UNIVERSITY OF PITTSBURGH

Student Profile

Name: Audrey Mamros

Campus: University of Pittsburgh at Greensburg

Major: Biology

Honors and Awards:
- 2006 University Scholar
- Seton Hill University Women in Science Chemistry Award
- Who's Who Among Students in American Universities and Colleges
- Phi Eta Sigma National Freshman Honor Society
- Phi Kappa Phi Honor Society

Experience and Community Outreach:
- Member, University of Pittsburgh at Greensburg House of Representatives
- Treasurer, Beta Beta Beta Biological Honor Society
- Volunteer, Make-A-Wish Fundraiser

Publications:
- Mamros, Audrey N.; Schweikarth, Lindsay; Engle, Jennifer L.; Wisniewski, Amanda M.; Wojcik, Kristen L.; Pardus, Abigail G.; Fair, Justin D., Luderer, Mark R.;Luderer, Matthew R. "Oxidation of Primary and Secondary Alcohols by 4-Acetylamino-2,2,6,6-tetramethylpiperidine-1-oxoammonium Tetrafluoroborate in Aqueous Media" manuscript in progress and to be submitted to *Tetrahedron Letters* spring 2007.

Future Plans
"Gain admittance and successfully complete the University of Pittsburgh Medical Scientist Training Program, thereby acquiring MD and PhD degrees."

Voting Information
Westmoreland County, Lower Burrell 4th ward 2nd precinct

Project Abstract
The oxidizing agent, 4-acetylamino-2,2,6,6-tetramethylpiperidine-1-oxoammonium tetrafluoroborate, has been found to oxidize primary and secondary alcohols to their corresponding aldehydes and ketones (which is a fundamental reaction in organic synthesis) with and without catalyst in aqueous media in good to excellent yields. The previous methodology utilizing this oxidant employed the highly carcinogenic solvent, methylene chloride. Because we have found that water is a suitable replacement, this procedure will be added to an ever growing list of environmentally friendly organic reactions.

Project Faculty Advisor: Matthew R. Luderer, Department of Chemistry, Division of Natural Sciences, Greensburg Campus