

THE DOSSIER

The Digest on CCR Staff Scientists and Staff Clinicians: Information, Employment and Research

March 2014

Issue 15



From the Editor

Welcome to the March issue of The Dossier, a newsletter dedicated to the Staff Scientists and Staff Clinicians (SSSC) of the CCR!



This issue contains important messages from the Director's Office and a special article by Dinah S. Singer, Ph.D. Our Core Corner highlights collaborations among Staff Clinicians Austin Duffy, M.D., Ravi Madan, M.D., and Arun Rajan, M.D., with the Clinical Pharmacology Program, headed by William

Douglas Figg Sr., Pharm. D. In our Technology Corner, David Goldstein, Ph.D., and Mariam Malik,

Ph.D., discuss the new CCR Research Exchange (CREx) program.

Rimas Orentas, Ph.D., and Anu Puri, Ph.D., provide us with information about the upcoming SSSC Annual Retreat, while the published work of Masaki Terabe, Ph.D., is highlighted in our Author's Corner. We also feature Marion K. Bona, Ph.D., in our SSSC Corner. We hope to continue to provide pertinent information to aid in the success of SSSCs. Please send your contributions, suggestions and comments to budhua@mail.nih.gov.

Anuradha Budhu, Ph.D. (SS)
Editor-in-Chief

Laboratory of Human Carcinogenesis

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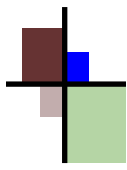
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From the Office of the Director

Reorganization Ensures Balance of Clinical Skills and Scientific Knowledge

Throughout the years as CCR has successfully recruited talented new researchers and said farewell to others and as scientific opportunities rapidly change, our areas of strength and our organizational needs continue to grow and evolve. To ensure that the organizational structure of CCR also evolves to meet our ever-changing needs and demands, we recently carried out a carefully considered reorganization. Our new structure is primarily aimed at maximizing clinical collaborations along thematic clinical oncology efforts, with multidisciplinary teams that bring together medical oncologists, surgeons, and bench scientists.

Here is what resulted. The Medical Oncology Branch has been officially abolished and three new branches created: The Thoracic and GI Oncology Branch (TGIB) will be led by co-Chiefs, David Schrupp, M.D., and Raffit Hassan, M.D. Stanley Lipkowitz, M.D., Ph.D., Chief and Pat Steeg, Ph.D., Deputy Chief will lead the Women's Malignancies Branch (WMB). James Gulley, M.D., Ph.D., will serve as Chief of the Genitourinary Malignancies Branch (GMB) with Doug Figg, Pharm.D., as Deputy Chief. In addition, three branches/laboratories have been renamed and their functional statements revised to reflect updated clinical research goals. The Metabolism Branch (Thomas Waldmann, M.D., Chief) is now the Lymphoid Malignancies Branch (LYMB); the Laboratory of Molecular Pharmacology (Yves Pommier, M.D., Ph.D., Chief) is now the Developmental Therapeutics Branch (DTB); and the Cell and Cancer Biology Branch (Kathy Kelly, Ph.D., Chief) is now the Laboratory of Genitourinary Cancer Pathogenesis (LGCP).

In addition, to ensure continued oversight and leadership of the medical oncology fellowship program and patient care infrastructure, the Office of the Medical Oncology Service was created within the Office of the Clinical Director and will be headed by Dr. Gulley.

With the restructuring of the clinical program came the opportunity to reinvigorate our clinical protocol scientific review process. From feedback received during the vetting of the reorganization concept, many researchers from our basic laboratories encouraged CCR to continue to find ways to promote translational partnerships. Now a new CCR scientific protocol has been created as an open forum with the

hope of stimulating involvement and encouraging collaboration among basic and clinical scientists. All senior staff, including, of course, our Staff Scientists and Staff Clinicians, provide feedback on each protocol through a question and answer forum followed by confidential ballot voting. Ballots ask for a level of enthusiasm for the proposed protocol in areas of "Scientific Importance/Strategic Priority", "Operational Feasibility", and "Resource Utilization."

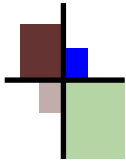
We hope that the broad input from the CCR community will make our protocols even better. CCR Scientific Review meetings are held on the first and third Friday of each month, 1:30-3:30 PM in the Lipsett Amphitheater, Building 10. I encourage each of you to attend and participate. You can learn more about protocol scientific review and request to be added to the announcement here: <https://ccrod.cancer.gov/confluence/display/CCRCRO/CCR+Scientific+Review>

We are excited to monitor the progress of these recent changes and welcome your continued feedback as you are each an important part of helping us reshape the CCR Clinical Program.



Lee J. Helman, M.D.
Scientific Director for Clinical Research





The 10th Annual SSSC Retreat

“Kicking Cancer in the Ras”

April 25, 2014, NCI, Shady Grove

The National Cancer Institute’s Center for Cancer Research (CCR), Division of Cancer Epidemiology and Genetics (DCEG), and the Frederick National Laboratory for Cancer Research (FNL) will hold a retreat for all Staff Scientists and Staff Clinicians on April 25, 2014.

We are trying an exciting new location this year: The NCI campus at Shady Grove. There is free parking and shuttle service from all campuses. To make things really special, weather permitting, we will have our poster sessions outside (beneath a tent) on the lawn of the NCI Shady Grove campus. Our theme this year is a bit provocative, “Kicking Cancer in the RAS.” Given the renewed focus on RAS-driven cancers, this is a great chance for all of us to hear directly about the cutting-edge research in this field.

The retreat will feature opening remarks by the new head of DCEG, Stephen Channock, M.D. This will be immediately followed by our keynote speaker, **Frank McCormick, Ph.D., FRS.**, the past AACR president and an international leader in cancer research. In addition to heading the UCSF cancer center, he is the Director of the RAS Cancer Genetics Initiative at FNL. Following Dr. McCormick’s remarks, we will have an interactive panel with presentations from five other leaders in the field of cancer research whose research also has a focus on RAS. The current scheduled panelists are: Ruth Nussinov, Ph.D., Head, Computational Structural Biology Group, CCR, NCI; Stuart Yuspa, M.D., In vitro Pathogenesis Section, Laboratory of Cancer Biology and Genetics, CCR, NCI; David C. Heimbrook, Ph.D., CEO, Leidos Biomedical Research, Inc., FNL; Deborah K. Morrison, Ph.D., Cellular Growth Mechanisms Section, Chief, Laboratory of Cell and Developmental Signaling, CCR, NCI; and Nadya Tarasova, Ph.D., Head, Synthetic Biologics and Drug Discovery Facility, Cancer and Inflammation Program, CCR, NCI.

The discussion time will include thoughts about the following topics, in addition to your own ideas: a) Why is Ras THE target? b) Is RAS more than a growth regulator? c) How can we insure that the RAS project succeeds? d) Are there better molecular targets in the Ras pathway than Ras itself? and e) Is RAS really non-druggable? The panel discussion time is designed to be interactive and informative and

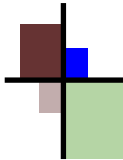
will allow for plenty of questions from the retreat participants, so come with questions or simply sit back, take it all in, and be inspired. Our hope is that this session will lead to new insights and ideas for us all.

This year we are trying new program events, based on feedback from previous retreats. Many had expressed a wish to hear from fellow SSSC colleagues about their own research. Thus, we will have a session to present some of the best abstracts in an oral format as well as judged posters in each of three categories: Clinical and Translational Research, Basic Research, Technological and Methodological Development. Travel awards will be given to the top three posters presented at the retreat. The poster session is always a highlight of the retreat and a unique time to network with colleagues, so we strongly encourage you to participate. Our closing remarks this year will be by NCI CCR Director, Robert Wiltrot, Ph.D. Dr. Wiltrot always gives us an honest review of where the NCI has been over the last few years, shares his vision of where we are headed, and focuses directly on SSSC concerns, so his remarks are not to be missed. So, please save the date and we hope to see you there! Details for online registration and abstract submissions will be shared soon on the SSSC listserve, and announced throughout the NCI. We look forward to seeing you at the retreat.



**Rimas Orentas, Ph.D. (AS)
and Anu Puri, Ph.D. (SS)**
2014 SSSC Retreat Co-Chairs





Clinical Collaborations Between NCI Investigators and the Clinical Pharmacology Program



The Clinical Pharmacology Program (CPP) is a core facility open to all NCI investigators for pharmacology-related studies. Such preclinical procedures include compound solubility, stability, formulation experiments, animal pharmacokinetic study design and execution, in vitro drug metabolism and drug-drug interactions. At the clinical stage, the CPP provides insight into pharmacokinetic trial design, sample collection, de-identification, long-term storage (plasma, DNA, tissue, PBMC, saliva, urine), measurement of drug(s) in biological matrices, pharmacogenetics analysis, and pharmacometric modeling (includes pharmacokinetics (PK), pharmacodynamics, pharmacogenetics, response and toxicity data) of the drug of interest to best describe how the population handles the drug and to simulate for future trials what to expect in terms of response and toxicity. The CPP has collaborated with many investigators within the CCR, including Austin Duffy, M.D., [GI Malignancies Section, Thoracic and Gastrointestinal Oncology Branch (TGIB)], Arun Rajan, M.D., (Thoracic Oncology Sec-

-tion, TGIB), and Ravi Madan, M.D., (Genitourinary Malignancies Branch) all Staff Clinicians within CCR.

Dr. Duffy utilized the expertise of the CPP in the design and execution of five separate human studies in pancreatic and colorectal cancer as well as hepatocellular carcinoma. The CPP provided processing and handling of tissue samples for various immune parameters, a major interest of the GI Malignancies Section, and one not able to be pursued without this critical and highly expert support.

Several CPP collaborations were conducted with Dr. Rajan, including a PK study of an orally administered heat shock protein 90 inhibitor (PF-04929113, aka SNX-5422) where the CPP processed all blood samples, measured drug concentrations in plasma and calculated relevant PK parameters. This study demonstrated that a twice-weekly schedule results in a linear correlation between PK parameters and Hsp70 induction across dose levels (Rajan et al., *Clin Cancer Res* 2011;17;6831-9).

Another collaboration with Dr. Rajan involved the PARP inhibitor, olaparib, in combination with gemcitabine and cisplatin. It was shown that the presence of gemcitabine increased the exposure to olaparib compared to olaparib alone and that accumulation of olaparib occurred from multiple doses with gemcitabine and resulted in plasma concentrations significantly greater than steady-state levels (Rajan et al., *Clin Cancer Res* 2012;18;2344-51). This could potentially explain the myelosuppression observed in this study.

Continued on pp.5

Please share this newsletter with your colleagues and visit the SSSC website at sssc.nci.nih.gov



The Core Corner, Con't.

Section Editor: Anne Gegonne, Ph.D. (SS)

The CPP was instrumental in developing an ongoing clinical trial (NCI-12-C-0204) with Dr. Madan, combining cabozantinib, a promising C-met/VEGF-R2 inhibitor, with docetaxel/prednisone. The CPP designed the pharmacokinetic studies and analyzed preliminary drug interactions before starting the phase I trial of this combination in 2012, with 15 patients already treated. Currently, Dr. Madan is in the process of designing a phase II component of the study.

In collaboration with the Genitourinary Malignancies Branch, the CPP also plays a vital role in the development of VT-464, a novel CYP-17 lyase inhibitor. A clinical trial of VT-464 in prostate cancer is set to commence in February 2014 and the CPP will be processing all samples, measuring plasma concentrations of VT-464 for pharmacokinetic studies, and modeling the data to provide insight into future stud-

ies and trial design.


Please contact Dr. W. Douglas Figg (wf13e@nih.gov, 301-402-3622) to discuss potential collaborations.

William Douglas Figg Sr., Pharm.D

Head, Molecular Pharmacology Section
Deputy Branch Chief, Genitourinary Malignancy
Branch

Cody J. Peer, Ph.D.

Research Fellow
Clinical Pharmacology Program



The Technology Corner

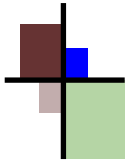
The CCR Research Exchange (CREx)

Access to cutting-edge research technologies in support of biomedical research has become a significant challenge due to rising costs and continually shrinking budgets. Furthermore, larger research centers, like CCR, often fail to leverage the organization's combined purchasing power or collective consumer experience to ensure efficient spending of research dollars when acquiring research services. While constrained by high costs and reducing budgets, many CCR investigators are also uninformed about cost-effective, internal resources and cores that are openly available to them. The existence of multiple and often outdated websites makes exploring and comparing capabilities of internal and external vendors confusing, cumbersome, and inefficient.

These concerns have motivated us (the CCR Office of Science and Technology Resources [OSTR]) to partner with the company Assay Depot to develop the CCR Research Exchange (CREx), a first-of-its-kind research marketplace for an academic institution. Assay Depot has successfully launched private re-

search exchanges for pharmaceutical companies, including Astra Zeneca, Pfizer, and Johnson & Johnson. Similar to these marketplaces, CREx is a private, online research marketplace that comprehensively catalogs the majority of research services available through internal research service providers and over 8,000 commercial vendors. NCI internal service providers include over 50 NCI cores available to all CCR investigators, as well as over 20 NCI Collaborative Resources that are open to CCR investigators on a project-by-project basis at the discretion of the Lab Manager or Principal Investigator. CREx also includes a listing of all scientific software available to CCR investigators. The platform takes advantage of search and comparison algorithms used by many popular online marketplaces, like Amazon, Kayak, and others.

Research services in a variety of disciplines, including biology, pharmacology, and chemistry are easily searchable using the taxonomy and its subcategories, or typing in a specific search term. Results can



The Technology Corner Con't

The CCR Research Exchange (CREx)

be viewed as specific service listings that further refine services and include associated vendors offering that service. Alternatively, results can be viewed by all vendors associated with the original search term or subcategory. Filters can be used to either locate NCI cores and facilities (internal) that offer the services and technologies, or narrow the list to cores and vendors that are included in the OSTR subsidy program. Additional filters provide further refinement of results by certifications like CLIA, PHS, and AAALAC, amongst others. Investigators can thus build a list of potential vendors of interest for a specific research service.

Once vendors of interest have been identified, the platform enables communication with multiple cores and vendors simultaneously through the investigator's private dashboard. The dashboard allows investigators to keep track of their requests, gather quotes and capabilities, and easily share this information with lab colleagues by adding them as followers. Quotes obtained from multiple vendors can also be used to fulfill procurement requirements to justify orders exceeding \$3,000. Most importantly, CREx allows users to review and rate vendors and their services letting them share their knowledge and experiences with the rest of CCR.

OSTR has set aside subsidy funds to help CCR investigators pilot studies with new vendors, especially for high-risk projects. To encourage the CCR community to adopt this new platform, any research services identified using CREx will be eligible for special OSTR subsidies.

CREx is available to all of CCR. Investigators can sign up using their NIH login credentials at nci.assaydepot.com to start using the platform. To quickly learn how to navigate the system, check out the "How To Videos" under the Help section on the home page. Contact us at OSTR (goldsted@mail.nih.gov or malikm@mail.nih.gov) to schedule demos of CREx for Labs and PI groups, or to learn more about the OSTR subsidy program.



David Goldstein, Ph.D.

Associate Director

Office of Science and Technology Partnerships

Mariam Malik, Ph.D.

Assistant Director for Technology Development

Office of Science and Technology Partnerships



The PI Corner

Section Editor: Lakshmi Balagopalan, Ph.D. (SS)

Today, to be successful, labs need to be able to apply many different technologies and approaches to answer their research questions. Therefore, it has become increasingly important to have a mechanism to maintain a stable group with diverse expertise. The Staff Scientist position was established to address that need. Indeed, the Staff Scientists at NCI are highly accomplished scientists who play an important role within a research team, contributing intellectually and technically to solving critical problems in biology.

Despite the demonstrated importance of the position, it remains surprisingly ill-defined. It is left to each PI and Staff Scientist to determine how the position is used. And it is being used very diverse ways in different labs. In some labs, the Staff Scientist is almost a senior postdoc, carrying on virtually independent research within the context of the research focus of the lab. In other labs, the Staff Scientist has defined projects designed by the PI. In yet other labs, the Staff Scientist is the expert in a particular area and conducts all of the work in that area. However, it is relatively seldom that this is clearly established and agreed upon by both Staff Scientist and PI. Among the questions that the Staff Scientist and PI should discuss and agree upon are: what mentoring should the Staff Scientist expect the PI to provide, what will be the Staff Scientist's responsibilities, how much research independence will the Staff Scientist have, what is the long-term goal and career path for the Staff Scientist and what is the PI's responsibility to the Staff Scientist?

As these positions increase in number, these issues become increasingly important to confront. Admittedly, those conversations are often difficult to initiate, especially for those who are already well established in a lab. But, it's critical to talk to the PI, to make sure that both PI and Staff Scientist have a common understanding of what each expects. Problems most often develop when the PI and Staff Scientist haven't communicated effectively. It's easiest to discuss expectations when starting the position. But, even for established Staff Scientists, those opportunities do arise (e.g. during the performance evaluation) and should be taken advantage of.

I anticipate that the position of Staff Scientist is going to continue to grow in importance within the biomedical research enterprise. The need for Staff Scientists is being recognized in the extramural community and

NCI is beginning to consider how such a position might be constructed to make it an appealing career path. As Director of an extramural Division at NCI and PI in an intramural lab, this has been an issue that I have given considerable thought. I have already had a number of discussions on this issue with my colleagues. However, missing from these discussions has been the perspective of the Staff Scientist. I would very much like to hear from all of you regarding your thoughts and ideas on the elements that make a Staff Scientist position an appealing and rewarding career option. Please send me your ideas and suggestions at dinah.singer@nih.gov.



Dinah S. Singer, Ph.D.
Head, Molecular Regulation Section,
Experimental Immunology Branch



The Delicate Balance among Three Types of T cells in Concurrent Regulation of Tumor Immunity

[Izhak L, Ambrosino E, Kato S, Parish ST, O'Konek JJ, Weber H, Xia Z, Venzon D, Berzofsky JA, Terabe M. \(2013\) *Cancer Research* 73, 1514-23.](#)

The immune system protects us by eliminating “non-self” or “abnormal self” (e.g. pathogens and tumors) from our body. However, immune responses against self-antigens will result in the development of autoimmune diseases. To prevent such deleterious events, the system has developed many negative feedback mechanisms. It is now evident that tumors take advantage of negative feedback mechanisms to evade the immune system. Targeting immune suppressive pathways is an attractive approach for the development of cancer treatments. Recently, *Science* magazine has named Cancer Immunotherapy as a Breakthrough of the Year 2013 (1).

There are multiple cell types and molecules involved in the regulation of the immune response against cancer. Among these, there is not one pathway or particular cell type that is commonly found to be necessary for the suppression of tumor immunity in different tumor types or tumor models. For example, CD4⁺CD25⁺Foxp3⁺ regulatory T (Treg) cells have been reported to be involved in suppression of tumor immunity observed in tumor-bearing individuals in both mice and humans. Blockade of Treg cells induces significant suppression of tumor growth in some mouse tumor models. On the other hand, the same treatment does not show any effect in other tumor models. Moreover, Treg cell-targeted therapy has not yet achieved any success in the clinic. Thus, it is critical to understand the relationship among different negative feedback pathways or cell types.

In the lab headed by Jay Berzofsky, M.D., Ph.D., we have discovered that CD4⁺ CD1d-restricted type II NKT cells suppress tumor immunity in mouse tumor models (2). NKT cells are a unique T cell population that recognizes lipids, but not peptides, presented by an MHC-like molecule, CD1d. There are two types of NKT cells distinguished by the TCR α chain that they express; type I NKT cells express a V α 14J α 18 semi-invariant chain and type II express diverse TCR chains, but not the V α 14J α 18 semi-invariant chain. Importantly these two types of NKT cells play opposing roles in the regulation of tumor immunity; type I enhances and type II suppresses immune response.

Furthermore, they counteract each other to form an immunoregulatory axis. In a lung metastasis model using colon carcinoma CT26 cells, NKT cell-deficient mice were highly resistant to tumor growth, but blockade of Treg cells had no or minimal effect on tumor growth. Conversely, when CT26 cells were administered subcutaneously, Treg blockade induced tumor rejection, while NKT cell-deficient mice developed

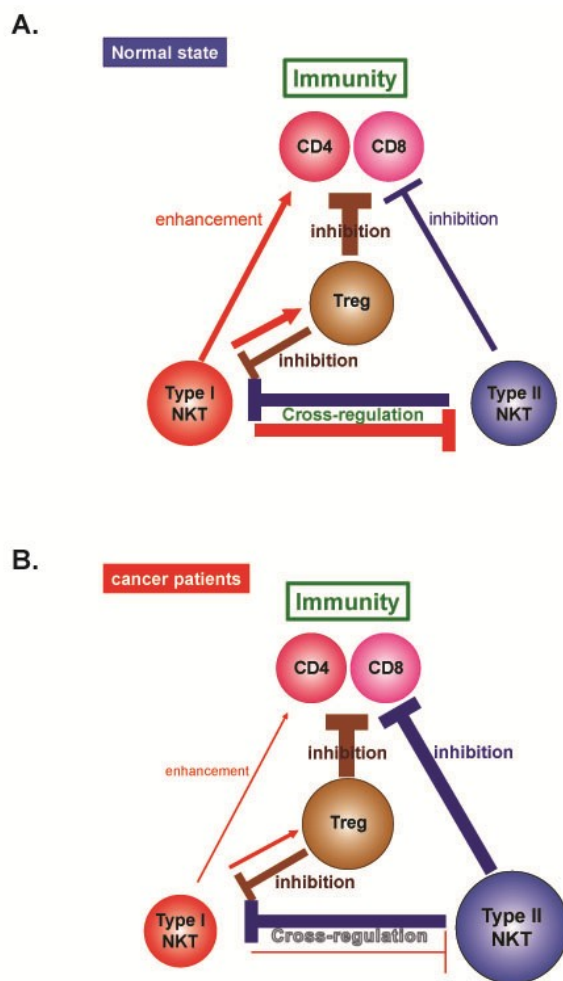
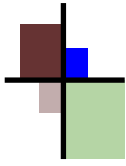


Figure 1. The relationship among type I NKT cells, type II NKT cells and Treg cells in either a normal (A) and tumor-bearing host (B).



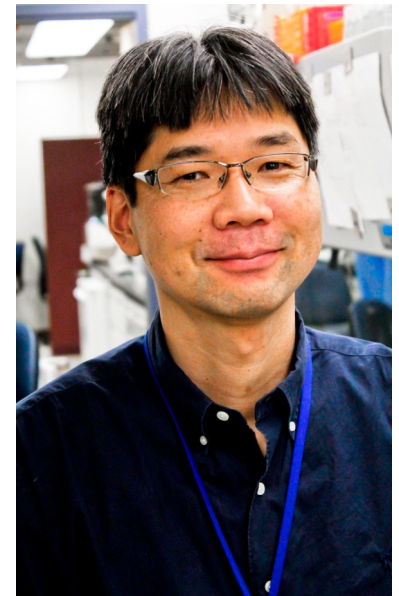
The Author's Corner Con't

Section Editor: Cristina Bergamaschi, Ph.D. (SS)

tumors similar to NKT cell-intact mice. Why do the same tumor cells employ different mechanisms to evade the immune system when they grow in different tissues?

To answer this question, we recently studied the relationship between NKT cells and Treg cells in the CT26 subcutaneous tumor model and discovered that type I NKT cells determine the relative roles of Treg cells and type II NKT cells (3). When both types of NKT cells are intact, such as in wild-type mice, type I NKT cells counteract the immunoregulatory activity of type II NKT cells. This interaction between the two types of NKT cells leaves Treg cells to play a dominant role in the regulation of tumor immunity, and blocking Treg cells induces tumor rejection (Figure 1A). In type I NKT cell-deficient mice, type II NKT cells are not counteracted by type I NKT cells. Under this condition, blocking Treg cells is not sufficient to remove immune suppression, but simultaneous blockade of type II NKT cells is also necessary to induce tumor rejection (Figure 1B). This observation was not unique to this tumor model and was also confirmed in a model of renal cell carcinoma, R331. Since it has been reported by many groups that cancer patients have a functional deficiency as well as reduced numbers of type I NKT cells, it is likely that type I NKT cell-deficient mice mimic the immunological status of cancer patients. Therefore, this discovery may provide a new modality of cancer immunotherapy where both Treg cells and type II NKT cells need to be inhibited.

Masaki Terabe plays a critical role in the research program of the Molecular Immunogenetics and Vaccine Research Section, Vaccine Branch by serving as a Deputy Section Chief. He leads the tumor immunology team in the lab by training and mentoring four trainee members. As a team leader he has published papers as a corresponding and/or a senior author. He also conducts his own lines of research and multiple collaborative projects.



Masaki Terabe, Ph.D. (AS)
Molecular Immunogenetics and
Vaccine Research Section,
Vaccine Branch



References:

1. Couzin-Frankel, J. (2013) *Science* **342**, 1432-1433.
2. Terabe, M, Swann, J, Ambrosino, E, Sinha, P, Takaku, S, Hayakawa, Y, Godfrey, D. I, Ostrand-Rosenberg, S, Smyth, MJ, and Berzofsky, JA. (2005) *Journal of Experimental Medicine* **202**, 1627-1633.
3. Izhak, L, Ambrosino, E, Kato, S, Parish, ST, O'Konek, JJ, Weber, H, Xia, Z, Venzon, D, Berzofsky, JA, and Terabe, M. (2013) *Cancer Research* **73**, 1514-1523.

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The SSSC Corner

Section Editor: Takashi Furukawa, Ph.D. (SS)



I began my scientific career in *Drosophila* research and received Masters and Ph.D. degrees in Molecular Genetics from the University of Heidelberg in Germany. A postdoctoral fellowship from the German research foundation (DFG) allowed me to spend three years at Brown University, in Providence, Rhode Island, deciphering DNA puffs of *Sciara coprophila*. Returning to Europe, I took positions at the European Molecular Biology Laboratory in Heidelberg and the University of Freiburg in Germany and also experienced working in industry at Hoffmann-La Roche in Basel, Switzerland. In 1990 with a change in research fields to infectious diseases, I accepted a position as a senior instructor at Case Western Reserve University in Cleveland, Ohio.

I joined the HIV Drug Resistance Program at the NCI campus in Frederick as a Staff Scientist in 1999. The Frederick campus is located within Fort Detrick and operated by Leidos Biomedical Research, Inc.. Working on a base is a special experience. We see a lot of military personnel and equipment. Every day at 5p.m. all traffic respectfully stops for the lowering of the flag ceremony.

As a member of the Reverse Transcriptase Biochemistry Section, directed by Stuart Le Grice, Ph.D., I enjoy a versatile research program. This includes aspects of HIV-1 and retrotransposon reverse transcriptase (RT) biochemistry, including the interaction of these enzymes with their nucleic acid substrates and testing RNase H inhibitors as well as analysis of RNA secondary structure. More recently, I was involved in

the structural analysis of RTs from the gammaretrovirus XMRV and yeast LTR-retrotransposon Ty3. Another enjoyable task I have is mentoring high school and undergraduate students, who are always enthusiastic about their experiments and can't wait to see results. Through our outreach program, which connects scientists with elementary schools, I also had the opportunity to teach basic-level science to second and third graders.

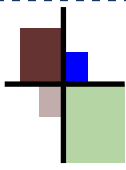


Marion's two snow-loving dogs, Pita, a seven year old Siberian Husky (left), and Moka, a six year old Bernese Mountain Dog (right), are pictured.

My spare time is divided between visiting family in Colorado, Germany, and Scotland, and my two dogs Pita and Moka. In the summer I enjoy riding my bike and kayaking the Potomac and Monocacy rivers at full moon with family and friends. In the winter, I love cross-country and downhill skiing.

Marion K. Bona , Ph.D. (SS)
HIV Drug Resistance Program
Retroviral Replication Laboratory





Announcements



Congratulations!

*Join us in congratulating this year's SSSC winners
of the NCI Director's Innovation Awards!*

Lakshmi Balagopalan, Ph.D., Laboratory of Cellular and Molecular Biology
Anjali Shukla, Ph.D., Laboratory of Cancer Biology and Genetics
William Telford, Ph.D., Experimental Transplantation and Immunology Branch

Attend!

The CCR and DCEG SSSC Annual Retreat
April 25, 2014
NCI Shady Grove Campus

Congratulations!

Ofelia Olivero, Ph.D., (AS) has authored a book on Interdisciplinary
Mentoring in Science ([http://www.amazon.com/Interdisciplinary-
Mentoring-Science-Strategies-Success/dp/0124159621](http://www.amazon.com/Interdisciplinary-Mentoring-Science-Strategies-Success/dp/0124159621))

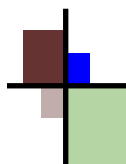
Attend!

SSSC Social
June 10, 2014, 3-4 p.m.
Bldg. 37 North Entrance (park benches)
In case of inclement weather: 4-5 p.m., Bldg. 37, Rm. 2107/2014

Looking for Editorial Experience?

*The Dossier is looking for SS or SC to participate as Section
Editors. If interested, please contact Anuradha Budhu at
budhua@mail.nih.gov*





A Call for Content



We need your input! Send your articles or suggestions with subject title “The Dossier” to budhua@mail.nih.gov

This newsletter is an avenue for you to express your ideas and thoughts regarding being a Staff Scientist or Staff Clinician at CCR and to make pertinent announcements.

Your contribution is very important to the success of The Dossier. Please send us your commentary, announcements, and suggestions for topics/subject matter and we will do our utmost to include your material in upcoming issues.

Join a SSSC Committee

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