

Research Tips

University of Colorado Denver

Vice Chancellor for Research: RJ Traystman

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Stimulus Funding Update (ARRA)

As of November 24, 2009, UC Denver submitted 568 grant proposals to NIH. A total of 110 ARRA awards were funded at \$51,742,385.

COMIRB

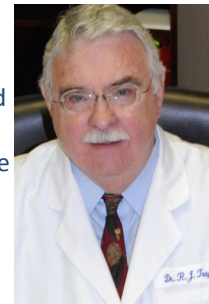
What is the CITI Refresher Course? When do I need it?

The CITI Basic Course expires every 3 years; every investigator and coordinator needs to have their COMIRB training current upon submission of any new or continuing protocol. If any person on the protocol is not current, the submission will not be approved.

CITI sends out a reminder 90 days before your training expires. Most faculty took the basic CITI training in 2006 and are due to take the refresher. Please check that your education is current before you submit your next continuing review to avoid unnecessary delays. Go to the COMIRB web site (<http://comirbweb.uchsc.edu>), click on COMIRB Education and enter your name in the Look-Up box. You will see all of your training courses and the dates they were completed. You can also print this page to use as a certificate to submit to sponsors who require documentation of education in human subject protection in research.

Dr. T's Corner

Some weeks ago, in this "Research Tips" newsletter, I highlighted the Nobel Prize given in Physiology and Medicine for work relating to the telomere and telomerase. Not to slight the Nobel Prize in Chemistry, I would like to mention that the Prize in Chemistry was awarded to Venkatraman Ramakrishnan of the MRC Laboratory of Molecular Biology from Cambridge, UK, Thomas A. Steitz from Yale University and Ada E. Yonath from the Weizmann Institute of Science in Israel, for their work in revealing the atomic structure and inner workings of the ribosome. These investigators all used x-ray crystallography to pinpoint the position of thousands of atoms in the ribosome. Ribosomes are important in translating DNA information into life. They actually build all the proteins that cells need for life, everything from hemoglobin to insulin. The recipe of each protein gets carried to the ribosome, which then puts together a string of amino acids in exactly the right order to make the protein. There are tens of thousands of proteins in the body, and they all have different forms and functions. They literally build and control life at the chemical level. These three Laureates have all generated 3D models that show how different antibodies bind to the ribosome. This knowledge can be put to a practical and immediate use because many of today's antibiotics cure various diseases by blocking the function of bacterial ribosomes. Without functional ribosomes, bacteria cannot survive, and this is why ribosomes are such an important target for new antibiotics.



Faculty-directed Research Advisory Committees: Do You Know What RAC, SIRC, and CTRAC Are? Do You Know What They Do?

The School of Medicine's Research Strategic Plan of 2003 recommended that three committees be established to advise the Dean on matters of research: The Research Advisory Committee (RAC), the Strategic Infrastructure for Research Committee (SIRC), and the Clinical-Translational RAC (CTRAC). A fourth committee, the Bridge Funding Committee, was added when reductions in the NIH budget threatened faculty survival. When Dr. Traystman was appointed as Vice Chancellor, the Dean agreed that he should use the RAC and CTRAC also as advisory to him. The RAC and SIRC are made up of nine members who serve 3-year terms. Chairs of these committees alternate yearly between a basic and a clinician scientist. The goal of RAC, currently chaired by Peter Buttrick, is to conduct ongoing research strategic planning at monthly meetings. Its output has included an interim mechanism to fund 1st-year PhD graduate students, recommendation in 2004 that a program in stem cell biology should carry the highest priority for campus research, a review of the SIRC awards and their progress which led to recommendation to the Dean regarding further funding, identification that the most important need for faculty recruitment and retention was a childcare center, and selection of initiatives to be presented at the research retreat in November, 2009. The SIRC, currently chaired by Sandy Martin, meets quarterly to review applications for support by the Dean's Academic Enhancement Fund of new equipment or infrastructure programs that are available to any qualified UC Denver user. In 19 meetings through June of this year, its recommendations have led to ~\$9.2M in funding for campus research core facilities and programs. When UC Denver received NIH support to establish the Colorado Clinical Translational Science Institute, the CTRAC added as members research leaders from affiliated institutions, research support services, and UC Denver Schools other than the SOM, and it expanded its role to serve as the CCTSI Internal Advisory Committee. Bill Hiatt is the current Chair. CTRAC has worked to improve interactions across the patient- and community-based researchers and to strengthen compliance and support services, e.g., COMIRB and biostatistics. Bridge funding for grant lapses was moved in 2008 from a SIRC responsibility to a separate committee of five senior researchers, with Kate Horwitz as Chair. In seven reviews, 45 awards have been made totaling \$2.3M. Progress reports through the 1st 4 reviews indicate that NIH awards to bridge-funding recipients are about twice the Dean's AEF investment for year-1 awards alone.

Research Corner

Emily A. Gibson, PhD is an Assistant Professor of Physics at UCDenver (DDC). She received her BS in Engineering Physics from the Colorado School of Mines in 1997 and her PhD in Physics in 2004 from University of Colorado Boulder. Emily's research involves: integration of nonlinear optical spectroscopy with microfluidic devices biomedical applications; microfluidic devices for cell sorting, cell migration studies, and biomedical sensors; and the development and applications of novel biological imaging techniques including coherent anti-stokes Raman (CARS) microscopy, multi-photon microscopy, and super-resolution microscopy. One of the most widely used diagnostic methods is blood analysis through commercial flow cytometers. In addition, flow cytometers that measure and sort cells based upon light scattering or detection of fluorescent markers are also ubiquitous in research laboratories. Two important technologies that can improve upon these existing commercial flow cytometers are: microfluidics i.e. devices with small (micron-scale) fluidic channel networks that are fabricated using photolithography techniques, and nonlinear optical spectroscopy such as coherent anti-stokes Raman spectroscopy (CARS). CARS spectroscopy can provide label-free, realtime, nonperturbative measurements on biological samples with chemical specificity. Therefore, this technique can completely eliminate the need for fluorescent labeling which involves an additional pre-processing step and allow more parameters for selection of cell type. Working with Tim Lei, they are currently developing a prototype device that combines CARS spectroscopy with microfluidics for flow cytometry and cell sorting applications. Some of the possible biomedical applications include screening of circulating tumor cells for cancer diagnosis and sorting of lymphocytes for diabetes research.



Emily A. Gibson, PhD

COMIRB Website Notice

The COMIRB Web Server was migrated to the ucdenver domain late last week. As a "unforeseen" consequence, the address has changed and the links within university web pages do not currently point to the correct address. The new address is: <http://comirbweb.ucdenver.pvt/portal>

Redervation Update

Please contact the Transgenic and Gene Targeting Core immediately to schedule cryo-preservation/implantation of your unique mouse lines that will be transferred to RC-2. The Vice Chancellor has set the end of December as the deadline for scheduling cryo-pervations. After the deadline has passed, you might be financially responsible for the rederivation of your lines. Please contact us immediately at makeamouse@ucdenver.edu to schedule rederivations. Given that we schedule procedures several weeks ahead of time, you might not make the December deadline if you wait much longer. Please let us know if we can assist you in any way to facilitate the process.

Colorado Clinical and Translational Sciences Institute (CCTSI)

What is the Research Ethics Support Service?

The Research Ethics Support Service (RESS) is a newly created, free service sponsored by CCTSI. It is available to all biomedical and behavioral researchers at UCDenver, as well as its clinical affiliates, who seek advice about ethically complex aspects of their research.

When should I contact RESS?

Although you can contact the service during any phase of your research, we encourage you to utilize this service very early in the process of study design.

How do I contact RESS?

To request assistance from RESS, please call 303-724-3994 or send an email to ResearchEthics@ucdenver.edu

What kinds of issues can RESS can help with?

Examples of the kind of questions that the support service might assist you with include, but are not limited to:

- How do I know if the consent process that I am anticipating using for my research is the most appropriate one, given special characteristics of my research population?
- Should I do anything about the fact that my research is controversial in the eyes of the public?
- How should I determine how far to go in my efforts to minimize the risks of my research, especially if it might compromise my ability to test my hypotheses?
- How can I assure that my research team is honoring the privacy of our research participants, given the access we have to confidential information?

Is this service related to COMIRB or other campus research committees?

RESS is not a replacement for COMIRB review, or is it an arm of COMIRB or any other university research oversight committee, such as the Committee on Research Ethics. However, like every other unit at the university, these other groups can utilize the services of RESS.

Who staffs RESS?

RESS is staffed by the Research Ethics Core of CCTSI. Its membership is drawn from faculty of the Center for Bioethics and Humanities, campus Research Subject Advocates, as well as clinical investigators and others with significant research ethics and IRB expertise.

Office of Grants and Contracts

Did you know that the Office of Grants and Contracts has an e-mail list? The GC-Listserv provides information, updates, and notices on important issues impacting sponsored project issues. For more information see: <http://www.uchsc.edu/ogc/listserve.php>.

OLAR Space Determination Survey

When the decon of RC1 is complete, OLAR will be strategically placing all investigators into RC1 or R2 depending on their research and space needs. Please follow the link below so that we can collect information on your research needs in the vivarium. It is extremely important that we receive a response from EVERY investigator that houses animals in RC1 or R2 in order to ensure that everyone is placed correctly in the facility. Responses are due no later than December 15, 2009. http://www.surveymonkey.com/s.aspx?sm=9CEw6Bh1b9MK4vY1zjKaoA_3d_3d