Research Tips

Vice Chancellor for Research: RJ Traystman, PhD

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DR. T'S CORNER

CU Sets Record $924 million in sponsored research funding

Annual federal, state, and local grants increase by nearly $46 million. The University of Colorado faculty researchers earned $924 million in research awards for the 2015-2016 fiscal year. This is a new record for our four campus system. The final figures will be announced later this fall and represent more than 2,000 research awards, a 5.2% increase over last year's total of $878 million. It also eclipses the previous record of $884 million in fiscal year 2009-2010, a total funded by one-time federal stimulus dollars.

Of the $924 million, $606 million (66%) came from federal agencies, and the remainder were non-federal awards. A further breakdown shows: Anschutz at $454 million, CU Boulder at $468 million, CUDenver at $25 million, and CU Colorado Springs at $8 million. This is an outstanding achievement for all of our researchers at the University of Colorado. Congratulations to all.

TWO INCUCYTE MACHINES FOR ALL UNIVERSITY RESEARCHERS TO USE

WHERE: In the PPSR Shared Resource - RC1-S, 5404B
COST: $25 for twenty-four hours, $18 one time scan
HOW: Contact Lori or Michelle at Lori.Sherman@UCDenver.edu or Michelle.Randolph@UCDenver.edu 303-724-3770.

Assays Available
Scratch Wound Cell Migration & Invasion
Chemotaxis
Angiogenesis
Tumor Spheroids
Immune cell killing
Phagocytosis
Immune cell clustering
Neurite analysis

A lunch and learn opportunity will be available on March 7, 2017 at 11AM at RC1-S 5105, please RSVP to Michelle.Randolph@UCDenver.edu.
Dr. Joaquin Espinosa is a Professor in the Department of Pharmacology at the University of Colorado School of Medicine and Associate Director for Science at the Linda Crnic Institute for Down Syndrome. He is also the co-Leader of the Molecular Oncology program at the University of Colorado Cancer Center, and the founding Director of the Functional Genomics Facility at the University of Colorado. Joaquin directs a diverse research program both at the Department of Pharmacology and the Crnic Institute, with an emphasis on understanding how gene networks control cell behavior and organismal function. Their two main focus areas are cancer biology and Down syndrome.

Their cancer research aims to identify novel molecular mechanisms that could be exploited to design biologically targeted therapeutics, with an emphasis on transcriptional regulators and their cofactors. Their studies of the p53 tumor suppressive network have illuminated novel strategies to harness the power of this transcription factor for selective elimination of cancer cells, and these strategies are now being tested in pre-clinical models. They have also advanced our mechanistic understanding of key oncogenes, such as the Hypoxia Inducible Factor (HIF1A), the oncogenic protein kinase CDK8, and the transcriptional repressor p63. In every instance, these investigations have revealed new venues for therapeutic modulation of these important cancer genes.

At the Crnic Institute, Joaquin directs The Human Trisome Project, a large cohort study of the population with Down syndrome, involving deep clinical characterization and generation of multi-omics datasets. A key goal of this project is to elucidate why individuals with Down syndrome have a different disease spectrum, being protected from some conditions (e.g. most solid tumors, hypertension) while strongly predisposed to others (e.g. Alzheimer’s disease, autoimmune disorders). A key discovery from this project is that trisomy 21, the chromosomal abnormality that causes Down syndrome, leads to constitutive activation of the Interferon response, which could explain many of the hallmarks of Down syndrome, including the obvious immune dysregulation and neurological features associated with this condition.

For more information, please visit: Espinosalab.org and www.trisome.org (please cut/paste the url into your browser address window).

**NEW DEA application process changes and university requirements**

As part of the change to how applications for use of controlled substances are processed by the US Drug Enforcement Administration (DEA), new applicants and those renewing their DEA registrations will have a site visit or phone interview to review compliance with security measures. In addition, DEA may require filling out a questionnaire, submitting photographs to document compliance with security measures, and providing sensitive personal identifiable information (PII) at the discretion of the Diversion Investigator assigned to the researcher’s application.

The university will continue to perform annual audits through the Department of Environmental Health and Safety (EHS) for all university affiliated registration holders conducting research using DEA requirements and the university DEA policy. Information regarding the DEA and university requirements and policies are outlined on the EHS webpage: www.ucdenver.edu/dea

EHS will be sending an email to all registration holders to assist with some of the new requirements and will hold a Town Hall Meeting in the near future to address any questions regarding DEA registrations. The meeting will be a great opportunity to meet DEA investigators and get answers about the new application process.

**IMAGE MANIPULATION - A PROBLEM**

Image manipulation has become a widespread problem and a reason for many recent retractions. Check out these tips for making sure your images are publication-proof:

"Avoiding Twisted Pixels: Ethical Guidelines for the Appropriate Use and Manipulation of Scientific Digital Images"

"A figure worth 1000 words", ASMBMTODAY, Jan2017
https://www.asbmb.org/asmbmtoday/201701/DueDiligence/

**NOTE:** Dr. Sakabe will be writing a series on different topics regarding images and figures over the next few months in ASMBMB Today

**INSTITUTIONAL BIOSAFETY COMMITTEE (IBC)**

**Recruitment of Technical Members**

We are currently recruiting additional members for the Institutional Biosafety Committee (IBC). The IBC provides review of all recombinant DNA research conducted at UC Denver. We are particularly recruiting Technical Members to assist with the review and approval of research involving recombinant DNA. Technical members consist of Lab Managers and PRAs that are knowledgeable in rDNA research. The time commitment for members is a monthly 2 hour meeting and review of approximately 3-4 protocols/month. Approval from your PI for this time commitment is required. The IBC meets once per month; treats are provided! If you are interested in this opportunity for University community service, please contact Mark Douse at 303-724-1057.