

Public Relations Office
Jamia Millia Islamia

January 7, 2022

Press Release

JMI and GWU, USA researchers discover potential drug target for therapeutic management of liver cancer

Scientists from the Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia (JMI) and George Washington University, USA jointly discovered β 2-spectrin protein as a potential drug target for therapeutic management of non-alcoholic steatohepatitis (non-alcoholic fatty liver disease-NAFLD) and liver cancer. This research will aid in controlling the non-alcoholic fatty liver disease and liver cancer incidences that are increasing rapidly.

The findings of the research team composed of Prof. Lopa Mishra, a renowned Gastroenterologist and the Director, Center for Translational Medicine, Department of Surgery, George Washington University, USA, Dr. Mohd. Imtaiyaz Hassan of JMI & his PhD scholar Taj Mohammad and other researchers have been published in the Science Translational Medicine (Impact Factor of 17.956), a highly reputed sister journal of 'Science' published by the American Association for the Advancement of Science (AAAS). AAAS is one of the world's oldest and largest general science organizations.

Realizing the immense clinical significance of the research, the Science Translational Medicine has featured the paper titled ' β 2-spectrin (SPTBN1) as a therapeutic target for diet-induced liver disease and preventing cancer development' (DOI: 10.1126/scitranslmed.abk2267) on the home page of its website.

The team investigated the role of SPTBN1, a protein that promotes TGF- β -SMAD3 signaling in liver disease and tumor formation and found that β 2-spectrin promotes lipogenesis and development of liver cancer in mice on a Western diet. They also found that knockout of SPTBN1 or siRNA-mediated therapy protected mice from diet-induced obesity, fibrosis, lipid accumulation, and tissue damage in the liver. Data indicate that SPTBN1 represents a potential target for therapeutic intervention in non-alcoholic steatohepatitis and liver cancer.

Dr. Hassan's Lab (hassanlab.org) is working in drug design and development. His research team's work has already published several papers in the top-tier clinical research journal, including Lancet Respiratory Medicine, Seminar in Cancer Biology etc.

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