



Summer 8-8-2006

IWU Students Go Green

Leslie Boelter
Illinois Wesleyan University

Follow this and additional works at: <https://digitalcommons.iwu.edu/news>

Recommended Citation

Boelter, Leslie, "IWU Students Go Green" (2006). *News and Events*. 3696.
<https://digitalcommons.iwu.edu/news/3696>

This Article is protected by copyright and/or related rights. It has been brought to you by Digital Commons @ IWU with permission from the rights-holder(s). You are free to use this material in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/ or on the work itself. This material has been accepted for inclusion by faculty at Illinois Wesleyan University. For more information, please contact digitalcommons@iwu.edu.

©Copyright is owned by the author of this document.

IWU Students Go Green

August 8, 2006

BLOOMINGTON, Ill. - As an increasing number of people become aware of the catastrophic situations facing the ecosystem these days, student researchers at Illinois Wesleyan University are taking the environment into their own hands this summer.

Under the guidance of Ram S. Mohan, associate professor of chemistry, six IWU students are spending their summer exploring green chemistry, researching the non-toxic compound bismuth (the compound used in Pepto-Bismol).

Mohan and the students feel strongly about the effect of chemicals on the environment. "Until approximately 10 years ago the focus in the medical field was on getting to the life-saving drugs," said Mohan. "In the process people were using a lot of toxic reagents and catalysts, and not caring what the impact was on the environment. All of this really changed with a new concept called green chemistry."

The concept is an environmentally friendly way of carrying out experiments by minimizing waste and the use of hazardous material. According to Mohan, the biochemistry, toxicology and environmental effects of bismuth compounds are well documented. The majority of bismuth compounds are relatively non-toxic and inexpensive.

Bismuth, the 83rd element on the periodic table of elements, is a pinkish-white, brittle metal that is primarily beneficial for antidiarrheal, antibacterial, and antacid uses, which is why it is used in Pepto-Bismol.

Claude Geoffroy le Jeune, a French chemist, proved bismuth to be a distinct element in 1753. Before then, bismuth-containing minerals were frequently identified as either lead or tin ores. Today, bismuth is largely found in Bolivia as a by-product of mining.

Even in the intensity of their research, the students make every attempt to be green and safe. They dispense reagents in fume hoods, keep food in a designated area, and prevent waste by recycling whenever possible. All this is added to the fact that the students are trying to replace toxic chemical use in some drugs with the non-toxic bismuth compound.

Joshua Lacey, a senior biology major from Eldridge, Iowa, is currently applying to medical school and says that research is extremely important: "On almost all of my applications they want to know what type of research experience I have. I've written essays about how it's affected my personal development, essays about how it's helped me in class, and essays about what we've been doing. They're really interested in how much experience you've had and what you've gotten from it."

While the students say their summer research with Mohan is essential for medical school, they have also taken much more from this experience than just organic chemistry. Lacey, who had previously participated in summer research with Mohan, said, "It's exciting because you really feel when you start understanding scientific concepts that you know a lot, and you see a difference in your classes."

Ashvin Baru, a senior biology major from Bloomington, agrees. "One of the major things you learn right away is how to think independently."

The students researching green chemistry this summer are: Ashvin Baru, a senior biology major from Bloomington; James Christensen, a junior biology major from Crystal Lake, Ill.; Matthew Huddle, a sophomore chemistry major from Bloomington; Joshua Lacey, a senior biology major from Eldridge, Iowa; Jamie Rogers, a junior chemistry major from Elmwood, Ill.; and Herbie Yung, a junior biology major from Glenview, Ill. Each student plans to attend medical school once they graduate from IWU.



Jamie Rogers '08 and Herbie Yung '08 conduct green chemistry research.