



News Release

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PHOTOS AVAILABLE UPON REQUEST**

Cancer Treatment Gets Software Boost

More precise radiation therapy reduces stress on surrounding tissues

LOS ALAMOS, New Mexico, October 16, 2007— Nearly a million cancer patients will undergo radiation therapy this year in the United States, and now a new software application, Acuros[®], based on the Los Alamos National Laboratory-developed Attila[®] radiation-modeling software, will enable physicians to focus their beams more precisely on specific tumor sites.

Acuros is developed by Transpire Inc. (<http://www.transpireinc.com>), a Los Alamos spinoff company and exclusive licensee of the Attila software.

“Transpire, Inc. is a great spinoff success story for the Laboratory. Not only are they selling a very impressive commercial software based on Los Alamos technology, they are further developing that technology to branch out into other markets,” said John Mott, acting division leader for Technology Transfer at Los Alamos. “Spinoff companies are another way for Los Alamos to transfer technology into private industry, creating new jobs and boosting the economy.”

Transpire scientists developed Acuros through adapting technology, originally developed at Los Alamos, which predicts radiation behavior in a broad range of applications with unrivaled speed and accuracy. For the radiotherapy dose calculations, Acuros uses an accurate representation of the patient’s anatomy, obtained from computed tomography scans or magnetic resonance imaging, to directly solve the mathematical equations governing subatomic particle behavior.

A central challenge in radiotherapy is to deliver high doses of radiation to the entire tumor site without damaging surrounding organs and tissues. Dozens of dose calculations may be required to develop a single, optimized radiotherapy-treatment plan.

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Plans are developed on hospital computers with physicians or physicists anticipating nearly immediate results, requiring almost real-time dose calculation speed.

To meet these speed demands, most dose calculation methods in use today use simplifications that compromise accuracy. With Acuros providing accurate information without a time lag, physicians are able to properly develop and interactively apply better patient-specific treatment plans, raising success rates and reducing complications.

Acuros will initially support photon-beam radiotherapy and brachytherapy (a radioactive seeding method of treatment). Proton therapy and targeted radionuclide therapies will be added later.

Former Los Alamos scientists John McGhee and Todd Wareing, together with Gregory Failla and Allen Barnett, launched Transpire, Inc. with the intention of commercializing Attila. Based in Gig Harbor, Washington, Transpire Inc. now addresses industry applications as diverse as radiation shielding, medical imaging, homeland security, and reactor analysis. Transpire was recently awarded a Phase II Small Business Innovation Research grant from the National Cancer Institute for \$750,000. The company will use this money to further develop Acuros.

About Los Alamos National Laboratory (www.lanl.gov)

Los Alamos National Laboratory, a multidisciplinary research institution engaged in strategic science on behalf of national security, is operated by Los Alamos National Security, LLC, a team composed of Bechtel National, the University of California, BWX Technologies, and Washington Group International for the Department of Energy's National Nuclear Security Administration. Los Alamos enhances national security by ensuring the safety and reliability of the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction, and solving problems related to energy, environment, infrastructure, health, and global security concerns.