

Indiana University Cancer Center Newsletter

July 1999

Special points of interest:

- *In the Spotlight*-Martin Smith, Ph.D.
- Peachey Pilot Project Awards
- Pam DeWeese Named Clinical Research Office Administrator
- Jensi Receives NIGMS Grant
- Kelley Receives NCI/ SBIR Grant
- Cancer Center Grand Rounds
- Seminars/ Meetings/ Conference Schedule

In the spotlight.....

Martin Smith, Ph.D.

Having seen other new faculty “in the spotlight”, I knew this was coming. I am one of the newer members of the Cancer Center. I am an Assistant Professor in the Department of Microbiology and Immunology, and a member of the Walther Oncology Center. While I am “in the spotlight” I would like to thank Drs. Broxmeyer and Stephen Williams and Len Erickson for their support.

I am in the “start-up” phase of my operation and writing a lot of grants. One of my colleagues asked me if I was “going for the record”, the record number of grant submissions in the first year that is, and the answer is yes. One of my thesis committee members in graduate school wrote a letter describing me as a “no-nonsense kind of guy”. I just like to make extra sure. Not only that, I actually like writing grants, which makes me a very sick man, I know. But writing is an important part of what we do, and one may as well learn to like it.

How did I get to be here? Having moved across country several times, it becomes a blur. But I remember that I was at the National Cancer Institute in Bethesda, Maryland, before becoming a Hoosier. I met with Len Erickson at the American Association for Cancer Research Meeting, and that started the ball rolling. The meeting was in New Orleans that year (there is good food in New Orleans). Len and I have that in common-we both like good food! I miss the seafood in Maryland, but I like everything. I do most of my own cooking. My Mom taught me how to cook when I was about ten. She would call from work, “honey, put those potatoes on to boil” the idea being that she could get supper ready faster if I started it for her. Anyway, I have learned to make Midwest-style mashed potatoes since coming here.

I work on the p53 tumor suppressor pathway, which is a molecular network that controls cellular responses to environmental stimuli. Most people think of p53 in the response to DNA damage, but it does a lot of different things. That is because p53 is a transcription factor that regulates perhaps 100 genes. These genes are involved in cell cycle control, and “life and death decisions” of the cell to repair the DNA damage, or undergo cell death. I work on the DNA repair side of the equation. Not just any old repair, but nucleotide excision repair, which is the pathway for

DNA damaged caused by UV-light, and also important cancer chemotherapy drugs like cisplatin, carboplatin, and nitrogen mustards. Now, p53 is mutated, and the pathway largely inactive in 50-70% of all human cancers. This suggested that cancers cells carrying mutant p53 might be more sensitive to these agents, by virtue of having less capacity to repair this class of DNA damage. That has turned out to be true, at least in some cancer cell types, including breast cancer cells.

One of the great things about working on p53 is that there are several “angles” that one can take. For example, a subset of p53-regulated “downstream effector” genes contribute to the DNA repair response, so the mechanism(s) of this response provide the basis for a grant. (Seems to be mediated by accessibility to lesions in chromatin). Yet another “angle” is that certain cancer chemoprevention agents can upregulate p53-mediated DNA repair, so there is a chemoprevention angle (p53 has been called “the Guardian of the Genome”) so if one can beef up the Guardian of the Genome, that should prevent cancer. Yet another angle explores functional interactions between cell cycle alterations and altered DNA repair in cancer cells with mutant p53 (a chemotherapy angle). And yet another avenue explores the role of the cyclin G gene (another p53-regulated gene) in cell cycle checkpoint responses to DNA damage, especially things like carboplatin. I am putting oxaliplatin on my cells now. It is pretty fun killing cells, especially cancer cells. This is the kind of stuff that I think about.

Catherine Peachey Pilot Project Awards

The 1999 Catherine Peachey Pilot Projects were awarded to the following individuals and its annual reception held on June 24, 1999.

This years recipients were:

- Harikrishna Nakshatri, Ph.D. for his project entitled “Estrogen-Independent Activation of ER Alpha by AKT in Breast Cancer”.
- Kathy Miller, M.D., Robert Kruger, Ph.D., Gary Hutchins, Ph.D., and George Sledge, M.D., for their project entitled “Breast Cancer Imaging Using Thermoacoustic Computed Tomography: Validation and Physiologic Correlation”.
- Ken Cornetta, M.D., for his project entitled “Gene Therapy for Breast Cancer Using Flt3-ligand (FLT3-L)”.

Congratulations to all this years recipients!

Pam DeWeese Named CRO Administrator

Pam DeWeese has been named the new Clinical Research Office Administrator. Pam previously held the position of the Clinical Research Office Manager. Pam’s responsibilities are to provide overall supervision, program development and administrative direction for the Clinical Research Office of the Indiana University Cancer Center and to manage the conduct of clinical research studies in patients with hematologic or oncologic diseases.

Pam can be reached at 4-0931 or pdeweese@iupui.edu. Her office is located in the Cancer Pavilion Room 380.

Jenski and Stillwell, Ph.D.s, Receive NIGMS Grant

Drs. Laura Jenski and William Stillwell, Professors of Biology and Cancer Center members have received a National Institute of General Medical Sciences (NIGMS) grant from the National Institutes of Health for their project entitled “Novel Drugs Involving Methotrexate & Omega-3 Fatty Acids”.

The projects aims are to 1) synthesize and partially characterize two novel phospholipids; 2) monitor the cellular uptake of liposomes containing the novel phospholipids; 3) compare cytotoxic/cytostatic activity of 18:0,MTX-PC; 22:6, MTX-PC; and free MTX and fatty acids on cultured cells and on bystander cells; and 4) determine whether MTX and 22:6 synergize through concerted actions in the S phase of the cell cycle.

Mark Kelley, Ph.D., Receives an SBIR Grant

Mark Kelley, Ph.D., Professor of Pediatrics and Associate Director of the Wells center has been awarded a small business innovative research (SBIR) grant for his project entitled “Development of Antibodies to Study Oxidative DNA Damage”.

This is a SBIR grant from NCI with Novus Biologicals in Littleton, CO, to produce antibodies to some of the major oxidative DNA repair enzymes in mammalian cells. “We will be partnering with Novus in the characterization and testing of the antibodies that will then be commercially available from Novus Biologicals. Currently, they have licensed our poly and monoclonal APE/ref-1 antibodies from us“, writes Dr. Kelley. The antibodies will be selected for use in Western blotting and immunohistochemistry assays.

IU Cancer Center Grand Rounds

Beginning in July the Indiana University Cancer Center will begin a Grand Rounds series. Grand Rounds will be held on Fridays from 7:30 a.m. to 8:30 a.m. in the Cancer Research Institute Auditorium, Room 101. For a listing of presenters check your monthly IUCC newsletter, the IUCC web page (www.iupui.edu/~iucc), or your departments posting boards. If you don't already receive postings for IU Cancer Center various lecture series, please contact the editor and we will get you on our mailing list.

For the month of July :

July 16, 1999

“Oncogene Derived Cancer Vaccines: Integrating Genetics & Immunology”. Samir Khleif, M.D., National Cancer Institute.

July 23, 1999

“Adjuvant Therapy in Breast Cancer”. George Sledge, M.D., IUSM.

Seminars/Conferences/Meetings

Friday, July 2

8:00 a.m. Introduction to New Fellows. *RT 425*.

Tuesday, July 6

8:30 a.m. Hematology Fellows Conference. **“Supportive Care Issues-Part I”**. Larry Cripe, M.D., IUSM. *RT 425*.

Wednesday, July 7

7:00 a.m. Skull Base Group Conference. *UH 2005.*

Monday, July 12

4:30 p.m. Hematology Fellows Lecture. **“Protocols: GP”**. Hem/Onc Faculty. *RT 425.*

Tuesday, July 13

8:30 a.m. Hematology Fellows Conference. **“Overview of the Process of Diagnosis of Major Hematologic Malignancies.”** Hematopathology, IUSM. *RT 425.*

Wednesday, July 14

4:00 p.m. **SPECIAL COMBINED SEMINAR SERIES-“Androgen Receptor Function in Prostate Cancer.”** Chawnshang Chang, Ph.D., George Whipple Distinguished Professor of Pathology, Department of Urology, Radiation Oncology, & Biochemistry, and the Cancer Center, University of Rochester, Rochester, NY. *Cancer Research Institute Auditorium 101.*

Thursday, July 15

12:00 p.m. Hematology/Oncology House Staff Lecture. **“Leukemia (CLL, AML, ALL).”** Michael Gordon, M.D., IUSM. *EM304.*

Friday, July 16

7:30 a.m. **“Oncogene Derived Cancer Vaccines: Integrating Genetics & Immunology”**. Samir Khleif, M.D., National Cancer Institute. *Cancer Research Institute Auditorium 101.*

Monday, July 19

4:30 p.m. Hematology Fellows Lecture. **“Protocols: GU”** Hem/Onc Faculty, IUSM. *RT 425.*

Tuesday, July 20

8:30 a.m. Hematology Fellows Conference. **“Establishing Communication on the First Consult”**. Anita Butler, IUSM. *RT 425.*

12:00 p.m. Experimental Therapeutics Research Program Meeting. **“TBA.”** *Cancer Research Auditorium 101A.*

Friday, July 23

7:30 a.m. **“Adjuvant Therapy in Breast Cancer”**. George Sledge, M.D., IUSM. *Cancer Research Institute Auditorium 101.*

Monday, July 26

12:00 p.m. Hematology/Oncology House Staff Lecture. **“Cancer of Unknown Primary”**. Stephen D. Williams, M.D., IUSM. *EM304.*

4:30 p.m. Hematology Fellows Lecture. **“Protocols:Thoracic-Sarcoma.”** Hem/Onc Faculty, IUSM. *RT 425.*

Tuesday, July 27

8:30 a.m. Hematology Fellow Conference. **“Acute Leukemia (AML, AUL, ALL)”**. Larry Cripe, M.D., IUSM. *RT 425.*

Questions? Suggestions? Announcements?
Contact Liz Parsons 8-0070

eparsons@iupui.edu
<http://www.iupui.edu/~iucc>