



ICRF

RESEARCH AWARDS 2004-2005

For the fiscal year, 2004-2005, the Israel Cancer Research Fund/ICRF has allocated \$1.625 million to support 53 projects:

- 3** *Professorships*
- 1** *Clinical Research Career Development Award*
- 12** *Research Career Development Awards*
- 24** *Project Grants*
- 13** *Fellowships*

Since awarding its first cancer research grants in 1977, the ICRF has funded 1466 awards valued at a total of \$29.56 million.

ICRF-sponsored awards are determined by the Scientific Review Panel (SRP). Comprised of leading scientists in fields related to cancer research, the SRP meets annually to review applications submitted to the Fund. Their criteria are based upon the scientific merit of the project, demonstrated ability of the investigator, and suitability of the institution.

ICRF's long-term investment in Israel's cancer research community has begun to reap rewards, and we are especially proud to note the two of our Professorship awardees, Drs. Aaron Ciechanover and Avram Hershko of the Technion, Israel Institute of Technology, were awarded the 2004 Nobel Prize in Chemistry!

Among the areas of cancer research directly sponsored by ICRF in 2004-2005 are: studies in breast, colon, eye, kidney, prostate, skin, and mucosal site cancers, such as the gastrointestinal tract; anticancer drug mechanisms and multi-drug resistance; leukemia, lymphoma, blood cells, and tumor blood vessel growth (angiogenesis); bone marrow transplantation and graft vs. host disease; expression, regulation, and mutation of genes; growth factors, growth control, and tumor metastasis; immunotherapy and vaccine development; protein interactions; oncogenes and tumor suppressor genes, such as p53; and programmed cell death (apoptosis).

Following is a complete listing of ICRF cancer research studies funded during 2004-2005.

PROFESSORSHIPS

AWARD	DESCRIPTION
<p><i>THE SAMUEL UNGERLEIDER RESEARCH PROFESSORSHIP</i> ICRF U.S., New York Howard Cedar, M.D., Ph.D. Hebrew University/Hadassah Medical School <i>Regulation of Gene Expression in Animal Cells</i> 18th Year</p>	<p>Tumors result from an imbalance in the gene regulation machinery of the cell. This study's objective is to learn how and why genes are turned on and off during development.</p>
<p><i>THE HARVEY & GLORIA KAYLIE RESEARCH PROFESSORSHIP IN MEMORY OF THEIR FRIENDS, HELA & SIMSON STOLZ</i> ICRF U.S., New York Aaron Ciechanover, M.D., D.Sc. Technion, Israel Institute of Technology <i>Aberrant Ubiquitin-Mediated Regulation of Apoptosis in Prostate Cancer</i> 2nd Year</p>	<p>Using prostate cancer cells, both in culture and laboratory animals, this researcher will study the mechanisms that enable cancer cells to evade death and continue to metastasize during chemotherapy and radiotherapy treatments.</p>
<p><i>THE NATHAN GALSTON RESEARCH PROFESSORSHIP</i> ICRF U.S., Los Angeles Avram Hershko, M.D., Ph.D. Technion, Israel Institute of Technology <i>Control of Cell Division by Ubiquitin-Mediated Protein Degradation</i> 3rd Year</p>	<p>Proteins in cells are tagged for degradation by being linked to a small protein called <i>ubiquitin</i>. This scientist's work is aimed at understanding the multiple roles of the ubiquitin system in the control of cell division.</p>

CLINICAL RESEARCH CAREER DEVELOPMENT AWARD

AWARD	DESCRIPTION
<p><i>THE CHICAGO FELLOWSHIP CIRCLE AWARD IN HONOR OF DR. TAPAS DAS GUPTA</i> ICRF U.S., Chicago Dan Hershko, M.D. Rambam Medical Center <i>Skp2 and Cks1 Expression as Markers of Prognosis and Tumor Behavior in Breast and Colon Cancer</i> 3rd Year</p>	<p>This researcher is examining the role of two cell-cycle regulatory proteins as markers for prognosis and tumor behavior in breast and colon cancers. Identifying the molecular mechanisms responsible for tumor aggressiveness may lead to the development of better treatment modalities for these cancers.</p>

RESEARCH CAREER DEVELOPMENT AWARDS

AWARD	DESCRIPTION
<p>THE DR. BENJAMIN BERNSTEIN AWARD ICRF U.S., New York Uri Abdu, Ph.D. Ben-Gurion University of the Negev <i>The Role of DNA Damage Proteins Hus1 and Chk2 in the Drosophila Meiotic Checkpoint</i> 1st Year</p>	<p>Mutations in DNA repair genes and cell cycle checkpoints have been implicated in the formation of certain cancers. This researcher is using the fruit fly as a model system in order to study the signaling events that take place when DNA becomes damaged during cell division.</p>
<p>THE LEAH AND JACK SUSSKIND AWARD ICRF U.S., New York Ami Aronheim, Ph.D. Technion, Israel Institute of Technology <i>Characterization the Role of c-Jun Inhibitor in Human Cancer</i> 4th Year</p>	<p>The aim of this project is to examine the function of JDP2, a novel protein originally identified in this scientist's laboratory, in malignant transformation. It is thought that this protein may play an important role in inhibiting other proteins that promote cells to become malignant.</p>
<p>THE SCHULWEIS FAMILY FOUNDATION AWARD ICRF U.S., New York Nir Ben-Tal, D.Sc. Tel-Aviv University <i>Surface-Mapping of Phylogenetic Information on Proteins</i> 4th Year</p>	<p>Binding of one protein to another is a phenomenon observed in all types of cancer, yet the principles governing protein interactions are not fully understood. This researcher will analyze protein surfaces and inter-protein interfaces to elicit the atomic details of the interactions and to relate the protein's activity in cancer to its structure.</p>
<p>THE LOLA, HEINRICH, AND ERICH SCHAFRANIK MEMORIAL AWARD ICRF U.S., New York Ehud Gazit, Ph.D. Tel-Aviv University <i>The Role of Protein Folding and Stability in Type I VHL Syndrome</i> 4th Year</p>	<p>Tumor-suppressor proteins play a central role in the development of human cancer. This researcher is studying the structure and stability of the von Hippel-Lindau (VHL) tumor-suppressor protein, which is involved in the normal assembly of parts of the cellular matrix.</p>
<p>THE MARION WEXMAN MEMORIAL AWARD ICRF U.S., Los Angeles Michael Glickman, Ph.D. Technion, Israel Institute of Technology <i>Participation of the Proteasome in Regulating Stress Response</i> 5th Year</p>	<p>This scientist is investigating how certain cellular enzymes called proteases regulate the removal of foreign, damaged, or unnecessary proteins from cells. If proteins responsible for causing cells to grow or divide become damaged, they must be removed or cancer can result.</p>
<p>THE SUZANNE AND DAVID SAPERSTEIN AWARD ICRF U.S., Los Angeles Sima Lev, Ph.D. Weizmann Institute of Science <i>The Role of PYK2 in Cell Growth, Motility and Invasion</i> 5th Year</p>	<p>This scientist will study the action of a cell component, PYK2. This appears to be important in transmitting signals inside a cell that promote cell migration and invasion, and should improve our knowledge of metastasis, the spread of tumor cells throughout the body.</p>

AWARD	DESCRIPTION
<p>THE DR. HARRY WEINER MEMORIAL AWARD ICRF U.S., Los Angeles Ofer Mandelboim, Ph.D. Hebrew University/Hadassah Medical School <i>CD16 as a Lysis Receptor for Human Natural Killer (NK) Cells</i> 5th Year</p>	<p>Our immune systems produce natural killer (NK) cells which destroy tumor and virus-infected cells. A specific protein, CD16, may promote the action of NK cells. Study of this protein could shed light on how NK cells destroy noxious cells and may lead to new ways to fight the spread of both viruses and tumors.</p>
<p>THE DR. DANIEL G. MILLER MEMORIAL AWARD ICRF U.S., New York Eli Pikarsky, M.D., Ph.D. Hadassah University Hospital <i>Is NF-κB the Missing Link Between Inflammation and Neoplasia?</i> 1st Year</p>	<p>This scientist will use a mouse model to study the mechanisms by which chronic inflammation leads to cancer. By uncovering the steps to the transformation process, he hopes to identify specific molecular events that can be stopped, thus preventing cancer.</p>
<p>THE POLA AND HENRY LAND MEMORIAL AWARD ICRF U.S., New York Angel Porgador, Ph.D. Ben-Gurion University of the Negev <i>Cancer Vaccines Based on Mucosal Application of Recombinant Bacterial Vaccine Vectors</i> 4th Year</p>	<p>Many cancers metastasize to mucosal sites, such as the lung or gastrointestinal tract, and primary or secondary tumors in those areas are the most common cause of cancer-related mortality. This scientist will use a mouse model to administer an oral, bacteria-based vaccine with the hope of stimulating an immune response against tumor cells growing in mucosal organs.</p>
<p>THE HARRY C. WILF MEMORIAL AWARD ICRF U.S., New York Ram Reshef, Ph.D. Technion, Israel Institute of Technology <i>Regulation of Pax-2 and Wt1 in Kidney Development</i> 2nd Year</p>	<p>This researcher seeks a better understanding of the embryonic and molecular mechanisms that govern the expression of early kidney genes. Disruption of these genes' regulatory processes may lead to tumor formation as well as urogenital malformation.</p>
<p>THE SIDNEY GREENBERG AND SYLVIA GREENBERG COHAN MEMORIAL AWARD ICRF U.S., New York Yehuda Tzfati, Ph.D. Hebrew University of Jerusalem <i>Telomerase Dysfunction in Hoyeraal-Hreidarsson Syndrome</i> 1st Year</p>	<p>Telomerase is an enzyme activated in most cancers to enable unlimited cell proliferation. This investigator will study the molecular mechanisms underlying a rare genetic disease in order to understand the consequences of telomerase inactivation on cell transformation and cancer.</p>
<p>THE RACHEL'S SOCIETY AWARD IN HONOR OF FLORENCE & MICHAEL EDELSTEIN, BEATRICE GINDEA, LEE LENCH, ARLENE MORROW, RITA & FRED RICHMAN, JUDITH & ISAAC SHERMAN, AND MAXINE STEIN-KOHLER ICRF U.S., New York Ronit Yarden, Ph.D. Chaim Sheba Medical Center <i>The Role of BRCA1 in Cell Cycle Checkpoint Regulation: Interplay with Chk1</i> 1st Year</p>	<p>Cell cycle checkpoints are elaborate surveillance mechanisms developed in cells to halt cell division after DNA is damaged, until the DNA is repaired and intact. The goal of this project is to understand the role of the BRCA1 gene in cell cycle checkpoint control, and how it operates as a tumor suppressor.</p>

FELLOWSHIPS

AWARD	DESCRIPTION
<p><i>THE DR. EMIL & STEPHANIE AUFRICHTIG AND LEON & IRENE TZUREF MEMORIAL FELLOWSHIP</i> ICRF U.S., New York Shifra Ash, M.D. Schneider Children's Medical Center <i>Immunotherapy to Neuroblastoma using Allogeneic Bone Marrow Transplantation and Dendritic Cells</i> 1st Year</p>	<p>Neuroblastoma, the most common extra-cranial solid tumor in children, is usually treated by a combination of surgery, chemotherapy, and radiation, but these conventional forms of treatment are not always successful. This clinician proposes to induce an immunotherapeutic reaction by means of a specialized bone marrow transplantation procedure.</p>
<p><i>THE ICRF/CFTAU GOLF TOURNAMENT FELLOWSHIP</i> ICRF Canada, Toronto Orna Dahan, Ph.D. Tel-Aviv University <i>Regulating a LIM-Based Transcription Complex by Protein Degradation</i> 1st Year</p>	<p>Many genes in mammals have counterparts in lower organisms. This researcher will use the fruit fly as a model system to examine the role of a set of genes that are involved in the formation of T-cell acute lymphoblastic leukemia when their function is disrupted.</p>
<p><i>THE RESEARCH FELLOWSHIP CIRCLE FELLOWSHIP</i> ICRF Canada, Toronto Ayelet Erez, M.D. Chaim Sheba Medical Center <i>The SIL Gene in Neoplasia</i> 1st Year</p>	<p>SIL, a gene necessary for cellular growth, proliferation, and survival, has recently been discovered to be one of 17 genes that, when overexpressed, predict metastatic spread. This scientist will further study the SIL gene in order to shed light on mechanisms of metastasis in a variety of tumor systems.</p>
<p><i>THE WOMEN OF ACTION 2004 FELLOWSHIP</i> ICRF Canada, Toronto Shlomit Erlich, Ph.D. Tel-Aviv University <i>Cross-Talk Between Ras and ErbB Receptors: Implications for Cancer Therapy</i> 2nd Year</p>	<p>Ras and ErbB are two genes associated with cancer and the regulation of cell growth. This investigator will study the interaction of these two genes with the ultimate goal of finding a new target for anticancer drugs.</p>
<p><i>THE HARVEY & GLORIA KAYLIE FELLOWSHIP IN FOND MEMORY OF HOWARD MARTIN LANE, OUR "UNCLE" AND SOURCE OF TRUTH</i> ICRF U.S., New York Sigal Gelkop, Ph.D. Ben-Gurion University of the Negev <i>The Role of Crk Adapter Proteins in T Cell Growth Regulation and Leukemogenesis</i> 2nd Year</p>	<p>Crk proteins make it possible for signals on a cell's surface to be transmitted to the nucleus. This scientist has found that Crk proteins help Bcr-Ab1, a specific gene in the abnormal chromosome that causes chronic myelogenous leukemia, to function. Further study of this mechanism may lead to the development of drugs to counteract this process.</p>
<p><i>THE GOLDIE KARP MEMORIAL FELLOWSHIP</i> ICRF U.S., New York Maya Groysman, Ph.D. Hebrew University/Hadassah Medical School <i>Wnt Signaling in the Control of Neural Crest Delamination</i> 1st Year</p>	<p>This researcher is investigating the molecular mechanisms that regulate the evolution and transformation of various cell types during development; processes that parallel malignant transformation and metastasis in cancer.</p>

AWARD	DESCRIPTION
<p>THE ICRF NEW YORK FELLOWSHIP ICRF U.S., New York Hilit Gur, Ph.D. Weizmann Institute of Science <i>Graft Versus Host Disease Prevention by Conditional In Vivo Cell Ablation</i> 1st Year</p>	<p>Bone marrow transplantation for the treatment of leukemia is often hampered by the development of severe graft-versus-host disease. This scientist will test a novel strategy to specifically neutralize the grafted T cells responsible for the destructive attack on the host, while retaining the beneficial graft-versus-leukemia effect.</p>
<p>THE HARVEY & GLORIA KAYLIE FELLOWSHIP IN FOND MEMORY OF ROSE ARANOWITZ SCHOENBLUM, OUR BELOVED AUNT ICRF U.S., New York Orlev Levy-Nissenbaum, Ph.D. Tel-Aviv University <i>The Role of PYST2 in Shaping the Phenotype of Malignant Cells</i> 2nd Year</p>	<p>This investigator has found that a molecule, termed PYST2, is not present in normal white blood cells, but is expressed in high amounts in acute leukemia cells and certain other malignancies, such as prostate and breast cancers. He seeks to find out whether PYST2 could serve as a novel target molecule in cancer therapy.</p>
<p>THE WOMEN OF ACTION FELLOWSHIP ICRF U.S., New York Tal Meir, Ph.D. Hadassah University Hospital <i>Intra-Tumor Gene Expression Variation Association with Metastases and Microcirculation Patterns in Uveal Melanoma</i> 1st Year</p>	<p>Uveal melanomas, the most common form of eye malignancy, often result in liver metastases that can be fatal. The goal of this study is to gain a better understanding of the molecular pathways which underlie the development of metastasis. This could potentially lead to better predictions of prognosis as well as more targeted therapies.</p>
<p>THE VISIONS, THE NEXT GENERATION OF ICRF, FELLOWSHIP ICRF U.S., Los Angeles Tal Peleg-Shulman, Ph.D. Weizmann Institute of Science <i>Designing the Next Generation of Anti-Cancer Interferons (IFNs) by way of Understanding the Differential Response of IFN Subtypes</i> 2nd Year</p>	<p>Interferons are molecules involved in regulatory processes in the body. They can inhibit cancer cell growth, and are used in the treatment of various leukemias. The aim of this research project is to design novel interferons with improved anticancer activity that can potentially be used as therapeutic agents.</p>
<p>THE GOLDA & HERMAN WEISSBERGER FELLOWSHIP ICRF U.S., New York Tovit Rosenzweig, Ph.D. Bar-Ilan University <i>PKCδ and PKCϵ: Key Regulators in Glioma Cell Apoptosis</i> 1st Year</p>	<p>Glioblastoma, considered the most malignant brain tumor, is resistant to conventional radiotherapy and chemotherapy. This researcher seeks a better understanding of the PKC family of proteins and their role in the regulation of glioma cell death.</p>
<p>THE HARVEY & GLORIA KAYLIE FELLOWSHIP IN HONOR OF OUR MOTHER, TESSIE ARANOWITZ KAYLIE, OUR SOURCE OF CARING AND INSPIRATION ICRF U.S., New York Galit Rozenfeld-Granot, Ph.D. Weizmann Institute of Science <i>Identification and Characterization of Cyclin G-Interacting Proteins</i> 2nd Year</p>	<p>Cyclins are molecules involved in the control of DNA production which underlies cell growth and division. This investigator will study Cyclin G in order to see what proteins it interacts with, learn how these proteins function, and discover whether such interactions are influenced by p53, a critical gene which acts to control normal cell division.</p>

AWARD	DESCRIPTION
<p>THE HARVEY & GLORIA KAYLIE FELLOWSHIP IN HONOR OF FLORENCE AND MICHAEL EDELSTEIN, TWO VERY CARING AND BEAUTIFUL PEOPLE, WHO KNOW THE MEANING OF CHESED ICRF U.S., New York Anna Zetser, Ph.D. Technion, Israel Institute of Technology <i>Involvement and Regulation of Heparanase in Prostate Cancer Progression</i> 2nd Year</p>	<p>It has been found that patients with prostate cancer whose tumors have increased levels of the enzyme <i>heparanase</i> have a shorter survival time. This scientist will study how heparanase affects prostate cancer growth and response to treatment.</p>

PROJECT GRANTS

AWARD	DESCRIPTION
<p>THE PATTY FRANKLIN MEMORIAL AWARD ICRF U.S., Los Angeles Rachel Bar-Shavit, Ph.D. Hadassah University Hospital <i>The Role of Human Protease Activated Receptor1 (hPar1) in Mammary Gland Morphogenesis, Tumor Progression and Angiogenesis</i> 1st Year</p>	<p>This researcher has identified a target molecule in tumor progression, termed <i>Human Protease Activated Receptor 1</i> (or hPar1), and will study the potential role of hPar1 overexpression in the development of mammary gland tumors.</p>
<p>THE SALLY & MICHAEL GORDON PROGRAM FOR CELL BIOLOGY AWARD ICRF U.S., New York Avri Ben-Ze'ev, Ph.D. Weizmann Institute of Science <i>The Role of Novel Beta-Catenin Target Genes in Cancer</i> 2nd Year</p>	<p>This scientist has found that when a gene called Nr-CAM, normally found in brain cells, is expressed at high levels in other cell types, it can help drive cancer progression. Further research will be aimed at learning more about the mechanism of Nr-CAM action in the development of cancer.</p>
<p>THE DR. SANFORD J. KEMPIN AND STEVEN RUBINFELD HONORARY AWARD ICRF U.S., New York Eitan Bibi, Ph.D. Weizmann Institute of Science <i>Multidrug Recognition and Transport by the E. coli Mdr Transporter MdfA</i> 1st Year</p>	<p>Multidrug resistance (Mdr) to chemotherapeutic agents involves the activity of a diverse family of cell membrane transporters. This investigator will use a bacterial model to study this process at the molecular level with the ultimate goal of developing drugs that may inhibit Mdr function.</p>
<p>THE UNION MUTUAL FOUNDATION AWARD ICRF U.S., New York Eli Canaani, Ph.D. Weizmann Institute of Science <i>Targets of Normal and Leukemic ALL-1</i> 1st Year</p>	<p>The ALL-1 gene is directly involved in acute leukemia, particularly in infants. The goal of this project is to understand how the altered gene causes cancer.</p>

AWARD	DESCRIPTION
<p>THE WILLIAM & MARIA HERSKOVIC AWARD ICRF U.S., Los Angeles Amikam Cohen, Ph.D. Hebrew University/Hadassah Medical School <i>Reversal of Epigenetic Marks that Govern Silencing in Schizosaccharomyces Pombe</i> 2nd Year</p>	<p>This researcher will use yeast as a model system to study the molecular mechanisms that control how proteins interact to promote gene expression and gene silencing.</p>
<p>THE BARRIE ROSE AND FAMILY AWARD ICRF Canada, Toronto Rivka Dikstein, Ph.D. Weizmann Institute of Science <i>Control of Anti-Apoptotic NF-kappaB Target Genes by Transcription Elongation Inhibitor(s)</i> 2nd Year</p>	<p>In cancer, some proteins are produced in abnormal quantities, causing cells either to proliferate in an uncontrolled manner or to decrease their death rate. This scientist will explore the molecular machinery that regulates protein production in the body in order to further our understanding of the biological processes involved in cancer formation.</p>
<p>THE HARVEY & GLORIA KAYLIE HONORARY AWARD ICRF U.S., New York Zelig Eshhar, Ph.D. Weizmann Institute of Science <i>Activation of T-Bodies by Neurotransmitters for Adoptive Cancer Therapy</i> 1st Year</p>	<p>Most cancers, especially in their advanced stages, evade the body's immune surveillance system. This investigator will attempt to modify specific white blood cells called T-cells and genetically program them to recognize and kill metastatic breast and prostate cancer tumors.</p>
<p>THE BEVERLEY FRIEDMAN AWARD ICRF Canada, Montreal Abraham Fainsod, Ph.D. Hebrew University/Hadassah Medical School <i>The Caudal Genes in Blood Formation and Leukemia</i> 1st Year</p>	<p>Mutation of the <i>caudal</i> genes can lead to the loss of blood stem cell formation. This researcher will study in detail the role of the <i>caudal</i> genes in blood formation in order to better understand the role that these genes play in the development of leukemia.</p>
<p>THE LEE ANN & MELVIN H. JACOBS FOUNDATION AWARD ICRF U.S., Los Angeles Alberto Gabizon, M.D., Ph.D. Shaare Zedek Medical Center <i>Liposomal Delivery of Vitamin D3 to Enhance Therapeutic Efficacy in Cancer</i> 1st Year</p>	<p>Vitamin D3 has demonstrated significant anti-tumor ability, but extremely high doses can be lethal. The goal of this project is to improve the delivery of Vitamin D3 to tumors and to reduce its potential toxicity to the rest of the body by entrapping the molecules in submicroscopic fatty bubbles known as liposomes.</p>
<p>THE WOMEN OF ACTION 2003 AWARD ICRF Canada, Toronto Arnona Gazit, Ph.D. Tel-Aviv University <i>The Human Frizzled Receptor (Hfz6) - A Downregulator of the Wnt Canonical Pathway</i> 2nd Year</p>	<p>Wnt proteins play a key role in development, cell growth, and differentiation. Their misregulation is involved in a variety of human cancers. This researcher seeks a better understanding of the mechanisms that regulate Wnt signaling. This may potentially lead to the development of future tools for therapeutic intervention.</p>

AWARD	DESCRIPTION
<p>THE RACHEL'S SOCIETY AWARD IN HONOR OF MARALYN & ISIDORE FRIEDMAN, RITA & FRED RICHMAN, AND JUDITH & ISAAC SHERMAN ICRF U.S., New York Amiram Goldblum, Ph.D. Hebrew University of Jerusalem <i>Designing Selective Antagonists for Estrogen Receptors</i> 2nd Year</p>	<p>Estrogens have some highly beneficial effects on the body, but are also capable of stimulating malignant growth, such as breast cancer. The aim of this project is to develop novel drugs for treating breast cancer by blocking estrogen.</p>
<p>THE NEXT GENERATION AWARD ICRF Canada, Montreal Ygal Haupt, Ph.D. Hebrew University/Hadassah Medical School <i>Regulation of Mdm2 by PML</i> 2nd Year</p>	<p>The activation of the p53 gene in tumor cells results in growth inhibition. This project will explore the regulation of the p53 gene by two cellular proteins, PML and Mdm2, which are mutated in certain cancers.</p>
<p>THE SALLY & MICHAEL GORDON PROGRAM FOR CELL BIOLOGY AWARD ICRF U.S., New York Yoav Henis, Ph.D. Tel-Aviv University <i>Interactions and Endocytosis of Growth-Inhibitory Receptors</i> 1st Year</p>	<p>Growth factors are substances that promote the growth of an organism. This study deals with Transforming Growth Factor-B and how it regulates growth. Uncontrolled cell growth may lead to cancer.</p>
<p>THE IRVING PFEFFER MEMORIAL AWARD ICRF U.S., New York Nurit Hollander, Ph.D. Tel-Aviv University <i>Effector Mechanisms in the Protection Against Plasma Cell Tumors</i> 1st Year</p>	<p>A better understanding of the immune mechanisms involved in protection against plasma cell tumors will help in the design of vaccines that recruit the appropriate effector mechanisms. This researcher will analyze the effector mechanisms and the therapeutic potential of different immunotherapeutic vaccines in order to design improved treatment regimens.</p>
<p>THE SALLY & MICHAEL GORDON PROGRAM FOR CELL BIOLOGY AWARD ICRF U.S., New York Chaya Kalcheim, Ph.D. Hebrew University/Hadassah Medical School <i>Mechanisms of Epithelio-Mesenchymal Conversion of Neural Crest Progenitors</i> 2nd Year</p>	<p>This investigator is exploring the mechanism underlying creation of different cell types during development in order to understand which factors contribute to control of the number of cells present in the body.</p>
<p>THE WOMEN OF ACTION AWARD ICRF U.S., Los Angeles Mikhail Kolot, Ph.D. Tel-Aviv University <i>Recruitment of a Phage Site-Specific Recombination System for Eukaryotic Gene Manipulations</i> 1st Year</p>	<p>Cancer often results from a combination of genetic events that include mutations, chromosomal rearrangements, and/or gene insertions. The aim of this project is to develop an improved system of gene insertions in mammalian cells for the treatment of cancers as well as hereditary defects.</p>

AWARD	DESCRIPTION
<p>THE DR. RANDY S. ROSEN, DR. ALEXANDER VARSHAVSKY, AND CAMRYN MANHEIM HONORARY AWARD ICRF U.S., Los Angeles Alon Margalit, Ph.D. MIGAL, Galilee Technology Center <i>Novel DNA Cancer Vaccines for Induction of Tumor-Specific CTLs</i> 2nd Year</p>	<p>Using a mouse model for skin cancer (melanoma), this scientist will employ genetic engineering techniques in order to develop new vaccination strategies to induce a specific immune system response directed against cancerous cells.</p>
<p>THE JEFF SOLOMON HONORARY AWARD ICRF Canada, Montreal Hanah Margalit, Ph.D. Hebrew University/Hadassah Medical School <i>Implications of MicroRNAs in Cancer</i> 1st Year</p>	<p>By developing sophisticated computer algorithms and applying them to the human genome sequence – a process known as bioinformatics – this investigator will look for a possible relationship between a new group of genes and cancer.</p>
<p>THE AMY NEWMAN BROWN HONORARY AWARD ICRF Canada, Toronto Ramit Mehr, Ph.D. Bar-Ilan University <i>Analysis of Immunoglobulin Gene Lineage Trees in B Cell Lymphomas</i> 1st Year</p>	<p>This researcher will use a novel, bioinformatic method of graphic analysis to study immunoglobulin (Ig) gene diversification in B cell lymphomas that should lead to new insights into disease progression and that may provide better diagnostic and prognostic tools.</p>
<p>THE NEW LEADERSHIP AWARD ICRF Canada, Montreal Ze'ev Paroush, Ph.D. Hebrew University/Hadassah Medical School <i>Combinatorial Signalling in Drosophila Terminal Fate Specification</i> 2nd Year</p>	<p>The correct genes must be expressed in the correct tissue at the correct time or cancer will result. This study endeavors to understand the process underlying gene regulation.</p>
<p>THE LADIES GOLF AWARD ICRF Canada, Montreal Dina Raveh, Ph.D. Ben-Gurion University of the Negev <i>Control of Cell Proliferation by Inhibition of SCF Ubiquitylation Activity</i> 1st Year</p>	<p>Cell division is a highly-regulated process with multiple checkpoints. When this system goes awry, tumors form and cells divide in an uncontrolled manner. This scientist will use yeast as a model system to study a protein involved in cell cycle progression that, under certain conditions, may prevent cell division.</p>
<p>THE DR. M. E. HODES MEMORIAL AWARD ICRF U.S., New York Yosef Shaul, Ph.D. Weizmann Institute of Science <i>Mdm2 and Ubiquitin Independent p53 Proteasomal Degradation</i> 1st Year</p>	<p>When DNA is damaged, the p53 tumor suppressor protein accumulates in high levels within cells in order to help repair the damage. This researcher has discovered a chemical that can control the mechanism of p53 activation, and will study it further in order to learn how it might be utilized to fight cancer.</p>

AWARD	DESCRIPTION
<p>THE LEE ANN & MELVIN H. JACOBS FOUNDATION AWARD ICRF U.S., Los Angeles Vivian Teichberg, Ph.D. Weizmann Institute of Science <i>Blood Glutamate Scavenging in the Control of Glioma Growth and Invasiveness</i> 1st Year</p>	<p>Recent studies suggest that gliomas rely heavily on the use of the brain neurotransmitter <i>glutamate</i> for their expansive growth. This scientist will use a rat model of malignant glioma to test a procedure to eliminate excess glutamate in the brain by causing a decrease of glutamate in the blood.</p>
<p>THE SALLY & MICHAEL GORDON PROGRAM FOR CELL BIOLOGY AWARD ICRF U.S., New York Talila Volk, Ph.D. Weizmann Institute of Science <i>Coordination between Cell Cycle Progression and Tissue Differentiation in Drosophila</i> 1st Year</p>	<p>There is a delicate balance between cell division and the development into different tissue types. When this coordinated process is disrupted, cancer often results. In order to gain a better understanding of what may inhibit or activate these mechanisms, this researcher will use the fruit fly as a model system to study the molecular machinery that regulates cell division in differentiated tissues.</p>

