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 these animals can acclimate.

Looking like a cross between a frog and a lizard, the gray cheek salamander has thin, smooth skin that is permeable to gases and maintains a constant body temperature by sensing changes in the environment. As environmental conditions grow hotter or drier, scientists want to know whether and how these animals can adapt.

In a new study published in the Proceedings of the National Academy of Sciences, Biological Sciences' associate professor David Feliciano and his lab devised a way to track tiny movement of information-rich particles found in bodily fluids throughout the body, called extracellular vesicles. These vesicles float through body fluids like messengers, delivering important information to cells. In the brain, for example, extracellular vesicles could carry messages about injuries, infections and diseases.

A glowing "TIGER mouse" helps understand brain injuries, effectiveness of treatments

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Microbe diversity key to healthy coastal ecosystems

For millions of years, symbiotic bacteria have lived inside the gill cells of Lucinidae clams found in estuarine and coastal waters. Drs. Mike Sears and Eric Riddell (Biological Sciences Ph.D. '17) and Sourabh Dhingra (Microbiology) are leading the project to understand the role of these bacteria. For the first time, the team was able to quantify the number of known and unknown bacteria in one environment, seagrass beds of the Scuppernong River in North Carolina.

The researchers found that specific 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. Microbes are critical to nutrient recycling, disease suppression, and other activities that benefit many other marine organisms. The data can help scientists better understand the interplay between the bacteria and the seagrasses and other species that populate the coastal ecosystem.

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

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 professions students explore careers and network with alumni.

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.

Greetings to all our alumni and friends! I'm thrilled to welcome you to Biological Sciences' 2019 alumni event, "Tigers on Call." Thanks to our Biological Sciences alumni and many others who participated in the 5th annual Tigers on Call event, we all bring to elevate our prominence in biological literacy.

There are so many reasons why I understand my friends and alumni feel like they've found a home here at Clemson, and particularly in Biological Sciences and the Department of Biological Sciences. Throughout my time at the university, I've realized the impact of hot temperatures.

Salamanders actually harness their unique ability to regenerate limbs to rapidly minimize the impact of hot temperatures.

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