Mouse Model for Human Non-Alcoholic Steatohepatitis and Steatolic Hepatocellular Carcinoma

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BACKGROUND

Currently, there are no good mouse models to study the development of non-alcoholic steatohepatitis (NASH) and its progression to steatolic hepatocellular carcinoma (HCC) in less than one year. While there are other models of NASH in mice, none of the currently available models closely mimics the human disease and most are models of toxic liver damage associated with weight loss rather than obesity.

TECHNOLOGY DESCRIPTION

The mouse model described here has been recently developed by researchers at UC San Diego. It mimics the pathology of human NASH and steatolic HCC. NASH appears within 24 weeks and HCC develops within 40 weeks. This model may be used to evaluate compounds, drugs, diet, devices, etc. that prevent or ameliorate NASH and attenuate its progression to HCC.

APPLICATIONS

This model can potentially be very useful in studying NASH and HCC.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,034,462	07/31/2018	2014-361

RELATED MATERIALS

- Nakagawa et al., ER Stress Cooperates with Hypernutrition to Trigger TNF-Dependent Spontaneous HCC Development, Cancer Cell (2014)/j.ccr.2014.07.001

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OTHER INFORMATION

KEYWORDS

non-alcoholic liver disease, non-alcoholic steatohepatitis, liver cancer, hepatocellular carcinoma

CATEGORIZED AS

- **Medical**
  - Disease: Cancer
  - Disease: Digestive System
  - Disease: Metabolic/Endocrinology

RELATED CASES

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