AzTE Arizona Technology Enterprises

www.azte.com

Recombinant Bacterium to Decrease Tumor Growth

AzTE Case # M10-154

Inventor

Roy Curtiss III
Professor
Biodesign Institute
Arizona State University

Wei Kong
Assistant Research Professor
Biodesign Institute
Arizona State University

Invention Description

Conventional cancer therapies are limited by a number of factors including the development of drug-resistant tumor cells, the toxicity of treatment agents to normal tissue, and the difficulty of bringing therapy to poorly perfused areas of solid tumors. While these factors have prompted the development of new approaches for the treatment of cancer, including various methods of gene therapy, there is still an urgent need for new methods to fight tumor growth and metastasis.

Researchers at the Biodesign Institute of Arizona State University are developing a recombinant strain of *Salmonella* as a novel anticancer vector to reduce tumor growth. This genetically engineered, self-destructing bacterium could serve as a programmed "bio-time-bomb" to destroy tumor tissues by release of tumor killing materials after colonization of tumors.

The design, construction and successful evaluation of an engineered *Salmonella*-based cancer therapeutic might represent a highly effective means of overcoming chemo- and radio-therapeutic tumor cell resistance, reducing systemic toxicity of cancer treatment, and to eradicate tumors from the cancer patient.

Potential Applications

- Inhibition of tumor growth
- Treatment of cancer in patients

Benefits and Advantages

- Targeted cancer treatment
- Reduces risk of drug resistance
- Not toxic to normal tissue

Intellectual Property Status:

Patent Pending

Contact

Jack Geltosky, PhD

Senior Vice President

Business Development, Life Sciences

Arizona Technology Enterprises, LLC (AzTE)

P: 480.884.1989

F: 480.884.1984

JGELTOSKY@AZTE.COM

HEALTHSCIENCES@AZTE.COM