

THE BRIDGE

PUTTING RESEARCH INTO PRACTICE



MAY 2012

Service Oriented

TRI Coordination, Clinical Help Impress Researchers



The Translational Research Institute's (TRI) Clinical Research Services Core (CRSC) staff provide researchers with expert project coordination, regulatory navigation, subject recruitment, nursing and laboratory services.

Veteran UAMS researcher **Jill James, Ph.D.**, and **Nasim Khan, M.D.**, a new clinical researcher, are among a growing number of investigators discovering the value of the UAMS Translational Research Institute (TRI) and its Clinical Research Services Core (CRSC).



Jill James, Ph.D.

When James, director of the Autism Metabolic Genomics Laboratory at the Arkansas Children's Hospital Research Institute, needed startup assistance with a new autism research program last year, she reached out to TRI, one of 60 NIH-funded Clinical and Translational Science Award (CTSA) programs.

A pediatrics professor in the UAMS College of Medicine, James said she was

impressed with the professionalism and thoroughness of the startup meetings organized by **Angie Smith**, TRI's research coordinator supervisor and navigator.

Detailed Planning

"Every detail of the protocol is reviewed and discussed by the TRI team and investigators so that new ideas are generated and every participant knows exactly what is involved and their responsibility in making the protocol come together," James said.



Nasim Khan, M.D.

Khan, assistant professor in the Division of Rheumatology, said he has received invaluable assistance from TRI for rheumatoid arthritis research on a number of

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Message from Dr. Lowery



Curtis Lowery, M.D.

Dear Colleagues,
We welcome you to *The Bridge*, the Translational Research Institute's (TRI) first bimonthly newsletter for all UAMS-affiliated researchers.

This newsletter was developed to inform you about TRI's services, promote collaboration and celebrate your successes. It's called *The Bridge* because the name aptly symbolizes our mission.

As one of 60 institutions with a NIH Clinical and Translational Science Award (CTSA), TRI is connecting scientists inside and outside of Arkansas, and we are building new, lasting connections with communities that are counting on us to deliver for them.

TRI offers pilot funds for promising translational studies and has the infrastructure to support your many research needs, including a data warehouse, subject recruitment, and expertise to help get your studies off the ground.

As with these services, we hope that *The Bridge* will become a valued research resource.

Sincerely,

Curtis Lowery, M.D.
Director
UAMS Translational Research Institute (TRI)



Service Oriented *continued*

fronts, including help with regulatory matters, the recruitment of study subjects, processing and storage of blood samples at the CRSC, and the development of a data storage system that made results readily available for statistical analysis. TRI also provided the expertise of a biostatistician, which has been instrumental in the publication of three manuscripts.

“The TRI is an important resource for all investigators, but I think it’s probably even more important for the new investigator,” Khan said. “The study coordinator support is crucial.”

Recruitment Resource

James’ study requires the recruitment of healthy pregnant women to serve

as controls for the metabolic study of autism in high-risk moms. TRI’s Ashley Sides, a research coordinator, has assisted with that aspect of the study and “has been a God-send,” James said

Sides devised a sample log and labeling method to assure that all samples will be accounted for and organized. She also is successfully recruiting healthy pregnant moms as control subjects.

“Having TRI as a partner in our research gives me confidence that the recruitment and sample collection will be done exactly as described in the protocol and that the work will be done in a timely manner,” James said. “TRI is a huge asset to UAMS research.”



TRI’s Kim Morehead (left) provides research coordination and human subject recruitment, and Tanya Stillman (center) is a research nurse.

CRSC Abstract

The TRI Clinical Research Services Core (CRSC) provides 6,000 square feet of research space, with six residential beds, three outpatient rooms and a sample processing lab. The CRSC provides nursing support, dietary consultation, a metabolic kitchen, as well as ECG machines, bone densitometer, telemedi-

cine, body impedance analyzer, resting metabolic rate calorimeter, and -20 C and -80 C freezers. Located in the UAMS Central Building, CRSC offers mobile support, including to Arkansas Children’s Hospital Research Institute, Freeway Medical Tower and Recovery Centers of Arkansas.

Funding opportunity



2013 Medical Research Endowment Awards

Application deadline: June 29, 2012

Funded by the UAMS Foundation Fund Board, these pilot grants are for research with the potential for obtaining extramural funding. Program support is focused on new areas of research for junior investigators and innovative avenues of research for established investigators. Grants will not exceed \$15,000.

Submit applications to the vice chancellor for research, mail slot 718, or deliver to room 159-2, Biomedical Research Center II.

Contact: Linda Laney-Rogers, 686-5347.

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UAMS





Question of the Month

What is Translational Research?

Translational research is an approach to research that seeks to produce more meaningful, applicable results that directly benefit human health. This approach emphasizes removing barriers to multidisciplinary collaboration among laboratory and clinical researchers. It also incorporates the views of the public by working in partnership with communities to determine their health needs.

The goal is to move basic science discoveries more quickly and efficiently into practice. Translational research also encompasses efforts to identify and support the adoption of best medical and health practices. At the Translational Research Institute (TRI), we provide numerous targeted resources to address barriers that can curb productivity and the swift translation of research into new health care advances.

Community Engagement



Community leaders from across Arkansas, meeting for the first time as the Community Advisory Board for TRI's Community Engagement Component, learned about TRI's mission and how their voices can affect critical research decisions. The meeting was led by UAMS' Kate Stewart, M.D., (standing) and Greer Sullivan, M.D. The group's next quarterly meeting will be in August.

Paying it Forward

Protected Time is Productive Time for KL2 Scholar



Holly Felix, Ph.D., shared her innovative long-term care delivery findings at a National Press Club briefing in Washington D.C.

As a junior investigator in the UAMS College of Public Health, Holly Felix, Ph.D., M.P.A., has made the most of her support from the Translational Research Institute (TRI). She received a two-year TRI-sponsored KL2 Scholars Award in 2010, and she is the principal investigator on a 2011 TRI Community Engagement pilot award.

The KL2 Scholars Award provided coverage for her to seek advanced training and conduct preliminary research that is allowing further study of long-term care delivery for obese older adults. The award also provided coverage for her to disseminate results from her earlier research, which has garnered national recognition after finding that Arkansas' Medicaid system could save \$2.6 million over three years by connecting certain elderly and disabled adults to community-based long-term care services.

The intervention that Felix identified resulted in a more than 23-percent reduction in annual Medicaid spending per participant.

Felix was invited to speak about her innovative findings in Washington D.C., at a National Press Club briefing in July 2011. Her research also led to the national Scholars Abstract Award, which she

received in April at Translational Science 2012, a three-day conference in Washington D.C.

"TRI has been of tremendous value to my research," Felix said. "At this point in my career, I doubt I would have been as productive without the support of the TRI resources and staff."

The protected time provided by the \$181,434 KL2 Scholars Award also enabled Felix to develop fruitful research collaborations with colleagues in Pennsylvania and South Carolina. Several projects are under way and she is optimistic they will lead to a larger research proposal.

Her \$47,632 TRI pilot study award is supporting the analysis of UAMS electronic health records and qualitative interviews to identify clinical, socio-demographic and community root causes for hospital readmission for acute myocardial infarction, heart failure and pneumonia among Medicare patients. About 75 percent of hospital readmissions are avoidable and cost the Medicare program \$17 billion a year. The identified causes will inform the design of a care transition intervention, which will be tested in a subsequent study.

TRI AUTHORS

The following UAMS researchers cited TRI in publications between Feb. 1 and April 30 after utilizing TRI resources or receiving TRI funding:

Dennis Kuo, M.D., M.H.S., Family-centered care: current applications and future directions in pediatric health care

Philip Mayeux, Ph.D., Resveratrol improves renal microcirculation, protects the tubular epithelium, and prolongs survival in a mouse model of sepsis-induced acute kidney injury

Giulia Baldini, M.D., Ph.D., Activating transcription factor 6 limits intracellular accumulation of mutant $\alpha(1)$ -antitrypsin Z and mitochondrial damage in hepatoma cells

Nasim Khan, M.D., Horace (Trey) Spencer, M.S., Determinants of discordance in patients' and physicians' rating of rheumatoid arthritis disease activity

Chenghui Li, Ph.D., Trends in utilization of management strategies for newly diagnosed atrial fibrillation patients in the United States

Philip Mayeux, Ph.D., Horace (Trey) Spencer, M.S., Development of oxidative stress in the peritubular capillary microenvironment mediates sepsis-induced renal microcirculatory failure and acute kidney injury

Donald Mock, M.D., Ph.D., Marginal biotin deficiency can be induced experimentally in humans using a cost-effective outpatient design

Mary Aitken, M.D., M.P.H., Trends in U.S. pediatric drowning hospitalizations, 1993-2008

William Fantegrossi, Ph.D., Monohydroxylated metabolites of the K2 synthetic cannabinoid JWH-073 retain intermediate to high cannabinoid 1 receptor (CB1R) affinity and exhibit neutral antagonist to partial agonist activity

Philip Mayeux, Ph.D., LeeAnn MacMillan-Crow, Ph.D., Pharmacological targets in the renal peritubular microenvironment: Implications for therapy for sepsis-induced acute kidney injury

Nasim Khan, M.D., Horace (Trey) Spencer, M.S., Association of industry funding with the outcome and quality of randomized controlled trials in drug therapy for rheumatoid arthritis

Mark Smeltzer, Ph.D., Horace (Trey) Spencer, M.S., Impact of extracellular nuclease production on the biofilm phenotype of *Staphylococcus aureus* under in vitro and in vivo conditions

Charles O'Brien, Ph.D., New insights into the control of bone remodeling

Holly Felix, Ph.D., Delia West, Ph.D., Calculating reach of evidence-based weight loss and memory improvement interventions among older adults attending Arkansas senior centers, 2008-2011

Mary Aitken, M.D., M.P.H., Tracking the impact of the National Institutes of Health Clinical and Translational Science Awards on child health research: developing and evaluating a measurement strategy

Sarah Blossom, Ph.D., Epigenetic alterations may regulate temporary reversal of CD4+ T cell activation caused by trichloroethylene exposure

Song Ounpraseuth, Ph.D., Curtis Lowery, M.D., Evaluating the effect of hospital and insurance type on the risk of 1-year mortality of very low birth weight infants: controlling for selection bias

Grazyna Nowak, Ph.D., Martin Hauer-Jensen, M.D., Ph.D., Cesar Compadre, Ph.D., γ -Tocotrienol protects against mitochondrial dysfunction and renal cell death

William Hogan, M.D., M.S., Laura James, M.D., Bradley Martin, Pharm.D., Ph.D., Acute and chronic acetaminophen use and renal disease: a case-control study using pharmacy and medical claims

Richard Kurten, Ph.D., Daniel Voth, Ph.D., *Coxiella burnetii* alters cAMP- dependent protein kinase signaling during growth in macrophages

Christine Sheffer, Ph.D., Reid Landes, Ph.D., Lisa Jackson, J.D., R.N., Warren Bickel, Ph.D., Delay discounting, locus of control, and cognitive impulsiveness independently predict tobacco dependence treatment outcomes in a highly dependent, lower socioeconomic group of smokers

Kevin Raney, Ph.D., Dda helicase tightly couples translocation on single-stranded DNA to unwinding of duplex DNA: Dda is an optimally active helicase

Stavros Manolagas, M.D., Ph.D., Charles O'Brien, Ph.D., The RANKL distal control region is required for the increased RANKL expression, but not the bone loss, associated with hyperparathyroidism or lactation in adult mice

Nasim Khan, M.D., Patient's global assessment of disease activity and patient's assessment of general health for rheumatoid arthritis activity assessment: are they equivalent?

Frank Simmen, Ph.D., Dietary soy protein induces hepatic lipogenic enzyme gene expression while suppressing hepatosteatosis in obese female Zucker rats bearing DMBA-initiated mammary tumors

Cite TRI

Thank you for using TRI and remembering to cite Award Number UL1RR029884 in your publications resulting from studies that received TRI support.