



NAME OF LABORATORY: Breast Cancer Translational Research

Director of unit: Dr. Amir Sonnenblick MD PhD

Lab manager: Dr. Efrat Dvash Riesenfeld PhD

Research Objectives: The Breast Cancer Translational Research lab is aimed at contributing to the development of personalized medicine that tailors medical treatments to individual patients. Moreover, we aim to identify molecular regulators and biomarkers involved in breast cancer development, survival and invasion and to elucidate mechanisms of resistance to therapies in breast cancer patients. To this end we embrace an integrated approach. Our lab benefits from a direct access to clinical databases and to biological samples, including a tissue-bank, facilitating relevant and significant translational research. The laboratory also benefits from both, the strong clinical platform of the Breast Cancer Division and the cutting edge technological and scientific facilities available at the medical center. The Laboratory operates to establish close collaborations between basic research scientists, bioinformaticians, oncologists, radiologists and pathologists from Israel and from worldwide leading academic and medical institutes.

Main Research topics:

- STAT3 as a predictor of benefit from therapy in breast cancer
- The breast tumor microenvironment role in cancer development, progression and response to therapy
- The SWI/SNF complex in breast cancer: prognostic and predictive implications
- Dissecting the Akt/mTOR pathway in estrogen receptor positive breast cancers
- The effect of breast cancer intratumor heterogeneity on disease progression and response to therapy
- Design of patient-specific treatments using bioinformation
- Develop efficient personalized selection of neoadjuvant agents or combinations
- Enzymatic remodeling of the extracellular matrix in cancer progression
- Development novel strategies for success in breast cancer therapies

Active Grants:

- Israel Cancer Research Fund (ICRF)
- Israel Cancer Association (ICA)
- Kamin- Ministry of health

Collaborations:

- Dr. Nataly Kravchenko-Balasha, The Hebrew University of Jerusalem
- Prof. Ittai Ben-Porath, The Hebrew University of Jerusalem
- Prof. Michael Elkin, Hadassah Medical Organization
- Prof. Tamar Geiger, Tel Aviv University
- Prof. Christos Sotiriou, Jules Bordet Institute, Belgium

Contact us: Emails - amirson@tlvmc.gov.il; efratdr@tlvmc.gov.il