

The Heart of Science

The American Heart Association donated about \$1.23 million to fund University projects

BY JOE BAILEY
NEWS REPORTER

Grant money from the American Heart Association helped Sandra Greive launch her scientific career by providing her with the resources to study how ribosomes are made in bacteria.

Greive, a post-doctoral research assistant at the University, is part of a group of University scientists who have received grants from the AHA. As of September, the AHA provided about \$1.23 million in active grants to University scientists.

AHA grants are currently being used to fund a range of projects at the University, including Bruce Branchaud's study of antioxidants, Rodger Voelker's study of the human genome and Nathan Tublitz's study of the origin of nerve cells.

Starting a career

The AHA awarded Greive almost \$45,000 to pursue her study of ribosome creation in bacteria. Ribosomes make the proteins that bacteria need to survive.

Greive's research interested the AHA because infectious bacteria can lead to inflammation of the arteries, a risk factor for heart disease, she said.

Money from the AHA allowed Greive to buy supplies and attend conferences with other molecular biologists. Although Greive's grant expired last summer, she said the grant's impact on her career will endure.

"For me personally, it makes me more confident in my ideas that someone would think they were useful," she said. "It's helping young scientists grow."

Refining nature

Branchaud, a chemistry professor, received \$198,000 to study antioxidants.

The body ingests antioxidants through food. Antioxidants are needed to neutralize free radicals that cause oxidative damage, leading to, among other things, aging, cancer and heart disease.

Branchaud said his research is novel because it applies the principles and methods of medicinal chemistry to make better antioxidants. Usually, medicinal chemistry attempts to make drugs to

treat disease; Branchaud's research looks to prevent disease.

"We're looking at nature's imperfect response to an imperfect world, and we're trying to make it a little better," he said. "That's the whole goal of medicinal chemistry, we want to make someone healthier."

Breaking the code

Voelker, a post-doctoral research associate, is using a \$99,000 grant from the AHA to investigate the human genome.

Genes represent only a small portion of the human genome, the rest is made up of non-essential materials that some refer to as "junk DNA," Voelker said.

Voelker's research builds on the Human Genome Project, which in 2003 announced that it had successfully mapped out the human genome. "We now have the entire sequence. We know how to read parts of it, and there are a lot of implications that the rest of it — the bulk of it — is important, but we don't know how to read it," he said.

Voelker said the human genome has lots of useless information sandwiched between useful information. The body separates the good information from the bad information. He is conducting research to decipher how the body carries out the splicing process.

"A large number of genetic diseases are the results of mistakes in splicing," he said. "There's a mistake in recognition of what's junk and what's not."

By collaborating with people from other disciplines such as mathematics and computer science, Voelker is hoping to determine how the body reads its own genetic code.

"Ultimately, the idea is that once we figure out what the error is, we can use some of these methods to go in and repair the mistake," he said. "I have no doubt that in time humans will figure out how to correct these mistakes."

Examining nerve cells

Tublitz's study of the origin of nerve cells earned a \$198,000 grant from the AHA.

In order to better understand how and why nerve cells disintegrate prematurely, Tublitz, a biology professor, examines how nerve cells are formed.

He studies nerve cells in fruit flies. After understanding how nerve cells develop in fruit flies, scientists can apply that knowledge to more complex systems, such as humans.

There are 4,000 known diseases of the human body and 1,600 are based in the nervous system, including diseases like Parkinson's and Alzheimer's. Eventually, scientists might be able to replace faulty nerve cells with better functioning ones.

"Understanding more about how nerve cells arise will give us the tools to be able to understand how one can make those new nerve cells," Tublitz said.

Tublitz uses his grant money to pay for research aides as well as equipment and supplies.

"I'm very appreciative of not just the Heart Association but of the people who donate to the Heart Association," he said. "They're giving their hard-earned money to do some very difficult but essential things."

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NATHAN TUBLITZ | Biology professor

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RRC: Thirty-six programs will be reviewed this year

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reviewed groups contingent on the groups updating or revising their by-laws in accordance with an ASUO rules template. Remaining groups will be heard this or the following week. Thirty-six total programs are scheduled for review this year.

The RRC decides whether the Executive will recognize student

groups by ensuring services aren't duplicated and that they are beneficial to students. Only groups that are recognized

by the Executive are allowed entrance to the Programs Finance Committee process, where incidental fees are allocated.

McCown said Tuesday he looked into whether approval of the template itself by the court is necessary.

Justice Charlotte Nisser asked why the committee decided to create by-laws if it believes it's not required.

Goward said the committee should be consistent with other ASUO programs and governing bodies.

"To work better with student groups and to respond to not only to this court, but to program concerns, we have drafted these bylaws to clearer state our position," he said.

Goward told the court that he revised the by-laws to ease concerns voiced while the Executive was cre-

ating the committee. He said he also allotted 72 hours starting last Friday for programs to give feedback and suggest changes to the committee's bylaws. Only minor wording changes were made after a suggestions from Student Senate Ombudsman Jared Axelrod.

ASUO President Adam Walsh and the RRC approved the bylaws on Monday.

"To work better with student groups and to respond to not only to this court, but to program concerns, we have drafted these bylaws to clearer state our position."

DAVID GOWARD | ASUO Programs Administrator

Goward said the ASUO is looking into fully incorporating the RRC into the Green Tape Notebook, the official rules and regulations guide for student government.

Also at the hearing, the Constitution Court heard a petition from Axelrod, who represented the entire Senate. Rahmat Rahmat, who was elected by the student body in the spring, has not yet attended any of the five Senate meetings or made it to his office hours. The Green Tape Notebook states that two absences constitute non-fulfillment of duties, which is punishable by removal of elected position.

All Constitution Court decisions will be publicized in the next seven days.

Contact the campus and federal politics reporter at nwilbur@dailyemerald.com

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