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Deepwater Horizon Cleanup — GWU Student Searches for Future Solutions

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Office of University
Communications

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Jacob Walley of Stanley, N.C., Fills Gaps in Research on Historic Oil Spill

By Bryton Mitchell, ('17) GWU Intern for Communications

BOILING SPRINGS, N.C.— Jacob Walley, a Gardner-Webb senior chemistry major from Stanley, N.C., had a unique opportunity recently to conduct research on the largest marine oil spill in history. Deepwater Horizon, an oil rig in the Gulf of Mexico, exploded on April 20, 2010, and scientists are still investigating the effects of the spill and cleanup efforts. *Deepwater Horizon*, a film about the explosion, opened in theaters on Sept. 30.

“I was 16 years old when the oil spill occurred, and at that time I didn’t even know what chemistry was,” Walley shared. His love for the subject came soon after. “I took high school chemistry and had a fantastic professor. I loved the class and wanted to know more,” he said.

At Gardner-Webb, he’s studied the subject in-depth and also been introduced to opportunities for research. He was invited to participate in the Research Experience for Undergraduates (REU) program at the National High Magnetic Field Laboratory at Florida State University (Tallahassee, Fla.). He worked closely with GWU chemistry alumnus, Dr. David Podgorski, a research scientist at the lab.

“The professors at Gardner-Webb taught me very well,” Walley observed. “All the stoichiometry (the calculating of chemical reactions) I was taught applied directly to my research at the magnet lab. There are a lot of holes in the research, and I am happy that I was able to help fill in some of those gaps.”

Walley looked at how a chemical used to disperse the oil reacted when exposed to sunlight. “I investigated how Corexit (a dispersant used to assist with the BP oil spill) affected the photodegradation of the oil,” he explained. “A similar experiment was done without Corexit. Therefore, doing the experiment with Corexit is necessary since it was used in the oil spill. The ultimate goal of this research is to create better solutions for future oil spill cleanup.”

[Click here to view the poster Walley created from his research.](#)

Research Experiences for Undergraduates (REU) is sponsored by The National High Magnetic Field Laboratory. The program offers a wide range of research experiences in physics, chemistry, biological sciences, geochemistry, materials science and magnet science and engineering. Click here for more information.

<https://nationalmaglab.org/education/college-students-early-career-scientists/reu>

Located in Boiling Springs, N.C., Gardner-Webb University's purpose is to advance the Kingdom of God through Christian higher education by preparing graduates for professional and personal success, instilling in them a deep commitment to service and leadership, and equipping them for well-rounded lives of lasting impact, Pro Deo et Humanitate (For God and Humanity).