



CHILDREN'S

HOSPITAL OF RICHMOND AT **VCU**

PEDIATRIC RESEARCH NEWSLETTER

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Pediatric Research Office

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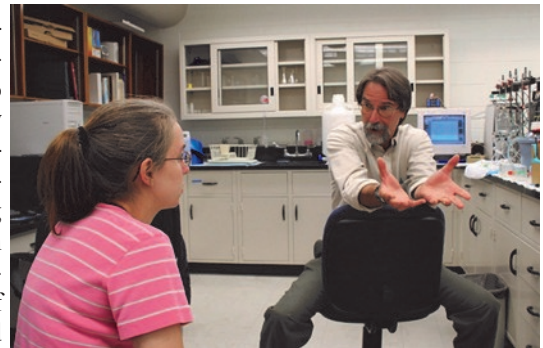
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Research Activities from the Laboratory of Paul H. Ratz, PhD.

Vasodilatory shock is a life-threatening condition with short-term mortality ranging from 40% to 60%. Notably, vasodilatory shock due to sepsis kills more pediatric patients than cancer, and hemorrhagic shock is one of the leading causes of mortality in patients with trauma. One key feature of vasodilatory shock is dysregulation of vascular smooth muscle. Enhanced smooth muscle contractile activity



of the bladder wall (detrusor) plays a principle role in detrusor overactivity, a form of overactive bladder syndrome which is the most common voiding dysfunction in children. Our research focuses on gaining a better understanding of the molecular and cellular mechanisms regulating vascular and detrusor smooth muscles. Our disease models are shock and overactive bladder.

Currently, I am a Co-PI with R. Wayne Barbee on a Department of the Army grant funded to study to the role of AMP-dependent protein kinase in cellular metabolic homeostasis and vascular smooth muscle function during hemorrhagic shock and resuscitation. Preliminary data for this project was obtained several years ago by a VCU Pediatric Intensive Care Fellow, Melissa Porter, MD, who worked in our laboratory on an NIH R01-funded project. The study culminated in a publication 1st-authored by Dr. Porter (Am J Physiol 290: C1552, 2006).

Working in conjunction with Harry Koo, MD (Pediatric Urologist) and Adam Klausner, MD (Urologist), and in collaboration with John Speich, PhD from the Mechanical Engineering faculty, we have trained 8 Urology Residents in biomedical research since 2006. Much of this work, which culminated in 13 peer-reviewed articles, was funded by an NIH R01 grant. We are currently obtaining additional data that will be used in a new NIH grant application to continue our bladder research.

Our current research team consists of 2 postdoctoral fellows, 1 graduate student, 2 undergraduate students and our laboratory manager. We would welcome the contribution of Pediatric Residents and Fellows who wish to engage in a unique opportunity to learn tissue, cell, biochemical and molecular biology, whole animal physiology-



New Grants & Contracts Awarded

Congratulations to the following Principal Investigators who were awarded grants and contracts in the second half of 2012!

| | | | |
|------------------------|-----------------------------|--|-------------------------------|
| Godder, Kamar | Pediatrics | An Open-label, Extension Study to Assess the Long-Term Safety of Twice Daily Oxycodone Hydrochloride Controlled-release Tablets in Opioid Experienced Children Who Completed the OTR3001 Study | Purdue Pharma LP |
| Hendricks-Munoz, Karen | Pediatrics | Reducing Health Disparities Among Minority and Underserved Children (R21) | NIH/NICHD |
| Irani, Anne-Marie | Pediatrics | Phase IV Study to Evaluate the Persistency of Asthma With or Without Xolair After Long Term Therapy | Genentech, Inc. |
| Irani, Anne-Marie | Pediatrics | MPI-101-06 Oral Budesonide Suspension in Adolescent and Young Adult Subjects With Eosinophilic Esophagitis | Meritage Pharma |
| McVoy, Michael | Pediatrics | An HBC-vectored Peptide-based Cytomegalovirus Vaccine | NIH/NIAID |
| Schmidt, H. Joel | Pediatrics | Participation in the Cystic Fibrosis Registry 2012-13 | Cystic Fibrosis Foundation |
| Schmidt, H. Joel | Pediatrics | A Phase 3, Randomized, Double-Blind, Placebo- Controlled, Parallel-Group Study to Evaluate the Efficacy and Safety of Ivacaftor in Subjects With Cystic Fibrosis Who Have the R117H-CFTR Mutation | Vertex Pharmaceuticals |
| Lavoie, Suzanne | Pediatrics | Peer Review Technical Assistance and Consultation | Virginia Department of Health |
| Lavoie, Suzanne | Pediatrics | VCU Women and Children's Care Program—VA LINC | Virginia Department of Health |
| Lavoie, Suzanne | Pediatrics | A Multicenter, Randomized, Observer-Blinded, Active-Controlled Study to Evaluate the Safety, Tolerability, Efficacy, and Pharmacokinetics of Ceftaroline Versus Comparator in Pediatric Subjects with Acute Bacterial Skin and Skin Structure Infections | Crexa, Inc. |
| Rubin, Bruce K | Pediatrics | Inhaled Dapsone for Respiratory Diseases (patent) | Nostrum Pharmaceuticals |
| Ratz, Paul | Pediatrics/ Biochemistry | Pre-Clinical Testing of AMPK Activators as Resuscitation Adjuncts | Department of Defense |

Anyone with a grant application, or an inquiry or an idea is encouraged to call the Pediatric Research Office. We can help with regulatory document review and preparation (OSP, IRB, WIRB, IACUC), with budget preparation, with getting signatures or with finding resources within the University to help you accomplish your research goals. Call or email Sharon Dawson, Jaime Petrasek or Henry Rozycki.

Publications Second Half 2012

Brown RC, Yaroslavsky I, Quinoy AM, Friedman AD, **Brookman RR**, Southam-Gerow MA. Factor Structure of Measures of Anxiety and Depression Symptoms in African American Youth. *Child Psychiatry Hum Dev*. 2012 Dec 9. [Epub ahead of print]

Downs EA, **Moskowitz WB**, Throckmorton AL. Steady flow analysis of mechanical cavopulmonary assistance in MRI-derived patient-specific fontan configurations. *Artif Organs*. 2012 Nov;36(11):972-80.

Eason DE, Allen DR, Gangemi JJ, Moskowitz WB. Subpulmonic obstruction by aneurysmal tricuspid valve tissue in a perimembranous ventricular septal defect. *J Am Coll Cardiol*. 2012 Jul 24;60(4):355

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Throckmorton AL, Carr JP, **Moskowitz WB**, Gangemi JJ, Haggerty CM, Yoganathan AP. Uniquely shaped cardiovascular stents enhance the pressure generation of intravascular blood pumps. *J Thorac Cardiovasc Surg*. 2012 Sep;144(3):704-9.

Kwon EN, Kambalapalli M, Francis G, Donofrio MT. Fetal Right-Ventricular Hypertrophy With Pericardial Effusion and Maternal Untreated Hyperthyroidism. *Pediatr Cardiol*. 2012 Nov 21. [Epub ahead of print]

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Chima RS, **Daniels RC**, Kim MO, Li D, Wheeler DS, Davies SM, Jodele S. Improved outcomes for stem cell transplant recipients requiring pediatric intensive care. *Pediatr Crit Care Med*. 2012 Nov;13(6):e336-42

Kumar A, Hayes CE, Iwashyna SJ, Boustani R, Duncan L, **Mickell JJ, Francis G**. Management of intentional overdose of insulin glargine. *Endocrinol Nutr*. 2012 Nov;59(9):570-2.

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Bhutani VK, Stark AR, Lazzeroni LC, Poland R, Gourley GR, Kazmierczak S, **Meloy L**, Burgos AE, Hall JY, Stevenson DK; Initial Clinical Testing Evaluation and Risk Assessment for Universal Screening for Hyperbilirubinemia Study Group. Pre-discharge Screening for Severe Neonatal Hyperbilirubinemia Identifies Infants Who Need Phototherapy. *J Pediatr*. 2012 Oct 5. [Epub ahead of print]

Sharma A, Armstrong AE, Posner MP, Kimball PM, Cotterell AH, King AL, Fisher RA, **Godder K**. Graft-versus-host disease after solid organ transplantation: A single center experience and review of literature. *Ann Transplant*. 2012 Dec 31;17(4):133-9.

Bajwa R, Schechter T, Soni S, Gassas A, Doyle J, **Sisler I, Godder K**, Tatman D, Rumelhart S, Domm J, Miao Y, Frangoul H. Outcome of children who experience disease relapse following allogeneic hematopoietic SCT for hematologic malignancies. *Bone Marrow Transplant*. 2012 Nov 5. [Epub ahead of print]

Trottier B, Machouf N, Thomas R, Gallant S, Longpré D, Vézina S, Boissonnault M, Lavoie S, Legault D, Dion H, Nguyen VK. Abacavir/lamivudine fixed-dose combination with ritonavir-boosted darunavir: a safe and efficacious regimen for HIV therapy. *HIV Clin Trials*. 2012 Nov-Dec;13(6):335-42. (**S Lavoie**)

Patel K, Van Dyke RB, Mittleman MA, Colan SD, Oleske JM, Seage GR 3rd; International Maternal Pediatric Adolescent AIDS Clinical Trials 219219C Study Team. The impact of HAART on cardiomyopathy among children and adolescents perinatally infected with HIV-1. *AIDS*. 2012 Oct 23;26(16):2027-37. (**S Lavoie**)

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Wang JB, Zhu Y, **McVoy MA**, Parris DS. Changes in subcellular localization reveal interactions between human cytomegalovirus terminase subunits. *Virol J*. 2012 Dec 21;9(1):315.

Mally PV, **Hendricks-Muñoz KD**, Bailey S. Incidence and Etiology of Late Preterm Admissions to the Neonatal Intensive Care Unit and Its Associated Respiratory Morbidities When Compared to Term Infants. *Am J Perinatol*. 2012 Oct 24. [Epub ahead of print]

Hendricks-Muñoz KD, Perez-Perez G, Xu J, Kim Y, Louie M. Maternal Antenatal Treatments Influence Initial Oral Microbial Acquisition in Preterm Infants. *Am J Perinatol*. 2012 Jul 13. [Epub ahead of print]

Tanabe T, **Rozycki HJ**, Kanoh S, **Rubin BK**. Cardiac asthma: new insights into an old disease. *Expert Rev Respir Med*. 2012 Dec;6(6):705-14.

Jayaram A, Sima A, Barker G, Thacker LR. T-piece Resuscitator versus Self-Inflating Bag for Preterm Resuscitation - an Institutional Experience. *Respir Care*. 2012 Dec 4. [Epub ahead of print]

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Bunchman TE. Paediatrics: paediatric CRRT and ECMO: fluid overload is not the only issue. *Nat Rev Nephrol*. 2012 Oct;8(10):565-6.

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Schaefer F, Borzych-Duzalka D, Azocar M, Munarriz RL, Sever L, Aksu N, Barbosa LS, Galan YS, Xu H, Coccia PA, Szabo A, Wong W, Salim R, Vidal E, Pottoore S, Warady BA; IPPN investigators. Impact of global economic disparities on practices and outcomes of chronic peritoneal dialysis in children: insights from the International Pediatric Peritoneal Dialysis Network Registry. *Perit Dial Int*. 2012 Jul-Aug;32(4):399-409. **(TE Bunchman)**

Ghannoum M, Nolin TD, Goldfarb DS, Roberts DM, Mactier R, Mowry JB, Dargan PI, Maclaren R, Hoegberg LC, Laliberté M, Calello D, Kielstein JT, Anseeuw K, Winchester JF, Burdman EA, **Bunchman TE**, Li Y, Juurlink DN, Lavergne V, Megarbane B, Gosselin S, Liu KD, Hoffman RS. Extracorporeal treatment for thallium poisoning: recommendations from the EXTRIP Workgroup. *Clin J Am Soc Nephrol*. 2012 Oct;7(10):1682-90

Publications Second Half 2012

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Morris B, Etoubleau C, Bourthoumieu S, Reynaud-Perrine S, Laroche C, Lebbar A, Yardin C, **Elsea SH**. Dose dependent expression of HDAC4 causes variable expressivity in a novel inherited case of brachydactyly mental retardation syndrome. *Am J Med Genet A*. 2012 Aug;158A(8):2015-20.

Moshier MS, York TP, Silberg JL, **Elsea SH**. Siblings of individuals with Smith-Magenis syndrome: an investigation of the correlates of positive and negative behavioural traits. *J Intellect Disabil Res*. 2012 Oct;56(10):996-1007

Anyone with a publication we missed this round is encouraged to send it to Henry Rozycki at hrozycki@mcvh-vcu.edu for inclusion in the next newsletter.

CHOR@VCU on the move!

Honors and Awards

Presentations to National & International Meetings

Lydia Klinger has become Director of VCU Ryan White Services and is acting as overall administrator of these grants which are housed within both Pediatrics and Internal Medicine and represent over \$2.5 M annually for HIV care services.

Bruce Rubin, Jessie Ball duPont Distinguished Professor and Chair, Dept. of Pediatrics, was awarded the Jimmy A Young Medal by the American Association of Respiratory Care, New Orleans, LA on November, 11, 2012. See www.youtube.com/watch?v=zA_hIHsxGiU

Bruce Rubin, Jessie Ball duPont Distinguished Professor and Chair, Dept. of Pediatrics, was appointed to the Editorial Board of the European Respiratory Journal

Santiago, Chile - Pediatric Critical Care Conference, Oct 25-27, 2012

Tim Bunchman, Chair of Pediatric Nephrology at CHOR at VCU presented on

- AKI and Renal Replacement Therapy
- Vascular Access
- Choice of RRT
- Outcome in AKI
- RRT in In Born Error of Metabolism

New Delhi, India - Pediatric Nephrology and Critical Care Conference, December 15-18, 2012

Tim Bunchman, Chair of Pediatric Nephrology at CHOR at VCU presented on

- Infant AKI: Non RRT and RRT therapies
- AKI and CRRT in Children

Anyone with an award, including editorial boards, study sections, medals, lectureships etc., or who have given lectures or research presentations at meetings outside of VCU, please send the information to Henry Rozycki at hrozycki@mcvh-vcu.edu for inclusion in the next newsletter.

Who's New in Pediatric Research

Over the last six months, four new members of the Pediatric Research Office have come on board. So that you can get to know them better, here's what they have to say about themselves

SHARON DAWSON—ASSOCIATE ADMINISTRATOR

I was born in Myrtle Beach, South Carolina and my family moved to Richmond, VA shortly thereafter. I am a graduate of VCU. I've been employed with VCU since 1990. I worked in Effort Reporting, Grants and Contracts Accounting as an Accountant and Senior Accountant. I moved to the College of Humanities and Sciences, (Dean's Office) in the late 1990's and worked as a Grants Specialist, Grants Administrator and Director Grants Administration.

My current charge as the new Associate Administrator will be to set up new processes, create a Research Fiscal Administration Office, creation of formal process to identify opportunities for faculty and divisions with the department.

Areas of expertise: budget building, proposal process, post award, grant accounting. I enjoy working with the various electronic portals- – VCUeRA System, NSF Fastlane, Grants.gov etc... Post Award Process- Award Set up, Monitoring, Effort Reporting, and Close-Out Process.

Committees and programs served on and/or completed:

- Committee on the Administration of Research (CAR)
- VCU Leadership Development Program
- Minority Political Leadership
- Higher Ground Women's Leadership
- University Appeal Board
- Recalibration Committee – Group Theme 2

I enjoy reading, writing, taking long walks, traveling and spending time with my husband (Vernon).

MATT WARD—CLINICAL COORDINATOR (PULMONARY)

I was born and raised in Richmond, Virginia. After graduating from William & Mary I worked at the Clark-Hill Institute on the Monroe Park campus before coming to the Children's Hospital. When I'm not working I enjoy running, playing soccer, reading, crossword puzzles, and attending concerts. I ran my first half-marathon in November and I'm currently training for my second, the Rock n' Roll Half in March. For the past two years I've volunteered at the Fan Free Clinic. One of my favorite things about this job is working with the CF clinic staff. Everyone is friendly, thoughtful and helpful. My other favorite thing is working with patients on days we have research appointments. Those days are busy, dynamic, require a lot of attention and I love it.

STACEY MOONE—CLINICAL COORDINATOR (HEME/ONC)

I am a native Virginian, recently returned to my home state after spending 6 years in Ohio following college. I received a B.S. in Psychology from James Madison University in 2006, and an M.A. in Clinical Psychology from the University of Dayton (UD) in 2009. While at UD, I spent a year as a psychology intern at the Children's Medical Center of Dayton. After finishing classes at UD, I worked as a clinical research coordinator at The Ohio State University's Nisonger Center from September 2008 to June 2012, on autism and ADHD treatment research studies. Throughout my time in Columbus, OH, I spent weekends working with a child with autism as an Applied Behavior Analysis (ABA) therapist. Currently, I am working for the VCU Pediatric Research Office as a clinical research coordinator in the Department of Pediatric Hematology/Oncology. My favorite part about being a research coordinator at VCU is helping children gain access to treatments that may reduce their pain and improve their quality of life. I am passionate about making a difference in the lives of children, and love that my job at VCU allows me to achieve this goal through research. In my free time, I enjoy spending time with her husband, cat, and new puppy; visiting friends and family; traveling; reading; spending time outdoors, especially in the mountains; and singing in the Richmond Symphony Chorus (RSC), the RSC's Chamber Chorus, and a new Richmond-based a cappella group I helped to found.

SABRINA MINTER—CLINICAL COORDINATOR (VARIOUS)

I was born in Fairfax, Virginia and was raised in Mechanicsville, Virginia (where I happily still reside). I have two Bachelor of Science Degrees, one from VCU and one from Virginia Tech. Prior to joining the Pediatrics family, I was a Laboratory Manager for a PI in the Psychiatry Department here at VCU. I live with my husband and best friend Gill, our sweet and sassy 7 month old daughter Audrey, and our two dogs: a Boston terrier 'Brody' and a Basset Hound 'Frankie'. Spending time with my family is my favorite past time and our daughter definitely keeps me busy! If I ever get a rare second of down time, I also enjoy shopping, reading, watching football (Go Hokies and Giants!), and enjoying the outdoors. My favorite part of being a member of the Pediatrics family is that I get to work with and for the children. Having my daughter has shown me how precious and wonderful children are and I am incredibly blessed to have the opportunity to incorporate my everlasting love for children and a