

NEWS FROM THE CENTER FOR CARDIOVASCULAR AND PULMONARY RESEARCH

Welcome to Research Beat!

—♥— A MESSAGE FROM PAM —♥—

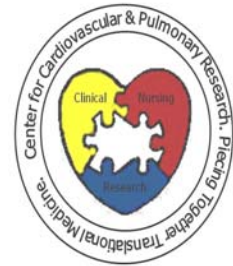
Welcome to the first edition of the Center for Cardiovascular and Pulmonary Research and The Heart Center Research Newsletter. We are in the midst of exciting times as we begin to implement our strategic plan to develop programmatic, translational research related to congenital and acquired heart disease. Our overall mission is to improve cardiopulmonary and vascular health of our patients. In order to achieve this goal we will:

- ♥ Increase research infrastructure
- ♥ Perform cutting edge research to define mechanisms underlying cardiovascular disease
- ♥ Discover new treatments and cures
- ♥ Improve outcomes and outcome disparities
- ♥ Identify risk factors that promote disease development and progression

During the past 10 months we have aggressively expanded the research infrastructure that was put into place by John Bauer, PhD, FAHA. Our Clinical Research Coordinators are available for all aspects of clinical research, from IRB protocol development to patient enrollment and data collection. They work closely with our staff biostatistician, who provides not only data analysis services, but also help with study design. A new molecular core facility was established to perform molecular analysis of blood and tissue samples. All of these research services are highlighted in this issue.

We hope to keep you informed about all of the happenings in our center, feature different basic science and clinical researchers, and provide an update on center presentations and events.

Pamela Lucchesi, PhD, FAHA



Icon designed by Jamie Stewart, PhD

The Operations Team

Need to know who to contact in our Center? The Operations Team can assist you!

Paula Thompson is our Lead Administrative Assistant, and assists Mary Cismowski, PhD, Pam Lucchesi, PhD, Jamie Stewart, PhD, and Loren Wold, PhD. Paula coordinates our Center recruiting initiatives.

Irene Snyder is our Center's Purchasing Coordinator, and also assists John Bauer, PhD, Max Chotani, PhD, Peter Giannone, MD, and Wendy Luce, MD.

Diane Carver is Operations Manager for our Center. Diane assists researchers with grant submissions and post-award management and compliance, coordinates communications and marketing initiatives, and provides fiscal oversight to the Center.



WORKS IN PROGRESS INFORMATION

The Center for Cardiovascular & Pulmonary Research has initiated a *Works In Progress* presentation series for various research forums and topics. The series allows staff and invited guests an opportunity to present ongoing research and findings for positive feedback in order to enhance the scientific quality of current research projects. Presentations are held in the Research II Building in conference room WA4525 from 11:30AM-1:00PM.

Upcoming Presentations:

March 18 th	Beth Hashiguchi
April 29 th	Hong Huang
May 13 th	Diane Carver
May 27 th	Juli Richter

If you are interested in presenting, please contact Jamie Stewart , PhD at 355-3161.

What is research but a blind date with knowledge?

Will Henry

Clinical Services

Office Hours

Monday	2:00-4:00PM
Tuesday	8:00-10:00AM
Wednesday	2:00-4:00PM
Thursday	2:00-4:00PM

Ideas or suggestions for upcoming newsletter articles? Please contact Diane Carver at 355-2821 or Irene Snyder at 722-4984

Visit us online at:

<http://www.nationwidechildrens.org/GD/Templates/Pages/Childrens/Research/ResearchCenter.aspx?page=3808>

FEATURED RESEARCH—STEPHEN COOK, MD

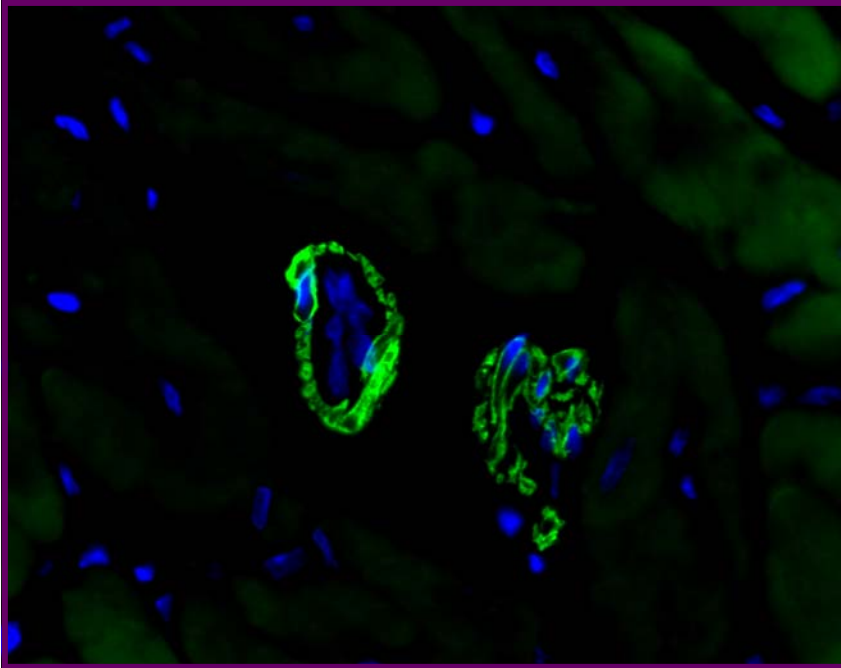
My research interests are in the areas of cardiovascular magnetic resonance imaging and adolescent cardiac disease, especially with respect to early detection of atherosclerosis. I'm particularly interested in the development of and utilization of MR technologies for cardiovascular applications. I have established some small projects that have been funded by NCH, and some of these I am in the process of leveraging with my colleagues for extramural support (including NIH and American Heart Association).

Coronary and cerebral assessments of adults with repaired coarctation of the aorta (NCH funded). This study investigates the atherosclerotic burden in patients with coarctation of the aorta as an effort to screen for early interventions.

Cardiac significance and mechanistic aspects of erectile dysfunction in adults with congenital heart disease (NCH funded, AHA proposal in review). This study involves the investigation of the relationships between ED and inflammatory biomarkers and vascular endothelial dysfunction in relation to cardiac functional measurements in ACHD patients.

HEART-ACHD study (funded NIH R03 multicenter project). This is the first NIH funded multicenter study of ACHD patients, which is focused on evaluating patient education and care standards across the country.

Age related cardiovascular recovery after bariatric surgery (NIH R01 submission). This is a collaborative large study of cardiac structure and function in extremely obese adolescents and adults, and their recovery following bariatric surgery.



Bright green fluorescence indicates alpha-smooth muscle actin in Human right ventricle, detected by Immunohistochemistry. Blue fluorescence indicates cell nuclei stained with Dapi

FEATURED RESEARCH— CARDIO NURSES

Neonatal Congenital Heart Disease Survey:

Parental anxiety levels during home monitoring

When medically-fragile infants with congenital heart disease return home from our hospital, their parents often feel stressed and anxious as they provide care for their child. These children often require intensive care and support at home and may have acute episodes that require hospital visits and emergent care. In recent years, several institutions have developed a home-monitoring program, with a goal of providing resources and training to parents to improve patient recovery and reduce medical costs. The Heart Center has likewise established this strategy, by providing to families an infant scale and pulse oximeter for use at home after patient discharge. These instruments are used by the parents to record data on patient weight gain and oxygenation at home. These data are recorded by the parents and phone contact is made weekly by the Heart Center Nurse study team.

Our study is designed to investigate the impact of home monitoring on the level of parental anxiety while caring for medically –fragile infants with congenital heart disease. We have established a survey to use as a measure of the level of anxiety for the primary caregiver parent. This survey was developed by adapting a well-established document already validated for adult anxiety measurement; the state-trait anxiety scale questionnaire.

We will provide this survey four times. These include 1) prior to home monitor training, 2) prior to patient discharge from hospital, 3) at one-month post discharge, and 4) at time of Stage 2 palliation and/or program completion.

The above study received IRB approval 01/16/2009. We anticipate that it will take two years to collect a large enough sample for analysis.

Submitted by Jamie Stewart, RN

RESEARCH SERVICES

Some exciting changes have come to The Heart Center – clinical research is growing! There are currently three Clinical Research Coordinators in the Center for Cardiovascular and Pulmonary Research who are available to help you with your clinical studies. SAM Barry, the newest member of our team, is currently in nursing school, volunteers with the Columbus Department of Health, and will add more clinical expertise to our area. With a communications degree and an ACHD patient herself, Becca Anderson has a special understanding of our unique patients and is able to provide quality, personal insight to patient and family needs. Together, SAM and Becca focus on patient contact activities such as recruitment and consenting, administering surveys, data collection and organization. Susan Meyer has a background in basic science with several years at the lab bench and experience working on regulated government projects in a contract research setting. She will focus on regulatory coordination of studies including writing and submitting IRBs, consent forms, amendments, continuing review reports, and final reports.

There is also a talented statistician on our team. Beth Hashiguchi is a PhD candidate who focuses on providing study planning, sample size analysis, and set-up of data collection processes before studies begin. She also performs statistical analysis of data collected from studies.

We look forward to providing individualized services and guidance in conducting clinical and translational research.

FUNDING OPPORTUNITY

NEWSFLASH!

As part of the *American Recovery and Reinvestment Act of 2009*, economic recovery and stimulus package, President Obama allocated \$7.4 billion to the National Institutes of Health to support scientific research.

One significant funding opportunity is the NIH Challenge Grants. This new program will support research on topic areas that address specific scientific and health research challenges in biomedical and behavioral research that would benefit from significant two-year jumpstart funds.

Some key features of these grants:

- ♥ 200 grants will be funded
- ♥ Each grant is for up to one million dollars in total costs over two years
- ♥ The application due date is **April 27, 2009**
- ♥ The format is 12 pages with no preliminary data required

Check out this website:

<http://www.nhlbi.nih.gov/funding/recovery.html>

For more information on funding sources and submission procedures, please contact Diane Carver, Center Operations Manager, at 355-2128.

WELCOME NEW STAFF

The Lucchesi Lab welcomed new staff members to their team in January.

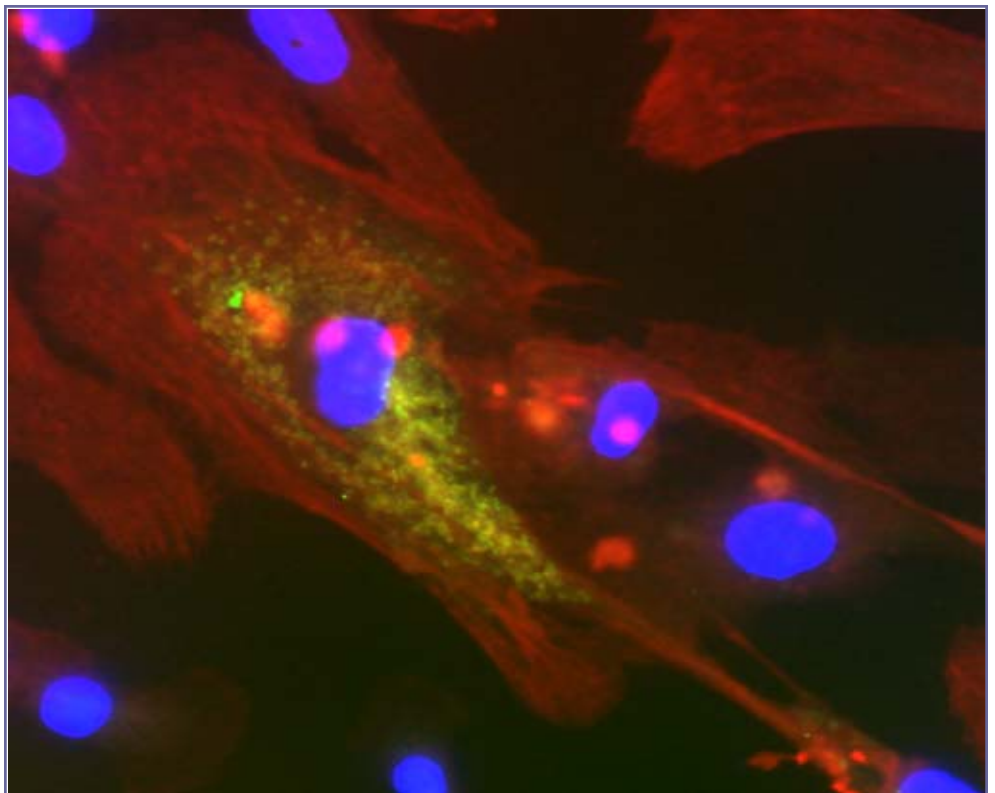


Aaron Trask received his PhD from Wake Forest University in physiology and pharmacology and plans to expand his interest and training in heart related research, specifically actions of advanced glycation end products (AGEs) in diabetic cardiomyopathy.



Aaron West received his MS thesis in biology from Purdue University in cell biology and physiology. Prior to joining the Lucchesi Lab he worked in clinical research, and is excited to use all aspects of his background, both technical and clinical, to further the Center's research.

*Research is to see
what everybody else has seen,
and to think what nobody else has thought.
Albert Szent-Gyorgyi*



Human myofibroblast—Compliments of the Wold Lab