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Pancreatic Cancer Markers and Uses Thereof

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Inventors

Douglas Lake
Associate Professor
School of Life Sciences
Arizona State University

Yvette Ruiz
Research Specialist
School of Life Sciences
Arizona State University

Kwasi Antwi
Postdoctoral Fellow
School of Life Sciences
Arizona State University

Michael Demeure
Senior Investigator
TGEN

Invention Description

Pancreatic cancer has a generally poor prognosis with a five-year survival rate of less than 5%. Since the symptoms of pancreatic cancer tend to occur after the disease has advanced beyond stage I, early detection is rare. Early detection of pancreatic cancer would permit treatment at an earlier stage and improve patient prognosis. Currently, there are no adequate early detection methods available.

Researchers at Arizona State University have discovered a method to detect pancreatic tumors by identifying the presence of peptides from quiescin sulfhydrl oxidase 1 (QSOX1) and serine protease inhibitor 2 (SerpinF2). An increase in one or more peptides from these proteins relative to a control correlates with the presence of a pancreatic tumor.

An antigen capture assay composed of antibodies, antibody fragments, or aptamers can detect the peptides and compare the signal against a standard curve. Unlike other assays in development, this detection strategy targets specific peptides of QSOX1, a novel target discovered to be over-expressed in cancer.

Potential Applications

- Early detection of pancreatic cancer
- Detection of pancreatic cancer and metastases

Benefits and Advantages

- Targets QSOX1, a protein previously unknown to be upregulated in cancer
- Cancer can be identified from various tissue samples: plasma, serum, urine, saliva, etc.
- Adaptable to other markers

Intellectual Property Status:

Patent Pending

Contact

Jack Geltosky, PhD

Senior Vice President

of Business Development, Life Sciences

Arizona Technology Enterprises, LLC (AzTE)

P: 480.884.1989

F: 480.884.1984

JGELTOSKY@AZTE.COM

HEALTHSCIENCES@AZTE.COM