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# Federal Grant Will Allow Winthrop to Focus on Molecular Biomedical Research

Winthrop University

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## Quick Facts

- The grant will link comprehensive research universities in South Carolina with primarily undergraduate institutions, such as Winthrop.
- The focus for the state's proposal is bioengineering, with each university pursuing a different concentration related to that theme. Winthrop's focus is on molecular biomedical research.

ROCK HILL, S.C. - **Winthrop University** and **six South Carolina colleges and universities** will share a **$17.3 million federal grant** – among the largest ever awarded to a university in the Palmetto State – for a collaborative program that will bolster biomedical research and expand educational opportunities for undergraduates.

The federal grant is part of the **IDeA Networks of Biomedical Research Excellence program**, an initiative sponsored by the National Institutes of Health through the National Center for Research Resources. The grant will link comprehensive research universities in South Carolina – University of South Carolina, Medical University of South Carolina and Clemson University – with primarily undergraduate institutions – Winthrop, College of Charleston, Furman University and Claflin University – through collaborative programs, projects and outreach efforts.

The focus for the state's proposal is bioengineering, with each university pursuing a different concentration related to that theme. Winthrop's focus is on molecular biomedical research.

Each university will match its portion of the grant to bring the total funding package to nearly $35 million. Over the five-year period, Winthrop will receive $2.1 million and will commit another $1.7 million of its own resources.

Officials said the project will give Winthrop students a strong interdisciplinary foundation in the biomedical sciences and significant experience in biomedical research. It also will increase the number of biology and chemistry graduates who enter biomedical research fields and will give faculty members the opportunity to recruit, train and mentor more female and minority students.

"As this grant award affirms, public universities like Winthrop play an integral role in spotting and developing young talent who will be tomorrow's cutting edge researchers in the sciences," said **Winthrop President Anthony DiGiorgio**. "We look forward to doing the work on the Winthrop campus that will be supported by this grant as South Carolina institutions continue to collaborate to develop overall state expertise in these areas."

**Nine Winthrop faculty members** will participate in the program, which includes six research projects. **Pat Owens**, chair of the Department of Chemistry, Physics, and Geology, will serve as project director. **Jim Johnston**, chair of the Department of Biology, is the project co-director. **Cliff Calloway** is the core laboratory director.

**Three faculty members** from the chemistry department and three from the biology department are project investigators. Their research projects focus on:

• examining repair mechanisms for cardiac tissue damage – **Dwight Dimaculangan, biology**

• investigating potential mechanisms that regulate angiogenesis and cell motility in prostate cancer – **Laura Glasscock, biology**

• developing new spectroscopic tools to better understand a wide range of specific interactions between metals and molecules in living systems – **Robin Lammi, chemistry**

• completing the structural analysis of a protein recently implicated in obesity development – **Chasta Parker, chemistry**

• revealing the specific role that oncogenic proteins play in cancer progression by identifying the molecular regions that are critical to these processes – **Takita Sumter, chemistry**

• using bioinformatics techniques to project evolutionary pathways of the Hepatitis B virus – **Kristi Westover, biology**

**Debra Boyd**, dean of the College of Arts and Sciences, said that Winthrop faculty and students in biology and chemistry have been doing collaborative research for many years. "The INBRE grant represents an acceleration and intensification of this approach and ushers in an exciting new phase in science education at the university. Collaborative research provides profound learning experiences for students and faculty, the kind of learning that is the hallmark of Winthrop University," Boyd said. "Everyone directly involved with the grant appreciates the support provided by President DiGiorgio and Vice President Moore; we know that current and future Winthrop students will greatly benefit from their biomedical research experiences and that the state will benefit from the results of these projects."

For more information, contact Owens at 803/323-4925 and Johnston at 803/323-2111, ext. 6424.

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