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Grant Awarded Anatomy Prof.

A medical center researcher has been awarded a $59,700 grant from the National Science Foundation for a project aimed at identifying the nerve connections in the brain controlling fertility.

Dr. John W. Everett, professor of anatomy, is attempting to identify the nerve mechanisms in the hypothalamic region of the brain which control the pituitary gland and cause it to release the hormone that triggers ovulation.

The funds awarded under the two-year grant bring the total NSF support for the project to $112,700. Dr. Everett's research has been supported by the same agency through previous grants since 1957.

The hypothalamus, a region in the base of the brain, produces hormones which stimulate the pituitary to release hormones that regulate other functions in the body.

One of two hypothalamic hormones which scientists have identified and synthesized is called LRF—luteinizing hormone releasing factor. LRF stimulates the pituitary to release its gonadotrophic hormones, which in turn, stimulate secretion of sex hormones by the gonads and trigger ovulation.

Everett's project, titled "Neural Mechanisms Controlling the Pituitary Gland," is aimed at localizing the exact nerve connections in the brain regulating the production of LRF. By stimulating various areas of the hypothalamus and then measuring the amount of gonadotrophic pituitary hormone in the blood stream, he can get an indirect measurement of the LRF produced by stimulation of that area.

"One of our major concerns is the timing mechanism that controls when the pituitary gland secretes the hormone that triggers ovulation," Everett said.

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DOWN THE HATCH—John Boyce of Oceaneering International Inc. disappears into the Hyperbaric Chamber's "wet pot" to prepare a work project for the divers who will participate in the high pressure experiment scheduled to begin next week. The ergometer he is setting up will help scientists measure the work efficiency of divers using different types of breathing gear. *(photo by Dale Moses)*

Take Pressure Plunge

Divers Dip Deep at Duke

A team of six professional divers will enter the hyperbaric chamber here next week for a simulated dive to depths ranging up to 1,000 feet.

It will be the first time in four years that divers at Duke have gone that depth. In 1968 a Duke team set records by staying at 1,000 feet for 72 hours and demonstrating that humans could perform work at that depth.

The dive next week, called "Deep Work 1000", will be a multidisciplinary mission to test the performance of humans and life-support equipment at various depths.

Participants in the mission will be the University of Florida Communications Science Laboratory, the Smithsonian Institution, Harbor Branch Foundation, Oceaneering International Inc. of Houston, Tex., the Naval Medical Research Institute, the National Oceanic and Atmospheric Agency and Duke University's departments of mechanical engineering, anesthesiology, physiology and pharmacology and the F. G. Hall Laboratory for Environmental Research.

The coordinator and manager of the dive will be L. Sigfred Linderoth Jr., a professor of mechanical engineering at Duke.

Three of the divers will be provided by Oceaneering International and three by

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