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DSU Awarded a School-Record $10.5M Grant for Neuroscience Research

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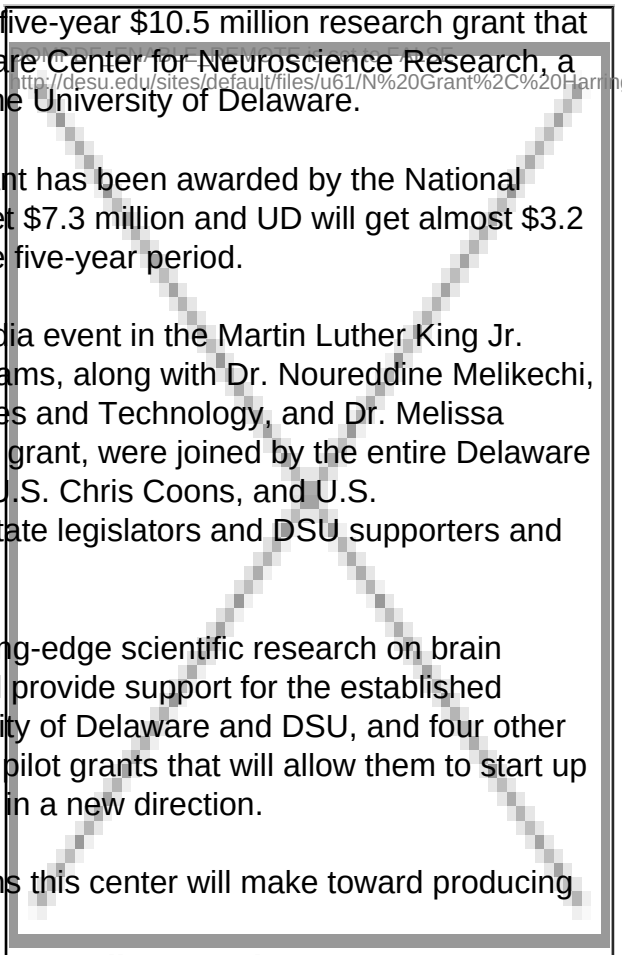
Delaware State University announced on Nov. 26 a five-year $10.5 million research grant that will fund the establishment on campus of the Delaware Center for Neuroscience Research, a joint endeavor by DSU ? the lead institution -- and the University of Delaware.



Dr. Melissa Harrington, professor of neuroscience and the principal investigator of the NIH grant.

The Center for Biomedical Research Excellence grant has been awarded by the National Institutes of Health. Of the $10.5 million, DSU will get $7.3 million and UD will get almost $3.2 million, barring any unexpected budget cuts over the five-year period.

The announcement was made during a Nov. 26 media event in the Martin Luther King Jr. Student Center, where DSU President Harry L. Williams, along with Dr. Noureddine Melikechi, dean of the College of Mathematics, Natural Sciences and Technology, and Dr. Melissa Harrington, the principal investigator of the research grant, were joined by the entire Delaware congressional delegation ? U.S. Sen. Tom Carper, U.S. Chris Coons, and U.S. Representative John Carney ? as well as by other state legislators and DSU supporters and University officials.

The resulting Neuroscience Center will support cutting-edge scientific research on brain development and the neurobiology of learning. It will provide support for the established research projects of five investigators at the University of Delaware and DSU, and four other faculty members will also be supported with smaller pilot grants that will allow them to start up new research projects or take their current research in a new direction.

Dr. Williams said he is excited about the contributions this center will make toward producing the next generations of neuroscientists.

?This is an outstanding development for the state of Delaware, in that its two state universities have joined research forces to attract this grant to the First State,? the DSU president said. ?And in addition to being an inter-institutional center, we are also excited that it will also be interdisciplinary ? not only involving faculty researchers in biology, psychology, and mechanical engineering.?

The Neuroscience Center also supports affiliated faculty with an integrated mentoring and professional development program aimed at helping them progress to senior levels of the profession.

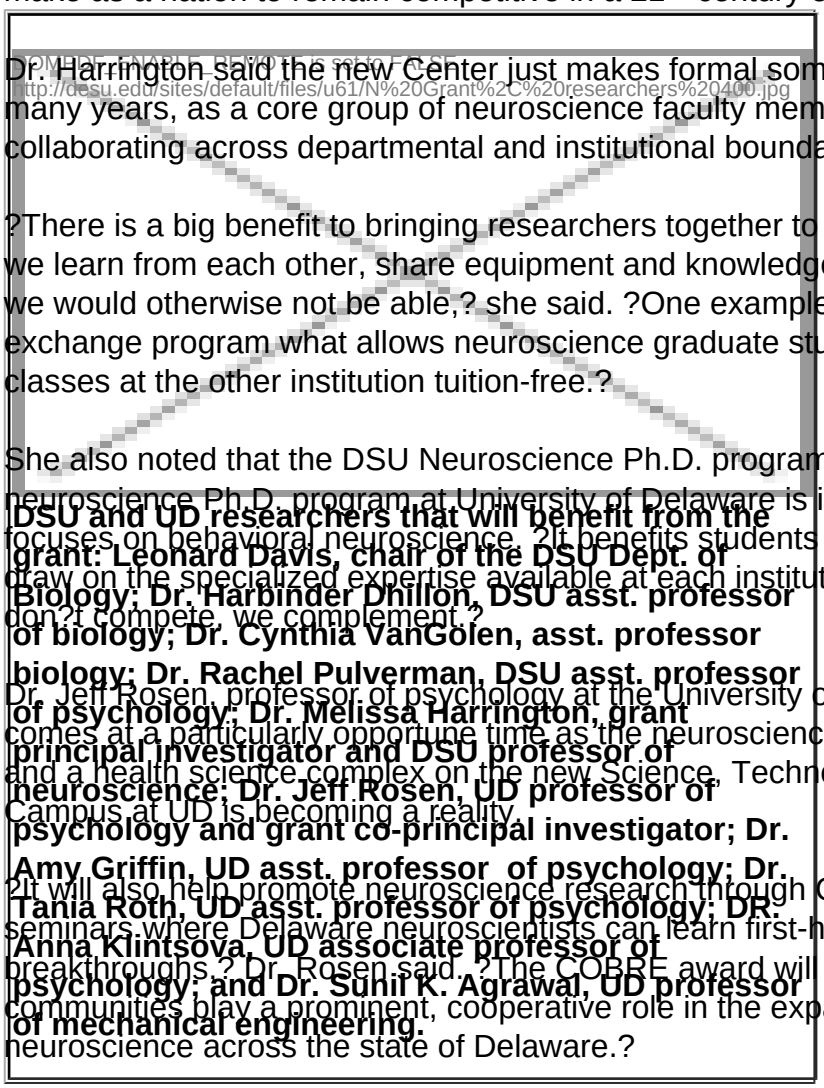
Each member of the Congressional delegation viewed the grant as an outstanding accomplishment for DSU.

?This grant award to Delaware State University will jump-start neuroscience research in Delaware, creating opportunities for leaders in this field to come to the state to further their research in this specialized area,? said U.S. Sen. Tom Carper. ?I am excited about the possibilities to come out of this project ? from new discoveries to job creation ? that will

happen here in the First State.?

?Investments in scientific research are investments in America?s economic security, and in order to get the best and the brightest into the lab, we have to cultivate the next generation of researchers from all kinds of backgrounds,? U.S. Sen. Chris Coons said.
?This grant will help ensure that Delaware plays a leading role in scientific research and in mentoring bright young scientists. The future of our state ? including our economy and the health of our citizens ? will be powered forward by investments like this one. I congratulate DSU and UD on earning this exciting and competitive grant.?

?This investment will attract top talent in the field to our state, and most importantly, will provide students at DSU and UD with learning opportunities that simply weren?t possible until now,? said Congressman Carney. I?d like to thank the faculty at UD and DSU, in particular the director of the Delaware Center for Neuroscience Research, Dr. Melissa Harrington, for bringing this opportunity to Delaware. These are the investments that we must continue to make as a nation to remain competitive in a 21st century economy.?



DSU and UD researchers that will benefit from the grant: Leonard Davis, chair of the DSU Dept. of Biology; Dr. Harbinder Dhillon, DSU asst. professor of biology; Dr. Cynthia VanGolen, asst. professor biology; Dr. Rachel Pulverman, DSU asst. professor of psychology; Dr. Melissa Harrington, grant principal investigator and DSU professor of neuroscience; Dr. Jeff Rosen, UD professor of psychology and grant co-principal investigator; Dr. Amy Griffin, UD asst. professor of psychology; Dr. Tania Roth, UD asst. professor of psychology; DR. Anna Klintsova, UD associate professor of psychology; and Dr. Sunil K. Agrawal, UD professor of mechanical engineering.

Dr. Harrington said the new Center just makes formal something that has been developing for many years, as a core group of neuroscience faculty members have been meeting and collaborating across departmental and institutional boundaries for the last five years.

?There is a big benefit to bringing researchers together to share scientific information, in that we learn from each other, share equipment and knowledge, and work together in ways that we would otherwise not be able,? she said. ?One example of this collaboration is a course exchange program what allows neuroscience graduate students at each university to take classes at the other institution tuition-free.?

She also noted that the DSU Neuroscience Ph.D. program has a biological focus, while the neuroscience Ph.D. program at University of Delaware is in the Psychology Department and focuses on behavioral neuroscience. ?It benefits students of both universities to be able to draw on the specialized expertise available at each institution,? Dr. Harrington said. ?We don?t compete, we complement.?

Dr. Jeff Rosen, professor of psychology at the University of Delaware, said the NIH grant comes at a particularly opportune time as the neuroscience curriculum at UD is expanding and a health science complex on the new Science, Technology and Advanced Research Campus at UD is becoming a reality.

?It will also help promote neuroscience research through COBRE-sponsored symposia and seminars where Delaware neuroscientists can learn first-hand about the latest breakthroughs,? Dr. Rosen said. ?The COBRE award will help the UD and DSU neuroscience communities play a prominent, cooperative role in the expansion of basic and health-related neuroscience across the state of Delaware.?

The Neuroscience Center will support the following five investigators and their established research programs:

- Dr. Harb Dhillon, DSU associate professor of biology ? Understanding the molecular basis of learning and memory using C. elegans.
- Dr. Amy Griffin, UD assistant professor of psychology ? Role of the rodent medial

prefrontal cortex in behavioral plasticity.

- Dr. Anna Klintsova, associate professor of psychology, UD ? Fetal Alcohol Syndrome model: therapeutic interventions.
- Dr. Tania Roth, UD assistant professor of psychology ? Lasting epigenetic influence of early-life adversity on the BDNF gene.
- Dr. Cindy van Golen, DSU associate professor of biology ? CXCR4 controls neurite extension through direct regulation of actin dynamics.

In addition, the Neuroscience Center will support following investigators who are moving into new research areas through pilot project. The Center will assist them in collecting preliminary data that will enable them to apply for external funding:

- Dr. Sunil K. Agrawal, UD professor of mechanical engineering ? Robotic navigation inspired by neuromechanics of C. elegans.
- Dr. Rachel Pulverman, DSU assistant professor of psychology ? Infant verb learning: from attention to comprehension
- Dr. Theresa Szabo-Maas, DSU assistant professor of biology -- DSU influence of environmental and hormonal changes on mechanisms of motor learning.
- Dr. Georgianna Gould will join DSU as an assistant professor of biology in January 2013. Her research focuses on the development of social behavior in a mouse model of autism.

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