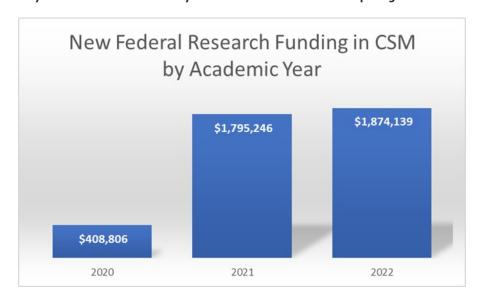


Research Support for Faculty

An important goal of our R2 mission is to increase the amount of federally funded research. Over the last three years, CSM faculty have been very successful in expanding our federally funded grant portfolio. The amount of federal funding to our college is illustrated below. The figure below presents the total dollar amount of new awards per year for federally funded research projects.



To sustain our graduate programs, which train our students without them incurring debt, we need to continue this trend and further increase the number of federal grants that provide support for graduate students. We must also think of raising stipends for graduate students, to stay competitive with peer Institutions. Finally, the size of our program must reflect the degree to which we can commit federal funds to support it.



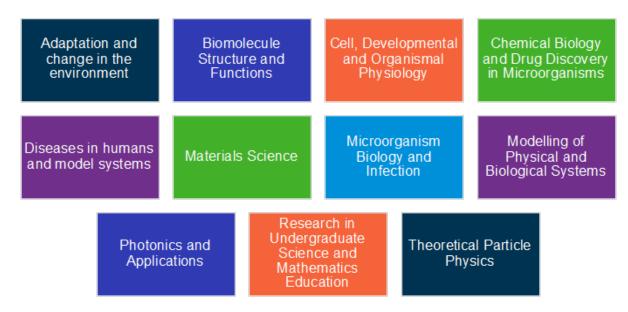
Kojo Mensa-Wilmot, Ph.D.Dean and Professor of Molecular Cell Biology

Summary of FY22 Research Initiatives

Below we summarize some of the college-wide research initiatives that occurred last year; we will continue several of them to provide support for faculty with fundable research programs.

Foci of Research Excellence:

Areas of overlapping faculty research interests have been identified; those supported with extramural funding were designated as Research Interest Groups (RIGs), to serve as the foci of research excellence. RIGs are dynamic; new RIGs may be formed, and some abandoned. They will be evaluated every two years to determine whether the level of activity justifies continued recognition as RIGs.

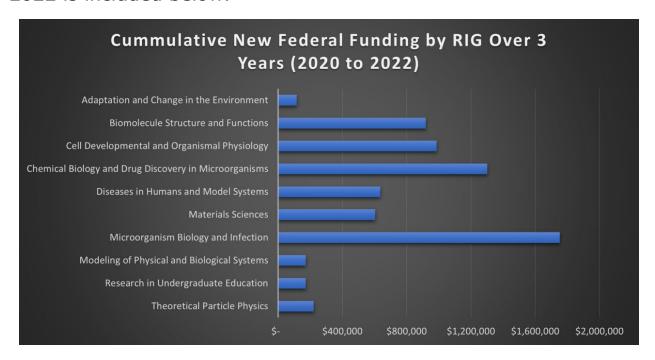


Faculty association with the Research Interest Groups (RIGs) can be found on the <u>RIGS website</u>.

New RIGs can be proposed for consideration by the Office of the Dean. Faculty who wish to be listed within the RIGs may send an email to our webmaster <u>Sara Franka</u>, and copy the Associate Dean

for Research and Graduate Studies, Dr. Vishnu Suppiramaniam (vsuppira@kennesaw.edu).

Cumulative new federal funding for the top ten RIGs from 2020 to 2022 is included below.



Department-specific research programs are summarized <u>here</u>.

In the next three years, new tenure-track faculty will be recruited into the RIGs to support our graduate programs. The role of Departments in the process of hiring faculty into the RIGs has been explained to chairs, who will present it to you at faculty meetings.

Ad Hoc Research Advisory Group:

This advisory group was created to assess the state of research in the College of Science and Mathematics, consult with faculty, and make recommendations to the Dean's office.

Dr. Michael Van Dyke , Chemistry and Biochemistry	Dr. Sigudur Greipsson , Ecology, Evolution, and Organismal Biology	Dr. Scott Nowak , Molecular and Cellular Biology
Nikolaos Kidonakis, Physics	Jennifer Vandenbussche, Mathematics	

Programs to Support Research Proposals for Extramural Funding

Conceding that it is difficult for faculty to obtain federal support and/or retain extramural support, we have instituted several equitable ways to provide funds to faculty seeking federal funds. Several of the initiatives launched with support from the Office of Research are presented in this document. We plan to offer the programs again in FY23.

Research Launch/Relaunch Initiative:

This program supported faculty whose extramural funding had lapsed. Proposals were evaluated by external reviewers.

The FY22 awardees are listed below.

Faculty	Project Title
Dr. Melanie Griffin (Molecular and Cellular Biology)	Identification of the Lrp Regulon through Whole Transcriptome Shotgun Sequencing
Dr. Thomas Leeper (Chemistry and Biochemistry)	Exploring alternative warheads for targeted covalent inhibition of a protein from an opportunistic human pathogen.

Seed Grants:

This initiative backed novel projects with potential for extramural funding. Proposals were evaluated by reviewers external to KSU.

The FY22 awardees are listed below.

Faculty	Project Title
Dr. Glenn Young (Mathematics), Dr. Eric Albrecht (Molecular and	Experimental and Mathematical Studies on the Role of Gap Junctions in Collective

Cellular Biology), Dr.	Yizeng
Li (Mechanical Engine	eering)

Migration of Breast Cancer Cells

Retention of Federal Funding:

Faculty whose project was in the last year of federal funding received support to increase chances of renewing their grant.

The FY22 awardees are listed below.

Faculty	Grant Received From	Project Title
Dr. Min Wang , (Mathematics)	National Science Foundation (NSF)	Algorithms for Threat Detection Program.
Dr. Michael Stollenz, (Chemistry and Biochemistry)	National Science Foundation (NSF)	Highly Luminescent Multinuclear Coinage Metal Arrays with a Twist: A New Approach to Design Light- Emitting Molecular Strings and Coils

PhD Proposal:

A new PhD proposal is under development. We are grateful to faculty listed below who have worked on a previous version of the proposal.

Dr. Chris Dockery , Chemistry and Biochemistry	Dr. Jeremy Gulley , Physics	Dr. Scott Nowak , Molecular and Cellular Biology
Dr. Heather Abbott- Lyon , Chemistry and Biochemistry	Dr. Glenn Young , Mathematics	Dr. Anton Bryantsev , Molecular and Cellular Biology

Dr. Sarah Guindre Parker, Ecology,
Evolution and
Organismal Biology

Dr. Martin Hudson, Molecular and Cellular Biology

If all goes well, we hope to recruit our first cohort in fall of 2025.

New/Updated Research Facilities

The College of Science and Mathematics (CSM) believes in providing students, faculty and external users with research-grade, state-of-the-art equipment, both for learning and for research. Visit the CSM Research website for more information on facilities and resources.

Discipline Based Education Research (DBER) Space – SC 464:

Renovated space for faculty involved in DBER. DBER space is anticipated to be fully operational in Summer of 2022.

Microscopy Core Facility - SL 5049:

New super-resolution microscope installed.

Vivarium - SC 127:

Animal housing/research laboratory equipped with IVIS fluorescence/bioluminescence imaging system, and a procedure room.

Insectarium - SC 246A:

An Arthropod Containment Level 2 (ACL-2) Laboratory for safe handling of arthropods. This is a Biosafety Level 2 (BSL-2) facility. The ACL-2 laboratory is anticipated to be fully operational in the Summer of 2022.

Mountains-to-Metro Biodiversity Collection –SC 367:

This space houses specimens of plants, insects, fish, mammals, amphibians, reptiles, and birds. The collection supports research on local biodiversity gradients as well as educational initiatives focused on biodiversity and urban ecology. The space is anticipated to be fully operational in Fall 2022.

Initiatives for 2023

Positioning ourselves to receive greater federal funds may require some new and/or renewed strategic projects. Below are a few examples of grant identification and writing initiatives to be offered by CSM.

Proposal-Writing Communities:

Proposal-writing communities composed of small groups of faculty will be developed. These groups will meet on a regular basis to receive and provide constructive feedback on their and other group members' grant proposals. Additional details will be communicated later this year.

Grant Writing Workshops:

The KSU Office of Research is holding sessions to introduce faculty to opportunities relevant to their unit. Following those presentations, the CSM Office of the Dean will lead two workshops in late November to discuss strategies for sustaining fundable research programs. Please plan to join us, if possible. Contact <u>Dr. Vishnu Suppiramaniam</u> for more information.

Research Launch/Relaunch Initiative:

This program will support faculty whose extramural funding lapsed in AY2022. Proposals will be evaluated by external reviewers. Information is available from <u>Dr. Vishnu Suppiramaniam</u>.

Seed Grants:

Novel projects with potential for extramural funding will be supported. Proposals will be evaluated for scientific and technical merit by experts external to KSU. Information is available from <u>Dr. Vishnu Suppiramaniam</u>.

Retention of Federal Funding:

Faculty with projects in the last year of federal funding receive support to increase chances of renewing their extramural grant. <u>Dr. Vishnu Suppiramaniam</u> has further information.

Implementation Research on Student Success:

Support will be provided to faculty who develop, implement, and study the impact of inclusive strategies that foster student engagement and academic success. Contact <u>Dr. Kadian</u> <u>Callahan</u> for information.



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