

Tulane University Professor Wins National Science Foundation CAREER Award

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Hank Ashbaugh, a professor of chemical and biomolecular engineering at the Tulane University School of Science and Engineering, has received a National Science Foundation CAREER Award for his research on the structures, or lack thereof, of proteins. Ashbaugh will receive a total of \$431,000 in research funding for a five-year study.

Ashbaugh's proposal explores the 20-30 percent of proteins in complex cell organisms that unlike insulin, hemoglobin, phosphatases and other well-known proteins, do not have unique three-dimensional folded structures. Scientists are just beginning to study the functions of these "unfolded" proteins, which resemble a jumble of spaghetti.

In the past five to ten years, it has become recognized that a large percentage of the human genome is made up of these unstructured proteins "and Ashbaugh hopes to discover their purpose. He and his team, which includes Tulane students, are trying to understand the roles unfolded proteins may play in regulating communication between DNA in the command center of the cell and the rest of the cell.

The Faculty Early Career Development (CAREER) Award is considered one of the National Science Foundation's most prestigious awards. It supports the early career-development activities of teacher-scholars who most effectively integrate research and education within the context of the mission of their organization.