



**UW CARDIOVASCULAR RESEARCH CENTER
14th ANNUAL SCIENTIFIC POSTER FAIR
TUESDAY, DECEMBER 2, 2008, 3:00 - 5:00 PM
ATRIUM, HEALTH SCIENCES LEARNING CENTER
750 HIGHLAND AVENUE
INFO: 263-2266
WWW.CVRC.WISC.EDU**

Preventive Cardiology/Epidemiology

Lack of association between early cardiovascular autonomic function and progression to diabetic nephropathy in type 1 diabetes

Herrera, VM; Palta M.

Presenter: Victor M. Herrera, MD, Research Assistant, Population Health Sciences, 626 WARF, vherrera@wisc.edu, 265-3686

Cystatin C and Carotid Intima-Media Thickness in Young Persons with Type 1 Diabetes

Tamara LeCaire, MS, Mari Palta, Ph.D., James H. Stein, MD, Bryan Becker, MD

Presenter: Tamara LeCaire, MS, Researcher, Population Health Sciences, 611 WARF, tjlecaire@wisc.edu, 263-5305

The Effects of Sleep-Disordered Breathing on Arterial Stiffness are Modulated by Age

Claudia E Korcarz, Adam D Gepner, Susan E Aeschlimann, Laurel A Finn, Paul Peppard, Terry Young, James H Stein

Presenter: Claudia E Korcarz, DVM, RDCS, Associate Scientist, Cardiovascular Medicine, former Trainee, **Training Program in Translational Cardiovascular Science**, H6/377 CSC, ck4@medicine.wisc.edu, 265-9947

Ultrasound Detection of Increased Carotid Intima-Media Thickness and Carotid Plaque in an Office Practice Setting: Does It Affect Physician Behavior or Patient Motivation?

¹Claudia E. Korcarz, DVM, FASE; ²Jeanne M. DeCara, MD; ³Alan T. Hirsch, MD; ⁴Emile R. Mohler, MD; ⁵Bryan Pogue, MD; ⁶John Postley, MD; ⁴Wendy S. Tzou, MD; ¹James H. Stein, MD, FASE

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⁶ New York Physicians, New York, NY

Presenter: Claudia E Korcarz, DVM, RDCS, Associate Scientist, Cardiovascular Medicine, former Trainee, **Training Program in Translational Cardiovascular Science**, H6/377 CSC, ck4@medicine.wisc.edu, 265-9947

Lipoprotein Changes in HIV-Infected Antiretroviral-Naïve Individuals After Starting Class-Sparing Antiretroviral Therapy: ACTG Study A5152s

James H Stein¹, Lauren Komarow², Bruno R. Cotter³, Univ of California-San Diego, San Diego, CA; Judith S. Currier⁴, Michael P. Dube⁵, Carl J. Fichtenbaum⁶, Mariana Gerschenson⁷, Carol K. Mitchell¹, Robert L. Murphy⁸, Kathleen Squires⁹, Robert A. Parker², Francesca J. Torriani³.

¹ Univ of Wisconsin Sch of Med and Public Health, Madison, WI; ² Harvard Sch of Public Health, Boston, MA; ³ Univ of California-San Diego, San Diego, CA; ⁴ Univ of California-Los Angeles, Los Angeles, CA; ⁵ Indiana Univ Sch of Med, Indianapolis, IN; ⁶ Univ of Cincinnati Medical Ctr, Cincinnati, OH; ⁷ Univ of Hawaii, Honolulu, HI; ⁸ Northwestern Univ Feinberg Sch of Med, Chicago, IL; ⁹ Univ of Southern California, Los Angeles, CA

Presenter: James H. Stein, MD, Professor, Cardiovascular Medicine, G7/341 CSC, jhs@medicine.wisc.edu, 263-9648

Predictors of Subclinical Atherosclerosis Among Current Smokers

Heather M. Johnson, MD; Susan E. Aeschlimann, RVT, RDMS; Megan E. Piper, PhD; Douglas E. Jorenby, PhD; Michael C. Fiore, MD, MPH; Timothy B. Baker, PhD; James H. Stein, MD, FAHA

Presenter: Heather Johnson, MD, Clinical Cardiovascular Medicine Fellow, Cardiovascular Medicine, H6/349 CSC, hm2@medicine.wisc.edu, 263-0891

Effects of a Uterine Restriction Model on Fetal Kidney Development in Sheep

K Meyer, JM Habeck, SE Blohowiak, PJ Kling, RR Magness

Presenter: Kate Meyer, Graduate Student, Endocrinology-Reproductive Physiology Program, 202 S. Park Street, kmmeyer1@wisc.edu, 417-5780

How Many Guidelines Does It Take To Send An Asymptomatic Man To Invasive Angiography?

Miguel A. Leal, M.D.; Jon Keevil, M.D.

Presenter: Miguel A. Leal, MD, Fellow, Cardiovascular Medicine, H6/3 CSC, mleal@uwhealth.org, 263-0891

Vascular Biology

TGF-beta promotes recruitment of bone marrow cells and bone marrow-derived mesenchymal stem cells through stimulation of MCP-1 production in vascular smooth muscle cells

Fan Zhang, Shirling Tsai, Chunjie Wang, Shahin Rafii, Bo Liu and K. Craig Kent.

Presenter: Fan Zhang, MD, Assistant Scientist, Surgery, 5133 WIMR, zhangf@surgery.wisc.edu, 263-5961

Increased apoptosis and protein kinase-C delta expression during Angiotensin II-induced aneurysm formation in apolipoprotein E-deficient mice

Dai Yamanouchi, Kaori Kato, Fan Zhang, Sebastian Schubl, K. Craig Kent, Bo Liu

Presenter: Dai Yamanouchi, MD, Ph.D., Assistant Visiting Scientist, Surgery, 5133 WIMR, yamano@surgery.wisc.edu, 265-2358

Apoptosis in Vascular Smooth Muscle Cells is induced by Protein Kinase C Delta Cleavage but not Phosphorylation

Kaori Kato, Dai Yamanouchi, Fan Zhang, K. Craig Kent, and Bo Liu

Presenter: Kaori Kato, MD, Assistant Visiting Scientist, Surgery, 5120 WIMR, kato@surgery.wisc.edu, 263-5938

Do Sex Differences Exist in Functional Sympatholysis?

Jacqueline K Limberg, Alyssa M Drezdon, Marlowe Eldridge, and William G. Schrage

Presenter: Jacqueline Limberg, Graduate Student, Kinesiology, Natatorium/Gym II, 1149C, limberg@wisc.edu, 263-6308

Exercise in Obesity: Impaired Muscle Blood Flow

Michael D De Vita, Jacqueline K Limberg, Gregory M Blain, and William G Schrage

Presenter: Michael D. De Vita, Medical Student and *Summer 2008 CVRC Medical Student Intern*, Kinesiology, Natatorium/Gym II, 1149C, mddevita@wisc.edu, 263-6308

Endogenous Placental Estrogen Inhibition Using Letrozole in Ovine Pregnancy Lowers Uterine Artery Endothelial Nitric Oxide Production

Ronald R Magness^{1,2,3}, Fuxian Yi¹, Terrance M. Phernetton¹, and Jason L. Austin¹

Perinatal Research Labs, Departments of Ob/Gyn¹, Peds² Anim Sci³, Univ Wisconsin-Madison

Presenter: Ronald R. Magness, Ph.D., Professor, Ob/Gyn, Perinatal Research Labs, PAB Meriter Hospital/Park, 202 S. Park Street, rmagness@wisc.edu, 417-6314

Uterine Artery Endothelial Bradykinin Receptor Levels and Their Activation of NO Production in During the Ovine Ovarian Cycle and Pregnancy

Ronald R. Magness^{1,2,3}, Fu-Xian Yi¹, Gladys Lopez¹ and Kimberly Vonnahme⁴

Perinatal Research Labs, Departments of Ob/Gyn¹, Peds² Anim Sci³, Univ Wisconsin-Madison; Anim/Range Sci, North Dakota State Univ Fargo ND⁴

Presenter: Ronald R. Magness, Ph.D., Professor, Ob/Gyn, Perinatal Research Labs, PAB Meriter Hospital/Park, 202 S. Park Street, rmagness@wisc.edu, 417-6314

Vascular Biology and Function

Impedance as a measure of proximal, intermediate and distal arterial changes with pulmonary hypertension in mice

Rebecca Vanderpool, Diana Tabima Martinez, Ah Ram Kim, and Naomi Chesler

Presenters: Rebecca Vanderpool and Diana Tabima Martinez, Graduate Students, Biomedical Engineering, 2145 Engineering Centers Building, beccav@cae.wisc.edu and dtabimamarti@wisc.edu, 265-3792

Mechanisms of Large Pulmonary Artery Stiffening in Hypoxia-Induced Pulmonary Hypertension

Zhijie Wang, Naomi Chesler

Presenter: Zhijie Wang, Ph.D., Research Associate, Biomedical Engineering, 2145 Engineering Centers Building, zwang48@wisc.edu, 265-3792

Viscoelastic Properties of the Pulmonary Artery in Mice

Nicholas Balge, Zhijie Wang, Naomi Chesler

Presenter: Nicholas Balge, Student, Biomedical Engineering, nbalge@wisc.edu

The effects of past pregnancies on uterine artery mechanics: potential indicators of risk for preeclampsia

Danny Henao, Naomi Chesler, Ron Magness

Presenter: Danny Henao, Student, Biomedical Engineering, dhenao@wisc.edu

Valvular Biology and Function

Creating 3-D Models of Valvular Disease

Karien J. Rodriguez, Laura M. Piechura and Kristyn S. Masters

Presenter: Karien Rodriguez, Graduate Student, Biomedical Engineering, and Trainee, **Training Program in Translational Cardiovascular Science**, 2153 Engineering Centers Building, krodriguez@wisc.edu, 265-3849

Investigating the mechanism of statin action on valvular interstitial cells

Elyssa L. Monzack, M.S. and Kristyn S. Masters, Ph.D.

Presenter: Elyssa Monzack, Graduate Student, Biomedical Engineering and Trainee, **Training Program in Translational Cardiovascular Science**, 2151 Engineering Centers Building, monzack@wisc.edu, 265-3849

Hemostasis

Depolymerized Holothurian Glycosaminoglycan Inhibits Plasma Thrombin Generation via Interaction with the Factor IXa Heparin-Binding Exosite

Buyue Yang and John P Sheehan

Presenter: Buyue Yang, Graduate Student, Medicine /Hematology-Oncology and Pathology, 2459 MSC, byang4@wisc.edu, 262-7587

Gene Regulation and Development

Sumoylation as a Determinant of Context-Dependent GATA-1 Function

Hsiang-Ying Lee, Kirby D. Johnson, former Trainee, **Training Program in Translational Cardiovascular Science**, Meghan E. Boyer, Shin-Il Kim and Emery H. Bresnick

Presenter: Hsiang-Ying Lee, Graduate Student, Pharmacology, 389 MSC, hlee33@wisc.edu, 265-6301

Molecular Hallmarks of Endogenous Chromatin Complexes Containing Master Regulators of Hematopoiesis

Ryan J. Wozniak, former Trainee, **Training Program in Translational Cardiovascular Science**, Sunduz Keles, Jesse J. Lugus, Ken H. Young, Meghan E. Boyer, Tuan M. Tran, Kyunghee Choi, Emery H. Bresnick

Presenter: Meghan E. Boyer, Research Specialist, Pharmacology, 389 MSC, meboyer@wisc.edu, 265-6301

Characterization of a novel cardiac specific factor LRRC10

Sang Hee Lee, Matthew Brody, Ki-Hyun Kim, Dagmara Antkiewicz, Richard Peterson, Warren Heideman, and Youngsook Lee

Presenter: Sang Hee Lee, Research Assistant, Anatomy/Molecular and Environmental Toxicology, 322 SMI, slee225@wisc.edu, 262-5984

The role of Jarid2 in cardiac development

Matthew R. Mysliwicz and Youngsook Lee

Presenter: Matthew R. Mysliwicz, Graduate Student, Anatomy, 322 SMI, mrmysliwicz@wisc.edu, 262-5984

Angiogenesis

Molecular Imaging of Angiogenesis: Cancer and Beyond

Weibo Cai and Xiaoyuan Chen

Presenter: Weibo Cai, Ph.D., Assistant Professor, Radiology & Medical Physics, K4/628 CSC, wcai@uwhealth.org, 262-1749

Excitation-Contraction Coupling

Imperatoxin from *Pandinus imperator* scorpions ablates calcium sparks in permeabilized cells

E. Michelle Capes, MS and Hector H. Valdivia, PhD

Presenter: E. Michelle Capes, Graduate Student, Physiology, 601 Science Drive, capes@wisc.edu, 265-5961

Arrhythmias and Ion Channels

hERG and MiRP1 Do Not Associate Prior to Export Out of the Endoplasmic Reticulum

Brooke M. Moungey, Eric C. Lin, Ravi Balijepalli, Craig T. January, Brian P. Delisle, former Trainee, **Training Program in Translational Cardiovascular Science**

Presenter: Brooke M. Moungey, Research Specialist, Medicine/Physiology, 024 SMI, bmm@medicine.wisc.edu, 263-2250

Characterization of the hERG Activation Gate

Sarah Wynia Smith and Gail Robertson

Presenter: Sarah Wynia Smith, Graduate Student, Physiology, and former Trainee, **Training Program in Translational Cardiovascular Science**, 601 Science Drive, slwynia@wisc.edu, 265-3162

N-Terminal LQT2 Nonsense Mutations Cause a Dominant-Negative Destabilization of WT hERG Subunits

Elon C. Roti Roti and Gail A. Robertson

Presenter: Elon Roti Roti, Graduate Student, Cellular and Molecular Biology and Trainee, **Training Program in Translational Cardiovascular Science**, 601 Science Drive, rotiroti@physiology.wisc.edu, 265-3162

Rab11b GTPase is Expressed in Ventricular Myocardium and Regulates Trafficking of L-type Ca²⁺ Channels

Jabe M. Best, Jason D. Foell, former Trainee, **Training Program in Translational Cardiovascular Science**, Jing Wang, Ravi C. Balijepalli, Timothy J. Kamp

Presenter: Jabe Best, Graduate Student, Molecular and Cellular Pharmacology, and Trainee, **Training Program in Translational Cardiovascular Science**, 024 SMI, jb11@medicine.wisc.edu, 263-2250

Identification and Characterization of a Novel Susceptibility Gene, SCN3B, for Idiopathic Ventricular Fibrillation

Carmen R Valdivia, Argelia Medeiros-Domingo, Timothy J. Algers, Bin Ye, former Trainee, **Training Program in Translational Cardiovascular Science**, Michael J. Ackerman, and Jonathan C. Makielski

Presenter: Carmen R. Valdivia, MD, Senior Scientist, Medicine, 024 SMI, cv2@medicine.wisc.edu, 263-1140

Synergistic Depolarization of Mitochondria by Arachidonic Acid and Cytochrome p450 inhibitors in Isolated Rat Cardiomyocytes

Robert A. Haworth and Katherine T. Potter

Presenter: Robert A. Haworth, Ph.D., Distinguished Scientist, Surgery, H4/331 CSC, Haworth@surgery.wisc.edu, 263-1339

Heart Failure

Impact of Reductions in Aortic Pressure Augmentation on Stroke Volume and Diastolic Function in Elderly Subjects

Nancy K. Sweitzer, Joseph H. Skalski, Kevin L. Eggleston, Colette A. Wagner, Mauricio Velez (former Trainee, **Training Program in Translational Cardiovascular Science**), Gary F. Mitchell

Presenter: Nancy K. Sweitzer, MD, Ph.D., Assistant Professor, Cardiovascular Medicine, E5/584 CSC, nks@medicine.wisc.edu, 263-0080

Decreased Cardiac Functional Reserve in Heart Failure with Preserved Systolic Function

Holly S. Norman, PhD, James Oujiri, MD, Shane J. LaRue, MD, Carrie B. Chapman, MD, Kenneth B. Margulies, MD, Richard L. Moss, PhD, Nancy K. Sweitzer, MD, PhD

Presenter: Holly S. Norman, Ph.D., Postdoc, Physiology, and Trainee, **Training Program in Translational Cardiovascular Science**, 601 Science Drive, norman@physiology.wisc.edu, 263-0773

Protein Kinase A Catalyzed Phosphorylation of Cardiac Myosin Binding Protein C Decreases Calcium Sensitivity of Force and Increases Cross-Bridge Cycling Kinetics in Murine Myocardium

Peter P. Chen, Jitandrakumar R. Patel, Inna N. Rybakova, Jeffrey W. Walker, Richard L. Moss

Presenter: Peter P. Chen, Graduate Student, Physiology, 601 Science Drive, peterchen@wisc.edu, 263-0773

G Protein-Coupled Receptor Dimerization Evaluated in Living cells by Fluorescence Resonance Energy Transfer

Ryan M. Schmidt, Jozef Lazar, *Summer 2008 CVRC Medical Student Intern*, Jeffery W. Walker, Ph.D.

Presenter: Ryan M. Schmidt, *Summer 2008 CVRC Medical Student Intern*, Physiology, rmschmidt@students.wisc.edu

Differential roles of myosin regulatory light chain and myosin binding protein-C kinase phosphorylation in force development in murine cardiac muscle

Brett A. Colson, Matthew R. Locher, Tanya Bekyarova, Daniel P. Fitzsimons, Thomas C. Irving, and Richard L. Moss

Presenter: Brett A. Colson, Graduate Student, Physiology, 601 Science Drive, brett@physiology.wisc.edu, 262-0694

Right ventricular outflow tract obstruction in hypertrophic cardiomyopathy: a rare condition with implications in clinical practice

Miguel A. Leal, M.D.; Jennifer Penzotti, M.D.

Presenter: Miguel A. Leal, MD, Fellow, Cardiovascular Medicine, H6/3 CSC, mleal@uwhealth.org, 263-0891

A novel splice factor is responsible for switching titin isoforms

Wei Guo, Kurt W. Saupe, Timothy A. Hacker, Amanda M. Parrish, Marion Greaser

Presenter: Wei Guo, Ph.D., Research Associate, Animal Science, 1805 Linden Drive, wguo2@wisc.edu, 262-1066

Top Down Disease Proteomics: Deciphering Myofilament Protein Modifications for Understanding Heart Failure

Ying Ge, Jiang Zhang, Serife Ayaz-Guner, Lisa Xu, Inna Rybakova, Moltu Guy (*Summer 2008 CVRC Medical Student Intern*), Vlad Zabrouskov, Jeffery W. Walker, Ken H. Young, Richard L. Moss

Presenter: Ying Ge, Ph.D., Assistant Scientist, Human Proteomics Program, 130 SMI, yge@physiology.wisc.edu, 263-9212

Improved Survival in Patients with Ventricular Assist Device Therapy: The University of Wisconsin Experience

Satoru Osaki, MD, PhD, Niloo M Edwards, MD, Lucian Lozonschi, MD, Maryl R Johnson, MD, Margaret A Murray, MSN, Amy K. Proebstle, RN, BSN, CCRN, and Takushi Kohmoto, MD, PhD
Presenter: Satoru Osaki, MD, Ph.D., Research Associate, Surgery, H4/337 CSC,
osaki@surgery.wisc.edu, 263-4071

Transplant

The Impact of Lung Allocation Score at the Single National Veterans Affairs Hospital Lung Transplantation Program

Satoru Osaki, MD, PhD, James Maloney, MD, Holly Thomas, Richard D Cornwell, MD, Keith C Meyer, MD, Niloo M Edwards, MD and Nilto C De Oliveira, MD
Presenter: Satoru Osaki, MD, Ph.D., Research Associate, Surgery, H4/337 CSC,
osaki@surgery.wisc.edu, 263-4071

Cardioregenerative Medicine

Adult Cardiac Stem Cells for Repair of Failing Mouse Hearts

Entela B. Lushaj, Robert Haworth, Satoru Osaki, Lucian Lozonschi, Takushi Kohmoto
Presenter: Entela B. Lushaj, MD, Ph.D., Assistant Scientist, Surgery, H4/337 CSC,
lushaj@surgery.wisc.edu, 263-5221

In-vivo Angiogenesis in Myocardial Tissue Engineering

Entela B. Lushaj, Jian Hu, Robert Haworth, Joseph Ebinger, Takushi Kohmoto and Lucian Lozonschi
Presenter: Entela B. Lushaj, MD, Ph.D., Assistant Scientist, Surgery, H4/337 CSC,
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Paracrine secretions from mESCs pre-treated with Thyroid hormone increase protection to infarcted myocardium, independent from differentiation

Matthew Barron, Lining Ma, Matthew George, Paul Hess, Tim Hacker, Gary Lyons, and Tim Kamp
Presenter: Matthew Barron, Ph.D., Assistant Scientist, Cardiovascular Medicine, B370 MSC,
mrbarron@medicine.wisc.edu, 265-8931

Does caloric restriction alter cardiac and adipose progenitor cell aging in mice?

Eric Schmuck, Jake Mulligan, former Trainee, **Training Program in Translational Cardiovascular Science**, Angie Brellenthin, Rebecca Ertel, and Kurt Saupe
Presenter: Eric Schmuck, Graduate Student, Physiology, 1695 MSC, egschmuck@wisc.edu, 262-8192

Durable and reproducible measure of hyperemic perfusion in a small animal hindlimb ischemia model

Nehal Shah, Nunzio Gaglianella, Timothy Hacker, Larry Whitesell, Amish Raval
Presenter: Nehal Shah, MBBS, Postdoctoral Fellow, Medicine, and Trainee, **Training Program in Translational Cardiovascular Science**, H6/340 CSC,
nshah@medicine.wisc.edu, 332-2714

Human Induced Pluripotent Stem Cells Give Rise To Functional Cardiomyocytes

Jianhua Zhang, Gisela F. Wilson, Andrew G. Soerens, Chad H. Koonce, Junying Yu, James A. Thomson and Timothy J. Kamp

Presenter: Jianhua Zhang, Ph.D., Research Scientist, Medicine, WiCell Research Institute, 1001 Spring Street, jz2@medicine.wisc.edu, 263-0435

Stroke

Stroke: Why drugs that work on animals do not work on humans?

Srikar N Adibhatla, MK Baskaya, MD, Rao M Adibhatla, Ph.D.

Presenter: Rao Adibhatla, Ph.D., Assistant Professor, Neurological Surgery, H4/330 CSC, adibhatl@neurosurg.wisc.edu, 263-1791

Thoracic and Cardiovascular Surgery

Robotic-Assisted Thoracoscopic Radical Thymectomy for Myasthenia Gravis is Safe and Effective

Tracey Weigel, Nikiforus Ballian, James Maloney, Takushi Kohmoto, Barend Lotz

Presenter: James Maloney, MD, Assistant Professor, Surgery, H4/320 CSC, Maloney@surgery.wisc.edu, 263-0439

Robotic-Assisted Lung transplants in the VA Population. Are there alternatives?

JD Maloney, N DeOlivera, RD Cornell, KC Meyers, JG McCartney, T Kohmoto, N Edwards

Presenter: James Maloney, MD, Assistant Professor, Surgery, H4/320 CSC, Maloney@surgery.wisc.edu, 263-0439

Cardiac Imaging

Frame-by-frame 3D catheter tracking methods for an inverse geometry cardiac interventional system

Michael A. Speidel, Augustus P. Lowell, Joseph A. Heanue, Michael T. Tomkowiak, Amish N. Raval, Michael S. Van Lysel

Presenter: Michael A. Speidel, Ph.D., Assistant Scientist, Medical Physics, 1171 WIMR, speidel@wisc.edu, 263-6795

Low Relative Area Change of Main Pulmonary Artery Correlates with High Mean Pulmonary Artery Pressure in Patients with Pulmonary Hypertension

Alejandro Roldán-Alzate, Scott B. Reeder, Jon G. Keevil, James R. Runo, and Naomi C. Chesler

Presenter: Alejandro Roldán-Alzate, Ph.D., Research Associate, Biomedical Engineering, 2145 Engineering Centers Building, roldan@wisc.edu, 265-3792

Clinical Cardiology Advances

Transcatheter Mitral Valve Replacement

Lucian Lozonschi, Rene Quaden, Satoru Osaki, Jian Hu, Dolores Snell, Niloo M Edwards, Jochen Cremer, Georg Lutter

Presenter: Lucian Lozonschi, MD, Assistant Professor, Cardiothoracic Surgery, H4/348, CSC, Lozonschi@surgery.wisc.edu, 236-5215

An updated look at the determinants for successful recanalization for chronic total occlusion of coronary arteries

Brian Hong, Nehal Shah, Trainee, *Training Program in Translational Cardiovascular Science*, Amish Raval

Presenter: Brian Hong, Medical Student, and *Summer 2008 CVRC Medical Student Intern*, Medicine, H6/321 CSC, bwhong@wisc.edu