DERC UC San Diego ■ UC Los Angeles ■ Cedars-Sinai ■ Salk Institute

OCTOBER 1, 2009

…To Meet Your Research Needs In Diabetes, Endocrinology, and Diabetes Complications…

NEW WEBSITE
http://DERC.ucsd.edu

TABLE OF CONTENTS

Please remember to cite the DERC Grant in all papers that utilize DERC Cores or are supported by the Pilot and Feasibility Awards:

"Our research utilized Core (or Research) support from the UCSD/UCLA NIDDK Diabetes and Endocrinology Research Center P30 DK063491."

THREE EXCITING FALL MEETINGS
FOR UCSD/UCLA/SALK/CEDARS DERC MEMBERS:

METABOLISM: BENCH TO BEDSIDE, OCT. 8-10, LA JOLLA
WESTERN JOINT DERC MEETING, OCT. 10, LA JOLLA
USC LIVER CENTER AND DERC JOINT MEETING, DEC. 4, LOS ANGELES

DETAILS INSIDE!

ARRA FUNDS AWARDED TO THE DERC!

ARRA Funds were awarded to our DERC in the amount of $500,000 direct costs over two years. The funds are specifically to DOUBLE our P&F grants for 2009 and 2010 to $300,000 per year and to purchase large equipment for the Core Facilities.

2009 DERC P&F Grants Awarded

Pilot and Feasibility Projects in Endocrinology and Diabetes

Pilot & Feasibility Program, Director: Pinchas Cohen

As part of the ARRA Funds awarded to our UCSD/UCLA DERC grant, the Pilot and Feasibility grant program will support 8 grantees at approximately $30,000-$40,000 per year for 2009 and 2010, double the number normally available.

Thus, the upcoming 2010 competition will award $300,000 in awards for P&F. Watch for the announcement for the competition early in 2010!

THE UCSD/UCLA DERC is Proud to Announce the 2009 P&F AWARDEES:

New ARRA P&F Awardees for 2009:

Gregory Harmon, Clinical Instructor, Department of Medicine, Division of Gastroenterology, UCSD
Peroxisome Proliferator-Activated Receptor Gamma Ameliorates the Phenotype of Cystic Fibrosis

Michael Downes, Senior Staff Scientist, Gene Expression Laboratory, The Salk Institute for Biological Sciences, La Jolla
Deciphering Nuclear Receptor Regulation of Diabetes via Promoter Ontology analysis

Jamie Powers, Clinical Instructor, Mattel Children's Hospital, Department of Pediatrics, UCLA
Effects of Hyperglycemia on Adrenal Cortex Function and Steroidogenesis

Senta Giorgia, Assistant Adjunct Professor, Endocrinology, Diabetes, and Hypertension, Department of Medicine, Geffen School of Medicine, UCLA
Using Comparative Methylation and Gene Expression Analysis to Understand Age-Restricted Beta Cell Replication in Response to Insulin Resistance

Original 2009 awardees:

Mina Desai, Associate Professor, UCLA
Development of Insulin Resistance and Adiposity via PPAR Dysregulation

Anthony Heany, Associate Professor, UCLA
Role of GLUT5 in Pathogenesis of Metabolic Syndrome

Karen Herbst, Assistant Professor, UCSD
Blockade of Receptor Cleavage in Diabetes Mellitus with an MMP Inhibitor

Andrea Hevener, Assistant Professor, UCLA
The Impact of Myeloid-Specific ERα Expression on Inflammation, Insulin Action and Adiposity

Listserv for DERC Members

Send announcements, communications, requests, etc., to your DERC colleagues:

DERC-L@UCSD.EDU

If you are receiving this newsletter directly, you are already subscribed. If you would like to subscribe, please email mellonadmin@ucsd.edu. This is a moderated listserv, so messages will be prescreened such that only relevant and important messages will reach you.

NEW WEBSITE
http://DERC.UCSD.EDU

Contact information for DERC Cores and Programs:

DERC PI/Director:
Jerrold Olefsky
(858) 534-6651
jolefsky@ucsd.edu
Administration:
Betsy Hansen
(858) 534-6651
ejhansen@ucsd.edu

Pilot & Feasibility Program
Pinchas Cohen, M.D.
(310) 206-5844
hassy@mednet.ucla.edu

Transgenic and Knockout Mouse CORE:
http://cancer.ucsd.edu/tgm/
Pamela Mellon, Ph.D.
Core Director

Core Contacts:
Jun Zhao
Transgenic Mice Contact
858-822-3270
tg@ad.ucsd.edu

Ella Kothari
Gene Targeting (Embryonic Stem Cells and Blastocyst Injection) Contact
858-534-3178
stemc@ad.ucsd.edu

Heather Oakley
Embryo Cryopreservation
858-822-2108
cryo@ad.ucsd.edu

DON'T MISS THE METABOLISM MEETING NEXT WEEK!

Clinical Investigation Institute/Nature Medicine Bench to Bedside: Metabolism October 8-10, 2009

http://www.nature.com/natureconferences/ctri2009/index.html

Special Pricing for DERC P & F Faculty and UC faculty

As part of our Enrichment activities, the DERC will help host a scientific meeting co-sponsored by Nature Medicine and UCSD next Fall in La Jolla. This Nature Medicine meeting is focused on Diabetes and Metabolism and begins at 4 pm the evening of October 8th, ending at Noon at Saturday October 10th.

For more information visit http://cme.ucsd.edu/b2b2009

Speakers Include:

Keynote Speaker:
Michael Brown (U Texas)

Helen Hobbs (U Texas)
Gokhan Hotamisligil (Harvard)
Peter Libby (Harvard)
Michael Karin (UCSD)
Paresh Dandona (SUNY Buffalo)
Gerry Shulman (Yale)
Ira Goldberg (Columbia)
Phil Scherer (U Texas)
Barbara Kahn (Harvard)
Chris Newgard (Duke)
Tony Lam (Toronto)
Zofia Zukowska (Georgetown)
Daniel Drucker (Toronto)
David Cummings (U Wash)
Steve Shoelson (Joslin Diabetes Center)
Francesco Rubino (Cornell Medical Center-NYC)

Hilton La Jolla Torrey Pines
10950 North Torrey Pines Road, La Jolla, California
http://www1.hilton.com/en_US/hi/hotel/SANTPHH-Hilton-La-Jolla-Torrey-Pines-California/index.do

Mouse Phenotyping CORE:
Rajendra Tangirala, PhD
Core Director
Pinchas Cohen, MD
Core Co-Director
Andrea Hevener, PhD
Core Co-Director
David Hwang, PhD
Core Co-Director

Core Contacts:
Binrong Liu
310-825-8499
bliu@mednet.ucla.edu
Diana Becerra/Jason Kim
310-794-6612
dbecerra@mednet.ucla.edu

Transcriptional Genomics CORE:
http://www.microarrays.ucsd.edu
Chris Glass, Ph.D.
Core Director
Gary Hardiman, Ph.D.
Core Co-Director
BIOGEM Core Facility
Nicholas Webster, Ph.D.
Core Co-Director
VA Genechip Core

Core Contacts:
BIOGEM Core
Agilent and Illumina Arrays
Solexa Sequencing
Colleen Ludka
(858) 822-4231
cludka@ucsd.edu
Genechip Core
Affymetrix Arrays
454 Sequencing
Jorge Valencia
(858) 552-8585 x7100
genechip@vapop.ucsd.edu

Human Genetics CORE:
Jerome Rotter, M.D.
Core Director
Leslie Raffel, M.D.
Core Co-Director
Xiuqing Guo, Ph.D.
Core Co-Director
Kent D. Taylor, Ph.D.
Core Co-Director

Core Contact:
Cynthia Hernandez, R.N.
Core Contact
(310) 423-1457
Cynthia.Hernandez@cshs.org

Inflammation CORE:
Peter Tontonoz, M.D., Ph.D.
Core Director
Rajendra Tangirala, PhD
Core Co-Director

Core Contact:
Rima Boyadjian
310-206-4622
rboyadjian@mednet.ucla.edu

PLEASE JOIN US FOR:
The First Western DERC Meeting

October 10th, 2009, from 1:30-6:30 PM

Immediately following the Nature Medicine Meeting

Grand Ballroom, Salon D, Hilton La Jolla Torrey Pines

The Western region DERCs (Baylor, UCSD/UCLA, University of Colorado, and University of Washington) have organized into a subgroup and through the Regional DERC Director's committee, we have arranged for P&F recipients from the other Western Centers to attend and present at this meeting.

No Registration Fee

Speakers should load their presentations between 11:00 AM and 1:00 PM
12:45 PM Box lunches will be available in the foyer

1:30-1:40 Opening remarks: Jerry Olefsky, Director of the DERC

1:40-2:20 **Keynote Speaker: Professor Ron Evans, The Salk Institute**

2:20-3:30 Introduction to the WDERC: Hassy Cohen, DERC Co-Director

2:30-3:45 **Selected talks: Insulin Action & T2DM**

Michael Downes, UCSD
Promoter Ontology Analysis of Nuclear Receptors
Greg Morton, Univ. Washington
Hypothalamic Signaling and Insulin Sensitivity
Laura Cobb, UCLA
Novel Mitochondrial Peptides and their Role in Metabolism
David Maahs, Univ. Colorado, Denver
Lipoprotein Sub-fractions and Atherogenesis in Diabetes
Andrea Hevener, UCLA
ERα Effects on Inflammation and Insulin Action

3:45-4:05 **Recent highlights of the UCSD/UCLA DERC Cores**

Peter Tontonoz, UCLA, The Inflammation Core, Core E
Harnessing Inflammation Markers for Diabetes Research
Gary Hardiman, UCSD, The Transcriptional Genomics Core, Core C
New Frontiers in Sequencing

4:05-4:15 Tea/Coffee break

4:15-5:30 **Selected talks on Islet Biology and T1DM**

Chris Hampe, Univ. Washington
Anti-GAD Anti-idiotypic Antibodies in T1DM
Janet Wenzlau, Univ. Colorado, Denver
The Humoral Autoimmune Response to ZnT
Ellen Lumpkin, Baylor
Sensory Innervation and Pancreatic Function
Vijay Yechoor, Baylor
Auto-immunity Evading Neo-islets for Diabetes
Steven Chessler, UCSD
Neuroligin-Neurexin Interactions in Islet Function

5:30-6:30 Wine & Cheese and poster-session reception on patio

Poster Boards available from 11:00 AM in the Grand Ballroom
Please note that WE ARE STILL ACCEPTING POSTERS FOR THIS MEETING
If you wish to present a poster, please email hassy@mednet.ucla.edu

Key new Publications by DERC Members:

Goodarzi, M.O., Taylor, K.D., Jones, M.R., Fang, B., Guo, X., Xiang, A., Buchanan, T.A., Hodis, H.N., Raffel, L.J., Rotter, J.I. 2009 Replication of Calpain-10 genetic association with carotid intima-media thickness, Atherosclerosis, 205:503-505

Ghislette, S., W. Huang, K. Jepsen, C. Benner, G. Hardiman, M.G. Rosenfeld, and C.K. Glass. 2009. Cooperative NCoR/SMRT interactions establish a corepressor-based strategy for integration of inflammatory and anti-inflammatory signaling pathways. Genes & Development 23:681-693.

Liu, Y., R. Dentin, D. Chen, S. Hedrick, K. Ravnskjaer, S. Schenk, J. Milne, D.J. Meyers, P. Cole, J. Yates, J. Olefsky, L. Guarent, and M. Montminy. 2008. A fasting-inducible acetylation/deacetylation switch modulates hepaic gluconeogenesis via the CREB coactivator TORC2. Nature 456(13):269-273.

USC Southern California Research Center for ALPD and Cirrhosis JOINT SYMPOSIUM with the UCSD/UCLA DERC

DECEMBER 4, 2009 at USC in Los Angeles

8:30-9:00 Continental Breakfast
9:00-9:10 Welcoming Remarks

Mechanisms of Liver Metabolism and Fatty Liver

9:10-9:35 Barry M. Forman, Ph.D., Professor and Director, Gene Regulation & Drug Discovery, The Beckman Research Inst., City of Hope Med Center
"FXR and Hepatic Metabolism: on the Fast Track"

9:40-10:05 Marc Montminy, Ph.D.
Professor, Clayton Foundation, The Salk Institute
"Regulation of Hepatic Gluconeogenesis by the TORC/CRTC Family of CREB Coactivators"

10:10-10:35 Mark Czaja, M.D.
Professor of Medicine, Albert Einstein College of Medicine
"Regulation of Cellular Lipid Accumulation by Macroautophagy"

10:40-10:45 Break

10:45-11:05 Kuk-Wha Lee, M.D., Ph.D.
Assistant Professor of Pediatrics, UCLA
"Contribution of the Growth Hormone/Insulin-Like Growth Factor Axis in the Pathophysiology of Hepatic Steatosis"

Pilot Projects

11:10-11:25 Ekihiro Seki, M.D., Ph.D., UCSD
"TLR Signaling in ASH vs. Non-ASH"

11:30-11:45 Kinji Asahina, Ph.D., USC
"Hepatic Stellate Cell Precursors in Developing and Fibrotic Livers"

11:50-12:05 Jenny Yuan, Ph.D. UCLA/West LA VA
"The Role of Protein Kinase D in Alcoholic Pancreatitis"

12:10-12:25 Bernd Schnabl, M.D., UCSD
"Early Bacterial Translocation in Alcoholic Liver Injury"

12:30-13:30 Lunch

Postdoc Presentations

13:30-14:30

Oxidant Stress, Inflammation, and Cancer

14:30-14:55 David Brenner, M.D.
Vice Chancellor for Health Sciences, Dean, UCSD School of Medicine
"ROS, NADPH oxidase, and liver fibrosis"

15:00-15:25 Neil Kaplowitz, M.D.
Professor and Director, USC Research Center of Liver Disease
"Mitochondrial and ER stress Coupling"

15:30-15:55 Hide Tsukamoto, DVM, PhD
Professor and Director, ALPD and Cirrhosis Research Center
"NASH Models"

16:00-16:20 Keigo Machida, Ph.D.
Assistant Professor, Dept of Mol. Microbiology and Immunology, USC
"Liver Cancer Stem Cells Generated by HCV, Alcohol, and Obesity"

16:25-16:40 Break

16:40-17:05 Jerome Rotter, M.D.
Professor, Pediatrics and Human Genetics, UCLA/Cedars Sinai
"Genome-Wide Association of IBD -- From Susceptibility to Therapy"

17:10-17:35 Anna Gukovskaya, Ph.D.
Professor and Senior Career Scientist, UCLA, West LA VA
"Autophagy in Pancreatitis"

17:40-18:00 Simon Beaven, M.D., Instructor, Gastroenterology, UCLA
"LXR Signaling in Hepatic Inflammation and Fibrosis"

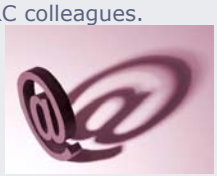
18:05-18:15 Closing Remarks
18:30-20:30 Reception and Dinner

VISIT OUR WEBSITE:
http://DERC.ucsd.edu

Find many great features:

CHECK OUT OUR MEMBERSHIP DIRECTORY

It allows easy searching by name, keywords, or location, and ONE-CLICK EMAILING to all of your DERC colleagues.



CHECK OUT OUR CORES' WEB PAGES

Find services offered by each Core with leadership and contact information to facilitate your core usage.

CHECK OUT OUR ANNOUNCEMENTS PAGES

See meeting schedules and announcements and one-click connections to the meeting sites and information.

CHECK OUT THE PILOT AND FEASIBILITY PROGRAM PAGES

Apply for P&F grants from the DERC. See the past awardees and get application instructions.

CHECK OUT OUR RESEARCH PAGES

Find important papers by your DERC colleagues and read summaries of their recent work.

ARRA EQUIPMENT FUNDS

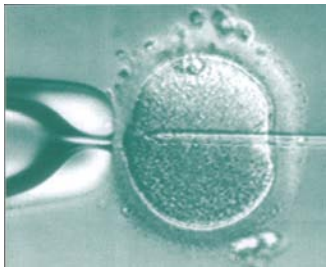
$200,000 direct costs awarded to:

The Transgenic and Knock-Out Mouse CORE

CORE A. Director: Pamela L. Mellon, Ph.D.

The DERC Transgenic and Knock-out Core is a state-of-the-art facility that has an outstanding track record in the production of genetically altered subjects. Transgenic subjects carrying new or novel genes are created by microinjection of DNA into the pronuclei of fertilized eggs. Knock-out mice lacking specific genes of interest are created by homologous recombination in embryonic stem cells followed by injection into blastocysts to create chimeric subjects. Highly experienced personnel produce transgenic and knock-out mice for UCSD investigators at subsidized cost and with very short lead times. The Core provides embryonic stem cell recombination, knockout mice, transgenic mice (both standard and BAC transgenics), embryo freezing, and pathogen-free embryonic rederivation to the DERC community at discounted rates. This UCSD-based Core Facility has been in operation since 1992.

ARRA FUNDS will purchase a third microinjection station which will be equipped for Intracytoplasmic Sperm Injection (ICSI) to allow the testing and development of a service for reconstituting cryopreserved sperm. Cryopreservation of sperm is a much more cost-effective and straightforward method for preservation of valuable mouse lines allowing DERC members to store their genetically modified mouse lines safely, cheaply and rapidly.



The Human Genetics CORE

CORE D. Director: Jerome I. Rotter, M.D.

With the rapid advances that have been occurring in the HapMap, high throughput genotyping, and statistical analysis methodology, meaningful advances in the identification of genes contributing to complex disorders such as diabetes have been made. While this progress is exciting, the consensus is that only a small portion of the genes involved in these diseases have been identified and much more work remains to be done.
The DERC Human Genetics Core offers expertise to DERC investigators conducting studies into the genetics of diabetes, its complications and related endocrine disorders. The Core provides services necessary for such genetic research in human populations; personnel offer expertise in study design, molecular genetics and statistical genetic analysis and Core facilities are available for high throughput genotyping and establishment of lymphoblastoid cell lines.

ARRA FUNDS will purchase IBM Blade Center Components and Server and a bay of 15 300GB disk drives. Large-scale genome wide association study (GWAS) has become a widely accepted approach for locating genes implicated in disease predisposition. In most GWAS studies, 300K to 1 million SNPs are genotyped, resulting in large amounts of genotyping data on each subject. In addition, imputation methods are now commonly used to infer additional genotypes, resulting in as many as 3 million SNPs per individual. The storage of this massive amount of GWAS data, as well as genetic analysis of such data, requires tremendous computing resources. The ARRA-funded computing equipment will increase the rate of data analyses by the Core many fold and accelerate and expand the analysis of results for DERC members.