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RESEARCH AWARDS 2015-2016

For the 2015/2016 funding year, ICRF is supporting 91 grants at a total of \$3,713,336. This is broken down as follows:

- **3 International Collaboration Grants**
- 4 L. & S. Mark Initiative for Ovarian/Uterine Cancer
- 3 Acceleration Grants
- 13 Research Professorships
- **2 Clinical Research Career Development Awards**
- 28 Research Career Development Awards (RCDAs)
- 1 B. S. Goodman Endowed RCDA for Pancreatic Cancer
- **30 Project Grants**
- 6 Postdoctoral Fellowships
- 2 Booster Grants

With the 2015/2016 grants, ICRF's funding has now reached 2,206 grants totaling \$56,075,000.

Among the areas of cancer research directly sponsored by ICRF in 2015/2016 are: studies in bladder, bone, brain, breast, colorectal, intestinal, liver, lung, ovarian, pancreatic, pediatric, skin, and vascular cancers; anticancer drug mechanisms, drug resistance, and targeted therapy; development of new diagnostic imaging techniques; leukemia, lymphoma, blood cells, and tumor blood vessel growth (angiogenesis); cancer stem cells and cellular reprogramming; expression, regulation, and mutation of genes; tumor viruses; tumor metastasis; inflammation and cancer; immunology and immunotherapy; protein interactions; oncogenes and tumor suppressor genes, such as p53; cell-cycle regulation, natural killer cells, programmed cell death (apoptosis), and the DNA damage response.

AWARD	AWARDEE	INSTITUTION	PROJECT TITLE
INTERNATIONAL COLLABORATION GRANTS	Sol Efroni, Ph.D. (PI)* and Francisco Quintana, Ph.D. (Co-PI)* * to begin in 2016-2017	Bar-Ilan University and Brigham & Women's Hospital	miR-29b and miR-9 to Target Glioblastoma Multiform via AHR and p38 Network Modulation
	Ephrat Levy-Lahad, M.D. (PI) and Mary-Claire King, Ph.D. (Co-PI)	Shaare Zedek Medical Center and University of Washington	Genomic Analysis of Inherited Breast and Ovarian Cancer for Israeli Women of all Ancestries
	Uri Nir, Ph.D. (PI) and Eldad Zacksenhaus, Ph.D. (Co-PI)	Bar-Ilan University and Toronto General Hospital	Studying the Role of Mitochondrial Reprogramming by Fer/FerT in Tumor Metastasis
LEN & SUSAN MARK INITIATIVE	Sol Efroni, Ph.D.	Bar-Ilan University	A Single Mutation in BCL-2 as a Biomarker for Paclitaxel Treatment Response
FOR OVARIAN AND UTERINE/MMMT CANCERS	Rotem Karni, Ph.D.	Hebrew University/ Hadassah Medical School	Discovery of Transcriptomic Changes that Lead to Ovarian Cancer Progression
	Keren Levanon, M.D., Ph.D.	Chaim Sheba Medical Center	Novel Approaches for Early-Detection Biomarkers for Ovarian Cancer
	Varda Rotter, Ph.D.	Weizmann Institute of Science	Oncogenic Mutant p53 Gain of Function in Ovarian Cancer Stem Cells
ACCELERATION GRANTS	David Gurwitz, Ph.D.	Tel-Aviv University	SSRI Antidepressants as Anticancer Therapy: Role for Down-Regulation of miR-221
	Tomer Shlomi, Ph.D.	Technion, Israel Institute of Technology	Targeting Antifilate Resistance in Cancer via Metabolic Synthetic Lethality
	Ruth Sperling, Ph.D.	Hebrew University of Jerusalem	Nuclear microRNA in Cancer

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PROFESSORSHIPS	Michal Baniyash, Ph.D.	Hebrew University of Jerusalem	The Role of Immunosuppressive Cells and Gut Microbiota in Inflammatory Bowel Disease and Colorectal Cancer: Clinical Implications
	Yinon Ben-Neriah, M.D., Ph.D.	Hebrew University/ Hadassah Medical School	Dissecting the Role of the Casein Kinase I Family in Gut Physiology and Cancer
	Yehudit Bergman, Ph.D.	Hebrew University/ Hadassah Medical School	The Role of Epigenetic Regulation in Stem Cells and Cancer
	Howard Cedar, M.D., Ph.D.	Hebrew University/ Hadassah Medical School	Regulation of Gene Expression in Animal Cells
	Aaron Ciechanover, M.D., D.Sc.	Technion, Israel Institute of Technology	Ubiquitin-Mediated Generation of NF-кВ: Mechanisms & Involvement in Carcinogenesis
	Avram Hershko, M.D., Ph.D.	Technion, Israel Institute of Technology	Roles of the Ubiquitin System in the Control of Cell Division and in Cancer
	Eli Keshet, Ph.D.	Hebrew University/ Hadassah Medical School	Tumor Neovascularization Assisted by VEGF- Recruited and Educated Myeloid Cells
	Martin Kupiec, Ph.D.	Tel-Aviv University	Dissecting the Molecular Functions of Elg1/ATAD5
	Ofer Mandelboim, Ph.D.	Hebrew University/ Hadassah Medical School	Learning from Viruses: MicroRNAs Controlling Tumor Cell Attack by NK Cells
	Yosef Shiloh, Ph.D.	Tel-Aviv University	The ATM-Mediated DNA Damage Response: Moving between the Forest and the Trees
	Israel Vlodavsky, Ph.D.	Technion, Israel Institute of Technology	Heparanase: From Basic Research to Therapeutic Applications
	Yosef Yarden, Ph.D.	Weizmann Institute of Science	Control Circuits of Growth Factor Signaling: Relevance to Cancer Progression and Therapy

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CLINICAL RESEARCH CAREER	Einav Nili Gal-Yam, M.D., Ph.D.	Chaim Sheba Medical Center	Dissecting Tumor Heterogeneity through Epigenomic Characterization
DEVELOPMENT AWARDS	Ruth Perets, M.D., Ph.D.	Rambam Health Care Campus	The Role of Fallopian Tube Lineage in Ovarian Cancer Pathogenesis
BARBARA S. GOODMAN ENDOWED RCDA FOR PANCREATIC CANCER	Moran Amit, M.D.	Rambam Health Care Campus	Roles of the L1 Cell Adhesion Molecule in the Pathogenesis of Pancreatic Cancer
RESEARCH CAREER DEVELOPMENT AWARDS (RCDAs)	Nabieh Ayoub, Ph.D.	Technion, Israel Institute of Technology	Deciphering KDM4C (GASC1) Role in Carcinogenesis via Systematic Mapping of its Non-Histone Substrates
	David Azoulay, Ph.D.	Western Galilee Hospital	BDNF Gene Polymorphism and Protein Levels in Circulating Blood as Biomarkers for CIPN in Cancer Patients
	Dalit Barkan, Ph.D.	University of Haifa	Characterizing the Role of LOXL2 in Breast Cancer Recurrence
	Michael Berger, Ph.D.	Hebrew University/ Hadassah Medical School	Targeting T-Lymphocyte Quiescence as a Novel Treatment for T-ALL
	Tal Burstyn-Cohen, Ph.D.	Hebrew University/ Hadassah Medical School	Molecular and Cellular Function of Protein S in Cancer
	Michael Blank, Ph.D.	Bar-Ilan University	Investigating the Role of Smurf2 in DNA Damage Response and Anticancer Genotoxic Therapies

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RCDAs (continued)	Shay Covo, Ph.D.	Hebrew University of Jerusalem	Revealing the Role of Severe Genome Instability and Mitochondria in Drug Resistant Polyploidy Yeast
	Neta Erez, Ph.D.	Tel-Aviv University	The Role of Fibroblasts in the Formation of a Permissive Metastatic Niche in Breast Cancer Metastasis
	Sara Eyal, Ph.D.	Hebrew University/ Hadassah Medical School	Non-Invasive In Vivo Optial Imaging of Cancer Multidrug Resistance
	Dinorah Friedmann-Morvinski, Ph.D.	Tel-Aviv University	Reprogramming in Cancer and Novel Targets for Immunotherapy
	Yaron Fuchs, Ph.D.	Technion, Israel Institute of Technology	Apoptotic Regulation of Cancer Stem Cells
	Gabi Gerlitz, Ph.D.	Ariel University Center of Samaria	The Role of Global Chromatin Condensation in Melanoma Cell Migration
	Zvi Granot, Ph.D.	Hebrew University of Jerusalem	The Effect of VEGF on Neutrophil Function in the Context of Tumor Growth and Metastatic Progression
	Shoshana Greenberger, M.D., Ph.D.	Chaim Sheba Medical Center	TGFβ Pathway in Infantile Hemangioma Involution
	Yaqub Hanna, M.D., Ph.D.	Weizmann Institute of Science	Novel Humanized Stem Cell Based Platforms for Modeling Human Disease and Cancer Development
	Ayelet Lamm, Ph.D.	Technion, Israel Institute of Technology	Identifying the Mechanisms by which Intracellular Transport affects Pancreatic Cancer Development
	Dan Levy, Ph.D.	Ben-Gurion University of the Negev	Lysine Methylation in Cancer

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RCDAs (continued)	Michael Milyavsky, Ph.D.	Tel-Aviv University	Isolation and Characterization of Novel Therapy Resistance Factors in Acute Myeloid Leukemia
	Ariel Munitz, Ph.D.	Tel-Aviv University	Molecular Regulation of Eosinophil Activation in Colorectal Cancer
	Vered Padler-Karavani, Ph.D.	Tel-Aviv University	Anti-Neu5Gc Antibodies for Cancer Therapeutics
	Niv Papo, Ph.D.	Ben-Gurion University of the Negev	Engineering Antagonistic Ligands as Tools for Cancer Imaging and Therapy
	Niv Pencovich, M.D., Ph.D.	Tel-Aviv Sourasky Medical Center	Genome-Wide Characterization of the Escape from Tumor Dormancy
	Marjorie Pick, Ph.D.	Hadassah Medical Organization	Generating Functional Platelets from Human Pluripotent Stem Cells
	Shiran Shapira, Ph.D.	Tel-Aviv Sourasky Medical Center	Humanized Anti-CD24 Antibody; A Potential Biology Tool for Cancer Immunotherapy
	Noam Shomron, Ph.D.	Tel-Aviv University	Combining Genetic and Epigenetic Markers: How SNPs and miRNAs Determine Cancer Development
	Ran Taube, Ph.D.	Ben-Gurion University of the Negev	P-TEFb and SEC as Targets for Treating MLL – Role in Promoting Leukemogenesis
	Amit Tzur, Ph.D.	Bar-Ilan University	Elucidating the E2F1-E2F7/8 Circuitry in Single Proliferating- and DNA-Damaged Cells
	Reuven Wiener, Ph.D.	Hebrew University/ Hadassah Medical School	Structure-Function Study of MCPIP1 to Understand it Role in Cancer

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FELLOWSHIPS	Shlomit Erenfeld, Ph.D.	Hebrew University of Jerusalem	Role of Natural killer cells in elimination of Triple- Negative Breast Cancer Cells
	Noa Rabinowicz, Ph.D.	Chaim Sheba Medical Center	The Role of Centrosomal Amplification and Aneuploidy in Cancer – Modeling in the Hematopoietic System
	Deborah Rosenberg-Nejman, Ph.D.	Weizmann Institute of Science	Tumor Microbiome-Mediated Chemo-resistance in Non-Small-Cell Lung Cancer
	Alona Sarver, Ph.D.	Weizmann Institute of Science	Dissecting the Role of Nitric Oxide in Colon Cancer by Regulating Arginine Substrate Availability
	Sivan Shoshani, Ph.D.	Hebrew University of Jerusalem	Enhancing the Efficacy of BCG Treatment of Transitional Carcinoma of the Urinary Bladder by Means of Recombinant BCG Bacteria
	Carmit Strauss, Ph.D.	Hebrew University of Jerusalem	Involvement of RNF20 and H2Bub1 in DNA Replication Plasticity upon Oncogenic Stress
BOOSTER GRANTS	Jonathan Kornspan, Ph.D.	Hadassah Medical Organization	Deciphering the Role of TLE-Corepressors as Modulators of Therapeutic Responses in Breast Cancer
	Vadim Maximov, Ph.D.	Hebrew University of Jerusalem	Dissecting the Roles of WWOX in Bone Biology and Osteosarcoma
PROJECT GRANTS	Ami Aronheim, Ph.D.	Technion, Israel Institute of Technology	The Role of Host c-Jun Dimerization Protein 2, JDP2, Expression in Cancer Growth, Metastasis and Therapy
	Gil Ast, Ph.D.	Tel-Aviv University	The Regulatory Effect of Splice Site Spatial Proximity and Genomic Location on Splicing

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GRANTS (continued)	Gilad Bachrach, Ph.D.	Hebrew University of Jerusalem	Role of Natural Killer Cells in Acceleration of Colorectal Carcinoma by Fusobacterium Nucleatum
	Shay Ben-Aroya, Ph.D.	Bar-Ilan University	Understanding the Roles of the Iron-Sulfur Cofactors in Regulating the Function of Proteins Involved in Maintaining Genome Stability
	Ittai Ben-Porath, Ph.D.	Hebrew University/ Hadassah Medical School	Regulation of Heterogeneity in Breast Cancers through Control of Symmetric Divisions
	Dalit Ben-Yosef, Ph.D.	Tel-Aviv Sourasky Medical Center	Induction of APC Somatic Mutation in FAP Human Embryonic Stem Cells for Studying Early Stages in Malignant Transformation
	Avri Ben-Ze'ev, Ph.D.	Weizmann Institute of Science	The Role of Intestinal Stem Cell Signature Genes in Colon Cancer Progression
	Limor Broday, Ph.D.	Tel-Aviv University	The Role of an Evolutionary Conserved SUMO Protease in Tissue Morphogenesis and Tumorigenesis
	Chaya Brodie, Ph.D.	Bar-Ilan University	microRNA Delivery by Mesenchymal Stem Cells for Brain Tumor Therapy
	Cyrille Cohen, Ph.D.	Bar-Ilan University	Development and Study of a Cell-Secreted 'Ligand Trap' to Mitigate TGFb Effects
	Benjamin Dekel, M.D., Ph.D.	Chaim Sheba Medical Center	Targeting Cancer Initiating Cells in Rhabdoid Tumors
	Amir Eden, Ph.D.	Hebrew University of Jerusalem	EZH2 and ErbB Family Inhibition in Rhabdoid Tumors

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PROJECT GRANTS	Ari Elson, Ph.D.	Weizmann Institute of Science	Tumor Promoting Roles of the Phosphatase PTPROt
(continued)	Dale Frank, Ph.D.	Technion, Israel Institute of Technology	Protein Kinase 7 Isoforms Regulate Wnt Signaling in Development and Cancer
	Assaf Friedler, Ph.D.	Hebrew University of Jerusalem	Disordered Proteins As Anti-Cancer Drug Targets
	Asaf Hellman, Ph.D.	Hebrew University of Jerusalem	Understanding Epigenetic Contribution to Cancer Risk and Malignancy Through Targeting the DNA Methylation of Transcriptional Enhancers
	Fuad Iraqi, Ph.D.	Tel-Aviv University	Mapping Modifiers of APC Gene in Intestinal Cancer Development in Collaborative Cross Mice
	Shai Izraeli, M.D.	Chaim Sheba Medical Center	Modeling Initiation of Human Acute Lymphoblastic Leukemia by Activated Cytokine Receptors Signaling
	Nathan Karin, Ph.D.	Technion, Israel Institute of Technology	The Role of CCR5 in the Mobilization of CD11b+GR1+ Myeloid Derived Suppressor Cells to the Tumor Site and its Implications in Melanoma
	Bella Kaufman, M.D.	Chaim Sheba Medical Center	Patterns of Molecular Evolution through the Course of Disease in Recurrent Breast Cancer
	Agnes Klochendler, Ph.D.	Hebrew University of Jerusalem	The Genetic Program of Cancer Replicating Cells

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PROJECT GRANTS (continued)	Doron Melamed, Ph.D.	Technion, Israel Institute of Technology	A Role for microRNAs in Responsiveness and Resistance to Anti-CD20 Therapy of B Cell Lymphoma
	Yifat Merbl, Ph.D.	Weizmann Institute of Science	Elucidating Regulatory Principles of Ubiquitin HECT-Domain E3 Ligases in Mammalian Systems
	Gera Neufeld, Ph.D.	Technion, Israel Institute of Technology	Elucidation of Enzyme Activity Dependent and Enzyme Activity Independent Mechanisms by which Lysyl-Oxidases Promote Tumor Progression
	Rachela Popovtzer, Ph.D.	Bar-Ilan University	Detection of Metabolic Activity using CT
	Shoshana Ravid, Ph.D.	Hebrew University of Jerusalem	The Role of Par6-aPKCzeta Complex in EGF- Dependent Cell Migration
	Yosef Shaul, Ph.D.	Weizmann Institute of Science	Viral Oncogenesis and the Hippo Tumor Suppressor Pathway
	Yehuda Tzfati, Ph.D.	Hebrew University of Jerusalem	The Role of RTEL1 Deficiency in Telomere Dysfunction, Genome Instability, and Cancer Predisposition
	Gideon Zamir, M.D.	Hadassah Medical Organization	Role of Ribosomal Protein rpS6 in the Development of Pancreatic and Lung Carcinoma
	Tsila Zuckerman, M.D.	Rambam Health Care Campus	AML Heterogeneity using Single Leukemic Cells; Genomic Analysis and Clonal Hierarchy