FOR IMMEDIATE RELEASE

Defense Department Funds Next Generation of Solar Cell Research at Chicago State University

Chicago (December 10, 2008) — American soldiers on 21st Century battlefields might be wearing solar cells integrated into their backpacks, thanks to research on flexible solar cells now underway in the labs of Chicago State University. Under the leadership of the Army Research Lab, in collaboration with Chicago-based American Science and Technology (AST) and funded by a $1.4 million Department of Defense (DOD) grant, Drs. Robert LeSuer, Kristy Mardis, Robert Richter and Felix Rivas are probing how next-generation solar-cell technology functions and how these systems can be improved.

The DOD wants to find an energy source for forces deployed in the desert on remote operations. If solar cells could be built into the fabric of backpacks, it would eliminate the need to carry separate solar cell panels or other sources of power.

The Chicago State University scientists, in collaboration with AST, are focusing on unlocking the secret of solar energy collection found in plants. Specifically, they are looking at dye-sensitized solar cells by using dyes from fruits and vegetables. They already have learned that dyes from blackberries work better than raspberries, and blueberries don’t work at all. Other candidates are beets and carrots. The study at CSU is basic research: How do certain plants convert sunlight into energy?

But the results of that research, which are expected to have far-reaching implications for a host of solar-powered applications, shall be commercialized by AST. That battery in your cell phone might be a thing of the past when the power comes from solar cells embedded in your suit jacket. The grant and the collaborations with a local industry such as AST provide immediate benefits to CSU students who receive hands-on experiences as lab technicians, free tuition and a salary. “It’s a great project for undergraduates,” said LeSuer. “They’re making solar cells from scratch to help national security and getting paid to do it.”