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RESEARCH AWARDS 2014-2015

For the 2014/2015 funding year, ICRF is supporting 94 grants at a total of \$3,453,332. This is broken down as follows:

- 4 L. & S. Mark Initiative for Ovarian/Uterine Cancer
- **4 Acceleration Grants**
- 11 Research Professorships
- 1 Clinical Research Career Development Award
- 29 Research Career Development Awards (RCDAs)
 - 1 B. S. Goodman Endowed RCDA for Pancreatic Cancer
- 35 Project Grants
- 7 Postdoctoral Fellowships
- 2 Gesher Awards

With the 2014/2015 grants, ICRF's funding has now reached 2,115 grants totaling \$52,361,664.

Among the areas of cancer research directly sponsored by ICRF in 2014/2015 are: studies in bladder, brain, breast, colorectal, intestinal, liver, lung, oral, 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); stem cell reprogramming; expression, regulation, and mutation of genes; tumor viruses; tumor metastasis; the relationship between inflammation and cancer, and obesity, diabetes 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 |
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| LEN & SUSAN MARK INITIATIVE FOR OVARIAN AND | Sol Efroni, Ph.D. | Bar-Ilan University | A Single Mutation in BCL-2 as a Biomarker for Paclitaxel Treatment Response |
| 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 |
| | Martin Kupiec, Ph.D. | Tel-Aviv University | Ribosomal Profiling of the Response to DNA Damage and Telomere Attrition |
| | Michal Sharon, Ph.D. | Weizmann Institute of Science | Investigating the Molecular Details of the 20S Proteasomal Degradation Pathway |
| | Tomer Shlomi, Ph.D. | Technion, Israel Institute of Technology | Targeting Antifilate Resistance in Cancer via Metabolic Synthetic Lethality |
| PROFESSORSHIPS | 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 |

| AWARD | AWARDEE | INSTITUTION | PROJECT TITLE |
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| PROFESSORSHIPS (continued) | Aaron Ciechanover, M.D., D.Sc. | Technion, Israel Institute of Technology | Ubiquitin-Mediated Generation of NF-кВ: Mechanisms and Involvement in Carcinogenesis |
| | Alberto Gabizon, M.D., Ph.D. | Shaare Zedek Medical Center | Development of Targeted Liposome Formulations of Anti-Cancer Agents |
| | 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 |
| | 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 |
| CLINICAL RESEARCH CAREER DEVELOPMENT AWARD | Einav Nili Gal-Yam, M.D., Ph.D. | Chaim Sheba Medical Center | Dissecting Tumor Heterogeneity through Epigenomic Characterization |
| 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 |

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| 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 |
| | 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 |
| | Tamar Geiger, Ph.D. | Tel-Aviv University | Elucidation of Proteome Networks in Breast Cancer – Toward Triple-Negative Specific Therapy |

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| RCDAs (continued) | Gabi Gerlitz, Ph.D. | Ariel University Center of Samaria | The Role of Global Chromatin Condensation in Melanoma Cell Migration |
| | Hava Gil-Henn, Ph.D. | Bar-Ilan University | Regulation of Invadopodia Formation and Function by Tyrosine Kinase Pyk2 |
| | 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 |
| | Dan Levy, Ph.D. | Ben-Gurion University of the Negev | Lysine Methylation in Cancer |
| | 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 |

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| RCDAs (continued) | Rachaela Popovtzer, Ph.D. | Bar-Ilan University | Basic Research Underlining Cancer Detection with Molecularly Targeted Gold Nanoparticles |
| | Yuval Shaked, Ph.D. | Technion, Israel Institute of Technology | Developing an Approach to Identify New Factors Promoting Cancer Resistance to Therapy |
| | 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 |
| | Karina Yaniv, Ph.D. | Weizmann Institute of Science | The Role of Lipoproteins in Tumor-Related Angiogenesis, Lymphangiogenesis and Metastasis |
| POSTDOCTORAL 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 |

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| POSTDOCTORAL FELLOWSHIPS | Yogev Sela, Ph.D. | Weizmann Institute of Science | The Role of Lipoproteins in Tumor-Related Angiogenesis and Metastasis |
| (continued) | 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 |
| | Manuela Vecsler, Ph.D. | Bar-Ilan University | Revealing the Dynamics of E2F Circuitry in Normal Proliferating Cells and Upon DNA Damage |
| GESHER AWARDS | Ari Meerson, Ph.D. | MIGAL-Galilee Research Institute | microRNAs as a Functional Link between Obesity, Diabetes, and Cancer |
| | Kobi Simpson-Lavi, Ph.D. | Tel-Aviv University | The Role of Aup1 in Signaling from Mitochondria to the Nucleus |
| 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 |
| | Gilad Bachrach, Ph.D. | Hebrew University of Jerusalem | Role of Natural Killer Cells in Acceleration of Colorectal Carcinoma by Fusobacterium Nucleatum |
| | Michal Baniyash, Ph.D. | Hebrew University/ Hadassah Medical School | The Role of Myeloid Derived Suppressor Cells in Ulcerative Colitis and Colorectal Cancer |
| | Itai Benhar, Ph.D. | Tel-Aviv University | Studying New Design Principles for Bispecific IgGs |
| | Moran Benhar, Ph.D. | Technion, Israel Institute of Technology | Thioredoxin and Cysteine-Based Redox Regulation in Lung Cancer |

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| PROJECT GRANTS | Ittai Ben-Porath, Ph.D. | Hebrew University/ Hadassah Medical School | EZH2 and and Bi-Lineage tumor Cell Identity as Drivers of Aggressive Breast Cancer |
| (continued) | Michal Besser, Ph.D. | Chaim Sheba Medical Center | Predicting and Controlling Clinical Response of Melanoma Patients Receiving T Cell Therapy |
| | 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 |
| | 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 |
| | Michael Elkin, Ph.D. | Hadsassah Medical Organization | Role of Heparanase in Coupling Inflammation and Tumorigenesis in Pancreas |
| | Ari Elson, Ph.D. | Weizmann Institute of Science | Tumor Promoting Roles of the Phosphatase PTPROt |
| | 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 |

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| PROJECT GRANTS (continued) | 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 |
| | Jeremy Kark, M.D., Ph.D. | Hadassah Medical Organization | Adolescent Precursors of Adult Cancer in a Cohort of 2,100,000 Israeli Males and Females |
| | 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 |
| | Sara Lavi, Ph.D. | Tel-Aviv University | The Role of PPM1A, the Negative Regulator of Angiogenesis, in Granulocytes Polarization |
| | Doron Melamed, Ph.D. | Weizmann Institute of Science | A Role for microRNAs in Responsiveness and Resistance to Anti-CD20 Therapy of B Cell Lymphoma |
| | 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 |

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| PROJECT GRANTS | Gabriel Nussbaum, M.D., Ph.D. | Hebrew University of Jerusalem | The Contribution of Chronic Oral Inflammation to Carcinogenesis and Tumor Chemoresistance |
| (continued) | Amir Orian, M.D., Ph.D. | Technion, Israel Institute of Technology | STUbL-Dependent Oncogenes Activation in Cancer – from Mechanisms to Diagnostics |
| | Shoshana Ravid, Ph.D. | Hebrew University of Jerusalem | The Role of Par6-aPKCzeta Complex in EGF- Dependent Cell Migration |
| | Rina Rosin-Arbesfeld, Ph.D. | Tel-Aviv University | How does Carboxypeptidase E (CPE) affect Wnt Signaling? |
| | Eytan Ruppin, Ph.D. | Tel-Aviv University | Drug Targets and Biomarkers Prediction via a Computational Study of Breast Cancer Metabolism |
| | Yosef Shaul, Ph.D. | Weizmann Institute of Science | Viral Oncogenesis and the Hippo Tumor Suppressor Pathway |
| | Boaz Tirosh, Ph.D. | Hebrew University of Jerusalem | Exploiting ER Stress/mTOR Synthetic Lethality for B Cell Tumors Treatment |
| | 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 |