



NAME OF LABORATORY: Neurosurgical Translational Neuroscientific Research

In affiliation with the Center for Functional Brain Informatics

PI: Dr. Tal Gonen PhD

Director of Division: Prof. Zvi Ram MD

Director of the Affiliated Lab: Prof. Talma Hendler

Research Objectives:

- Improve the preservation of high cognitive and affective functions following brain surgery by applying a personally tailored approach.
- Develop novel neurosurgical interventions providing treatment for neuropsychiatric diseases.
- Both basic and translational research is performed using advanced imaging methods (structural and functional) along with neuropsychological tools.

Main Research topics:

- Development of psychological tools for peri-surgical brain mapping of high-cognitive and affective functions.
- Develop reliable methods for intraoperative network stimulation driven by functional imaging.
- Characterization of resting state networks and their interactions, revealing the differential contribution of different network nodes underlying various functions (e.g. creativity, value-based decision).
- The influence of neurosurgical interventions (e.g. tumor removal, cingulotomy, stimulation) on the organization of large-scale functional networks and related behavior.

Staff: Dr. Ben Shofty, Ariela Glickman, Shlomit Ben Moshe, Hamutal Raber, Tal Gefen

Active Grants:

- BRAIN division - TASMC internal
- Herman Showder Foundation, Sakler Faculty of Medicine (2017)

Collaborations:

- Prof. Dafna Ben-Bashat, Dr. Haggai Sharon; Center for Functional Brain Informatics, TLVMC
- Dr. Tomer Gazit; Pre-surgical mapping clinic, Center for Functional Brain Informatics, TLVMC
- Neurophysiological surgical monitoring unit, TLVMC
- Dr. Gal Raz, Prof. Galit Yovel; Tel Aviv University
- Dr. Itamar Kahn, Technion

Contact us: Email - talg@tlvmc.gov.il

Research at Tel Aviv Sourasky
Medical Center

Brain & Neurological Disorders

