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Sherry Wallace
Illinois Wesleyan University

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April 9, 2003

Contact: Sherry Wallace

At Illinois Wesleyan's 14th Annual John Wesley Powell Student Research Conference

Jason R. Babcock to Speak About the Next Generation Space Shuttle

BLOOMINGTON, Ill.—On February 1 of this year, seven astronauts lost their lives when the space shuttle *Columbia* broke apart as it re-entered the Earth's atmosphere. As NASA officials continue to investigate possible cause of the disaster, Jason R. Babcock, a 1994 graduate of Illinois Wesleyan, is at work developing components for the next-generation space shuttle.

A research scientist at Ultramet, Inc., in Pacoima, Calif., Babcock will be the keynote speaker at Illinois Wesleyan's 14th annual John Wesley Powell Student Research Conference on Saturday, April 12. The event, which is free and open to the public, will be from 8:30 a.m. to 4 p.m., in the Center for Natural Science Learning and Research (CNS), 201 Beecher St., Bloomington.

Babcock will deliver his speech, "Development of Components for the Next Generation Space Shuttle," at 11 a.m. in the Anderson Auditorium (CNS 101).

While Babcock is not an expert on the current shuttle or the *Columbia*, he will speak on one of his programs that addresses the development of a thermal protection system that would replace the current tiles that are being evaluated by NASA in its *Columbia* investigation. Possible damage to the tiles during *Columbia's* lift-off is being considered as a contributing cause of the shuttle's break-up. According to Babcock, "one key aspect of our tile concept is to improve the resistance of the tiles to foreign object damage. A complete overhaul of the in-space propulsion system is being planned for the next generation, using something, in essence, more resembling a supersonic jet engine."

Babcock's area of expertise is in catalysis, thermal barrier coatings, volatile organic compound removal, and ceramic matrix composite, and film growth by sol gel and chemical vapor deposition.

Babcock received his B.A. in chemistry at Illinois Wesleyan, an M.S. in chemistry in 1995, and a Ph.D. in inorganic chemistry in 1998 from the University of Chicago. He had a postdoctoral fellowship at Northwestern, and for the last three years, at Ultramet, Inc., a small aerospace firm near Los Angeles, Babcock has managed small business innovative research programs, with funding in excess of \$1 million in the past year. His recent publications include "Economical fabrication of thick-section ceramic matrix composites," and "Advanced monopropellant catalysts."

The annual conference, named for explorer-geologist John Wesley Powell--a Civil War veteran and a founder of the National Geographic Society, who joined IWU's faculty in 1865--recognizes the research projects, and creative endeavors of Illinois Wesleyan students. Sponsored by Illinois Wesleyan's Provost's Office and the IWU Chapter of Phi Kappa Phi National Honor Society, the event will showcase Illinois Wesleyan students and their individual research projects with oral and poster presentations in such diverse fields as chemistry, Greek and Roman studies, economics, psychology, nursing, political science, biology, computer science, and international studies.

Poster Session A will be at 9 a.m. in the Science Commons in CNS, and at 10 a.m. there will be Oral Presentations-Session I with the first session in the Anderson Auditorium (CNS 101) and Session 2 in the Beckman Auditorium of (CNS 102).

Poster Session B is scheduled at 1:15 p.m. in the Science Commons, and at 2:15 p.m., Oral Presentations-Session II will be held with Session 3 in the Anderson Auditorium and Session 4 in the Beckman Auditorium.