Mesothelin as a Diagnostic & Therapeutic Target in Liver Fibrosis

Tech ID: 21777 / UC Case 2011-295-0

BACKGROUND

Hepatic fibroblasts are activated in response to chronic liver injury and are the source of the fibrous scar in liver fibrosis. Fibrosis can be reversible and different cell surface markers are expressed by activated fibroblasts allowing them to be targeted as fibrosis progresses. Mesothelin is a glycosylphosphatidylinositol-linked glycoprotein expressed in hepatic mesothelial cells and malignant mesotheliomas and mediates intracellular adhesion and metastatic spread.

TECHNOLOGY DESCRIPTION

Researchers at UC San Diego have shown that certain activated fibroblasts express mesothelin in cholestatic liver injury (such as in bile duct inflammation and obstruction) making them easy to identify and target during the course of cholestatic liver fibrosis. The investigators are developing new compounds to target such cells and have working animal models to demonstrate compound efficacy. Certain anti-mesothelin antibodies are already in use for treating mesothelioma and such compounds may also benefit patients with liver fibrosis.

INTELLECTUAL PROPERTY INFO

United States patent rights are available for licensing. UC San Diego is seeking a commercial partner for this technology.

RELATED MATERIALS

Kisseleva T, Paik Y, Scholten D, Fanli Meng F, Iwaisako K, Jiang C, Brenner DA. Hepatic Stellate Cells revert to an inactive phenotype during regression of Fibrosis. Poster presentation at The Liver Meeting, September 2010 (Amer. Assoc. for the Study of Liver Disease)
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Iwaisako K, Brenner DA, Kisseleva T. "What's new in liver fibrosis? The origin of myofibroblasts in liver fibrosis" J Gastroenterol Hepatol. 2012 Mar;27 Suppl 2:65-8 (doi: 10.1111/j.1440-1746.2011.07002.x).
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US Patent Application 14/279245 (continuation of US Patent Application 13/450,400)

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,233,240	03/19/2019	2011-295

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OTHER INFORMATION

CATEGORIZED AS

- **Medical**
  - Diagnostics
  - Disease: Metabolic/Endocrinology

RELATED CASES

2011-295-0, 2011-296-0

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