Dr. T's CORNER

Want to be a better runner, or a better athlete? Just get rid of one of your genes called IL-15Ra! Laboratory mice run only occasionally on their exercise wheels. But mice lacking a gene called IL-15Ra run for hours at a time each night. The IL-15Ra (IL-15 receptor a) is a component of the heterotrimeric plasma membrane receptor for the pleiotropic cytokine IL-15. This gene may not just make a difference in mice, but may also be linked to the ability of long distance athletes to outperform the normal person. Early studies suggested that IL-15Ra is important for muscle strength. In cultured cells, this gene seemed to control the accumulation of proteins necessary for muscle contraction; however, IL-15Ra had never been studied in vivo. In a study performed by Tajvir Khurana and his colleagues at Penn (J. Clin. Invest. doi:1172/JCI44915), they genetically engineered mice to lack the IL-15Ra gene. The exercise wheels were monitored nightly in the mouse's cages and the investigators found that the transgenic mice ran 6 times farther than the normal type mice. However, it was possible that the IL-15Ra knockout (KO) mice were just jittery or had additional energy, so the researchers dissected muscles from their mice. The KO mice had increased numbers of mitochondria and an increased number of muscle fibers. When these muscles were electronically stimulated, the muscles in the KO mice continued to contract for longer times than the normal mice. The investigators also feel that removing the IL-15Ra gene coaxed the mouse's fast-twitch muscles to turn into slow twitch muscles. To determine whether IL-15Ra might also affect human endurance, the Khurana group collaborated with an Australian group who maintain a gene library of samples from Olympic and world class athletes. They found that certain amounts of the IL-15Ra gene were more common in endurance athletes than they were in sprinters. More than three-quarters of the long-distance tri-athletes had one type of variant. Thus, the investigators believe that their data suggest that the most successful endurance athletes might have a gene variant that gives their muscles extra endurance. So the question is if you had a drug that blocked IL-15Ra, would this enhance endurance in humans?

OFFICE OF RESEARCH DEVELOPMENT AND EDUCATION (ORDE)

The Office of Research Development and Education (ORDE) has purchased copies of two books helpful to principal investigators contemplating application submissions to the National Institutes of Health and/or the National Science Foundation. Several copies of these resources have been placed with the Auraria and Health Sciences Libraries for check-out by PIs.

"NIH R01 Grant Application" Mentor: An Instructional Manual
Written by the Principal Investigators Association, Dorothy Lewis was the Consulting Editor for the project. Dr. Lewis is a long-time NIH-funded investigator who currently chairs one of its study sections. This manual provides:

- Background information on the agency and its individual institutes and centers
- Tips on making your decision to submit an R01
- Assistance when defining your project and specifying your hypotheses
- Steps to follow when developing your project title
- When and how to contact a program officer
- Strategies for creating a writing schedule specific to your grant application
- Detailed information on each NIH application component
- An overview of the NIH peer review process
- Many examples of well written titles, abstracts, project narratives, personal statements

Executive Report: How to Write a Winning NSF Proposal
This brief executive report from the Principal Investigators Association gives informative instructions related to the National Science Foundation’s review criteria - Intellectual Merit and Broader Impacts - and how to successfully address each in your NSF proposal. An overview of the Agency’s peer review process is also provided.

OFFICE OF GRANTS AND CONTRACTS (OGC)

PreAward, Contracting and Policy
We’ve noticed many applications are being submitted for review without all the forms and attachments required by the sponsor for final submission. Be sure to check application packets for completeness prior to the deadline date.

Fiscal Managers and Fiscal Staff - be sure your names are on routing forms so we can enter your names in InfoEd and in PeopleSoft as contacts for projects and project reports.
RESEARCH CORNER

Victoria Erickson, PhD, PNP-BC, Associate Professor and Master and Doctor of Nursing Practice Director at the University of Colorado College of Nursing, was recently inducted as a Fellow of the American Association of Nurse Practitioners (AANP). The AANP program was established in 2000 to recognize nurse practitioner leaders who have made outstanding contributions to health care through nurse practitioner clinical practice, research education, or policy. Priority initiatives of the AANP are the development of leadership and mentorship programs for nurse practitioners and nurse practitioner students. Fellows of the American Academy of Nurse Practitioners (AANP) are visionaries committed to the global advancement of nursing through the development of imaginative and creative future nurse practitioner leaders, and as such, hold an annual think tank to strategize about the future of nurse practitioners and health care outside the confines of traditional thinking. A limited number of nurse practitioners are selected for this highly coveted distinction each year. Vicki will continue the tradition of contributing to the mission of the AANP and promoting the role of the nurse practitioner. Dr. Erickson was recognized for her accomplishments in nursing care and education as well as for her state and national leadership in health care and policy. Vicki is clearly known for her continued excellence in nursing, primary care, and mentoring others. AANP was founded in 1985 and is the oldest, largest, and only full-service national professional organization of nurse practitioners of all specialties. With 28,000 individual members and 145 group members, AANP represents the interests of approximately 140,000 nurse practitioners around the country. AANP continually advocates for the active role of nurse practitioners as providers of high-quality, cost-effective and personalized healthcare.

COLORADO CLINICAL AND TRANSLATIONAL SCIENCE INSTITUTE (CCTSI)

The Colorado Clinical and Translational Sciences Institute (CCTSI) is proud to announce the annual CCTSI Pilot Grants Program Request for Applications and the Novel Clinical and Translational Methods Development Program RFA. This Award program consists of the 1) CO-Pilot Awards for Clinical and Translational Research which now include potential product development funding from the Technology Transfer Office and Translational Neuroscience Awards funded by the new Center for NeuroScience (CNS); 2) Child and Maternal Health Pilot Awards; 3) Community Engagement Pilot Awards for encouraging Community-Academic Partnerships; and 4) Novel Clinical and Translational Methods Development Awards. These pilot grants will provide more than $1,000,000 of funds for translational research and methods development.

You can obtain more information about CCTSI and this funding opportunity by visiting http://cctsi.ucdenver.edu/Funding. If you have specific questions regarding the three pilot programs please contact the point people listed below. For other questions, feel free to contact the CCTSI office at 720-848-7100.

- For questions regarding the CO-Pilot Awards for Clinical and Translational Research contact Sarah Stallings at 720-848-5519 or sarah.stallings@ucdenver.edu
- For questions regarding the Child and Maternal Health Pilot Awards contact Bonnie Savone at 303-724-1602 or bonnie.savone@ucdenver.edu
- For questions regarding the Community Engagement Pilot Awards for encouraging Community-Academic Partnerships contact Montelle Tamez at 303-724-5736 or montelle.tamez@ucdenver.edu
- For questions regarding the Novel Clinical and Translational Methods Development Grants contact Claudia Diaz-Byrd at 303-724-4419 or claudia.diaz-byrd@ucdenver.edu

The link to the RFAs is: (http://cctsi.ucdenver.edu/Funding/Pages/default.aspx)

OFFICE OF LABORATORY ANIMAL RESOURCES (OLAR)

OLAR ANNOUNCES RODENT STANDARD DIET CHANGE TO START THE WEEK OF SEPTEMBER 26, 2011

OLAR will start the process of changing the standard rodent diet from a pelleted diet, Harlan Teklad 2918, to an extruded diet, Harlan Teklad 2920x, during the week of September 26, 2011. The change is anticipated to take 2-4 weeks to complete. The reason is that the manufacturer changed the shape of the pellet, cause the diet to fall through the rodent feeders. This is causing a regulatory issue due to the food on the floor and a major cost issue due to the fact that the amount of diet being used is significantly increased. The proposed new diet is similar in formulation to the current standard diet. Several large institutions have studied the impact of changing from a pelleted to an extruded diet and have found many advantages to the change including less food waste, lower ammonia issues, decreased grinding of food, and the appearance of cleaner cages. While we do not anticipate problems outside of a few lines with known jaw and teeth problems (due to the increased hardness of the diet), during the month that it takes to perform the change-over of the diet, OLAR will be increasing its monitoring to ensure that all animals transition well. It is highly recommended that research staff also monitor their colonies closely and report anything unusual. If you have questions or concerns about the diet change please contact Dr. Jori Leszczynski (Jori.Leszczynski@ucdenver.edu), University Veterinarian and Director of OLAR.