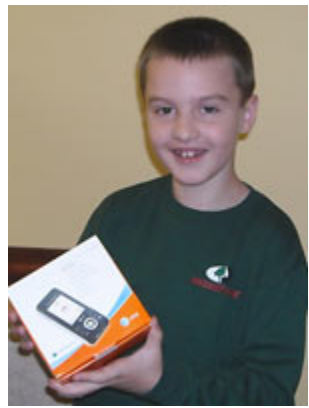




RESEARCH update

October 2009

Making a Diagnosis Easier to Swallow



David's success in a clinical trial allows him to enjoy his favorite meals without problem.

One night last summer, David was taking a tablet to aid his sleeping. Suddenly, the tablet became lodged in his throat. "We took him to the emergency room, and they used an EGD [esophagoduodenoscope] to push it down," says his mother Sarah. The hospital visit soon led to a diagnosis of eosinophilic esophagitis.

Eosinophilic esophagitis, or EE, is a newly recognized eosinophilic disorder first identified by pediatric gastroenterologists. Eosinophils, a type of white blood cell, are an important part of the immune system, helping fight off certain types of infections and are present at the site of allergic reactions. When eosinophils occur in higher than normal numbers in the body without a known cause, an eosinophilic disorder may be present. With EE, an abnormal number of eosinophils are present in the esophagus, the tube that connects the mouth to the stomach.

Difficulty swallowing and even stricture (or narrowing) of the esophagus results from EE. For David, EE was closing his throat causing that tablet to get stuck in his throat. Continued esophageal stricture can lead to tissue injury, inflammation, and thickening of the esophageal layers. EE symptoms also include food impactions, nausea and vomiting, poor growth or weight loss, poor appetite, difficulty sleeping, and reflux symptoms that do not respond to therapy. An EE diagnosis is made on the presence of clinical symptoms and on the basis of an esophageal biopsy in which many eosinophils are seen as well as the absence of acid reflux (failure to respond to acid reduction therapy).

"Evidence indicates EE is an allergic response in most patients," according to Dr. George Fuchs, a gastroenterologist at ACH. Concerning treatment, Dr. Fuchs adds, "Nothing can cure it."

Dietary treatment is one way to relieve EE. Among these treatments is dietary therapy by removing certain foods from the diet that are the most common causes of food allergies. However, this is a difficult diet and is not successful in all children. Another dietary treatment removes intact protein from the diet and substitutes an amino acid formula; however, these formulas have a very bad taste for all children except for infants. Medications are the second method to control inflammation and suppress the eosinophils. Steroids are used if dietary measures do not resolve the symptoms; however, the disease comes back when the steroids are stopped. Both dietary and steroid treatments require additional endoscopies to assess how the esophagus is responding to treatment because the disease can come back and cause damage, even with few or no symptoms.

After discussing David's examination and other medications, the diagnosing physician suggested that David and his family learn about clinical trials Dr. Fuchs is doing on a possible new treatment for EE. The treatment involves a monthly intravenous infusion of an IL-5 inhibitor; it has been learned that IL-5 inhibition can lead to the resolution of EE. The trial for which Dr. Fuchs is the ACH site investigator studies treatment of pediatric EE with the medication. The medication is undergoing FDA-approved testing through the trial for approval as a pediatric EE treatment.

Dr. Fuchs is seeing enrolled patients at ACHRI's Pediatric Clinical Research Unit. At the PCRU, patients receive a monthly IV infusion for four months. PCRU staff contact the family weekly for a safety check up. Of the two studies, the first is a blinded placebo study in which some patients receive the medication and some receive a placebo. The actual medicine delivered is not known until treatment has ended. Once the children complete this first study, they can enter the second study which is called an open label study where patients and researchers are aware of the actual dose the child is receiving. "We can increase the dose if necessary," says Dr. Fuchs.

David, now 9, has completed the placebo study and is now in the open label study. Mom Sarah notes that Dr. Fuchs and the PCRU staff have been wonderful and made the entire process painless. "David's having great success," says Sarah. "He was avoiding certain foods because of it...some foods he couldn't chew into small enough bits to eat," she explains. Now David can enjoy one of his favorite meals, his mom's grilled steaks. Dr. Fuchs notes, "This is a condition that can be very painful and disruptive, and it is really good having something to offer patients."

President's Choice

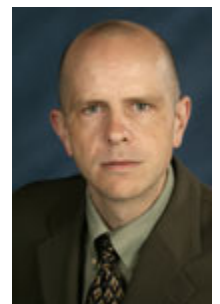
- Gilboa SM, Correa A, Botto LD, Rasmussen SA, Waller DK, Hobbs CA, Cleves MA, Riehle-Colarusso TJ; National Birth Defects Prevention Study. Association between prepregnancy body mass index and congenital heart defects. *Am J Obstet Gynecol*. 2009 Sep 29. [Epub ahead of print]
- Frindik JP, Morales A, Fowlkes J, Kemp S, Thrailkill K, Lippe B, Dana K. Stimulant medication use and response to growth hormone therapy: an NCGS database analysis. *Horm Res*. 2009;72(3):160-6. Epub 2009 Sep 1

ACHRI would like to know about your published findings, as your articles are published, please email or mail a copy to Phaedra Yount (mail slot 842). The number of publications by our researchers is reported to the hospital and ACHRI boards, so it is important that we receive an accurate count of the publications your research produces. To see all [recent publications](#) by ACHRI researchers and their collaborators, please visit the publications web page.

Introductions Are in Order

When ACHRI opened in 1992 there were only a handful of researchers on campus. In fiscal year 2009, over 120 researchers prepared and submitted proposals for future research projects or actively participated in research. With this growth in the number of investigators on campus comes the challenge of ensuring that everyone is properly introduced to new researchers as they arrive on campus. Collaboration is the key to successful research, and a proper introduction is the key to collaboration.

Dr. Stephen Erickson received his doctorate in statistics from UCLA and, in the spring of 2009, completed a postdoctoral fellowship with the Section on Statistical Genetics in the Department of Biostatistics of the University of Alabama at Birmingham (UAB). He joined the Arkansas Center for Birth Defects Research and Prevention in March as a statistical geneticist and is assistant professor in the Departments of Pediatrics and Biostatistics. He has extensive experience in the analysis of genomic microarrays, including the inference of DNA copy number variation (CNV) from genotyping array data. Dr. Erickson's methodological research focuses on empirical and hierarchical Bayes models. He is currently investigating the genetic and environmental factors influencing congenital heart defects and other birth defects.



- **What are your research interests?** Congenital heart defects (CHDs) are caused by a complex interaction of multiple genetic, environmental, and lifestyle factors. At the Arkansas Center for Birth Defects Research and Prevention, we are using cutting-edge genetic and statistical methods to tease apart these influences, which will improve the diagnosis, treatment, and prevention of these and other birth defects. The data sets involved are humongous and complex, and it requires a large quiver of visual, statistical, and analytical techniques to make sense of them. Making sense of data is what I (try to) do.

- **What are your plans for research projects in the near future?** In the next couple of weeks we will be receiving data from a set of DNA methylation microarrays that were run upstairs in the Center's genomics lab. DNA methylation is considered an epigenetic phenomenon, because it does not alter the genetic code, but is partially heritable and can influence how genes are expressed in cells. I'm excited to work with this completely new biological assay and hope that we can find novel associations between methylation patterns and susceptibility to CHDs.
- **Why do you think research is important?** Research is important because it is difficult. If it weren't difficult, research would be done and we'd know everything there was to be known. Unfortunately (or fortunately, depending on how you look at it) there are plenty of things we still don't know. So it's simultaneously frustrating and rewarding, and the tangible impact that medical research has on people's lives makes it that much more so.

Dr. Christopher Swearingen joined the Biostatistics Section as an assistant professor in August. He recently completed his PhD in Biostatistics from the Medical University of South Carolina (Charleston). His statistical research interests have developed in large part due the challenges encountered in prior collaborative projects in which the outcome of interest defied standard analytical techniques due to a large proportion of zero measurements. This problem of extreme values skewing an outcome's distribution is a ubiquitous one and often renders the usage of canonical analysis questionable. Dr. Swearingen's work on Beta Regression is one possible method of analyzing these data.



- **What are your research interests?** As a biostatistician, I have clinical and statistical research interests. Statistically, I am interested in techniques that handle skewed, non-normal data. Clinically, I have interests in neuroscience and rheumatology.
- **What are your plans for research projects in the near future?** I am planning further development of statistical tools to estimate sample size and model appropriateness for skewed data.
- **Anything else you would like people to know about you or your work?** I enjoy collaborating with researchers to understand the importance of their work and help answer their research questions.
- **Why do you think research is important?** "Knowing is half the battle."

Environmental Services Technicians shine bright at ACHRI

During the week of September 7th, ACH celebrated Environmental Services Week campus wide. In recognition of the efforts, dedication, and contributions of Environmental Services Technicians across ACH, ACHRI acknowledges its Research Environmental Technician staff.



Front Row: Jacqueline Credit, Youlanda Brown, Maxine English, and Sarah Jones
Back Row: Stephanie Bryant, Kathleen Henderson, Leigh McCall, and Ronald Scott.

Under the direction of Sarah Jones, Environmental Services Coordinator for ACHRI and ACNC, this staff of seven keeps the ACHRI and ACNC research buildings not just clean and sanitized, but assists researchers and researcher staff members with other needs including storage and moving. Unlike typical housekeeping staff members, each Research Environmental Technician receives training concerning the research environment in areas such as the proper disposal, storage, and cleanup of bio-hazardous and infectious agents, chemicals, and flammable liquids.

About the technicians, Sarah proudly says, "They are good hearted and gladly help and assist investigators and staff with whatever they need." Researchers and their support staff

members often note the technicians' contributions to Sarah and to Blake Harrison, Director of Operations at ACHRI, complimenting how well kept research areas are and how the staff goes "above and beyond" when carrying out their jobs. Blake adds, "We routinely receive compliments and commendations reflecting the outstanding effort of the Research Environmental Technicians whereby the cleanliness and stellar appearance signals comprehensive cleanliness and sanitation."

Sanitation of facilities is critical when being evaluated by outside agencies such as the USDA, Arkansas State Health Department, and AAALAC, and internal programs such as IACUC and the Safety Department. Blake says, "We often hear high compliments from visiting candidates for recruitment, board members, students from high schools, and also college students about how clean the Institute always looks."

Blake is also complimentary of the team and its leader Sarah, "I feel fortunate to get to work with such stellar individuals. In addition to having what it takes when it comes to cleaning and sanitizing, the research environmental staff are super individuals with talent, excellent values, good morals, and strong ethics...Ms. Sarah Jones performs beyond measures in that she has a very high expectation from the Research Environmental staff. She provides daily coaching and motivation to her staff in addition to leading by example, in that she is truly a working manager...She does not expect anything from her staff that she, herself, isn't willing to do."

Sarah has been with ACHRI since 1994 after three years at ACH. She became Environmental Services Coordinator in 2001. The staff also has other long tenured members. Ron Scott has been with ACHRI since 1997 and previously with ACH since 1991. Jacqueline Credit and Kathleen Henderson each have over 5 years with ACHRI, and Youlanda Brown, Stephanie Bryant, Maxine English, and Leigh McCall each have over 2 or 3 years on the team. About the team Sarah has assembled, Blake says, "She should be highly complimented for her effort and achievement. I am extremely proud of the program she has continued to build on."

Join us in recognizing the important contributions of our Environmental Services team!

Clinical research trials featured on Today's THV

Today's THV featured clinical research trials conducted by ACHRI's researchers in its weekly "Today's Healthy Child" segment on September 17. Dr. Bryan Burke of ACH, the segment host, interviewed Dr. Jose Romero, ACHRI's Medical Director of Clinical Research, who discussed the importance of the participation and commitment of the children and their families in clinical research. Visit Today's THV web site to [view the video](#).



Need assistance but don't know who to call at ACHRI?

If you have questions while considering or conducting research at ACHRI or ACH but aren't sure who to contact, call our office at 364-7373. Our staff will be glad to help you or to connect you with the person that can help. Please check out our revised administrative staff directory on the web (<http://achri.archildrens.org/staff.htm>). The directory now includes descriptions of services offered by ACHRI staff.

Grant Writing Tip: Upcoming application changes are not just a reduced R01 research plan page count!

In mid-September, NIH released [NOT-OD-09-149](#) announcing that new, restructured versions of the paper PHS 398 and electronic SF 424 (R&R) application packages and instructions will be available by December 2009. Though most people are equating the update with only a reduction in the Research Plan's size, applications will get a new structure to better align with the new review criteria. Not only will you have to conceptualize a smaller application, but also deal with a new organization. Also, the application revisions also include the Resources section and the Biographical Sketches. To learn more about these changes, visit <http://achri.archildrens.org/researchupdate/grantwritingtip.html>.

Biostatistics Program Staff Increasing Significantly

The Biostatistics Program within the Department of Pediatrics currently has an unprecedented number of staff. The administrative staff has grown to three, with Dr. Todd Nick as the new Program Director, along with Darcy Ewalt as the new Project Manager and Hannah Feild as the Business Officer. The Biostatistics Program staff currently resides at 12 but has plans to hire two more faculty and two more Master's-level Biostatisticians by next fiscal year. The program's newest faculty member is Christopher Swearingen, a new Ph.D. from The Medical University of South Carolina. He is featured in the "Introductions Are in Order" section of this newsletter. Maria Melguizo is the newest Master's Biostatistician with the Biostatistics Program. Originally from Colombia, Maria received a Master's degree in Statistics from the University of Kentucky at Lexington in May 2009, where she worked as a Research Assistant in the Sanders Brown Center on Aging on various biostatistics projects. Maria's research includes using mixed models and Bayesian statistics. Most recently, Darcy Ewalt has joined the Biostatistics Program from Dillard's corporate offices where she worked as a buyer

analyst for 14 years. Darcy, the Biostatistics Project Manager, is originally from Iowa and obtained her BA in Speech Communications from North Carolina State University in Raleigh.

CUMG Application Workshop

ACHRI will hold a workshop on the Children's University Medical Group (CUMG) Award Program. The workshop will provide an overview of the program, a summary of application contents, assistance for developing your application, a review of the research plan, reminders about routing and submitting, and a discussion of the application review process. The presentation will cover the recent changes to the CUMG grant program. A representative from the Biostatistics Section will be present to address statistical support. We will hold the workshop on Tuesday, December 8, from 9:30 am to 11:00 am in Brandon North A&B (South Campus).

The next CUMG grant application deadline is March 1, 2010, and it is never too early to begin developing your research plan and contacting collaborators. You can find detailed information at the [CUMG grant program Web page](#). First-time applicants will find the guidance helpful for building their applications. If necessary, confirm your eligibility for application with [Amy Stalls](#) (364-3627).

You can view ACHRI's past presentations on the CUMG program and all ACHRI intramural programs at <http://imediassrv.archildrens.org/mediasite/Catalog/>. Select "Other Presentations" on the menu on the left. Then to find these presentations, type ACHRI in the search text window and click "Find Presentations". Choose the presentation you wish to view. If you are interested in attending the presentation, please contact [John Gregan](#) (364-6296).

UAMS News: Secure USB Thumb Drives Required

Federal regulations require that all Protected Health Information (PHI) and other Confidential Information that is stored on thumb drives be encrypted. The UAMS Stockroom has USB thumb drives available that are easy to use and in compliance with these regulations. (In addition, these may be obtained through ACH Purchasing).

The Imation USB 2.0 Pivot Plus Flash Drive in 2GB and 4GB sizes will be the only thumb drives offered for purchase in the UAMS Stockroom. Anything written to these drives will be automatically secured with 256-bit AES hardware encryption, with the owner setting up the password when first plugged in.

The news headlines are full of stories about organizations that have lost confidential data that resided on USB thumb drives. UAMS policy states that confidential information should not be stored on a thumb drive unless absolutely necessary and if you do save UAMS confidential data to USB thumb drives, it must be encrypted. Purchase one of these authorized drives and protect UAMS confidential data!

Two New UAMS Policies Involving Research ([From the UAMS ORSP Newsletter](#))

The following two new UAMS policies will impact the UAMS researchers conducting investigator-initiated research on both the UAMS and ACH campuses. The policies are:

- Declaration of Sponsorship for Investigational New Drug Applications
<http://www.uams.edu/AdminGuide/PDFs/12.1.10.pdf>
- Declaration of Sponsorship for Investigational Device Exemption Applications
<http://www.uams.edu/AdminGuide/PDFs/12.1.11.pdf>

For more information, please contact Carole Hamon, Regulatory Affairs Manager in the UAMS Research Support Center at 501-526-7437.

New Industry-Sponsored Projects

Investigator	Agency	Project Period	Total Cost
Morris, Paula	Novartis	9/09 - 4/13	\$78,970.00
Morris, Paula	Novartis	9/09 - 8/10	\$23,080.00

Recent Grant Awards and Submissions

Extramural Awards				
PI	Agency	Project Title	Project Period	Total Funding for All Years
Mary Aitken	NHTSA	Improving Teen Driving Through Parental Responsibility	9/10/09-9/10/11	\$599,825.00
Adnan Bhutta	FDA	Assessment of Pharmacokinetics, Pharmacodynamics and Neurotoxic Effects of an Anesthetic in Infant Primates Undergoing Surgical Procedures	5/18/09-11/18/10	\$100,000.00
J. Mick Tilford	NIH	Measuring Quality Adjusted Life Years in Children with Autism Spectrum Disorders	9/30/09-8/31/11	\$883,448.00
ACHRI/ABI Awards				
PI		Project Title	Project Period	Total Funding for All Years
Mario Cleves		Genome-Wide Association Study of Congenital Heart Defects	8/1/10-7/31/11	\$125,000.00
John Fowlkes		Focus Group Initiatives in Diabetes and Endocrinology	7/1/10-6/30/11	\$124,864.00
Kathleen Gilbert		Developing an Immunotoxicology Center in Arkansas	7/1/10-6/30/11	\$124,919.00
Jill James		Molecular Mechanisms of Mitochondrial Dysfunction in Autism	10/1/09-9/30/11	\$123,090.00
Mohy Morris		Comprehensive Integrated Lung Function (CILF) in Infants	10/1/09-9/30/10	\$50,000.00
Gresham Richter		Center for Investigation of Congenital Aberrencies in Vascular Development	12/1/09-11/30/11	\$121,729.00
Jennifer Woods		CONTRAST: Adolescent Program for Identification, Management, and Improvement of Contraception and STI Services	10/1/09-9/30/11	\$124,697.00
Extramural Submissions				
PI	Agency	Project Title	Project Period	Total Funding
Shanmugam Nagarajan	NIH	Anti-Inflammatory Properties of Soy Protein	7/1/10-6/30/15	\$1,837,500.00
Kimo Stine	American Thrombosis & Hemostasis Network	ATHN Data Quality Counts	1/15/10-1/14/11	\$24,999.84
ACHRI Student and Clinical Staff Grant Program Submissions				
PI		Project Title	Project Period	Total Funding
Shimul Chowdhury		Validation of MDQ1 Technology as an Accurate Marker of Maternal DNA Methylation	12/1/09-11/30/10	\$2,000.00

Janie Kane	The Use of Routine Flushing to Maintain Patency of Central Line Lumens through which Continuous Fluids are Infusing	12/1/09-11/30/10	\$1,900.00
Sharon Stevenson	Neuroimaging When Evaluating Children with New Onset Non-febrile Seizures	12/1/09-11/30/10	\$2,000.00

ATTENTION: Does Your Human Research Project Involve an “Off-label Use” of a Drug or Device?

Off label use of drugs or devices for the purpose of research activities is not the same as off label use for clinical purposes. The FDA has very specific regulations that apply to the research setting. If you or someone you mentor is conducting an investigator-initiated research project that uses a drug or device, UAMS is requiring you to submit your protocol to the UAMS Research Support Center’s Regulatory Affairs Unit for review prior to submission to the IRB. They will help you determine whether the project falls under the FDA regulations for IND/IDE (Investigational New Drug or Investigational Device) applications. Note: If you have an Industry-Sponsored project, the Industry will already hold the IND/IDE if they are providing full support and have given you the protocol. If they are only partially supplying funds or just providing the device or drug free of charge but offer no additional support, you should still contact UAMS. UAMS Research Support Center Contact Information: <http://www.uams.edu/rsc/>; Carole Hamon: 526-7437.

Funding Opportunities

The National Association of Children’s Hospitals (NACH) prepares and distributes upcoming funding opportunities every two weeks. Funding opportunities recently distributed by the NACH are listed below.

Key words: Children’s Health Care

[Children’s Health Insurance Program Reauthorization Act \(CHIPRA\) Quality Demonstration Grant Program \(Centers for Medicare & Medicaid Services/DHHS\)](#)

Deadline: Informational Teleconference: October 15, 2009; Letter of Intent (not required): October 22, 2009; Application: January 8, 2010

Eligibility: State Medicaid Agencies or State CHIP Agencies, or a multi-State collaborative of State Medicaid/ CHIP agencies. Hospitals must partner with one of these agencies to apply for this grant.

Key words: Emotional Disturbances – Children and Adolescents

[Statewide Family Network Grants \(SAMHSA\)](#)

Deadline: Application: November 25, 2009

Eligibility: Non-profit organizations in States where there is currently not a funded Statewide Family Network.

Key words: Mental Health – Children and Youth

[Cooperative Agreements for Comprehensive Community Mental Health Services for Children and Their Families Program \(SAMHSA\)](#)

Deadline: December 8, 2009

Eligibility: Hospitals must partner with their state, county, city or town government to apply for this grant.

Private

No listings this week.

Pediatric Research

Key words: Comparative Effectiveness Research

[Recovery Act 2009 Limited Competition: AHRQ Clinical and Health Outcomes Initiative in Comparative Effectiveness \(CHOICE\) Grants \(R01\) \(AHRQ\)](#)

Deadline: Opening: November 16, 2009; Letter of Intent (not required): November 18, 2009; Application: December 16, 2009

Eligibility: Non-profit organizations in the U.S.

Key words: Comparative Effectiveness Research – Adaption and Dissemination

[Recovery Act 2009 Limited Competition: Innovative Adaptation and Dissemination of AHRQ Comparative Effectiveness Research Products \(iADAPT\) \(R18\) \(AHRQ\)](#)

Deadline: Opening: November 16, 2009; Letter of Intent (not required): November 18, 2009; Application: December 16, 2009

Eligibility: Non-profit organizations in the U.S.

Beware: Recent Version of Adobe Reader or Acrobat Required for Grants.gov Submissions

To complete a Grants.gov application package (e.g., SF424 forms used for NIH grant proposal submission) or to convert files that attach to the package you must either install the Grants.gov compatible version of Adobe

Reader for free or have an equivalent version of Acrobat Standard or Professional software (8.1.1, 8.1.2, 8.1.3, 8.1.4, 8.1.5, 9.0, 9.1, 9.1.1) already installed on your computer.

Upcoming Educational Opportunities

There are several on-campus educational opportunities scheduled in the next couple months. Learn more about these opportunities and others at <http://achri.archchildrens.org/resources/calendar.htm>.

Contact ACH Public Relations with All Media Requests

It is a policy of Arkansas Children's Hospital that all employees (both ACH and UAMS who work on ACH campus) contact the ACH Public Relations department after any media request. Employees who are contacted by media for interviews regarding their work on the ACH campus, in connection with an outside organization, for their personal opinion on a particular topic, or any other reason should contact the ACH Public Relations department. Media are not allowed on the ACH campus unless they are escorted by a Public Relations representative. Employees who wish to conduct an interview with the media on matters not relating to Arkansas Children's Hospital must conduct those interviews off-site from the hospital campus. Please direct any questions or concerns to the Public Relations office at 364-6444. [ACH Policy J02 – Press Relations Policies and Release of Patient Information](#) (available in the ACH Vault) addresses this issue.

Wanted: Researcher Profiles!

Since January 1, there have been over 6,000 page visits to ACHRI's "Our Researchers" index page. Would you like to add your researcher profile to our Web site? If so, send [John Gregan](#) the following information: your title, a paragraph about your research interests and accomplishments, a list of your current research funding, appropriate contact information, and a list of five key publications. Include a current digital photograph if you have one available. You can view the profiles we've developed here:

<http://achri.archchildrens.org/researchers/faculty.htm>.

If you already have a profile at our web site, contact John if you need to revise it in regards to accomplishments, publications, and funding.

ACHRI Address Change

With the dedication of Children's Way (formerly Marshall Street), ACHRI has a new street address: 13 Children's Way. Use this address on grant applications submitted through ACHRI. Refer to the [sample SF 424](#) with ACHRI information at our Web site to view the change for NIH submissions.

Also, don't forget to update your study consent forms and other research-related documents (and any templates) that may contain the old address as you make new submissions to the IRB.

Advertise Your Clinical Trial on the ACH Web site

Are all of your potential research subjects aware of your clinical trial? An excellent tool you can use to recruit participants for your studies is available at www.archchildrens.org/research. This web site lists currently enrolling studies, so interested parents can contact you about possible participation. To have your study included on the web site, you must have received IRB approval for your study advertisement. Once you have done so, please email a copy of the approved material and a completed [Clinical Trial Web site Form](#) to [Rebecca Myrick](#) or call her at 364-3577.

Analytical Support Available from the Autism Metabolic Genomics Laboratory

Dr. Stepan Melnyk, PhD, Laboratory Director for the Autism Metabolic Genomics Lab, offers an Oxidative Stress Core Laboratory equipped with state-of-the-art analytical instruments including HPLC-based Electrochemical Detectors, HPLC UV/Visual detectors, LC-MS, and Universal Detector Corona. The equipment can assist with the detection of proteins, lipids, carbohydrates, or small molecules associated with oxidative stress, providing excellent sensitivity, wide dynamic range, superior reproducibility, and a more consistent response. Dr. Melnyk is looking for opportunities to consolidate research institutionally, between institutions, or nationally known research centers. The equipment in this laboratory as well as the expertise of its staff provides advantages for beginning and established researchers to strengthen their grant applications. Currently and in past, the Oxidative Stress Core Laboratory provides significant support for numerous grants (NIH, DOD, CUMG) by successfully performing analysis of multiple markers of oxidative stress and

transmethylation pathway metabolites. To discuss your interest with Dr. Melnyk, contact him at 364-4659 or 364-4534.

Database Building, Reporting, and Analysis Services for Researchers

Does your research project include building a database and reports or analyzing an already existing database? You can find support for building databases and reports from the Department of Pediatric Biostatistics. Jennie Stern has recently joined the department as the Clinical System Analyst. She is already working with research investigators and will be the liaison between Pediatric Biostatistics, investigators, ACHRI, and ACH's Systems Development Group. Jennie's efforts will develop new, user-friendly research databases for end-users and provide various types of data analysis in regards to research. Services provided by Jennie will be charged to studies as a direct cost to the project based on a percentage of her effort. To discuss your project, contact Jennie by email (jestern@uams.edu) or by telephone (364-3189).

Recent Publications

Bird MT, Robbins JM, Druschel C, Cleves MA, Yang S, Hobbs CA; National Birth Defects Prevention Study. Demographic and environmental risk factors for gastroschisis and omphalocele in the National Birth Defects Prevention Study. *J Pediatr Surg*. 2009 Aug;44(8):1546-51.

Brownell KD, Farley T, Willett WC, Popkin BM, Chaloupka FJ, Thompson JW, Ludwig DS. The Public Health and Economic Benefits of Taxing Sugar-Sweetened Beverages. *N Engl J Med*. 2009 Sep 16. [Epub ahead of print]

Cabrera AG, Dyamenahalli U, Gossett J, Proadhan P, Morrow WR, Imamura M, Jaquiss RD, Bhutta AT. Preoperative lymphopenia is a predictor of postoperative adverse outcomes in children with congenital heart disease. *J Thorac Cardiovasc Surg*. 2009 Jul 28. [Epub ahead of print]

Chen JR, Lazarenko OP, Blackburn ML, Badeaux JV, Badger TM, Ronis MJ. Infant Formula Promotes Bone Growth in Neonatal Piglets by Enhancing Osteoblastogenesis through Bone Morphogenetic Protein Signaling. *J Nutr*. 2009 Aug 26. [Epub ahead of print].

Frindik JP, Morales A, Fowlkes J, Kemp S, Thrailkill K, Lippe B, Dana K. Stimulant medication use and response to growth hormone therapy: an NCGS database analysis. *Horm Res*. 2009;72(3):160-6. Epub 2009 Sep 1.

Gilboa SM, Correa A, Botto LD, Rasmussen SA, Waller DK, Hobbs CA, Cleves MA, Riehle-Colarusso TJ; National Birth Defects Prevention Study. Association between prepregnancy body mass index and congenital heart defects. *Am J Obstet Gynecol*. 2009 Sep 29. [Epub ahead of print]

Hofmann AM, Scurlock AM, Jones SM, Palmer KP, Lokhnygina Y, Steele PH, Kamilaris J, Burks AW. Safety of a peanut oral immunotherapy protocol in children with peanut allergy. *J Allergy Clin Immunol*. 2009 Aug;124(2):292-300, 300.e1-97. Epub 2009 Jul 3.

Jones SM, Pons L, Roberts JL, Scurlock AM, Perry TT, Kulis M, Shreffler WG, Steele P, Henry KA, Adair M, Francis JM, Durham S, Vickery BP, Zhong X, Burks AW. Clinical efficacy and immune regulation with peanut oral immunotherapy. *J Allergy Clin Immunol*. 2009 Aug;124(2):292-300, 300.e1-97. Epub 2009 Jul 3.

Oliver SE, Cloud GA, Sánchez PJ, Demmler GJ, Dankner W, Shelton M, Jacobs RF, Vaudry W, Pass RF, Soong SJ, Whitley RJ, Kimberlin DW; for the National Institute of Allergy, Infectious Diseases Collaborative Antiviral Study Group. Neurodevelopmental outcomes following ganciclovir therapy in symptomatic congenital cytomegalovirus infections involving the central nervous system. *J Clin Virol*. 2009 Sep 17. [Epub ahead of print]

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