



**FOR IMMEDIATE RELEASE**

**ISTN WINS NIH NANOTECHNOLOGY GRANT TO DEVELOP DRUG DELIVERY SYSTEM FOR ULCER TREATMENT**

**SPRINGFIELD, VA and YORK, PA (MARCH 2nd, 2004)** - ISTN announced today the award of a \$150,000 Phase I Small Business Innovation Research (SBIR) grant from the National Institutes of Health (NIH) to develop a novel drug delivery system for ulcer treatment. The grant is part of NIH's Bioengineering Nanotechnology Initiative, a special SBIR program for "nanotechnologies useful to biomedicine."

This award supports the development of a nanocomposite drug carrier made of chitosan and silica which is capable of sustained controlled release, thereby eliminating undesirable side effects such as diarrhea, nausea, and retching which can result from high, bursting dosages. Chitosan, derived from an abundant natural product found in shellfish, adheres well to mucosal membranes, a trait which increases the residence time of a chitosan-based drug carrier. However, due to chitosan's high solubility in acid, a composite form is required to maintain structural integrity. A tightly entangled network of chitosan and silica molecules would leach significantly less.

"We are excited to receive a grant as part of this highly selective program," said Frank Yang, ISTN's Director of Business Development. "Nanotechnology has the potential to revolutionize the \$47 billion drug delivery market, and this award is a significant accomplishment which validates the gradual extension of our technology to this competitive field. We have a multi-disciplinary team with strong expertise in nanocomposites that will look to design a controlled release system which maximizes drug efficacy while minimizing side effects for the numerous patients who undergo treatment for ulcers."

According to the Centers for Disease Control and Prevention (CDC), there are 500,000 to 850,000 new cases of peptic ulcer disease and over one million ulcer-related hospitalizations each year. Annual U.S. health care costs associated with peptic ulcer disease have been estimated at nearly \$6 billion: \$3 billion in hospitalization costs, \$2 billion in physician visits, and \$1 billion in decreased productivity and lost work days.

ISTN received its award, which could be worth an additional \$1.2 million over three years if selected for Phase II funding, from the National Institute of Diabetes and Digestive and Kidney Diseases, one of 18 institutes within NIH to participate in the Bioengineering Nanotechnology Initiative. The Bioengineering Nanotechnology Initiative is part of approximately \$80 million in federal funding allocated to NIH for nanotechnology R&D in FY2004 under the multi-billion dollar National Nanotechnology Initiative (NNI).

**ABOUT ISTN:**

Founded in 1997, ISTN is an advanced technology company specializing in the development of nanotechnology-enabled products based on over 10 years of R&D in nanocomposite materials. These products rely on the control of material composition, form and structure at the nanometer scale to deliver superior cost-effectiveness and performance. The Company is currently utilizing its proprietary silica nanopore technology to develop a variety of products, including several for biomedical applications. ISTN has offices in Springfield, VA (12 miles south of Washington, DC) and York, PA.

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