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## Faculty Highlights

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## Faculty Highlights

Jamie I. Baum, PhD, has mentored over 30 undergraduate students since joining the University of Arkansas in November of 2011. Dr. Baum serves as the Director for the Center of Human Nutrition and as a faculty member in the food science department. Baum received her bachelor's degree in Dietetics (2000) and her PhD in Nutritional Sciences (2004) from the University of Illinois at Urbana-Champaign. Baum briefly worked in the food industry as a nutrition scientist in the Netherlands before returning to academia.

Baum teaches multiple courses related to food science and food health and currently has eight undergraduate students working in her lab, at the Don Tyson Center for Agricultural Sciences, examining the importance of proteins in the human body. Baum's research group studies dietary proteins using a molecule-to-man approach. Baum and her students investigate the proteins we eat, whether it be animal or plant protein, and how they impact overall muscle mass.



Baum's lab also compares different patterns of protein intake in order to identify what is most beneficial to the health of humans.

Baum's research aims to show that healthy muscles create a healthy life, and that proteins play a vital role in muscle growth and keeping muscle healthy. Baum opines that being

informed about what you're eating and planning your diet is essential.

"As plant-based and other sustainable forms of protein become more popular in the media, it is important to find combinations of proteins that maintain a healthy diet while also having a good carbon footprint," Baum remarked.

In addition to studying the effect of protein on muscle mass, Baum's research group has been reinventing protein intake through the utilization of 3D food-printing. Using "food-ink", Baum and her students craft and print personalized protein diets for those who need help absorbing nutrients into their body. This is targeted mainly towards elderly individuals because our bodies become less able to collect nutrients as we age.

Baum emphasized that engaging in hypothesis-driven research is incredibly important, even if you're not researching in science-related areas.

"Anyone can benefit from understanding the scientific method and being able to use those skills in the future when looking at information from other sources," Baum stated. "It helps develop critical thinking skills, and makes students learn to ask their own questions. It also teaches them about failure, because 99% of research is picking yourself back up and learning what to fix for next time."

Baum disclosed that her research wouldn't be possible without her undergraduate mentees. When Baum isn't in her lab, she enjoys cooking for friends and spending time with her son.

Paul Adams, PhD, has mentored over 60 undergraduate students since joining the University of Arkansas in January of 2007 as a faculty member in the Chemistry and Biochemistry department. Currently, four undergraduates are working in Dr. Adams's lab. Adams is originally from Baton Rouge, Louisiana. He received his bachelor degree in biochemistry from the Louisiana State University and his PhD in biophysical chemistry from Case Western Reserve University.

Adams and his students use a variety of biochemical techniques to characterize interactions between proteins that have roles in the onset of diseases, such as cancer. Adams and his students have determined that there is great significance in the specific movements of molecules within a cell in relation to interactions with certain drugs and other entities. Adams said that he and his students hope to obtain information that may potentially lead to the design of novel therapeutic approaches against cancer.



“We’re hoping that studying these general interactions could lend itself to a broader

understanding of approaching drug design in the future,” Adams remarked.

Adams explained that undergraduate research is essential for students' growth and provides them an opportunity to think critically about their work instead of just looking for the right answer. He added that undergraduate research is pivotal to broadening a student's awareness of tools and skills they will use beyond the traditional classroom setting.

“I think that exposure is very important. Looking at my own experience, when I was younger, I had no idea that I would be pursuing a career in science like I am today. I just hadn't been exposed to that before,” Adams said. Before coming to the University of Arkansas, Adams was a postdoctoral scientist at Cornell University in New York, a research-focused opportunity that he frequently encourages both his undergraduate and graduate students to consider.

Adams is married to Dr. Stephanie Adams, Director of Faculty Development in the Provosts' Office at the UofA, and they have 3 children. He enjoys spending time with his family, saying that he often attends his children's athletic competitions at school. Adams is an active member of Omega Psi Phi Fraternity, Inc., a fraternity he joined when he was in college, and continues to participate in social and community projects as a member of the fraternity.

**Interviews conducted by Sophia Nourani**