



COLLEGE OF MEDICINE RESEARCH NOW

Volume 2 Issue 6 May 2008

SIGNATURE INTERDISCIPLINARY PROGRAM IN ALLERGY, IMMUNOLOGY & INFECTIOUS DISEASE II ANNUAL CONFERENCE

IMMUNITY AND PATHOGENS

MAY 9-10, 2008

Embassy Suites Hotel
3705 Spectrum Blvd
Tampa, Florida 33612

CONFERENCE SESSIONS

Adolescent HIV
Molecular & Cellular Links Between
Viral Infections & Asthma
Tumor Immunology
Microbial Pathogenesis
Opportunistic & Nosocomial Infection

PLENARY LECTURE

"The Role of Infections in Asthma"
James Gern, MD, University of Wisconsin

POSTER PRESENTATIONS

REGISTER ONLINE

www.health.usf.edu/medicine/spaiid

It's not too late to register for the
Summer Grant Writing Workshop

To register, send your name, department, and contact
information to CASresearch@cas.usf.edu

Participants will receive \$500 research funds when they submit a proposal
and an additional \$500 research funds when the grant is awarded.

Performance-Based Research Faculty Salary Enhancement

The COM has long had a policy requiring investigators to capture their salaries on their grants and contracts where permissible. Beginning April 1, 2008, Research Faculty will be rewarded for doing so with the launch of the Performance-Based Research Faculty Salary Enhancement Program. The goal of this program is to promote and reward departmental and individual success in research through monetary incentives, and to improve the COM's financial performance in order to enhance the ability to carry out its educational and research missions.

Eligible faculty include all research faculty supported by E&G funds, irrespective of their rank or level of FTE support, that commit and pay a portion of their E&G funded effort with a grant or contract.

The recovered E&G salary dollars will be shared among the faculty (40%), their academic department (20%) and the COM Dean's Office (40%). Faculty can accept these dollars as bonus compensation or invest them into their individual research program.

For more information on this and other COM research policies visit: <http://health.usf.edu/medicine/research/>

The USF Division of Comparative Medicine received continuing full accreditation by the Association for Assessment and Accreditation of Laboratory Animal Care International.



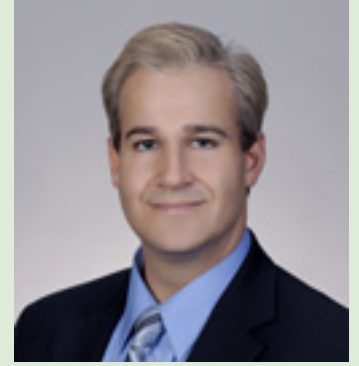
Mice expressing GFP photo courtesy of Advanced Cell Technology

INSIDE:

- Salary Enhancement Program
- Faculty Spotlight
- Cell Cycle and Flow Cytometry
- SIPAIID Symposium
- Fisher Scientific & USF
- Sponsor News
- AAALAC Accreditation
- Intellectual Property Guidelines
- Contacts
- Summer Grant Writing Workshop

Faculty Spotlight

Dr. John Mayer studies how muscle activity relates to the cause, prevention and treatment of low back pain, focusing on the role of medical exercise in physical rehabilitation.



John Mayer, DC, PhD joined USF Health in the Fall of 2007 as the Lincoln College Endowed Chair in Biomechanical and Chiropractic Research in the College of Medicine and Associate Professor in the School of Physical Therapy and Rehabilitation Sciences of USF Health. Dr. Mayer relocated to Tampa from San Diego, CA where he held the position of Director of Research for a non-profit foundation. He earned his DC from the National University of Health Sciences and his PhD in Exercise Science from Syracuse University.

Dr. Mayer's research program is part of an international movement to transform the prevention and treatment of back pain, neck pain, and related disorders through research to build evidence-based practices. He is most recently accredited with the development of a novel back exercise device to provide progressive resistance exercise to the low back muscles in a low-tech manner.

Dr. Mayer will launch a core research program in spinal neuromusculoskeletal disorders. His research is housed within two new core laboratories at USF Health, the Motion Analysis Laboratory and the Human functional performance Laboratory. Projects underway or planned include work

aimed at developing and testing promising exercise and related non-operative therapies and how these therapies work in combination with each other. He is specifically interested in assessing spinal muscle function and morphology during progressive resistance exercise and lifting tasks. Dr. Mayer also plans to make use of the various clinical settings at USF for assessing therapeutic outcomes. He is developing and testing valid, efficient, and cost-effective strategies to assess clinical outcomes related to physical function.

Dr. Mayer has practiced chiropractic since 1991. He has more than 40 peer-reviewed articles, book chapters, and other scholarly publications to his credit. He is the recipient of a US Spine and Sport Foundation award titled "Disc restorative solution for discogenic headache: a retrospective case series". His recruitment is an example of the USF College of Medicine School of Physical Therapy and Rehabilitation Sciences' commitment to excellence in education, research and clinical practice.

Dr. Mayer can be contacted by calling (813) 974-3818 or by e-mailing jmayer2@health.usf.edu.



Fisher Scientific & USF

Fisher Scientific won the primary laboratory and chemical supplier contract with the University of South Florida through a competitive bid process that strongly supported goals to maximize process efficiencies and product cost savings, while providing excellent customer service, superior account management, support of campus-specific e-commerce initiatives and a greatly enhanced portfolio of products. USF will enjoy the following offerings:

- ✦ 12% price reduction on 300-item Hot List
- ✦ 15% additional savings for 200-item Low Cost Alternative List
- ✦ Freezer stocking program
- ✦ Hassle-free return policy
- ✦ Free transportation for standard delivery on all orders
- ✦ No additional fee for hazardous material delivery
- ✦ Hassle-free return policy
- ✦ Easy conversion of competitive part numbers
- ✦ Onsite product shows and technical seminars
- ✦ 48-hour delivery of most products

Intellectual Property Guidelines: Protect Your Intellectual Property

The academic research mission is to discover and to make the benefits of those discoveries available to the world. Unless the discovery is protected under patent coverage, most technologies are not attractive to companies most able to get them to the market. For this reason, it is important for researchers to know the importance of protecting their discoveries prior to sharing them with colleagues. Once applications are filed, researchers are encouraged to publish.

The USF Division of Patents and Licensing is dedicated to facilitating the transfer of technologies created at the University of South Florida into the commercial sector for public use. Should you make a noteworthy discovery, be sure you understand these basic guidelines for protecting your intellectual property rights and those of the university. Spending a few minutes to review these guidelines could prove invaluable in helping you to accomplish your research goals.

Never Underestimate the Value of Your Work

Very few scientists who have made millions from their work planned to do so from the start. Several of the more notable examples of the value of this protection include University of South Florida inventors responsible for internationally marketed products such as The App/PS1 Alzheimer's Mouse Model, CellTiter 95® Aqueous Assays and Dolphin Medical's portable pulse oximeters. USF faculty receive 45% of net revenue as personal income from licensing and an additional 10% of net revenue for their research.

Keep Thorough and Accurate Notebooks

Having accurate records of daily experiments which lead to your discovery could prove invaluable should you ever need to prove your inventorship. The United States recognizes the "first-to-invent" rather than the "first-to-file" for patenting purposes. Having witnesses regularly date and sign your notebooks makes them even more creditable.

Report Your Discoveries to the Division of Patents & Licensing

Complete and submit an Invention Disclosure Form for all your discoveries that you believe are new, non-obvious and useful. Your licensing team at DPL will help you to evaluate the patentability and marketability of your discovery. Timeliness of these disclosures is very important. DPL will meet with you directly or forms may be obtained from our website at <http://www.research.usf.edu/pl>.

Never Discuss the Details of Your Discoveries with Anyone Outside Your Working Group

A good rule of thumb is to share what your discovery will do but not how it does it. Be sure to advise your coworkers to do the same.

Execute a Confidential Disclosure Agreement

Should you need to discuss enabling details of your work with individuals outside the university, be sure to request a Confidential Disclosure Agreement. Having a discussion without this agreement in place can destroy your ability to seek foreign patent protection and limits the time in which you can file for a patent in the U.S. to 12 months. With the cooperation of all parties, DPL staff can often complete this agreement the same day it is requested. Forms may be obtained from our website at <http://www.research.usf.edu/pl>.

Valerie McDevitt, JD
Director, Division of Patents & Licensing
(813) 974- 0994
Campus Mailpoint: 30338 USF Holly Drive
vmcdevitt@research.usf.edu
<http://www.research.usf.edu/pl>



Upcoming Talk... WHAT IS MY INVENTION? May 19, 2008 1:30 - 3:30 pm MDL 1005
Guest speakers: Jeff Lloyd, Esq. and Chris Eisenschenck, PhD of Saliwanchik, Lloyd and Saliwanchik
Registration Required. Please email COMResearch@health.usf.edu

This talk will discuss the invention disclosure process, what counsel will look for in describing biotech and chemical inventions for the patent office and how to create a bar to your own invention.

Cell Cycle and Flow Cytometry

Factors that promote or halt the cell cycle at various phases are of great interest in biomedical research. Flow cytometry happens to be an excellent tool to evaluate these changes. In this short article I'd like to point out a few key elements of cell cycle analysis with flow cytometry.

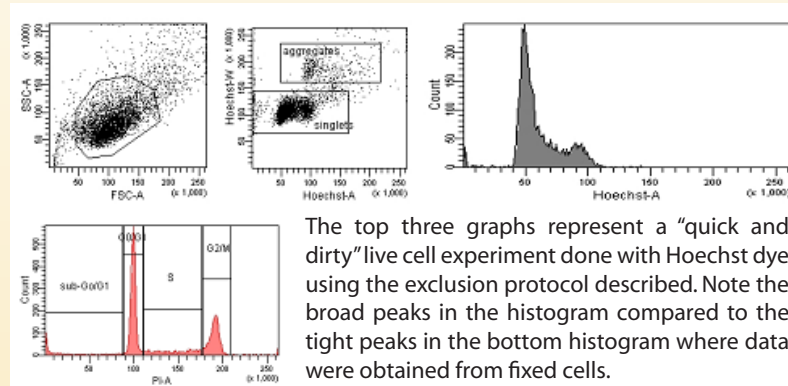
With flow, one can analyze both live or fixed cells. Live cell analysis is made possible by loading the cells with a cell permeable DNA specific dye, such as Hoechst33342. This dye enters cells and binds AT double helices, thus the cellular RNA content does not interfere with the measurement. More accurate cell cycle experiments can be performed using fixed cells that are treated with RNase and stained with propidium iodide.

Sample in hand you can measure a number of parameters. First, we exclude debris and aggregates morphologically using forward and side scatter. Then using the fluorescent parameters we exclude smaller aggregates. This is crucial, because two G1 cells emit exactly as much light as 1 G2 cell, but it takes twice as long for them to do so. If this exclusion analysis is not performed, these smaller aggregates would be erroneously identified as G2. Once the desired cell population is identified, we can employ software that models the cell cycle and ask what did our treatment do to the cells? Did it arrest one phase of the

cycle or not? Did it stimulate cells to leave quiescence? An increase in sub-G0/G1 population can be a crude sign of increased apoptosis.

Other methods allow specific measurement of S phase, mitosis, or more subtle phases of the cycle. If you are interested in these, please stop by the Flow Lab in MDC 3111.

By: Charlie Szekeres, PhD, Flow Core Manager
kszekere@health.usf.edu
 (813) 396-9393



The top three graphs represent a "quick and dirty" live cell experiment done with Hoechst dye using the exclusion protocol described. Note the broad peaks in the histogram compared to the tight peaks in the bottom histogram where data were obtained from fixed cells.

Sponsor News

NIH Salary Cap

Effective 1/01/2008 the Executive Level I salary cap is \$191,300.

NIH Public Access Policy: How does it apply to me?

The NIH Public Access Policy requires researchers funded by NIH to submit their final, peer-reviewed manuscripts, which have been accepted for publication on or after April 7, 2008, to PubMed Central (PMC). The author is responsible for submitting the peer-reviewed manuscript. To facilitate the submission process, the NIH has developed the NIH Manuscript Submission System (NIHMS). A separate submission to the NIHMS system is not necessary if a manuscript has been accepted by a PMC journal that permits free access in 12 months or less. The list of journals participating in PubMed Central can be found at: http://publicaccess.nih.gov/submit_process_journals.htm.

Beginning May 25, 2008, applications, proposals and progress reports submitted to NIH must include the PMC or NIH Manuscript Submission reference number in the citation of articles that arise from the NIH funded research. For NIH grantees, the NIHMS system will extract the necessary identifying information (e.g., NIH award number) from the journal article and transfer it to the NIH's grants management system to fulfill grantees' responsibility for providing publications as part of progress reports.

Because the NIH does not participate in the review and signing of copyright agreements for investigators, they suggest that the following language be included in the agreement:

(Journal) acknowledges that Author retains the right to provide a copy of the final manuscript to the NIH upon acceptance for Journal publication, for public archiving in PubMed Central as soon as possible but no later than 12 months after publication by Journal."

For questions and answers about the NIH Public Access Policy, please refer to the [Public Access Frequently Asked Questions webpage](http://publicaccess.nih.gov/FAQ.htm): <http://publicaccess.nih.gov/FAQ.htm>

Contacts

College of Medicine Office of Research
 Office - MDC 2305
 Telephone - (813) 974-3823
 Mail Point - MDC 61

Abdul S. Rao, M.D., M.A., D.Phil
 Vice Dean for Research
 Professor of Surgery and Molecular Medicine
 Email: arao@health.usf.edu

Patricia Emmanuel, M.D.
 Associate Dean for Clinical Research
 Professor and Chief of Infectious Diseases
 Email: pemmanue@health.usf.edu

Jessica L. Banko, Ph.D.
 Director
 Assistant Professor of Molecular Medicine
 Email: jbanko@health.usf.edu

Jo Ann Moore, M.S.
 Research Administrator
 Email: jamoore@health.usf.edu

Rochelle Morris, M.M.
 Faculty Recruitment Coordinator
 E-mail: rmorris@health.usf.edu

Charlie Szekeres, Ph.D.
 Scientific Researcher, Core Facilities Manager
 Email: kszekeres@health.usf.edu

J. Matthew Rutter
 Student Assistant
 Email: jrutter@health.usf.edu