



NAME OF LABORATORY: Research Center for Digestive Disorders and Liver Diseases

PI: Dr. Chen Varol PhD

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

Research Center Manager: Dr. Chen Varol PhD

Research Objectives: Studying the role of mononuclear phagocytes such as monocytes and macrophages in the pathogenesis of IBD, liver diseases, metabolic diseases and cancer. We utilize transgenic murine systems as well as human patient tissues.

Main Research topics:

- The interplay between immune cells and extracellular matrix (ECM) remodeling in the pathogenesis of IBD, colorectal cancer and liver fibrosis
- Immune cell-derived matrix remodeling enzymes as biomarkers and therapeutic targets in digestive tract diseases
- Monocytes and macrophage type of immune cells as pivotal drivers of liver inflammation and resolution following drug-induced liver injury and liver fibrosis, IBD inflammation and resolution and colorectal cancer
- The incretin hormone GIP as key linker between metabolism and immunity and a potent therapeutic drug candidate

Staff:

- Milena Vugman (MSc) – researcher and administrator
- Michail Kaplan – veterinary resources
- Dr. Nadine Graubard - Postdoctoral fellow
- Odelia Mohadev – PhD student
- Dana Fernanda Mantelmacher – PhD student

Active Grants:

- Israel Science Foundation (**ISF**), in collaboration with Dr. Sigal Fishman (TASMC).
- **Azrieli Foundation**, in collaboration with Prof. Zamir Halpern (TASMC) and Prof. Irit Sagi (WIS),
- Shared **TAMSC-WIS** grant in biomedical research, in collaboration with Prof. Irit Sagi (WIS)

Collaborations: External collaboration: Weizmann Institute of Science, Hebrew University of Jerusalem. Ben-Gurion University. Tel-Aviv University. Southwestern University of Texas, USA. Mount Sinai Hospital, Toronto, Canada., Institute of Biochemistry, Kiel University, Germany

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