

## INTRODUCTION

As I sit down to write this, the Year of the Fire Horse has arrived and winter is almost at an end. Our Center is entering the third year of Phase 1, with more accomplishments to celebrate.

In February, I gave a lecture on “Leading a Research Team” as part of the *Research Fundamentals* seminar series sponsored by the UAMS Translational Research Institute. In preparation for the talk, I spent time reflecting on what goes into a recipe for successful leadership in academic research. Of course, there is no single “correct” approach and context is a huge factor when deciding on leadership strategies, but one thing is certain - those selected to lead can change the direction of an entity in what can feel like an instant.

As our team enters a new era of leadership at multiple levels, I challenge each of us in the CMIC to find ways, however small they may seem, to help build a stronger future for UAMS and the Arkansans we serve.

Cheers,



Robert L. Eoff, Ph.D.  
Professor & Vice Chair of  
Biochemistry & Molecular Biology  
CMIC Director



## OUR MISSION

*Cancer affects the health of millions of Americans. Studying molecular mechanisms that endow cells with malignant properties is an essential component of advancing pre-clinical studies and a key part of efforts to improve patient outcomes. The purpose of this NIH COBRE grant is to establish the CMIC at the UAMS. The mission of the CMIC is to study molecular features and functional properties of biomolecules that drive cancer. The unifying theme of research among Center members is the coupling of structural biology and high-resolution imaging with precise, quantitative analysis of biochemical and cellular processes to understand how molecular interactions govern the initiation, progression and treatment of cancer. Our long-term goal is to leverage faculty mentoring, strategic recruitment, and cutting-edge core resources to develop a critical mass of investigators that will support a self-sustaining center in which research advances our knowledge of cancer through precise and comprehensive analyses of molecular events that impact malignant pathogenesis.*

**PLEASE CITE Grant P20 GM152281** if you receive COBRE support or use CMIC core services/instrumentation.

## CENTER NEWS & UPDATES



• **New CMIC Research Project Leader (RPL) Kirk West officially approved by NIH.** It is with great pleasure that I announce the official onboarding of Kirk West, Ph.D., as a CMIC RPL. Dr. West is an Assistant Professor in the Department of Biochemistry and Molecular Biology at UAMS. His COBRE project is entitled “Investigation of the mechanistic role of TLKs in Nucleotide Excision Repair”. Dr. West was a CMIC Pilot Project Awardee and prior to that, he was supported by a postdoctoral fellowship from the American Cancer Society. We are thrilled to have Dr. West officially join the CMIC as our newest RPL. Welcome Kirk!

• **CMIC Spring Advisory Committee (AC) Meeting March 20th.** We will hold our second virtual Spring check-in with the CMIC AC on Friday March 20th. I’m excited to share updates on new projects, funding, publications, and the growth of structural biology at UAMS.

• **FY27 Request for Pilot Project Applications.** The CMIC is accepting applications for FY27 Pilot Project Awards. The CMIC Pilot Project Program provides up to \$75,000 in direct costs for 1-year of support of basic or translational research projects that match the focus of the center. Two awards will be made annually. Funded pilot investigators will have access to the two CMIC Research Core facilities free of charge. Applicants are encouraged to take advantage of expertise available within other existing COBRE project teams and interact/collaborate with them. Funded COBRE pilot investigators will be required to participate in local, regional, and national COBRE and IDeA meetings, to give periodic progress reports when requested, and to submit a comprehensive final written report detailing studies performed and the findings. To learn more, visit <https://medicine.uams.edu/cmhc/2026-pilot-projects/>

• **Additional Reminder: Register for NISBRE 2026!** Registration for the 10th National IDeA Symposium for Biomedical Research Excellence (NISBRE) meeting is now open. The meeting will be held June 14-17 at the Bethesda North Marriott Hotel and Conference Center in Rockville, MD. This biannual meeting is a great way to meet other COBRE-funded investigators and learn about all the wonderful initiatives being developed by researchers in IDeA states. Please register @ <https://www.nisbre2026.com/>



## RECENT PUBLICATIONS

*(Center publications and publications citing the CMIC COBRE from December 2025-February 2026)*

**Garcia Garcia N, Nguyen THV, Richey D, Cox EF, Coca Juaristi J, Ashby C, Rodriguez A, Ryan KR** (2026) "Rnd3 regulates lung cancer cell invasion and migration independently of ROCK1 signaling via alpha 5 integrin modulation" *Life Sci Alliance*, 9(5):e202503494 (PMCID: PMC12932936).

\*Appell KT, Guo W, Scott M, Blevins JS, Pechous RD (2026) "Yersinia pestis plasminogen activator protease is regulated by the PhoP/PhoQ two-component system" *J Bacteriol*, 208(1):e0035725 (PMCID: PMC12826059). \*Involved CMIC Biomolecular Interactions Core equipment and staff

US Provisional Patent Application No.: 63/913,804, Title: Antisense oligonucleotides mediated correction of tumorigenic aberrant splicing of EZH2 in SRSF2-mutated cancer, Inventors: **Mohammad A. Rahman, Ph.D.** (cites COBRE funding)

*Center members are listed in bold*



*Congratulations to CMIC RPL Dr. Katie Ryan and her team for their publication identifying a novel pro-metastatic pathway in lung cancer. Great work! (Pictured from L-to-R: Emily Cox, Jon Coca, Noemi Garcia, Dr. Katie Ryan, and Vy Nguyen)*

## THE STRUCTURE OF DETERMINATION

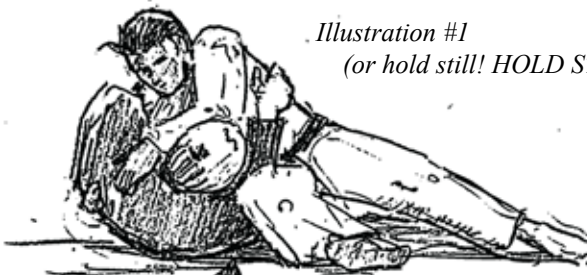
A major emphasis of any COBRE is to help faculty develop their research programs and advance their career. To help faculty achieve these interrelated goals, a faculty development plan is designed and implemented. The typical faculty development plan ensures that COBRE Research Project Leaders (RPLs) establish realistic goals, work towards achievable milestones, and have regular interactions with mentors and COBRE leadership. In this way, RPLs are held accountable for their progress, but they are also provided opportunities to ask questions, adjust course, and receive guidance from faculty who have traveled the road before them. These types of organizational structures, although not infallible, are intended to put more team members in a position to succeed. Yet, in spite of the clear intent, these plans are sometimes treated as an afterthought or a procedural nuisance that is not really helpful to anyone involved. But just like a bridge across a river, sound organizational structures can support progress.

To illustrate this idea in a different way, I'll draw an example from Brazilian jiu jitsu or BJJ. In training BJJ, the idea of "position before submission" has been drilled into my brain. While scrambles and flow might blur the absoluteness of this rule, ending a match is easier if you are in a position that exerts greater control over your opponent and supports execution of the submission. Here I illustrate this concept using two examples of what we call the "high scissor" position.

In the first illustration, the person on top seems to be in a dominant position. Close inspection of the drawing reveals that the person on the bottom should be able to escape fairly easily. This is due to the fact that there is a lot of room for them to get their bottom elbow on the ground, allowing them to create space and escape.

A more dominant position (drawing #2) can be secured by the person on top if they grab their opponent's triceps to lift the bottom elbow and slide their leg under the opponent's shoulder – a very small adjustment that can make a huge difference in this match. The much more secure position allows the person on top to attempt multiple submissions with relatively little risk. This also sets up an easy transition to a very tight side control position, another secure place to work from.

The take-home here is: micro-transitions and timely attention to detail matter in the creation of a structure that will help achieve the desired outcome.



*Illustration #1  
(or hold still! HOLD STILL!!)*



*Illustration #2  
(or now I've got you pal!)*