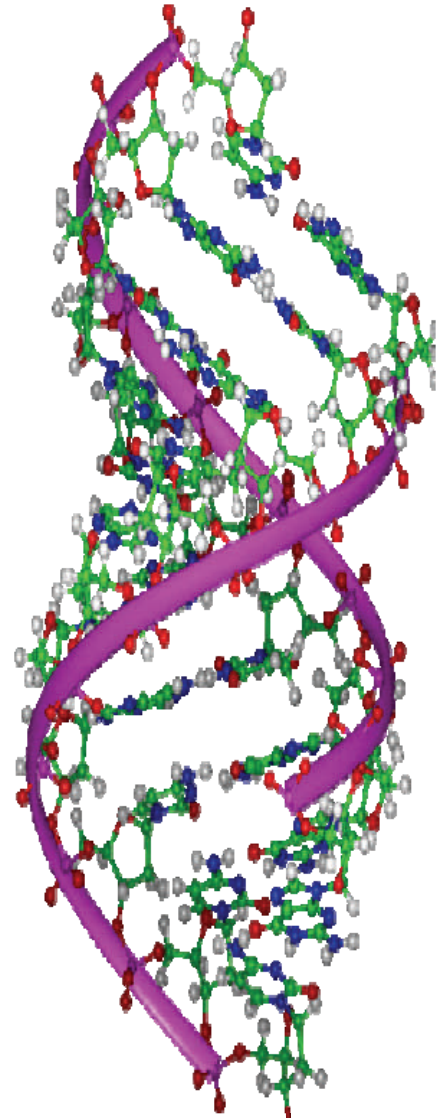
- ◇ DNA/RNA Extraction
- ◇ Amplification and Labeling
- ◇ Microarray Processing
- ◇ RNA and DNA GeneChips
- ◇ Short Tag Sequencing
- ◇ Bioinformatics
- ◇ Custom SNP Genotyping
- ◇ Genomic SNP Genotyping

Fees

Charges are based on the services requested and seed funding is available within the Core to support initial projects. Please check our website or contact the Facility to discuss prices for specific projects. Typical projects submitting total RNA for Affymetrix profiling should budget \$175 per GeneChip and \$350 per RNA sample to be processed.

Consultation

All new projects are required to begin with a free consultation with the Director or a Technical Director so that experimental design, technology options, and budgets can be discussed. Please email or call Angela Sakrison to schedule: sakrison@upenn.edu, 215-746-8157.



PCMD Annual Scientific Symposium Scheduled for November 14, 2012

The PCMD is looking forward to the 9th Annual Scientific Symposium which will take place on November 14, 2012.

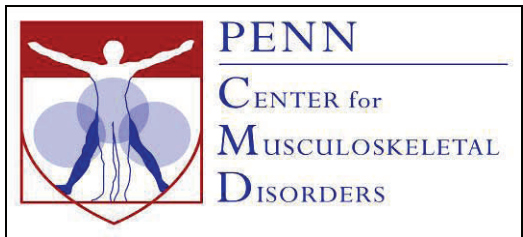
The keynote speaker will be Constance R. Chu, M.D., Albert B. Ferguson, Jr. MD Endowed Chair in Orthopaedic Surgery Professor; Vice Chairman for Trans-



lational Research; and Director, Cartilage Restoration Center at The University of Pittsburgh. Dr. Chu is going to speak on Cartilage Repair and Regeneration.

The symposium will include a continental breakfast, moderated scientific sessions, lunch and poster sessions. The day will conclude with Dr. Chu's lecture and the presentation of poster awards. Last year's event featured approximately 50

posters and almost 200 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



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Continuation of Pilot and Feasibility Grant Program from page 1

- Pilot project awardees are eligible for one year, with a second year to be considered (budgets will be for \$20-35,000 per year and timelines should be for one or two years). The 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.
- The 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 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.



U.S. Department of Health
and Human Services

Supported by the



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, February 28, 2012, 1:00-2:00pm/BRB 251

The Carpus: the Beauty and the Beast of the Upper Extremity

J.J. Trey Crisco, Ph.D.
Henry Frederick Lippitt Professor of Orthopaedic Research, Director Bioengineering Laboratory, Brown University and Rhode Island Hospital

Tuesday, March 27, 2012, 1:00-2:00pm/BRB 251

Magnetic Resonance Imaging of Short T2 Tissues

Graeme Bydder, MB, ChB
Professor of Radiology
University of California, San Diego

Tuesday, April 24, 2012, 1:00-2:00pm/BRB 251

The Role of the Osteocyte in Muscle-Bone Crosstalk

Lynda F. Bonewald, Ph.D.
Interim Vice Chancellor for Research and Curators Professor
University of Missouri at Kansas City

Tuesday, May 29, 2012, 1:00-2:00pm/TBA

Extracellular Microfibrils: Structural and Instructive Regulators of Bone and Cardiovascular Function

Francesco Ramirez, D.Sc.
Professor of Pharmacology and Systems Therapeutics, Professor of Medicine-Cardiology
Mount Sinai Medical Center

Do you have a speaker suggestion for the 2012-2013 Visiting Professorship series? Please email your ideas to pcmd@mail.med.upenn.edu.