

The University of Iowa
Roy J. and Lucille A. Carver
College of Medicine

CARDIOVASCULAR RESEARCH CENTER NEWSLETTER

Vol. 21, No. 4, October-December 2010

APPOINTMENTS

Francois M. Abboud, MD (*Internal Medicine*) was asked to serve as Consultant for **1)** the NIH Director's New Innovator Award Program, October 27, 2010, and **2)** Research Programs for the Fondation pour la Recherche Médicale, France, December 18, 2010.

C. Patrick Burns, MD (*Internal Medicine*) was elected Master, American College of Physicians, October 21, 2010.



Dr. Burns

Mark W. Chapleau, PhD (*Internal Medicine*) was named Co-Chair of the International Programming Committee for the 1st Joint Meeting of the International Society for Autonomic Neuroscience (ISAN) and the American Autonomic Society (AAS). The ISAN/AAS-2011 Meeting will be held September 12-16, 2011 in Buzios, Rio de Janeiro, Brazil.

Frank M. Faraci, PhD (*Internal Medicine*), was appointed as an Associate Editor for the *Journal of Neuroscience*.

The inaugural leadership team for the Fraternal Order of Eagle Diabetes Research Center has been announced as **Daryl K. Granner, MD** (*Internal Medicine*), Interim Director, and **Peter J. Mohler, PhD** (*Internal Medicine*), Deputy Director. The new center is a key component of the Pappajohn

Biomedical Institute in the John and Mary Pappajohn Biomedical Discovery Building, currently under construction.

Masataka Kawai, PhD (*Anatomy and Cell Biology*) recently served as Visiting Professor at the following institutions: **1)** Department of Physics, Faculty of Science and Engineering, Waseda University, Tokyo, Japan (July 2010) and **2)** Institute of Vegetative Physiology, University of Köln, Köln, Germany (September 2010)

Richard E. Kerber, MD (*Internal Medicine*) was elected to membership in American Clinical and Climatological Association

Curt D. Sigmund, PhD (*Pharmacology*) **1)** as Chair of the Program Project Committee, participated as a guest of the NHLBI Council at its September 2010 meeting in Bethesda, MD. He reported on review procedures for PPG applications, and **2)** participated in a special retreat of Editors-in-Chief of the journals published by the American Physiological Society to discuss the growing problem of unethical conduct in publishing, and to establish new procedures for the investigation of unethical behavior for the APS journals (i.e. *American Journal of Physiology*, *Journal of Applied Physiology*, and *Journal of Neurophysiology*).



SPECIAL PRESENTATIONS AND SEMINARS



Lecture Series Highlights “Bench to Bedside” Research

The Institute for Clinical and Translational Science (ICTS) hosted a lecture series titled “Bench to Bedside.” The lectures, which were free and open to public, demonstrated how translational research combines contributions from both basic and clinical scientists. The lectures were held from noon to 1 p.m. on the third Thursday of the month in C44-A GH at UIHC.

- **Oct. 21**, “Understanding How Actin Mutations Contribute to Aneurysms of the Aorta,” **Peter A. Rubenstein, PhD** (*Biochemistry*), and **Heather Bartlett, MD** (*Pediatrics*), explore actin mutations in vascular disease.
- **Nov. 18**, “The Ferret Model and Lung Transplantation,” **John F. Engelhardt, PhD** (*Anatomy & Cell Biology*), and **Kalpaj Parekh, MD** (*Cardiothoracic Surgery*), tackle complications affecting lung transplant recipients.
- **Dec. 16**, “Exploring a Newly Identified Gene’s Relationship with Cancer,” **Marc Wold, PhD** (*Biochemistry*), and **Daniel J. Berg, MD** (*Internal Medicine*), examine expression of a human-specific gene that may help

regulate cell growth and cancer progression.

An opportunity to learn more about the ICTS and view presentations via video feed, was offered at www.icts.uiowa.edu.

Francois M. Abboud, MD (*Internal Medicine*) Presentations: **1)** Invited Speaker – “In Search of Autonomic Balance,” at the Feinstein Institute for Medical Research, North Shore University Hospital-LIJ Medical Center, Manhasset, NY, November 30, 2010 and **2)** “Molecular and Functional Phenotyping of Baroreceptor Neurons in Spontaneously Hypertensive Rats (SHR),” at High Blood Pressure Research Council 2010 Scientific Sessions, Washington, DC, October 2010.

Kevin P. Campbell PhD (*Molecular Physiology and Biophysics*) Presentations: **1)** “Novel Post-Translational Processing of Dystroglycan: Insights from Muscular Dystrophy Patients” American Society of Matrix Biology meeting, Charleston, SC, October 24, 2010; **2)** “Mechanistic and molecular insights into the pathogenesis of muscular dystrophy” University of Texas Southwestern, Dallas, TX, November 3, 2010; **3)** “Distinct functions of glial and neuronal dystroglycan in the developing and adult mouse brain” Muscular Dystrophy Workshop, Charlotte, NC, November 11, 2010; **4)** “Glycosylation and Dystroglycan Function in Congenital Muscular Dystrophy” Children’s National Medical Center, Washington, DC, December 2, 2010.

Mark W. Chappleau, PhD (*Internal Medicine*) presented a review lecture on “Parasympathetic-Sympathetic Modulation” at the 21st International Symposium on the Autonomic Nervous System held in Marco Island, Florida, November 3-6, 2010.



Sanjana Dayal, PhD (*Internal Medicine*) gave a talk in August 2010 at the FASEB Meeting on “Folic acid, Vitamin B₁₂ and One Carbon Metabolism” at Carefree Resort, Arizona. The talk was titled “Mouse Models of Hyperhomocysteinemia and Vascular Disease.”

Gerald F. DiBona, MD (*Internal Medicine*) gave a presentation titled “Power Spectral and Transfer Function Analysis for the Study of Dynamic Renal Blood Flow Autoregulation”, Department of Physiology, University of Gothenburg, Sweden, December 30, 2010.

Frank M. Faraci, PhD (*Internal Medicine*) Presentations: **1)** “Cell Specific Effects of PPAR γ in the Vasculature”, American Heart Association Scientific Sessions 2010, Chicago, November 2010, and **2)** “Regional and Cell Specific Effects of PPAR γ in the Vasculature”, Department of Pharmacology, University of Vermont, December 2010.

Masataka Kawai, PhD (*Anatomy and Cell Biology*) Presentations: **1)** European Muscle Conference presentation, entitled “A study of hypertrophic cardiomyopathy mutations of tropomyosin in thin-filament reconstituted bovine myocardium” on September 12, 2010 at Padua, Italy; and **2)** Seminar at Institute of Vegetative Physiology, University of Köln, Köln, Germany, entitled: “Use of thin-filament reconstituted muscle fibers to probe the mechanism of contraction” on September 27, 2010.

Richard E. Kerber, MD (*Internal Medicine*) gave an Invited presentation at American Clinical and Climatological Association: “Therapeutic Hypothermia: What’s Hot about Cold?”, October 22, 2010, San Antonio, TX

Allyn L. Mark, MD (*Internal Medicine*) gave the following recent presentations: **1)** “A Cardiologist Confronts Obesity: Comments on the Genetic Neurobiological Contribution to

Obesity and Activity”, Cardiovascular Center, University of Michigan, Ann Arbor, MI, November 2, 2010; and **2)** “Neural Regulation of Activity: Lessons From Leptin.” Global Obesity Summit, University of Mississippi, Jackson, MS, November 11, 2010

Kamal Rahmouni, PhD (*Internal Medicine*) gave a presentation entitled “A novel mechanism of leptin resistance accounts for obesity in Bardet-Biedl syndrome” at the Obesity Summit held in Jackson, Mississippi, November 9-12, 2010.

Long-Sheng Song, MD (*Internal Medicine*) gave an invited presentation on October 13, 2010 at the Joint Conference on “New Horizons in Calcium Signaling”, organized by Biophysical Society (U.S.) and Biophysical Society of China, at Beijing, China (October 10th – 13th, 2010). Dr. Song’s presentation was titled “T-tubule Remodeling and Ca²⁺ Release Dysfunction in Heart Disease.”

Presentations at the American Heart Association Scientific Sessions, November 2010

Sunday, November 14 2010 –

Dianne L. Atkins, MD (*Pediatrics*) et al: “Chest Compression Rates Used During Out-of-Hospital Cardiopulmonary Resuscitation in Nine Resuscitation Outcomes in Consortium Regional Sites”

Mark E. Anderson, MD, PhD (*Internal Medicine*): “CAMkinases as Therapeutic Targets in Heart Failure”

Saket Girota, Peter M. Cram, MD (*Internal Medicine*), Mary Vaughan-Sarrazin, and Ioana Popescu: “Socio-economic and Racial Differences in Ad-missions to America’s Lowest Performing AMI Hospitals: Implications for Pay for Performance”

Francis J. Miller, MD (*Internal Medicine*): “Mitochondria-Nox Interactions and ROS Production”

Monday, November 15, 2010 –

Nicholas Zavazava, MD (*Internal Medicine*): “Role of Cell Fusion in Cellular Reprogramming”

Peter M. Cram, MD (*Internal Medicine*) et al: “Automated External Defibrillators and Survival after In-Hospital Cardiac Arrest”

Jennifer G. Robinson, MD (*Internal Medicine*) et al: “Association of 25(OH) Vitamin D Levels and All-cause and CVD Mortality in the Women’s Health Initiative”

Brant A. Rustwick and **Dianne L. Atkins, MD** (*Pediatrics*): “Comparison of Electrocardiographic Characteristics for Automated External Defibrillator Algorithms in Children and Adults”

Sanjana Dayal, Katina M. Wilson, **Francis J. Miller, MD, Steven R. Lentz, MD, PhD** (*Internal Medicine*): “Overexpression of Glutathione Peroxidase-1 Protects Mice from Increased Susceptibility to Experimental Thrombosis with Aging”

Allyn L. Mark, MD (*Internal Medicine*), Xian Cao, Gang Wang, Ram Sharma, Robin L. Davisson: “Slow-Pressor Angiotensin II Hypertension Involves Endoplasmic Reticulum Stress-Dependent Redox Mechanisms in the Brain”

Harold P. Adams, MD (*Neurology*) et al: “CLOSURE I: A Prospective, Multicenter, Randomized Controlled Trial to Evaluate the Safety and Efficacy of the STARFlex® Septal Closure System versus Best Medical Therapy in Patients with a Stroke or Transient Ischemic Attack Due to Presumed Paradoxical Embolism Through a Patent Foramen Ovale”

Jeremy S. Harrod, Benjamin R. Evans, **Kathryn G. Lamping, PhD** (*Internal Medicine*): “Upregulation of Serotonin 5HT2A and 5HT2B Receptors Contributes to Increased Vascular Contractions in Type 2 Diabetes”

Frank M. Faraci, PhD (*Internal Medicine*): “Cell Specific Effects of PPAR γ in the Vasculature”

Brian Olshansky, MD (*Internal Medicine*): “Inappropriate Sinus Tachycardia and Postural Ortho-static Tachycardia Syndrome”

Tuesday, November 16, 2010 –

Allyn L. Mark, MD (*Internal Medicine*): “Sympathetic Nervous System in Obesity and Hyper-tension: New Insights”

Wednesday, November 17, 2010 –

Quinchuan Wang, Jenny L.-C. Lin, **Jim J.-C. Lin, PhD** (*Biology*): “The mXin β Initiates the Formation of Intercalated Discs in the Developing Postnatal Hearts, While the mXin α Further Stabilizes Their Integrity in the Adult Mouse Heart”

Peter J. Mohler, PhD (*Internal Medicine*) et al: “Ankyrin-B (+/-) Mice Show Enhanced Sarcoplasmic Reticulum Ca Release in Cardiac Myocytes Due to Altered Local Ca Concentration Regulation”

NOTABLE PUBLICATIONS



Welsh MJ: Presentation of the Association of American Physicians of the 2009 George M. Kober Medical to **Francois M. Abboud**. *J Clin Invest* 120(11):4155-4160, November 2010.

Abboud FM: Acceptance of the 2009 George M. Kober Medal. *J Clin Invest* 120(11):4161-4162, November 2010.

Tan ZY, Lu Y, Whiteis CA, Simms A, Paton JFR, Chappleau M, and Abboud FM: Chemoreceptors hypersensitivity, sympathetic excitation, and overexpression of ASIC and TASK channels before the onset of hypertension in SHR. *Circ Res* 106:536-545, 2010. PMC2846115

Sabharwal R, Zhang Z, Abboud FM, Chappleau MW, and Russo AF: Receptor activity-modifying protein-1 increases baroreflex sensitivity and attenuates angiotensin-induced hypertension. *Hypertension* 55(3):627-635, 2010.

Schwimmer H, **Stauss HM, Abboud FM, Chappleau M**, Nishino S, Mignot, and E, Zeitzer JM: Effects of sleep on the cardiovascular and thermoregulatory systems: A possible role for hypocretins. *J Appl Physiol* 109*4):1053-63, 2010.

Abboud FM: The Walter B. Cannon Award Lecture, 2009: Physiology in perspective: The wisdom of the body: In search of autonomic balance: The good, the bad and the ugly. *Am J Physiol Regul Integr Comp Physiol* 298:R1449-R1467, 2010.

Satz JS, Ostendorf AP, Hou S, Turner A, Kusano H, Lee JC, Turk R, Nguyen H, Ross-Barta SE, Westra. S, Hoshi T, Moore SA and **Campbell KP**. Distinct Functions of Glial and Neuronal Dystroglycan in the Developing and Adult Mouse Brain. *J Neurosci* 30: 14560-72, 2010.

Lueck J, Rossi AE, Thornton CA, **Campbell KP**, and Dirksen RT. Sarcolemmal Restricted Localization of Functional C1C-1 Channels in Mouse Skeletal Muscle. *J. Gen. Physiol.* 136: 597-613, 2010.

Han R, Frett EM, Levy JR, Rader EP, Lueck JD, Bansal D, Moore SA, Ng RN, Beltran-Valero de Bernabe D, Faulkner JA, **Campbell KP**. Genetic Ablation of the Complement System Attenuates Dysferlin-deficient Muscular Dystrophy. *J. Clin. Invest.* 120: 4366-74, 2010.

DiBona GF and Esler M. Translational Medicine: The antihypertensive effect of renal denervation. *Am J Physiol* 298:R245-R253, 2010. Nitescu N, **DiBona GF**, Grimberg E, and Guron G. Angiotensin II type 1 receptor antagonism attenuates abnormalities in dynamic renal blood flow autoregulation in rats with endotoxin-induced acute kidney

injury. *Kidney & Blood Pressure Research* 33:200-208, 2010.

Saeed A, **DiBona GF**, Marcussen N, and Guron G. High NaCl intake impairs dynamic autoregulation of renal blood flow in angiotensin II-infused rats. *Am J Physiol* 299: R1142-R1149, 2010.

Girota S, Lu X, Popescu I, Vaughan-Sarrazin M, Horwitz PA, and Cram P. The impact of hospital cardiac specialization on outcomes after coronary artery bypass graft surgery: Analysis of Medicare claims data. *Circ: Cardiovasc Qual Outcomes* 3:607-614, 2010.

Grobe JL, Dickson ME, Park S, Davis DR, Born EJ, **Sigmund CD.** Cardiovascular consequences of genetic variation at -6/235 in human angiotensinogen using "humanized" gene-targeted mice. *Hypertension*. Nov;56(5):981-7, 2010.

Grobe JL, Grobe CL, Beltz TG, Westphal SG, Morgan DA, Xu D, de Lange WJ, Li H, Sakai K, Thedens DR, Cassis LA, **Rahmouni K, Mark AL, Johnson AK, Sigmund CD.** The brain renin-angiotensin system controls divergent efferent mechanisms to regulate fluid and energy balance. *Cell Metabolism*. Nov 3;12(5):431-42, 2010.

Lu X, Heeley DH, Smillie LB, **Kawai M.** The role of tropomyosin isoforms and phosphorylation in force generation in thin-filament reconstituted bovine cardiac muscle fibres. *J Muscle Res Cell Motil* 31:93-109, 2010.

Kawai M, Candau R. Muscle contraction and supplying ATP to muscle cells. In: Handbook of Exercise Physiology – From a cellular to an integrative approach (Edited by Connes P, Hue O, Perrey S), pp. 3-26. IOS Press, Amsterdam, 2010.

Beyer AM, Guo DF, Sheffield VC, **Rahmouni K:** Contrasting vascular effects caused by loss of Bardet-Biedl syndrome genes. *American Journal of Physiology - Heart and Circulatory Physiology* 2010; 299(6):H1902-H1907.

Guo DF, Beyer AM, Young B, Nishimura DY, Sheffield VC, **Rahmouni K:** Inactivation of Bardet-Biedl syndrome genes cause kidney defects. *American Journal of Physiology - Renal Physiology* 2010 Nov 24. [Epub ahead of print].

Curt D. Sigmund, PhD (*Pharmacology*) wrote a News and Views article for *Nature* entitled "Structural biology: On stress and pressure." *Nature*. 468:46-47, 2010.

NEWS RELATING TO PROJECTS



(On Narcolepsy)

Sleepiness Might Be in the Genes, Study Finds

Mark E. Dyken, MD (*Neurology*) participated in a new study, led by Dr. Namni Goel, Assistant Professor of Psychiatry at the University of Pennsylvania School of Medicine, which finds that a genetic marker associated with narcolepsy may determine sleepiness. Sleep is supposed to rejuvenate the body, but for a 43-year-old male patient, treated by Dr. Dyken, it can be anything but invigorating.

It would not be the only gene-linked sleep condition that this patient experiences; he already suffers from bouts of sleep paralysis, a disorder in which sufferers feel paralyzed as they fall asleep or as they wake up. Episodes can last a few seconds to a couple of minutes, but the patient said the effects of the temporary paralysis seem to bog him down all day. "He hasn't been tested for this gene yet, but it could be part of the spectrum of genes that contribute to his sleep habits," said Dr. Dyken

Researchers found that healthy people with one particular genetic variant were generally sleepier than those without the gene. About 25 percent of

the general public has the genetic variant, called DQB1 *0602, but only a small percentage of them actually suffer from sleep problems.

The research, published in the journal *Neurology*, found that people with the gene variant reported feeling sleepier and more fatigued compared to the people without the variant, whether they slept four hours or 10 hours. People with the gene variant also spent less time in deep sleep, and woke up more times during their sleep compared to the non-gene participants.

Dr. Mark Mahowald, Medical Director of the Minnesota Regional Sleep Disorders Center, said that "a one-size-fits-all policy is probably not a very wise idea when it comes to sleep. Our society has equated sleepiness with defects of character, like laziness and depression, but really, some people are generally sleepier during the day. They're more prone to naps, and to sleeping in. We have to accept the fact that sleep duration is genetically determined and not a sign of defect."

So what's a tired person to do? Not much. But Dr. Goel said she hopes to continue her research with genetic biomarkers.

ABC News/Health
October 26, 2010



Growth Defects in Cystic Fibrosis May Start Before Birth

A new study using a pig model of cystic fibrosis (CF) suggests that low levels of a growth promoting hormone at or before birth may contribute to growth defects in patients with CF.

The study, led by UI researchers and published online the week of Nov. 8 in the Early Edition of the *Proceedings of the National Academy of Sciences*, could help predict the severity of the disease in patients and may lead to new therapies for growth defects in people with CF.

Growth defects are common in people with CF and have been blamed, in part, on low levels of the growth-promoting hormone called insulin-like growth factor 1 (IGF1). Traditionally,

the malnutrition and lung inflammation that accompany CF have been blamed for the decreased levels of IGF1. However, even patients who are relatively healthy often do not reach their full growth potential, and newborns with CF often are smaller at birth than healthy babies.

"By examining IGF1 at this time point, we eliminated consequences of lung inflammation, which is absent at birth, and malnutrition, because nutrition in utero is provided by the mother," explained **Leah Reznikov, PhD**, (*Internal Medicine*), Postdoctoral Fellow and co-first author of the study. "We found that IGF1 levels were significantly reduced at birth in CF newborn pigs."

In addition, the UI researchers found that newborn CF pigs had shorter, smaller bones than pigs without CF.

These findings, led Dr. Reznikov and colleagues, to examine levels of IGF1 in newborn humans with CF found that infants with CF have reduced IGF1 levels compared to healthy infants.

In addition to Drs. Reznikov and Rogan, the research team included **Michael J. Welsh, MD** (*Internal Medicine*) and **David Stoltz, MD, PhD** (*Internal Medicine*). UI researchers, Alejandro A. Pezzulo, Assistant Research Scientist; **Joseph Zabner, MD** (*Internal Medicine*); Nicholas Gansemer and Douglas Fredericks, Research Assistants; and **Paul McCray Jr. MD** (*Pediatrics*) along with University of Missouri researchers, Randall Prather, PhD and Melissa Samuel, Senior Research Specialist, also contributed to the study.

UI News Release
November 10, 2010



GRANT AWARDS

Gerald F. DiBona, MD (*Internal Medicine*) was awarded the following: Research Grant, Karolinska Institute, Stockholm, Sweden, December 1, 2010- April 30, 2011. SEK 21,000

Robert B. Felder, MD (*Internal Medicine*) received a new NIH RO1 award for a project entitled "Brain MAP Kinases – Substrate for Sympathetic Activation in Heart Failure" in the amount of \$250,000 annually for the 4-year period, 12/15/10-12/31/14. **Robert M. Weiss, MD** (*Internal Medicine*) is a co-investigator.

Randy H. Kardon, MD (*Ophthalmology and Visual Science*) was awarded a \$1 million grant by the Department of Veterans Affairs (VA) Rehabilitation and Research Division to study the prevention of hemorrhage, or bleeding, and death after traumatic brain injuries that may help wounded soldiers.

Kamal Rahmouni, PhD (*Internal Medicine*) received a 3 years Basic Science Award from the American Diabetes Association for the grant entitled "Mechanisms Mediating the Metabolic Effects of Amylin Action in the Brain".

OTHER NEWS



➤ **Scott A. Vogelgesang, MD** (*Internal Medicine*) was appointed to the new M. Paul Strottmann, Family Chair for Medical Education. Dr. Vogelgesang, whose research and clinical interests are in medical education and general rheumatology, said the award is especially meaningful given Dr. Strottmann's years of leadership as a teacher.

➤ Data from FY 2010 demonstrates that research within the Carver College of Medicine continues to be ambitious and robust. The college received a total of 1,138 funded grant applications during the fiscal year, up from 1,017 in FY 2009. Of note, 395 of the 1,138 received during FY 2010

were new awards. The Carver College of Medicine accounts for almost half of the research funding received by The University of Iowa and ranks 12th nationally in National Institutes of Health funding to public medical schools.

➤ UI Heart and Vascular Center now has clinic hours for new patients from 5 to 8 p.m. Mondays and Wednesdays. The clinics offer assessment and treatment by cardiologists from a range of subspecialties, as well as diagnostic services such as EKG (electrocardiogram), heart stress testing, and echo imaging. For information or to make an appointment, call 356-7102.

➤ *The Examined Life: A Literary Journal of the University of Iowa Carver College of Medicine* is a new print journal published bi-annually by The Writing and Humanities Program at the UI Carver College of Medicine. A forum devoted to literary prose and poetry, the journal intends to deepen understanding of health care and healing, illness, the human body, and the human condition. With this in mind, submissions of previously unpublished, original works of fiction, non-fiction, and poetry have been solicited for the first publication. Wednesday, Dec. 15, 2010, 5 p.m., was the deadline for submission. The submission deadline for the next issue is to be announced.

➤ An investiture was held on Monday, Oct. 25, 2010 at 3:30 p.m. in the Prem Sahai Auditorium, Medical Education Research Facility (MERF). The ceremony recognizes generous gifts from the Roy J. Carver Charitable Trust to establish two endowed chairs and celebrates the appointment of two distinguished faculty members to the positions: **Curt D. Sigmund, PhD**, as the Roy J. Carver Chair in Hypertension Research, and Charles M. Brenner, PhD, as the Roy J. Carver Chair in Biochemistry.

➤ **Robert B. Felder, MD** served as a temporary member of the HM Study Section at its October, 2010 meeting.

➤ Lisa Smith, RN, MS, CCNS, ARNP of Cardiomyopathy is the Guest Editor for the Spring Edition of *The Connection*, which is a quarterly newsletter published by the American Association of Heart Failure Nurses

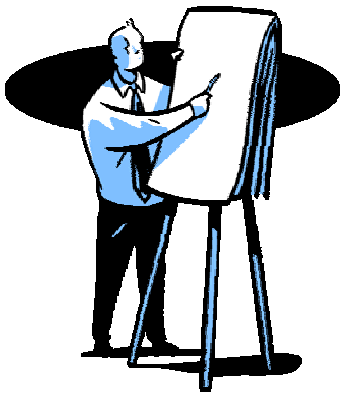
(AAHFN). The topic of the spring newsletter is "Heart Failure with Preserved Systolic Function".

TRAINEES / FELLOWS / STUDENTS



Aline Hilzendeger, PhD (Sponsor: **Allyn L Mark, MD** [*Internal Medicine*]) received a two year American Heart Association Postdoctoral Fellowship Award beginning January 2011.

Kristin Sprock, a medical student working in the laboratory of **Mark W. Chappleau, PhD** (*Internal Medicine*), received the Outstanding Presentation in Basic Neuroscience Award at the University of Iowa Medical Student Research Day (September 10, 2010) for her presentation titled "Sex Differences in Reactive Oxygen Species Generation in Sympathetic and Sensory Neurons: Implications for Control of Sympathetic Nerve Activity". Her presentation on the same topic was also selected as one of the best poster presentations by a graduate/medical student at the annual Iowa Physiological Society meeting held at Des Moines University on October 9, 2010.



VISITING PROFESSORS AND CARDIOVASCULAR CENTER SEMINARS



Dr. Lisa Baye (Oct 2010)
Postdoctoral Fellow in the Laboratories of Diane Slusarski, PhD, Department of Biology and Val C. Sheffield, MD, PhD, Department of Pediatrics, Carver College of Medicine, University of Iowa, Iowa City, IA
"Examining the Role of *bbs1* in Cardiovascular Development Using the Zebrafish Model System"

Dr. James Dowling (Oct 2010)
Division of Pediatric Neurology; Director, Pediatric Neuromuscular Clinic; University of Michigan, Ann Arbor, MI
"Childhood Muscle Disease: RYR1 at the Core"

Dr. Gregory Fink (Oct 2010)
Professor, Department of Pharmacology and Toxicology, Michigan State University, East Lansing, MI
"Is Venous Function Relevant to Hypertension?"

Dr. Masataka Kawai (Oct 2010)
Professor, Department of Anatomy and Cell Biology, Carver College of Medicine, University of Iowa, Iowa City, IA
"Thin-Filament Reconstituted Muscle Fibers and Results on HCM Tropomyosin Mutants"

Dr. Robert Linhardt (Oct 2010)
Professor, Rensselaer Polytechnic Institute, Troy, NY
"Heparin, A Recent Healthcare Crisis, and Future Prospects for this Critically Important Drug"

Dr. Daniel L. Minor (Oct 2010)
Associate Professor, Departments of Biochemistry & Biophysics and Cellular & Molecular Pharmacology; Investigator, Cardiovascular Research Institute, University of California; Faculty Scientist/Biochemistry, Physical Biosciences Division, Berkeley National Laboratory, San Francisco, CA
"Structural Insights into Ion Channel Function and Modulation"

Dr. Isabelle Maridonneau Parini (Oct 2010)
Institut de Pharmacologie et de Biologie Structurale, Toulouse, France
"Macrophage Migration in Three-Dimensional Environments"

Dr. John P. Rosazza (Oct 2010)
Professor Emeritus, University of Iowa College of Pharmacy & Center for Biocatalysis and Processing, Iowa City, IA
"MNPC and Actinomycetes: Archeological Digs"

Dr. Stefan Strack (Oct 2010)
Associate Professor, Department of Pharmacology, Carver College of Medicine, University of Iowa, Iowa City, IA
"Function Follows Form: Mitochondrial Morphogenesis in Neuronal Survival and Plasticity"

Dr. Steven S. Vogel (Oct 2010)
Investigator & Acting Section Chief, National Institute on Alcohol Abuse & Alcoholism, Division of Intramural Clinical & Biological Research, National Institutes of Health, Bethesda, MD
"Using FRET Microscopy to Monitor the Activation, Assembly and Subunit Swapping of CaMKII in Living Cells"

Dr. Thomas Hurley (Nov 2010)
Chancellor's Professor, Department of Biochemistry and Molecular Biology, Indiana University School of Medicine, Indianapolis, IN
"Structure/Inactivity Relationships in Human Aldehyde Dehydrogenase"

Dr/ Valerie Horsley (Nov 2010)
Assistant Professor, Molecular,
Cellular & Developmental Biology,
Yale University, New Haven, CT
“Intrinsic and Extrinsic Regulation of
Skin Stem Cells”

Dr. Jayasankar Jasti (Nov 2010)
CVC IRF Postdoctoral Research
Fellow, Department of Internal
Medicine, University of Iowa Carver
College of Medicine, Iowa City, IA
(Mentor: Michael J. Welsh, MD,
Professor, Department of Internal
Medicine)
“Identifying Specific Biophysical
Properties of Acid-Sensing Ion
Channels Required for Their
Physiological and Pathological
Actions”

Dr. Leah R. Reznikov (Nov 2010)
CVC IRF Postdoctoral Research
Fellow, Department of Internal
Medicine, University of Iowa Carver
College of Medicine, Iowa City, IA
(Mentor: Michael J. Welsh, MD,
Professor, Department of Internal
Medicine)
“Non-Epithelial Expression and
Function of CFTR: White It Matters”

Dr. Tina Tootle (Nov 2010)
Assistant Professor, Department of
Anatomy and Cell Biology, University
of Iowa Carver College of Medicine,
Iowa City, IA
“Probing the Roles of Prostaglandins
in Regulation Actin Remodeling”

Dr. Brian Wadzinski (Nov 2010)
Associate Professor, Department of
Pharmacology, Vanderbilt University
Medical Center, Nashville, TN
“Modulation of Protein
Serine/Threonine Phosphatase 2A
(PP2A) Function by Two Atypical
Regulatory Subunits – TIP and
ALPHA4”

Dr. Toshifumi Yokota (Nov 2010)
Research Associate, Research Center
for Genetic Medicine, Children’s
National Medical Center, Washington,
DC
“Therapeutic Potential of Exon
Skipping for Muscular Dystrophies”

Dr. Amrut V. Ambardekar (Dec
2010)
Internist, Division of Cardiology,
Department of Internal Medicine,
University of Colorado at Denver,
Denver, CO
“Effects of Left Ventricular Assist
Device Support on Myocardial
Sarcomere Contractile Function”

Dr. Ryan L. Boudreau (Dec 2010)
CVC IRF Postdoctoral Research
Fellow, Department of Internal
Medicine, University of Iowa Carver
College of Medicine, Iowa City, IA
(Mentor: Beverly L. Davidson, PhD,
Professor, Department of Internal
Medicine)
“High Throughput MicroRNA Target
Identification in Disease and
Development”

Dr. Carl J. Christel (Dec 2010)
CVC IRF Postdoctoral Research
Fellow, Department of Internal
Medicine, University of Iowa Carver
College of Medicine, Iowa City, IA
(Mentor: Amy Lee, PhD, Associate
Professor, Department of Molecular
Physiology and Biophysics)
“Regulation of Cav1.3 Calcium
Channels by PDZ Proteins”

Dr. C. Faith Kline (Dec, 2010)
CVC IRF Postdoctoral Research
Fellow, Department of Internal
Medicine, University of Iowa Carver
College of Medicine, Iowa City, IA
(Mentor: Peter J. Mohler, PhD,
Associate Professor, Department of
Internal Medicine)
“Exploring New Roles for Ankyrin
and Spectrin Polypeptides in Excitable
Cells”

Dr. Elizabeth D. Luczak (Dec 2010)
CVC IRF Postdoctoral Research
Fellow, Department of Internal
Medicine, University of Iowa Carver
College of Medicine, Iowa City, IA
(Mentor: Mark E. Anderson, MD,
PhD, Professor and Head, Department
of Internal Medicine)
“The Role of CaMKII and
Mitochondria in the Transition to
Heart Failure”

Dr. William Thiel (Dec 2010)
CVC IRF Postdoctoral Research
Fellow, Department of Internal
Medicine, University of Iowa Carver
College of Medicine, Iowa City, IA
(Mentor: Paloma H. Giangrande, PhD,
Assistant Professor, Department of
Internal Medicine)
“Smooth Muscle Cell-Specific
Inhibition of NADPH Oxidase to
Prevent Vascular Disease and
Bioinformatics of an RNA Aptamer
Selection”