



METHOD FOR PREDICTING AND DETECTING TUMOR METASTASIS

REFERENCE NUMBER

E-234-2008

PRODUCT TYPE

- Diagnostics

COLLABORATION OPPORTUNITY

This invention is available for licensing.

DESCRIPTION OF TECHNOLOGY

The National Institute of Child Health and Human Development's Laboratory of Development Neurobiology is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize methods for predicting and detecting tumor metastasis.

Detecting cancer prior to metastasis greatly increases the efficacy of treatment and the chances of patient survival. Although numerous biomarkers have been reported to identify aggressive tumor types and predict prognosis, each biomarker is specific for a particular type of cancer, and no universal marker that can predict metastasis in a number of cancers has been identified. In addition, due to a lack of reliability, several markers are typically required to determine the prognosis and course of therapy.

The inventors discovered a novel Carboxypeptidase E. (CPE) splice variant designated (CPE-deltaN) and found its expression levels increase according to the presence of cancer and metastasis. This variant is upregulated in tumors and further increased in metastatic cancer. This data has been demonstrated in both in vitro and in vivo experiments and in liver, breast, prostate, colon, and head and neck cancers. Metastatic liver cells treated with (CPE-deltaN) siRNA reversed the cells from being metastatic and arrested cells from further metastasis. Thus, this novel CPE isoform is a biomarker for predicting metastasis and its inhibitors have an enormous potential to increase patient survival.

Further R&D Needed: In vivo validation of method

R&D Status: Pre-clinical discovery

IP Status: U.S. Provisional Application No. 61/080,508 filed 14 Jul 2008

COMPETITIVE ADVANTAGES

- Methods to prognose multiple types of cancer and determine likelihood of metastasis
- Potential to prevent and treat cancer with CPE inhibitors



PATENT STATUS

- Not Patented