### **Accepted Manuscript**

Mechanisms of MAFG Dysregulation in Cholestatic Liver Injury and Development of Liver Cancer

Ting Liu, Heping Yang, Wei Fan, Jian Tu, Tony W.H. Li, Jiaohong Wang, Hong Shen, JinWon Yang, Ting Xiong, Justin Steggerda, Zhenqiu Liu, Mazen Noureddin, Stephanie S. Maldonado, Alagappan Annamalai, Ekihiro Seki, José M. Mato, Shelly C. Lu

202 Date in Male III Standardina in Edinburge 155 Genes of the Edinburge III Standard II Standard III Standard II Stand

Gastroenterology

PII: S0016-5085(18)34482-2 DOI: 10.1053/j.gastro.2018.04.032

Reference: YGAST 61860

To appear in: Gastroenterology Accepted Date: 30 April 2018

Please cite this article as: Liu T, Yang H, Fan W, Tu J, Li TWH, Wang J, Shen H, Yang J, Xiong T, Steggerda J, Liu Z, Noureddin M, Maldonado SS, Annamalai A, Seki E, Mato JM, Lu SC, Mechanisms of MAFG Dysregulation in Cholestatic Liver Injury and Development of Liver Cancer, *Gastroenterology* (2018), doi: 10.1053/j.gastro.2018.04.032.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Page 1 Liu et al GASTRO-D-17-01941R1

# Mechanisms of MAFG Dysregulation in Cholestatic Liver Injury and Development of Liver Cancer

Short Title: MAFG is an oncogene in human liver cancers

Ting Liu<sup>1-3†</sup>, Heping Yang<sup>1†</sup>, Wei Fan<sup>1,4,5†</sup>, Jian Tu<sup>1,6</sup>, Tony W. H. Li<sup>1</sup>, Jiaohong Wang<sup>1</sup>, Hong Shen<sup>7</sup>, JinWon Yang<sup>1</sup>, Ting Xiong<sup>1,6</sup>, Justin Steggerda<sup>8</sup>, Zhenqiu Liu<sup>9</sup>, Mazen Noureddin<sup>1,10</sup>, Stephanie S. Maldonado<sup>11</sup>, Alagappan Annamalai<sup>8,10</sup>, Ekihiro Seki<sup>1</sup>, José M. Mato<sup>12</sup>, and Shelly C. Lu<sup>1\*</sup>

Division of Digestive and Liver Diseases, Cedars-Sinai Medical Center, LA, CA 90048, USA;
Department of Gastroenterology, Xiangya Hospital, Central South University, Changsha, Hunan 410008, China;
Key Laboratory of Cancer proteomics of Chinese Ministry of Health, Xiangya Hospital, Central South University, Changsha, Hunan 410008, China;
Department of Geriatrics, Guangzhou First People's Hospital, Guangzhou 510180, China;
State Key Laboratory of Respiratory Diseases, The First Affiliated Hospital, Guangzhou Medical University, Guangzhou, 510120, China;
Institute of Pharmacy & Pharmacology, University of South China, Hengyang 421001, China;
Department of Oncology, Xiangya Hospital, Central South University, Changsha, Hunan 410008, China;
Department of Surgery, Cedars-Sinai Medical Center, LA, CA 90048;
Comprehensive Cancer Institute, Cedars-Sinai Medical Ceter, LA, CA 90048;
Comprehensive Transplant Center, Cedars-Sinai Medical Center, LA, CA 90048, USA;
The Warren Alpert Medical School of Brown University;
Cic bioGUNE, Centro de Investigación Biomédica en Red de Enfermedades Hepáticas y Digestivas (Ciberehd), Technology, Park of Bizkaia, 48160 Derio, Bizkaia, Spain

† These authors share first authorship

**Financial Support:** This work was supported by NIH grants R01DK092407 (HP Yang and SC Lu) and R01CA172086 (SC Lu, HP Yang, JM Mato), Agencia Estatal de Investigación MINECO SAF 2014-52097R, CIBERehd-ISCiii and Severo Ochoa Excellence Accreditation SEV-2016-0644 (to JM Mato). Changsha science and technology bureau 1701090 (to Ting Liu). The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

#### List of abbreviations (in alphabetical order).

AFP, alpha-fetoprotein; AP-1, activator protein-1; ARE, antioxidant response element; BDL, bile duct ligation; BrdU, 5-Bromo-2'deoxyuridine; CCA, cholangiocarcinoma; ChIP, chromatin immunoprecipitation; CRISPR/Cas9, Clustered Regularly Interspaced Short Palindromic Repeats/CRISPR-associated protein 9; DEN, diethylnitrosamine; EMSA, electrophoretic mobility shift assay; EV, empty vector; FXR, farnesoid X receptor; GSH, reduced glutathione; HCC, hepatocellular carcinoma; H&E, hematoxylin and eosin; IHC, immunohistochemistry; KO, knockout; LCA, lithocholic acid; MAFG, V-Maf Avian Musculoaponeurotic Fibrosarcoma Oncogene Homolog G; MAT, methionine adenosyltransferase; NF-κB, nuclear factor κB; NRF2, nuclear factor-erythroid 2 related factor 2; OCA, obeticholic acid; PHB1, prohibitin 1; PBC, primary biliary cholangitis;

#### Download English Version:

## https://daneshyari.com/en/article/8726268

Download Persian Version:

https://daneshyari.com/article/8726268

<u>Daneshyari.com</u>