

THE TRIBUNE

UAMS[®]
UNIVERSITY OF ARKANSAS
FOR MEDICAL SCIENCES

MARCH 2013

ACCELERATING DISCOVERIES TOWARD BETTER HEALTH

Tailor-Made

Translational Science Suits UAMS Child Health Researchers



Photo courtesy of Kelley Cooper

Mary Aitken, M.D., director of TRI's Child Health Research component, is a veteran pediatric injury prevention researcher.

When UAMS received its NIH-funded Clinical and Translational Science Award (CTSA) in 2009, child health researchers were ready.

Mary Aitken, M.D., M.P.H., directs the Child Health Research component of the UAMS Translational Research Institute (TRI), where her leadership, along with Co-Director Laura James, M.D., has helped child health researchers to capitalize on the resources of the CTSA-supported TRI.

Nine UAMS child health researchers have received TRI pilot awards totaling \$659,000, and three junior researchers have received TRI KL2 Scholar Awards totaling \$540,000. The institute has also provided other forms of support,

such as research nursing, coordination, biostatistics and data management.

"We've really been able to take advantage of the opportunities that are available through TRI and further this research," said Aitken, director of the Injury Prevention Center at ACH, where she is known for her public advocacy of stronger injury prevention measures, including Arkansas' graduated driver's license law and restrictions on cell phone use by teen drivers. She has also testified before Congress on all-terrain vehicle safety.

Examples of child health researchers who have led TRI-funded pilot studies include:

- Karen McNiece-Redwine, M.D., who also received a KL2 Scholar Award, is assessing the use of ambulatory blood pressure (ABPM) monitoring in which multiple readings are captured over an extended period in a patient's natural environment. She plans to evaluate ABPM as a method of improving blood pressure control and subsequent hypertensive target organ damage in children and adolescents.
- Aline Andres, Ph.D., whose maternal-fetal obesity research involves collaboration across a large group of scientists to expedite the application of knowledge gained from animal models to humans.
- Tamara Perry, M.D., who is studying the feasibility of using smart phones to help adolescents better manage their asthma.

"Translational science has been a cornerstone of the child health research

continued on page 2

Letter from Dr. Lowery



Dear Colleagues,

We are pleased to announce that the Translational Research Institute's (TRI) bimonthly newsletter is now *The Tribune*. The name was

chosen to help us advance the TRI brand and our position as UAMS' integrated academic home for the entire spectrum of translational research.

TRI became UAMS' seventh institute in 2011, taking up the mantle for the NIH-funded Clinical and Translational Science Award (CTSA), which came to UAMS in 2009. Over the last four years we have positioned UAMS to deliver health care advances with greater safety, speed and efficiency thanks to the CTSA and a significant commitment of resources from campus leadership.

We have established dynamic partnerships and collaboration locally (e.g., NCTR, Clinton School of Public Service and Tri-County Rural Health Network), regionally (Western States Collaborative), and across the CTSA consortium.

In this and future issues of *The Tribune* you'll see examples of how we are supporting research with funding, expertise and infrastructure, all with the goal of translating your findings into improved health and health care for the diverse populations of Arkansas and the nation.

Sincerely,

Curtis Lowery, M.D.

Director
UAMS Translational Research Institute (TRI)



Tailor-Made continued

enterprise at UAMS, and that makes it a natural fit for our mission at TRI,” said TRI Executive Director Lisa Jackson, J.D., R.N.

One of TRI’s priorities, Jackson noted, is “growing our own” UAMS researchers. The KL2 Scholars Program has provided salary support for 11 junior investigators, including child health researchers Dennis Kuo, M.D., M.H.S., McNiece-Redwine, and Anthony Goudie, Ph.D.

Kuo is developing primary and tertiary care models for children with medical complexity, while Goudie is identifying barriers to the use of prevention procedures that reduce

Clostridium difficile infections acquired in pediatric health-care settings.

Aitken also directs the Department of Pediatrics Center for Applied Research and Evaluation (CARE), which seeks to improve child health through research into child health services, pediatric injury prevention, child development and nutrition. In her role at TRI, she participates in the national Child Health Oversight Committee, which recommends strategies for addressing the unique challenges in child health research.

“There is still a lot more to be done, but TRI is helping,” she said.

Barrier Removal



Josh Cisler, Ph.D., left front, is the first UAMS researcher to receive subject recruitment assistance from a TRI-created Community Review Board.

Josh Cisler, Ph.D., is conducting research that will enroll 45 adolescent females who have experienced physical or sexual trauma. The study requires two MRIs and 12 weeks of behavioral therapy. Recruitment is challenging due to the nature of the subjects’ trauma, their age, and the intensive study requirements.

For help, Cisler turned to TRI’s Community Engagement Component, which set up a Community Review Board of community experts who

work with abused adolescents. The board assembled for Cisler was a first at UAMS after adopting the model from Vanderbilt University.

During a two-hour meeting, the board helped Cisler think through how his study will be perceived and complications for parents, such as transportation and work schedules.

“It was good to hear their perspective,” Cisler said. “Now we can develop strategies to address these potential barriers.”

Question of the Month

How can TRI help design my study?

TRI’s Biostatistics and Research Design program assists investigators from project inception to completion to ensure the use of statistically sound practices.

This facilitates properly designed and scientifically valid clinical and translational research studies. Because well-designed studies are not developed in isolation, we recommend that investigators include a biostatistician as part of their research team as early as possible in the design process.

Other research assistance, such as data analysis, is offered in conjunction with the UAMS Biostatistics Department. For more information, contact Trey Spencer, the Biostatistics and Research Design program manager, spencerhoracej@uams.edu, 526-6719.

The *TRIBune* is produced for UAMS-affiliated investigators by the UAMS Translational Research Institute (TRI).

TRI Main Number

501-614-2287

Website

TRI.uams.edu

Email: TRI@uams.edu

Editor

David Robinson

Art Director

Mindy Stout

TRI Director

Curtis Lowery, M.D.

TRI Executive Director

Lisa Jackson, J.D., R.N.

UAMS



TRANSLATIONAL RESEARCH INSTITUTE

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES



RFAs for KL2s

Applications are due June 3 for the 2013 KL2 Career Development Awards, which provide research training for professional doctorates committed to an academic career in translational research. The two-year award provides salary support up to \$52,000 a year, up to \$25,000 a year in research funds, and travel and some tuition support. Contact rgdennis@uams.edu or 526-0363.

Data Studies

TRI has awarded grants totaling \$145,748 for studies that will utilize UAMS' Enterprise Data Warehouse. Recipients are:

- Barbara Fuhrman, Ph.D., Mammographic density and breast cancer risk
- Illias Kavouras, Ph.D., Projected impacts of climate change on cardiovascular, stroke and respiratory morbidity in Arkansas
- Seongkum Heo, Ph.D., R.N., Factors associated with fatigue and depressive symptoms and the combined effects of fatigue and depressive symptoms on hospitalization rates and the gender differences in patients with heart failure
- Peter Kohler, M.D., Innovative analytic strategies to assess diabetic care in disparate populations
- Rosalind Penney, Ph.D., The relationship between BMI, cancer incidence, and residence in an agricultural county in Arkansas
- Charles Mabry, M.D., Trauma Early Warning Score (TEWS) as an early measure of trauma severity and need for aggressive intervention

Breathing Lessons

Tamara Perry, M.D., Created an App for That



Tamara Perry, M.D., demonstrates her asthma app to research participants.

Asthma rates among certain populations of children in Arkansas are nearly three times the national rate, which has led UAMS' Tamara Perry, M.D., to test novel methods for addressing the condition.

Perry, an allergy and immunology specialist, is studying interventions for asthmatic children at high risk for poor outcomes due to poverty and lack of access to health care. She hopes that telemedicine and mobile phones can make a difference.

Her Mobile Based Asthma Action Plan study has provided adolescents with phones that contain an app designed to improve their asthma self-management skills. The pilot study has shown that an interactive, mobile-based Asthma Action Plan may be a feasible way to improve asthma management and deliver critical instructions to asthmatic adolescents.

Funding for the app was provided by the Translational Research Institute (TRI) and developed by Perry in partnership with the UAMS Center for Distance Health. Her research also received a TRI letter of support

for a NIH R01 application.

Perry presented the study's results at the 2013 American Academy of Asthma Allergy and Immunology Conference in San Antonio. The 20 teenagers in the study used the app an average of four days a week with significant improvement in asthma control

test scores and asthma self-efficacy scores. "The children who participated loved it; they enjoyed using the app," she said.

TRI awarded \$50,000 for the pilot study, and TRI's Community Engagement Component provided equipment and other support to assist with community recruitment activities.

"TRI and its Community Engagement Component have been very helpful with this study, as well as with our 'Breath Connection' study," Perry said.

The Breath Connection study involves telemedicine connections to schools in the Delta where parents, children and school nurses can learn about asthma symptoms, medications, asthma triggers and when to seek emergency care. Perry will compare outcomes of children in groups that participate in the telemedicine program to those who do not.

Based at the Arkansas Children's Hospital Research Institute, Perry also has research interests in the natural history of food allergies and in developing new food allergy treatments.



TRIBUTES

The following UAMS researchers cited the Translational Research Institute (TRI) in publications between Dec. 29, 2012, and Feb. 28, 2013, after utilizing TRI resources or receiving TRI funding:

Fleisher DM, Burks AW, Vickery BP, Scurlock AM, Wood RA, Jones SM, Sicherer SH, Liu AH, Stablein D, Henning AK, Mayer L, Lindblad R, Plaut M, Sampson HA, Consortium of Food Allergy Research (CoFAR) Sublingual immunotherapy for peanut allergy: A randomized, double-blind, placebo-controlled multicenter trial. *J Allergy Clin Immunol*. 2013 Jan 131(1): 119-127.

Graham JG, Macdonald LJ, Hussain SK, Sharma UM, Kurten RC, Voth DE. Virulent coxiella burnetii pathotypes productively infect primary human alveolar macrophages. *Cell Microbiol*. 2012 Dec 24 [Epub ahead of print].

Bryant K, Haynes T, Greer-Williams N, Hartwig MS. "Too blessed to be stressed": A rural faith community's view of African-

American males and depression. *J Relig Health*. 2013 Jan 4 [Epub ahead of print].

Ketkar A, Zafar MK, Maddukuri L, Yamanaka K, Banerjee S, Egli M, Choi JY, Lloyd RS, Eoff RL. The leukotriene biosynthesis inhibitor MK886 impedes DNA polymerase activity. *Chem Res Toxicol*. 2013 Jan 10 [Epub ahead of print].

Wei F, Moore PC, Green AL. Geographic variability in human papillomavirus vaccination among U.S. young women. *Am J Prev Med*. 2013 Feb; 44(2): 154-7.

Cannon MJ, Goynes HE, Stone PJ, Macdonald LJ, James LE, Cobos E, Chiriva-Internati M. Modulation of p38 MAPK signaling enhances dendritic cell activation of

human CD4(+) Th17 responses to ovarian tumor antigen. *Cancer Immunol Immunother*. 2013 Jan 25 [Epub ahead of print].

Welty LJ, Carter RE, Finkelstein DM, Harrell FE JR, Lindsell CJ, Macaluso M, Mazumdar M, Nietert PH, Oster RA, Pollock BH, Roberson PK, Ware JH. Strategies for developing biostatistics resources in an academic health center. *Acad Med* 2013 Feb 19 [Epub ahead of print]

Cite Us!

Thank you for remembering to cite TRI in your publications resulting from studies that receive TRI support. Please note TRI's award numbers: **UL1TR000039** and **KL2TR000063**.