THE DOSSIER

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

December 2011 Issue 7

From the Editor

Welcome to the December 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 Jonathan R. Keller, Ph.D. An update on the new SSSC Mentoring Forum is discussed along with the continuation of a series summarizing Information Technology resources at NCI. We highlight the work of Vladimir Majerciak, Ph.D. and Michael Kruhlak, Ph.D. and their successful experience with the Microscopy Facility in the Experimental Immunology Branch. We also provide important news on the SS Quadrennial Review. We hope to continue to provide relevant and 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
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In This Issue

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From the Office of the Director

Scientific Networking Is Key to Our Progress

This December 23rd our nation will celebrate the 40th anniversary of the National Cancer Act. Since the Act's passage, CCR's researchers have made many contributions to understand and control cancer. This progress has been made, in part, because of CCR's infrastructure, one that enables our lab chiefs, principal investigators, staff scientists, and staff clinicians to network effectively.

CCR fosters networking opportunities primarily through its Centers of Excellence (COE) and Faculties. As our scientists consistently reach new milestones that build toward breakthroughs, these structures allow them to readily communicate their progress throughout CCR's research community. By participating in the COEs and Faculties' meetings, symposiums, and joint-projects, our researchers can create win-win environments—where one scientist's gain is everyone's gain—where all researchers share their collective understanding of a particular focus area and, in turn, contribute their relevant technological skills and data to mount more effective, collective team approaches to complex problems.

CCR scientists also create network synergies as a result of their broad extramural collaborations. As our ambassadors, they proactively link our efforts to those outside CCR, share their mastery of in-house technology and scientific knowledge, interact with pharma and academia to discover and develop better cancer therapies, and work with the NIH Office of Technology Transfer to establish CRADAs and other licensing agreements that facilitate our progress.

" By participating in the COEs and Faculties' meetings, symposiums, and joint-projects, our researchers can create win-win environments—where one scientist's gain is everyone's gain—….."

Our commitment to efficient networking will continue to speed up the pace at which our lab discoveries transition into successful clinical benefits. I wish to encourage our staff scientists and staff clinicians to take full advantage of all of these existing opportunities for scientific networking. By joining and contributing to CCR's Faculties and COEs and by developing your own network of collaborations, you can enrich your own career paths and help our organization continue to be productive. By cooperating with other labs within and outside CCR, you can share the fruits of your labor and benefit from the insights of others.

Robert Wiltrout, Ph.D.
Director, Center for Cancer Research

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

The PI Corner

Section Editor: Caterina Bianco, M.D., Ph.D. (*AS*)

Staff Scientists and PIs share many of the same hats or responsibilities in the laboratory including science, mentoring, and administrative (our personal favorite) hats. Yet each PI and Staff Scientist contributes in unique ways to manage the daily challenges of running a laboratory. I feel that defining and maintaining the right balance between these responsibilities has greatly enhanced the overall function and productivity of our laboratory, and the mission of the CCR. Dr. Kim Klarmann and I have worked together to clearly define her responsibilities by dove-tailing her unique strengths and abilities with these responsibilities. This process was achieved through mutual respect, communication, compassion, humor, and awareness. As we achieved this balance, we improved in all areas including enhanced scientific productivity, improved mentoring and less distraction from our administrative responsibilities. In our laboratory, Dr. Klarmann spear heads a scientific project to determine if Id genes are therapeutic targets for hematopoietic malignancies, manages a complex animal colony, trains incoming students and post-doctoral fellows in methods of stem cell purification and development in vitro and in vivo, works within the recent budget reductions, and strives to maintain outstanding relationships with the scientific and administrative staff. I know that the Staff Scientists in other laboratories are equally essential to the functions of their labs, which is due to their extraordinary abilities, effort and dedication. What a great opportunity to congratulate our Staff Scientists on all their accomplishments, and personally thank them for all that they do each day to support and make our laboratories and science the best that they can be.

" ….each PI and Staff Scientist contributes in unique ways to manage the daily challenges of running a laboratory.'"

Jonathan R. Keller, Ph.D.
Head, Hematopoiesis and Stem Cell Biology Section
Laboratory of Cancer Prevention

The SSSC Pilot Professional Development Mentoring Forum

The *Staff Scientist/Staff Clinician Professional Development Committee* recently partnered with NCI's *Office of Workforce Management and Development* to create a mentoring program for the Staff Scientists/ Staff Clinicians community. The program, now in its pilot year, defines mentoring as a supportive relationship established between two individuals where knowledge, skills, and experience are shared. The goal of this program is much broader than strictly scientific mentoring; it is to assist SSSCs with crystallizing and realizing their professional and career development goals and potential. Fourteen enthusiastic prospective mentees attended the program's first orientation session on October 20th, where they were challenged to contemplate what it will take for them to engage in a successful mentoring partnership, begin crafting their personal vision statement, and start identifying specific goals for mentoring.

After the next program meeting on November 17th, participants began the process of identifying possible mentors and initiating discussions with them about a

The SSSC Pilot Professional Development Mentoring Forum (Continued)

potential mentoring relationship. Once they have identified their mentors, mentees will engage in monthly meeting with their mentors and attend quarterly program check-ins with fellow mentees and *Office of Workforce Management and Development* program managers.

This mentoring program is the first of many efforts the *Professional Development Committee* and the *Office of Workforce Management and Development* are embarking upon to empower Staff Scientists and Staff Clinicians. Stay tuned for more updates!

Shannon Connolly, MSW, MPA
NCI Office of Workforce Management and Development

The Quadrennial Review Corner

2012 Quad Review for Staff Scientists

The CCR ARC recently informed all SSSC that are due for a quadriennal review to submit their review packages through their AO to the Bldg 31 ARC office by December 21. All reviewees should have been notified at this point. If you think the timing of your quad review is not accurate, please contact your AO for clarification.

For ***Staff Scientists*** who are anticipating a review next spring, here are some points gleaned from the last review process to consider. Reviewers are asked to comment specifically on accomplishments in these six areas: scientific productivity (pubs, patents, clinical trials), scientific presentations (talks, posters), participation in the scientific community (faculties, special interest groups, technology transfer, journal reviewer), collaborations, mentoring/ teaching, and continuing education.

The quad review package has three parts: the recommending memo from your PI, your CV, and two letters of recommendation from collaborators who know you and your work. In their recommending memo, your PI will be asked to discuss what you've done in each area, and also describe your role in the lab; be proactive by providing examples of how you have contributed to each of these areas to your PI.

Make sure you give specific details about everything in your CV. The reviewers only know what you tell them. Also, give outcomes - instead of just listing mentees' names, show how your mentoring affected their careers (pubs, posters, educational opportunities), and let us know where they are now (what medical or graduate school did they go on to, what university are they now a PI). Don't just list collaborators, describe your contributions to the projects. Be sure to make the distinction between a poster presentation (and did you or someone else present the poster?) and a talk. It's not a bad idea to list the meetings you attended, even if you didn't present; this is evidence of continuing education. Contributions to the scientific community cover a broad range of activities, again be specific. There are many terrific opportunities at the NIH; being involved in committees, getting to know scientists in other institutes, and remaining current with developing technologies at NIH. These efforts may also lead to collaborations with other NIH colleagues.

The Quadrennial Review Corner (Continued)

Your publications are an important measure of accomplishment. The number of publications, type of paper (research, methods, review), journal quality, and authorship position (first, last, middle) are all taken into account. Publication expectations for Staff Scientists who manage cores are different because of the nature of research support and service cores provide. For core managers, middle author publications resulting from collaborative contributions are typical. However, granting co-authorships for research contributions is often a difficult issue today. In some cases, core contributions do not result in co-authorship, but they are frequently acknowledged; include this information. Be sure to document all your collaborative contributions carefully in your review package, including acknowledgements.

Your PI should request letters of recommendation from two collaborators who have worked closely with you, either from the NIH or the extramural community. Letters from senior people carry more authority (don't get letters from other Staff Scientists).

Staff Scientists who have received "Outstanding" ratings in past review cycles had a number of high quality publications and were also very active in all the other areas evaluated. Those with only a few publications in four years typically received lower ratings.

Coordinate with your AO to have your package ready to forward to the CCR ARC by December 19 to meet the December 21 deadline.

Office of the Director, CCR

The Core Corner

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

Cellular microRNA pathway regulates the expression of Kaposi's sarcoma-associated herpesvirus viral IL-6 by hsa-mir-1293

The Tumor Virus RNA Biology Section within the HIV and AIDS Malignancy Branch of the NCI, led by Dr. Zhi-Ming Zheng, investigates the molecular mechanisms of RNA-mediated processes involved in viral oncogenesis. Dr. Vladimir Majerciak, a staff scientist, is particularly interested in the role of RNA posttranscriptional regulation in Kaposi sarcoma-associated herpesvirus (KSHV) induced cellular transformation and viral pathogenesis.

KSHV is the most recently discovered human herpes virus where infection by the virus, while asymptomatic in healthy individuals, represents a substantial health risk to immunocompromised patients. KSHV infection is linked to several malignancies such as Kaposi sarcoma, primary effusion lymphoma and multicentric Castlemans disease (MCD). KSHV-mediated oncogenesis is dependent on the expression of several viral oncogenes including KSHV-encoded viral homologue of human interleukin-6 (vIL-6). The vIL-6 functionally mimics activities of its human homologue (hIL-6) to promote cell proliferation and tumor growth during KSHV infection. Recently, we demonstrated that both vIL-6 and hIL-6 expression are regulated by a cellular miRNA pathway that can be influenced by expression of the KSHV ORF57 protein.

We identified miRNA functional binding sites for hsa-miR-1293 in vIL-6 and hsa-miR-608 in hIL-6 with, interestingly, both miRNA sites being located within the coding region of the genes and not in the transcripts 3' untranslated region, as commonly reported for most miRNAs targets. To further prove the involvement of microRNA regulation of vIL-6 we tested the expression of hsa-miR-1293 and its target vIL-6 by microscopy in lymph nodes from patient suffering from MCD, a rare lymphoproliferative disease associated with hyperproliferation of B cells due to oversecretion of

The Core Corner (Continued)

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

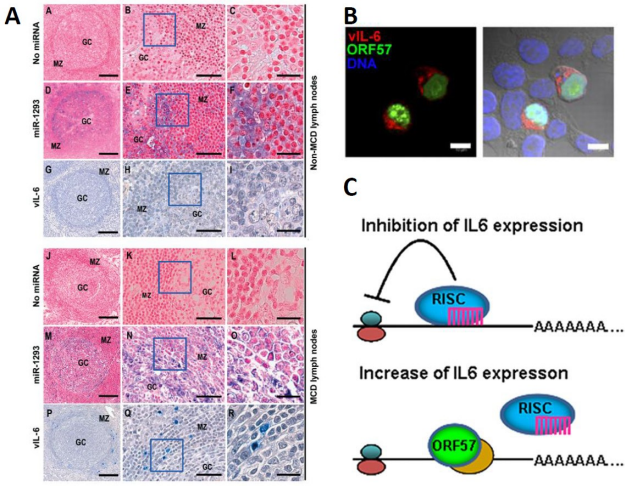
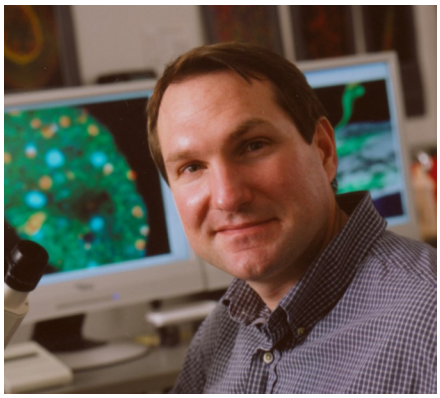


Fig 1. **Regulation of vIL-6 during KSHV infection.** A) The expression of endogenous hsa-miR-1293 and vIL-6 in lymph nodes detected by *in situ* hybridization and immunohistostaining performed on lymph node sections from a patient without (A–I) or with MCD (J–R), *MZ-mantle zone, GC-germinal centre*. B) Confocal imaging of KSHV-transformed B-cells with co-expression of vIL-6 and ORF57. C) Model of upregulation of vIL-6 expression by ORF57 via disrupting cellar miRNA pathway.

IL-6. To perform the high resolution imaging experiments, we employed the equipment and expertise found in the Experimental Immunology Branch (EIB) Microscopy Facility. Dr. Michael Kruhlak, a Staff Scientist in the EIB, heads the microscopy facility which houses six research grade light microscopes providing a wide range of image modes for EIB, NCI, and NIH scientists, from standard immunohistochemistry, through brightfield and wide-field epifluorescence imaging, to high resolution live cell confocal microscopy. The facility accommodates complex imaging methods such as FRAP, FRET, and photoactivation/ photoconversion, as well as imaging of intact specimens, tissue sections, and individual cells. Along with image acquisition, a number of resources are available for quantitative image processing and analysis, including volume reconstruction, object tracking, and modeling of protein dynamics.

The progressive and constructive collaborative environment of the EIB microscopy facility provided the opportunity to investigate the expression and distribution of vIL-6 in MCD lymph nodes and KSHV-transformed B cells (Fig. 1). Immunohistochemistry labeled tissue sections confirmed high expression of vIL-6 in lymph nodes from MCD patients which adversely correlated with expression of hsa-miR-1293 detected by *in situ* hybridization. In KSHV-infected cell lines, confocal imaging established the colocalization of high vIL-6 expression with ORF57protein responsible for promoting the suppression of the cellular miRNA pathway to upregulate vIL6 expression. The results of the fruitful collaboration were recently published in two separate articles (Kang et al., 2011; Journal of Virology 85:2620-30 and Kang et al., 2011; Journal of Pathology 225:378-89) that collectively revealed the influence of viral proteins in disengaging protective regulatory cellular miRNA pathways and implicating vIL-6 expression in the pathogenesis of KSHV malignancies.



Michael Kruhlak, Ph.D. (SS)
Experimental Immunology Branch
Head, Microscopy Facility

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Tumor Virus RNA Biology Section,
HIV and AIDS Malignancy Branch

The Core Corner (Continued)

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

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1. **Kang, J. G., V. Majerciak, T. S. Uldrick, X. Wang, M. Kruhlak, R. Yarchoan, and Z. M. Zheng**. 2011. Kaposi's sarcoma-associated herpesviral IL-6 and human IL-6 open reading frames contain miRNA binding sites and are subject to cellular miRNA regulation. J. Pathol. **225**:378-389.

2. **Kang, J. G., N. Pripuzova, V. Majerciak, M. Kruhlak, S. Y. Le, and Z. M. Zheng**. 2011. Kaposi's sarcoma-associated herpesvirus ORF57 promotes escape of viral and human interleukin-6 from microRNA-mediated suppression. J. Virol. **85**:2620-2630.

The Information Technology Corner

IT Support at NCI-Frederick

This is the second installment of the Dossier information technology column. This article will describe the process of obtaining IT support for staff located at the NCI-Frederick campuses.

At the NCI-Frederick there are two groups that provide IT support to all of the staff.

Computer & Statistical Services – run by the contractor DMS.

ISP IT Operations Group (ITOG) – run by the contractor SAIC-Frederick.

Each of these groups has their own areas of responsibility. But fortunately, there is one service, which oversees requests into both groups. The NCI-Frederick IT Helpdesk creates a one-stop shop for all of your computer needs and questions. You begin the process by contacting the NCI-Frederick IT Helpdesk via:

Phone: 301-846-5115 or x5115

Email: fredhelpdesk@nih.gov

Web form: http://css.ncifcrf.gov/helpdesk

Once your request is received, you will be emailed a support ticket number. This number is important because you can use it to find the status of your request and to escalate the request if you are not satisfied with the support you receive. Progress on your ticket should advance as outlined in the Service Goals and Metrics that the NCI-F contractors and government staff have created: http://css.ncifcrf.gov/information/goals.asp

You can view the progress being made on your request via this web form: http://css.ncifcrf.gov/helpdesk/requestor/search.asp

After the request ticket is closed you will be emailed a notification to that effect and you will receive a link to a user satisfaction survey.

If the service provided does not meet your requirements either in terms of time of delivery or quality of the work, you can contact the helpdesk at: x-5115 and inform them of the problem. They have a procedure that allows them to identify the issue and develop a plan to bring your request to a satisfactory conclusion. If there is still a problem you can email the support ticket number to me: jdshilling@nih.gov and I will follow-up with the proper support staff to get the situation resolved.

Thanks to Stephanie Halling of DMS for her help in framing out this article.

Jeff Shilling
IT Architect
CCR Office of Information Technology

Announcements

CCR Staff Scientist and Staff Clinician Meet and Greet

Cookies & Coffee for all SSSC of Building 37

Thursday, January 19th, 2012

1:00pm-2:00pm

Bldg. 37, Rm. 2102/2041

Congratulations!

Join us in congratulating Anu Puri, Ph.D. (SS) on her receipt of an Intramural-to-India Project Grant awarded by the U.S.-India Joint Working Group on Prevention of STDs and HIV/AIDS.

Attend

Register for The 2012 NCI Intramural Scientific Investigators Retreat.

Registration deadline: December 16, 2011

http://www.cvent.com/d/aID4OOUJe0i1AfHRb2ZKCw/8nfg/P1/1Q?

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 manner and we will do our utmost to include your material in upcoming issues.

Join one of these SSSC Committees

Professional Development: Contact Christophe Marchand, Ph.D.

Communications: ***SSSC Website:*** Contact Sharon Moore, Ph.D.
***The Dossier*:** Contact Anuradha Budhu, Ph.D.

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Nadezhda Tarasova, Ph.D

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