



## Research

The Israel Cancer Association plays a key role in supporting cancer research. Each year the ICA awards dozens of fellowships and grants to physicians at medical centers and to researchers at universities and research institutes all over the country. The ICA supports basic, clinical and epidemiological research as well as studies dealing with the psychosocial aspects of cancer and coping patterns of cancer patients and their families. The Research Committee, led by **Prof. Eli Pikarsky** from the Hebrew University, comprises the finest clinical researchers from the research and medical institutions in Israel. The Committee is coordinated by **Lily Biller-Lev**, manager of Committees and Projects at the ICA.

### *Research Fellowships*

**The Foundation for Research on Environmental Quality and/or Epidemiology in the Name of Israel Jacob and Laila Alther of Blessed Memory**

**Prof. Liat Lerner-Geva** from the Gertner Institute, Sheba Medical Center, on the subject

of "The possible link between exposure in pregnancy to air pollution and the risk of cancer in childhood".

### **Grants for Outstanding Researchers were awarded to:**

- **Dr. Barak Rotblat** from Ben Gurion University, on 'Functional identification of uncoded long RNA that is linked to aggressive cancer'.
- **Dr. Tal Burstein-Cohen** from the Hebrew University, on 'Solving and studying the anti-cancerous features of pros1 protein in the cancerous micro-environment'.
- **Dr. Nissan Yissachar** from Bar Ilan University, on 'Repairing the biological interaction with intestinal bacteria after chemotherapy'.
- **Dr. Orna Steinberg-Shemer** from Schneider Pediatric Center, on 'Understanding the mechanisms linked to the development of hematological malignancies in patients with congenital neutropenia'.
- **Prof. Alon Ronen** from the Weizmann Institute of Science, on 'Changes in the nuclear envelope in cancer cells: new control stage in metastasis to the lung'.

| Researcher                | Institute                                | Research subjects  | Funding Requested   |
|---------------------------|--|--|---|
| Prof. Eran Segal          | The Weizmann Institute of Science        | Systematic profiling of mutant p53 endowed drug resistance - towards personalized cancer treatment   | Nancy & Peter Brown, in memory and honor of their mothers Bernice Weinstein and Beatrice Brown. |
| Prof. Alon Ronen          | The Weizmann Institute of Science        | Modulation of the nuclear lamina: a new checkpoint in cancer metastasis to lungs   | Janet & Bruce Adler - in memory and honor of Kenneth and Michael Adler                          |
| Dr. Rotblat Barak         | Ben-Gurion University of the Negev       | Focused functional interrogation of long noncoding RNAs associated with poor patient outcome   | ICA-USA   |
| Prof. Brandeis Michael    | The Hebrew University of Jerusalem       | Elucidating Mitotic Slippage to improve the efficacy of the popular chemotherapeutic drug Taxol  | ICA-USA   |
| Dr. Levy Dan              | Ben-Gurion University of the Negev       | Lysine methylation in breast cancer  | ICA-USA   |
| Dr. Gross Menachem        | Hadassah Medical Center Ein Kerem Campus | Novel local sustained release application of chlorhexidine in prevention of biofilm formation on voice prostheses used by cancer patients after laryngectomy | ICA-USA   |
| Prof. Stein Reuven        | Tel-Aviv University                      | Mitochondria transfer from astrocytes to melanoma cells; a tumor supportive effect mediated by CD38  | Linda Kaminow, in memory of Oren Ziv, son of her dear friend Miri                               |
| Dr. Steinberg Shemer Orna | Schneider Children's Medical Center      | Elucidating the pathways involved in malignant transformation in severe congenital neutropenia patients  |   |
| Prof. Kerem Batsheva      | The Hebrew University of Jerusalem       | The effect of replication stress induced by p53 loss on the catastrophic genomic instability event of chromothripsis in cancer                               | ICA-USA   |
| Dr. Peled Michael         | Sheba Medical Center                     | Interferon $\gamma$ -induced Surface proteome analysis for the discovery of novel checkpoints in cancer  |   |
| Dr. Ben-Yoav Hadar        | Ben-Gurion University of the Negev       | Simultaneous Detection of Multiple Redox-Active Metabolites in Bladder Cancer  | Linda Kaminow, in memory of her dear mother Claire Rosenblatt                                   |
| Dr. Carmi Yaron           | Tel-Aviv University                      | Identifying the tumor-reactive CD4+ T clones and the mechanisms through which they induce anti-tumor immunity  |   |
| Dr. Burstein Cohen-Tal    | The Hebrew University of Jerusalem       | Decoding the anti-tumor roles of PROS1 in the tumor-microenvironment   |   |



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|---------------------------|--|---|--|
| Dr. Granot Zvi            | The Hebrew University of Jerusalem       | Molecular Characterization of the Inhibitory Effect of TGFbeta on Anti-Tumor Neutrophils  | Adam Brown, ICA-USA, in memory of Joe Markowitz  |
| Dr. Rahat Michal (Miki)   | Carmel Medical Center                    | How does 161-MAP vaccination against EMMPRIN selectively target tumors and not healthy tissues?   | ICA-USA  |
| Dr. Bruchim Ilan          | Hillel Yaffe Medical Center              | Development of an in-vitro system to identify gynecologic cancer tumor during surgical procedure using mid ir-atr spectroscopy  |  |
| Dr. Baraki Harington Liza | University of Haifa                      | Role of COX-2 proteolysis by SKI-1 protease in proliferation of multiple myeloma  | ICA-USA  |
| Dr. Milman Neta           | Rambam Health Care Campus                | The role of microRNAs Shuttled by Tumor Associated Macrophages in the Development of Chemotherapy Resistance in Pancreatic Cancer   | Seymour & Dina Freeman, in memory of Bernard Marks and Helen Hershkowitz and in memory of David Resnick & Daniel Rosenberg |
| Dr. Erez Neta             | Tel-Aviv University                      | Uncovering the role of fibroblasts in facilitating breast cancer chemoresistance and metastasis via pro-inflammatory signaling  | Estee Lauder Ltd.  |
| Dr. Shaul Yoav            | The Hebrew University of Jerusalem       | The essential role of GPX8 in regulating cancer cell fate   |  |
| Dr. Adar shira            | The Hebrew University of Jerusalem       | The contribution of DNA repair to cisplatin sensitivity and resistance of cancer cells  | ICA-USA friends in memory and in honor of Andrew Murray, son of Dr. Daisy and Dr. John Murray                              |
| Dr. Weiner Reuven         | The Hebrew University of Jerusalem       | Novel inhibitors for protein modifications by UFM1  |  |
| Prof. Rian Anuar          | ?? other Institute                       | New derivative of Taxol for efficient treatment of NSCLC – new drug with less side effects  | ICA-USA  |
| Dr. Yavlonsky Dvora       | Technion, Israel Institute of Technology | Intra-tumoral T cell responsiveness and exhaustion, modulated by the adaptor protein Gads   | ICA-USA  |
| Dr. Novak Rostislav       | Rambam Health Care Campus                | Targeting non-oncogene addiction in osteosarcoma  | ICA-USA - in honor of Crystal and Rob Minkoff  |
| Prof. Ashhar Zelig        | Tel Aviv Sourasky Medical Center         | Enhancing the efficacy of Chimeric Antigen Receptor (CAR) T cell therapy in Multiple Myeloma (MM) by blockade of immunosuppressive pathways in the tumor microenvironment |  |

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|------------------------|------------------------------------|---|---|
| Prof. Shpielberg Ofer  | Assuta Medical Center              | Salivary miRNAs as a novel biomarker for diagnosis and prognosis of multiple myeloma - Feasibility study  | ICA-USA   |
| Prof. Lerner Geva Liat | The Gertner Institute              | The possible association between antenatal air pollution exposure and the risk for childhood cancer   | Israel Jacob and Lila Alther Foundation   |
| Dr. Yisaschar Nissan   | Bar-Ilan University                | Restoring host-microbiota mutualism following anti-cancer chemotherapy  |   |
| Dr. Gil- Hen Hava      | Bar-Ilan University                | Targeting ABL family kinases to block breast cancer metastasis  | Estee Lauder Ltd.   |
| Dr. Labon Iris         | Hadassah Medical Center            | The mechanistic role of Androgen Receptor glioblastoma  | ICA-USA   |
| Prof. Dikshtein rivka  | The Weizmann Institute of Science  | Regulation of stability of mammalian mRNAs by transcription-dependent m6A modification  | ICA-USA   |
| Dr. Tzur Tzafrir       | Tel-Aviv University                | Effect of ceramide 1-phosphate (C1P) on macrophages and cancer cells via TLR4   | Steven Milman and Phyllis Lis - ICA-USA, from the 9th Golf Event  |
| Dr. Ilan Lena          | Rambam Health Care Campus          | Elucidating the interaction between mTOR and glycolysis pathways  | ICA-USA   |
| Dr. Parnas oren        | The Hebrew University of Jerusalem | Dissecting the regulatory network of PD-L1 in immune and cancer cells   |   |
| Prof. Ben-Arie Eran    | Lin Medical Center                 | Reducing anxiety and post-operative pain among patients with gynecological cancer referred to peri- and intra-operative acupuncture and integrative medicine: A randomized controlled study | Bruce Youngman - in honor and memory of Alice Youngman and in memory of Marge Goldner's grandson, Brandon Goldner |
| Dr. Gilboa Yafit       | The Hebrew University of Jerusalem | Alleviating Cancer-Related Cognitive Impairments (CRCI) using a combination of Mobile Interventions: A Randomized Controlled Trial  |   |
| Dr. Levin Dafna        | Assuta Medical Centers             | Comparison of different psycho-educational methods for the reduction of anxiety related to radiation treatment in breast cancer patients  | Jack Kuba Ltd.  |
| Dr. Baron Michal       | Tel Aviv-Yafo Academic College     | Compassion fatigue and compassion satisfaction among Israeli oncologists  | ICA Chairman Fund   |