



NAME OF LABORATORY: The Research Center for Digestive Tract & Liver Diseases

PI: Prof. Oren Shibolet MD - Director of the Liver Unit

Research Director at the Division of Digestive Diseases: Prof. Zamir Halpern MD

Research Center Manager: Dr. Chen Varol PhD

Research Objectives: Our group investigates various liver diseases, including liver fibrosis and cirrhosis, fatty liver and drug-induced liver injury (DILI), with particular focus on the mechanisms involved in these injuries, including endoplasmic reticulum (ER) stress and the unfolded-protein response (UPR). Our methodology includes use of genetically engineered mice that have deletions of specific proteins in liver cells, such as hepatocytes, cholangiocytes and myeloid cells. In addition, we investigate the involvement of ER stress and gut microbiota in DILI.

Main Research Topics:

- The role of ER/ UPR in regulation of liver diseases, specifically in mechanisms of DILI and hepatocellular carcinoma (HCC).
- Liver injury induced by drugs (acetaminophen, amiodarone), the mechanisms involved and the role of immune cells in these injuries.
- The role of sortilin in cholestatic-induced liver injury, inflammation, fibrosis and bile duct morphogenesis.
- The role of gut microbiota in liver diseases.

Staff: Dr Isabel Zvibel-senior researcher and lab manager, Dr Einav Hubel-Manor-senior researcher, Roy Avraham (MSc) - researcher, Dr Shira Zelber-Sagi-senior researcher and PI, Shiri Sherf- Dagan- PhD student

Active Grants:

- Israel Science Foundation (ISF)
- Grass foundation –Israeli Ministry of Health Chief Scientist
- German-Israel Foundation (GIF)

Collaborations: inside TASMC: Dr. Ehud Zigmund, the Research Center for Digestive Tract & Liver Diseases

External collaboration:

- Prof. Eran Elinav, Weizmann Institute of Science, Israel
- Prof. Shalev Itzkovitz, Weizmann Institute of Science, Israel
- Prof. Neil Kaplovitz, Univ of Southern California
- Prof. Boaz Tirosh, Hebrew University of Jerusalem, Israel
- Prof. Michael Manns, Univ of Hannover, Germany

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