CMIC
Center for Molecular Interactions in Cancer
@UAMS
Volume 3: July 31st, 2024

INTRODUCTION

Welcome back for another installment of the quarterly Center for Molecular Interactions in Cancer (CMIC) Newsletter. We're almost four months out from our official start date, and things are really cooking in the CMIC, just in time for another lovely but very toasty Arkansas summer. We've got some new folks to introduce and some great updates to share this time around.

In addition to celebrating new faces and new accolades, we are busy looking ahead to our first in-person Advisory Committee (AC) meeting in September. The meeting will be held on campus in the Winthrop P. Rockefeller Cancer Institute. I'm very excited to get our external AC members on campus and share the cutting-edge science being pursued by our RPLs and center members.

Without further ado, let's dive in and see what's been happening in the CMIC.

Cheers,

Robert L. Eoff, PhD
Professor 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

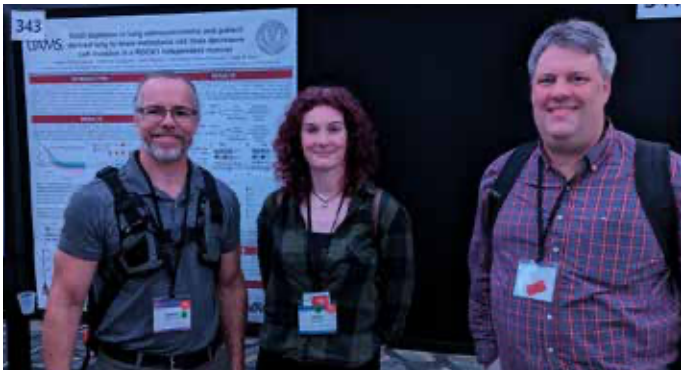
• Please give a warm welcome to **Veronica Overton**, MS, who is our new Research Program Director. Veronica comes to us from her role in the UAMS College of Public Health, where she helped administer the NIH-funded DiscovAR study.

Welcome to the team Veronica!

• Congratulations to **Mohammad Rahman**, PhD, on receiving the Notice of Award for his NIH R35 grant entitled "Decoding Mechanisms of Nonsense-mediated mRNA Decay through Alternative Splicing" (R35 GM154991). This award is funded by the National Institute of General Medical Sciences (NIGMS) Maximizing Investigators' Research Award (MIRA; PAR-23-145) mechanism. Acquisition of this award is a major achievement for Dr. Rahman and his team. It also marks another important milestone for the CMIC, as the R35 grant allows Dr. Rahman to graduate from COBRE support. This is the second Research Project Leader (RPL) to graduate from the CMIC. A special note of thanks to Dr. Rahman's COBRE mentors, **Angus MacNicol**, PhD, and **Fenghuang "Frank" Zhan**, MD/PhD, for their support and guidance. Well done Dr. Rahman!

• The 9th National IDeA Symposium of Biomedical Research Excellence (NISBRE) was held June 16-19 in Washington DC. It was an informative and fun meeting, and Arkansas was well represented by a contingent of INBRE and COBRE-supported faculty, staff, and students. UAMS and the IDeA National Resource for Quantitative Proteomics (R24 GM137786) were recognized as Diamond-level sponsors for the meeting.

Drs. Enemark, Eoff, Raney, and Ryan were on hand to introduce the UAMS CMIC to the IDeA community. Dr. Ryan presented her COBRE-funded work with a poster entitled "Rnd3 depletion in lung adenocarcinoma and patient derived lung-to-brain metastatsis cell lines decreases cell invasion in a ROCK1 independent manner".



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NEWS & UPDATES (CONT.)

• **Alan Tackett**, Ph.D., has kindly agreed to serve on the CMIC AC. Dr. Tackett is a Distinguished Professor of Biochemistry & Molecular Biology, Deputy Director of the Winthrop P. Rockefeller Cancer Institute, and Scharlau Family Endowed Chair for Cancer Research. He will serve as the senior faculty member for the CMIC AC. Dr. Tackett brings a vast amount of prior experience with the IDeA program. He is Director of the Center for Translational Pediatric Research (CTPR) COBRE, which recently entered Phase 2 of NIH support (P20 GM121293). Thank you Dr. Tackett!

• Congratulations to COBRE PI and CMIC Mentor, **Marjan Boerma**, PhD, for her investiture as the J. Thomas May Distinguished Endowed Chair in Oncology. Dr. Boerma is Director of the UAMS College of Pharmacy Division of Radiation Health and Associate Director of Basic Science in the Winthrop P. Rockefeller Cancer Institute. In addition to these roles, Dr. Boerma is very familiar with the IDeA program. She is Director of the UAMS COBRE Center for Studies of Host Response to Cancer (P20 GM109005). This is a well-deserved recognition of Dr. Boerma's excellence in research and leadership. Congratulations Dr. Boerma!

• Congratulations to **Kirk West**, PhD, and **Samantha Kendrick**, PhD, for being the recipients of the inaugural CMIC Pilot Project awards. Dr. West's project is entitled "Molecular role of TLK1 and 2 interactions within the DNA damage response". Dr. Kendrick's project is entitled "Biophysical insights into AID mutagenic activity at DNA secondary structure hotspots". Each of these 1-year, $75K awards is supported by funds from the UAMS College of Medicine. Congratulations Drs. Kendrick and West!

UPCOMING EVENTS

• The next CMIC monthly meeting is scheduled for Wednesday, August 21st from 4-5 PM in the Betsy Blass Boardroom on the 10th floor of the Winthrop P. Rockefeller Cancer Institute.

• The first CMIC AC Meeting will be held Wednesday, September 25th in the Winthrop P. Rockefeller Cancer Institute.

RECENT PUBLICATIONS

(RPL publications from May-July 2024)

Acharya B, Saha D, Garcia Garcia N, Armstrong D, Jabali B, Hanafi M, Frett B, **Ryan KR** (2024) "Discovery of 9H-pyrimido[4,5-b]indole derivatives as dual RET/TRKA inhibitors" *Bioorg Med Chem*, 106, 117749 (PMCID: PMC11144469; Cites P20 GM152281).

Shelton WJ, Zandpazandi S, Nix JS, Gokden M, Bauer M, **Ryan KR**, Wardell CP, Vaske OM, Rodriguez A (2024) "Long-read sequencing for brain tumors" *Front Oncol*, 14, 1395985 (PMCID: PMC11194609; Cites P20 GM152281).

Thank you Dr. Ryan for citing the CMIC P20 GM152281! That is a huge help in our efforts to show successful outcomes for center members in Phase 1.

THE STRUCTURE OF DETERMINATION

The All Blacks mens rugby team and the Black Ferns womens rugby team from New Zealand are two of the most successful sports teams in the world, including back-to-back Olympic Gold for the Black Ferns in Tokyo and Paris. They've acheived (and sustained) greatness on the pitch by creating a culture of intentionality and commitment, where self-discipline and teamwork are prioritized. Members of the legendary All Blacks follow a shared set of principles to guide their training and gameplay. James Kerr distilled these principles down into 15 mantras in his book *Legacy*:

Mantra #6: No. Jerks. - Put another way, "no one is bigger than the team".

For more reading, check out the article by Christine Kininmonth summarizing the book *Legacy* by James Kerr: https://www.thegrowthfaculty.com/blog/summaryLegacyAllBlacksJamesKerrbook