

# The Crucible

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## Project SEED: The First Four Weeks

At the helm of Washington & Jefferson College's 400 MHz NMR spectrometer, Tamara Scherer continues to experience new synthetic and analytical techniques under the aegis of the American Chemical Society's Project SEED (Summer Educational Experience for the Economically Disadvantaged). Tamara has used W&J's recent acquisition (provided by an NSF MRI grant) to characterize the product of a Diels-Alder reaction. This is one of the many facets of her summer research project conducted in the laboratory of W&J assistant professor of chemistry Michael S. Leonard.



From left to right: Neal Baker, Wesley Vosburg, Tamara Scherer, Stephen Zitelli, and Dr. Michael Leonard

This fall Tamara will be a senior at Washington High School in Washington, PA. As she considers the course that her education will take, this research experience provides a sampling of the opportunities available in the chemical sciences. Tamara is learning some of the fundamentals of organic chemistry by exploring the pressure-accelerated Diels-Alder reaction of coumalic acid and its derivatives. In the course of this work, she is discovering how chemists make sense of reaction mixtures by utilizing instrumentation such as NMR and GC/MS.

Tamara is also learning that scientific inquiry takes place in a community. This summer she is working with a group of three W&J undergraduates, Neal Baker, Wesley Vosburg, and Stephen Zitelli, who are participating in an on-campus summer research program sponsored by a grant from the Howard Hughes Medical Institute (associate professor of biology Alice G. Lee, HHMI grant program director).

Tamara has presented current literature and her research progress during Friday afternoon group meetings, and she and her lab partner, Wesley Vosburg, are beginning to prepare a poster for presentation at an undergraduate research symposium hosted by Duquesne University on July 30<sup>th</sup>.

Tours of local chemical companies have added to the experience by allowing the students to witness first-hand the day-to-day activities of scientists working in local industries. Together with the Project SEED group from Duquesne University led by assistant professor of chemistry Jennifer Aitken, students and their mentors have toured Bayer's Polymer facility in Pittsburgh as well as the Westinghouse Specialty Metals Plant in Blairsville. Students also look forward to a videoconference with chemists representing Lexicon Pharmaceuticals (Princeton, NJ).

Project SEED is providing students across the country with an enriching summer experience designed to foster interest in careers in the chemical sciences. Members of the W&J community are quite pleased to join this outreach effort for the first time this year. W&J is especially grateful to Ferro Corporation, Lexicon Pharmaceuticals, Westinghouse, PPG Industries, and LabChem for donations that have made the program possible. The launch of our SEED program has truly been a community endeavor, and Tabitha Riggio (Bayer MaterialScience LLC) and David Foreman (Director of Foundation Relations, W&J) must be acknowledged for their tireless fundraising efforts.

*Submitted by: Michael Leonard*

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