CLEMSON
BIOLOGICAL SCIENCES

Note from the Chair

Greetings to all our alumni and friends! I'm thrilled to have been selected as Chair of Biological Sciences after a national search this spring. The past 14 years I've been at Clemson, and particularly this past year during which I was Interim Chair for 9 months and then Chair since July, have been an amazing time to be at Clemson. I'm thrilled with the passion and enthusiasm we all bring to elevate our prominence in biological research that spans *Molecules to Ecosystems*, strengthen research and engagement opportunities for our students, and engage our state and local communities to increase biological literacy.

And we have been busy! Just this year, we hired 4 new assistant professors, 3 new lecturers, 3 new undergraduate academic advisors, several postdocs, staff for Microbiology teaching labs, and many more. New assistant professor Matt Koski examines plant evolutionary ecology and specifically plant-pollinator interactions. New assistant professor Sourabh Dhingra studies pathogenesis of aspergillus, a fungal pathogen, and joins our Eukaryotic Pathogen Innovation Center (EPIC), which brings together faculty from across the College of Science. Our new faculty will help us continue to provide high quality teaching, increase undergraduate research opportunities, and expand our study abroad opportunities.

In August, we welcomed our largest incoming class of Biological Sciences and Microbiology majors! And we are working hard to deliver the Clemson signature experience for the 1660+ undergraduate students in our Biological Sciences and Microbiology majors; 300+ students in our MS in Biological Sciences online program for Science Educators; and 67 MS and PhD students in our graduate programs in Biological Sciences, Environmental Toxicology, and Microbiology.

We constantly seek ways to build our partnerships, offer international experiences, provide students with meaningful research experiences, and engage the community. We hope you will consider investing in our students, faculty and staff.

Come visit us in person or on Facebook to see more.

Give to Biological Sciences

Thanks to our Biological Sciences alumni and many others who participated in the 5th annual Tigers on Call event to make connections for our students!
Image Credit: Pete Martin, College of Science

Students explore careers and network with alumni at 2019 Tigers on Call event

An aspiring physician, Biological Sciences sophomore Aimey Jimm knows how important the MCAT exam will be someday for getting into medical school. What she didn't realize until recently was the role the interview will also play in medical school admissions.

"I never really thought about what happens after the big exam," said Jimm, who participated in a mock interview as part of the fifth annual Tigers on Call: Making Connections in Healthcare event on November 1. "I learned a lot in that 20 minutes, especially since I'd never

really been in a professional interview before."

The mock professional school interviews, which were conducted in partnership with Clemson's award-winning Michelin Career Center, were just one of the activities designed to help pre-health majors achieve their goals of pursuing careers in medicine, dentistry, pharmacology, physical or occupational therapy, and other health professions.

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Biological Sciences' associate professor Barbara Campbell.
Image Credit: University Relations, Clemson University

Microbe diversity key to healthy coastal ecosystems

For millions of years, symbiotic bacteria have lived inside the gill cells of Lucinidae clams found in seagrass meadows located mainly along tropical coasts, such as the Florida Keys. These bacteria play a crucial role in the clam's survival while also contributing to the overall health of the seagrass in which the clams live.

As important as the bacteria are, little was known about their makeup until now. Biological Sciences' associate professor Barbara Campbell recently published a paper indicating that the bacteria are more taxonomically diverse than previously thought.

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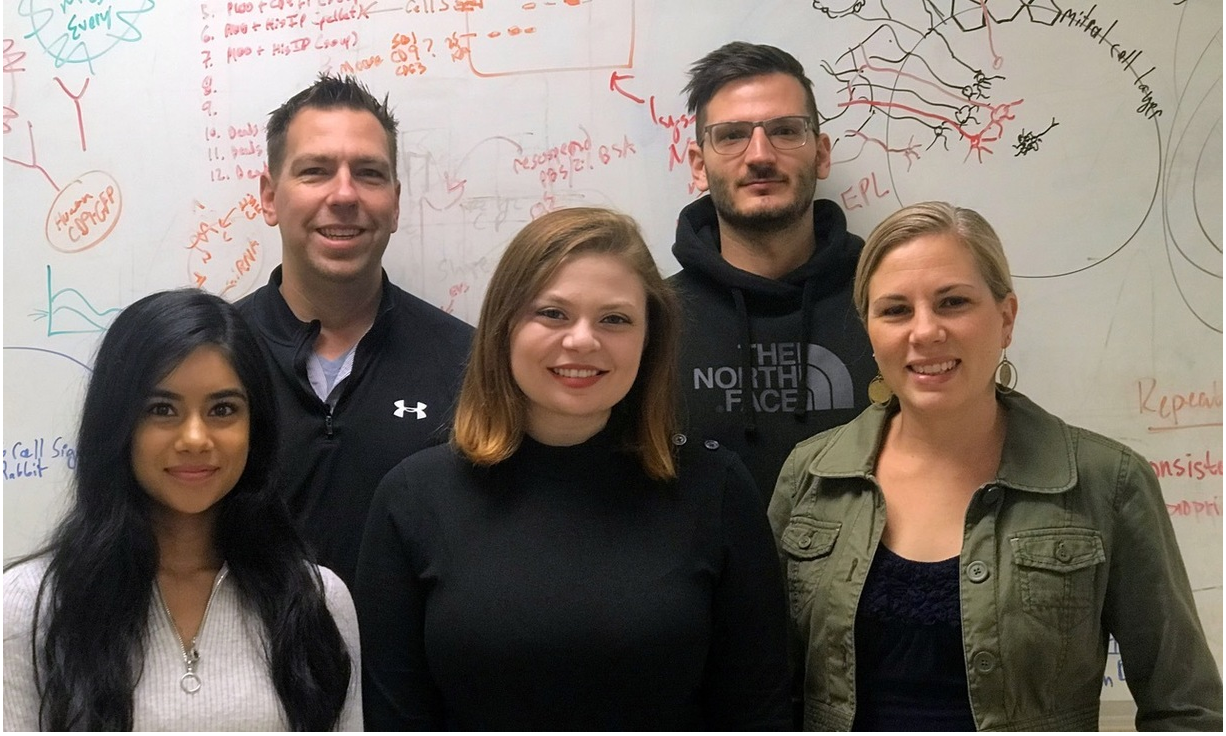

The Feliciano Lab (left to right): Victoria Neckles, David Feliciano,Tori Riley, Aidan Sokolov, Jennie Holmberg Feliciano.

A glowing "TIGER mouse" helps understand brain injuries, infections and diseases

Biological Sciences' associate professor David Feliciano and his lab devised a way to track tiny message-carriers in the brain that could prove useful in diagnosing and treating injuries, infections or diseases.

They use a glowing mouse – appropriately dubbed the “TIGER mouse” – to trace the movement of information-rich particles found in bodily fluids throughout the body, called extracellular vesicles.

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Drs. Mike Sears and Eric Riddell (Biological Sciences Ph.D. '17)
Image Credit: College of Science

Salamanders regenerate to buffer themselves from climate change

Looking like a cross between a frog and a lizard, the gray cheek salamander has thin, smooth skin and no lungs. The amphibian breathes through its skin, and to survive it must keep its skin moist. As environmental conditions grow hotter or drier, scientists want to know whether and how these animals can acclimate.

Biological Sciences researchers have shown for the first time that these salamanders inhabiting the southern Appalachian Mountains use temperature rather than humidity as the best cue to anticipate changes in their environment. Significantly, the researchers observed that salamanders actually harness their unique ability to regenerate limbs to rapidly minimize the impact of hot temperatures.

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Give to Biological Sciences

More on Biological Sciences...

- Zhicheng Dou and EPIC researchers in race to cure widespread parasitic infection
- Research brings ‘vampire elephants,’ ‘ecological zombies’ into human-wildlife conflict debate

- Department of Biological Sciences' Bob and Betsy Campbell Museum of Natural History featured on SCETV's *Making It Grow*
- Vince Richard's genomic analysis shows antibiotic resistance moving from humans to animals
- Bill Baldwin's lab ties metabolic enzyme to obesity and fatty liver disease

Find out more about the Department of Biological Sciences