



SimmonsCooper Cancer Institute at SIU

Spring 2008

DIRECTOR'S MESSAGE—K. THOMAS ROBBINS, M.D.

Having just returned from a visit to a hospital in east Africa, I feel compelled to share some thoughts on the state of healthcare in a third world country relative to what we have come to expect within a community like ours here in the United States. What a contrast to drive by the



handsome new SimmonsCooper at SIU building that is nearing completion and to compare it to the crowded hospital clinic where I recently evaluated several patients desperately seeking help. Many of them had extremely advanced tumors encompassing their face and neck, or blocking their throat making it difficult to

swallow and even breathe. Most have no money or just enough to make the journey to the hospital on a crowded bus traveling for hundreds of kilometers. In Tanzania with a population of 38 million people, half of whom live on less than a dollar a day, there is only one cancer center. We are so fortunate to live in a country that provides so much, including the best health care in the world. Furthermore, we are committed to making our treatments for cancer even more effective, in order to lessen the burden of this terrible disease among our own citizens. However, let us always keep world health care in perspective, and hope that what we do to improve outcomes at home, will ultimately benefit mankind everywhere. For me personally, I feel fortunate to be able to reach even further as have some other of my colleagues here at SIU.

Staffing Updates

New Staff

Welcome to **Justin Heggy**, he is responsible for the autoclave in the SCCI laboratories.

SCCI would also like to welcome **Patricia Young, BSN, RN, CPRN.**

Patty is the Clinical Operations Manager and will coordinate all the clinical activities, monitor the clinical care provided and be sure we have the supplies and equipment needed in each of the clinics as well as quality improvement activities.

Newsletter Focus: Hematology/Oncology

Director's Message	1
Clinical Trials	2
Research	2
Grants Office	3
Outreach	3
Cancer Clinic	4 & 5
WIT	6
SCCI Ribbon Cutting	7

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Clinical Trials

A new clinical trial for non-Hodkin's lymphoma patients will be conducted through the SimmonsCooper Cancer Institute at SIU that evaluates the efficacy of Inotuzumab Ozogamicin when administered in combination with Rituximab, compared with an active comparator arm.

The open-label, randomized, phase III study of Inotuzumab Ozogamicin administered in combination with Rituximab will be compared to RFN-D and R-CVP therapy (investigator's choice) in subjects with relapsed or refractory, CD22-positive, follicular B-Cell non-Hodgkin's Lymphoma. This study will enroll approximately 978 subjects that have had 1 or 2 prior treatment regimens, one of which

contained Rituximab.

For more information regarding this trial or for a listing of trials offered through the SimmonsCooper Cancer Institute Clinical Trials Office, please contact Kathy Robinson, PhD at 545-1946 or krobinson@siumed.edu, Susan Klug, RN at 545-7929 or sklug@siumed.edu, or Merri Ellen King, RN at 545-1190 or mking@siumed.edu.

Research

Dr. Andy Wilber's research interest is stem cell gene therapy for inherited blood disorders and cancer. The last decade has seen a tremendous expansion of research in stem cell biology, providing insights into stem cell character and differentiation as well as the potential for therapeutic application. In basic and translational studies of different stem cell types, genetic engineering will play a key role in bringing this research to fruition. Retroviral vectors have been used extensively for genetic modification of various stem cell types. There are also several recombinase systems that have recently emerged as non-viral alternatives that can mediate integration and long-term expression that are potentially applicable to primitive and differentiating targets. Dr. Wilber's laboratory utilizes both types of gene delivery systems for stem cell gene therapy of genetic disease and cancer.

Gene therapy applications for hematopoietic stem cells generally focus upon introduction of an intact copy of the defective gene into the patient's own stem cells. Alternatively, it may be possible to introduce genes which encode for "activators" of endogenous gene products that are normally silent in somatic cell types. One aspect of his research is focused upon reactivation of endogenous gamma-globin gene sequences in hematopoietic stem cells for the treatment of individuals with inherited hemoglobin disorders (Sickle Cell Anemia and Beta-Thalassemia).

Recently, while a post-doctoral fellow in Dr. Arthur Nien-

huis's laboratory at St. Jude Children's Research Hospital, Dr. Wiber explored the *in vitro* production of erythroid cells from hematopoietic stem cells obtained from peripheral blood of normal volunteers. He found that this experimental culture system provides a convenient and reproducible method for generating massive numbers of erythroid cells from a relatively small starting CD34⁺ stem cell population. Both fetal and adult hemoglobin can be measured in the resulting erythroid population. Importantly, the potential to differentiate along the erythroid lineage is not adversely affected when the starting CD34⁺ population is genetically engineered using lentiviral vectors. Dr. Wilber has continued his collaboration with Dr. Nienhuis. They are specifically interested in mediating the relative concentrations of several potential transcriptional "activators" of gamma-globin gene expression by coupling lentiviral vector-mediated gene transfer with this erythroid culture model. Findings from these studies could result in the development of a novel therapy for patients with hemoglobin disorders.

The bone marrow is also a source of multipotent non-hematopoietic stem cells termed mesenchymal stem cells. Recent evidence from several laboratories indicates that mesenchymal stem cells have the ca-

Research

(Continued from page 2)

capacity to home to tumors established in experimental animals. Working directly with Dr. Mary McAsey's laboratory, they are using retroviral vectors to genetically engineer mesenchymal stem cells for expression of cytotoxic-, tumor suppressor-, and cytokine-

encoding genes as a stem cell gene therapy approach to the treatment of cancer affecting the ovary, testis, prostate, breast and bladder. Findings from these studies may result in the development of a novel therapy with application to cancers that are refractive to conventional therapy.

Grants Office

Funding to Enhance Cancer Research

Everything we do at SCCI begins and ends with the cancer patient in mind. In our ongoing quest to maintain that focus, SCCI is fortunate to receive funding for cancer research from a variety of sources to study distinctive characteristics of this disease. The ability of SCCI faculty, researchers, and staff to understand the science of cancer, the challenges of its complexities, and the opportunities to change the course of this devastating disease through investment in research provides SCCI with a remarkable tool for communicating our mission and accomplishments.

Each research proposal is written offering a unique perspective on how we can best approach research to serve our patients. The following are recent external SCCI

grant recipients: **Michael Flister**, *Regulatory Role of the NF- κ B Pathway in Lymphangiogenesis and Breast Cancer*, Department of Defense (DOD) Breast Cancer Research Program (BCRP) Predoctoral Traineeship Award, three years of funding; **Daotai Nie, Ph.D.**, *Targeting Thromboxane A2 Receptor for Anti-metastasis Therapy of Breast Cancer*, DOD BCRP Idea Award, three years of funding; **Yin-Yuan Mo, Ph.D.**, *MicroRNA-21-Mediated Gene Regulation in Breast Cancer*, Illinois Department of Public Health (IDPH) Office of Women's Health (OWH), Ticket for the Cure grant, 18 months of funding; and **Daotai Nie**, *TP as a Target to Block EMT During Invasion & Metastasis of Breast Cancer*, IDPH OWH Ticket for the Cure grant, 18 months of funding.

Outreach

Regional Cancer Partnership of Illinois

A free drive thru colorectal cancer screening was held at 10 facilities in central IL in the month of March. Participants could drive thru one of the locations and receive a kit containing educational material on nutrition and colonoscopies and a free hemocult kit. This event was held to raise awareness on the importance of getting screening for colorectal cancer and the importance of nutrition. The sites included, Memorial

Medical Center, St. Johns Hospital, Abraham Lincoln Hospital, Blessing Hospital, Pana Community Hospital, St. Francis Hospital, Brown County Health Department, Calhoun County Health Department, Greene County Health Department and Scott County Health Department. Over 800 kits were distributed.

(More Outreach on page 4)

Outreach

Head and Neck Cancer Awareness Week

April 20-26 was National Head and Neck Cancer Awareness Week. SIU again offered free head and neck cancer screenings to those at high risk. The screenings were held on April 21 from 4-7 at the Pavilion and on April 26 from 9-12 at St. Francis Hospital in Litchfield. Anyone who drinks, uses tobacco or has a family history is at high risk for head and neck cancer.

Free Prostate Screening

A free Prostate Screening was held on Thursday April 17, 2008 from 5-8 at Union Baptist Church in Springfield.

To learn more about cancer and prevention, visit www.siumed.edu/cancer

Organ Site Working Group Spotlight Hematology/Oncology

The term “hematologic malignancies” describes a group of blood cancers derived predominantly from cells that live in or originate from bone marrow tissue. These disorders include lymphomas (non-Hodgkin’s lymphoma, Hodgkin’s lymphoma [formerly Hodgkin’s disease]); leukemias (acute myeloid leukemia, acute lymphoblastic leukemia, chronic myeloid leukemia, and chronic lymphocytic leukemia); multiple myeloma; and the myeloproliferative disorders (including polycythemia vera, myelofibrosis, and essential thrombocytosis). Without question, the hematologic malignancies are diverse and complex diseases. And while the term “cancer” represents over 300 different disease entities, the lymphomas alone account for at least 30 different types of cancer.

To tackle the complexity and variety of these diseases, SIU has assembled a team of experienced academic physicians, all of whom have spent their careers at university teaching hospitals. This team includes John

Godwin, MD, MS, Professor of Medicine and Division Chief Hematology/Oncology; Aziz Khan, MD, Associate Professor of Medicine; and Robert Mocharnuk, MD, MA, Associate Professor of Medicine.

Dr. Godwin served on the faculty at Loyola University in Chicago for 21 years. He was selected as one of Chicago’s Top Doctors in both 2004 and 2005. He has been a member of the leukemia committee of the well-respected Southwest Oncology Group (SWOG) for 20 years. He has designed and served as the national principal investigator or co-principal investigator for at least four large leukemia cancer treatment trials. He has also served as principal investigator for innovative phase II treatment



(Continued on page 5)

Long before the construction began on its state-of-the-art facility in Springfield, a foundation was built for the SimmonsCooper Cancer Institute at SIU on the belief that research is the path to a cure for cancer. Your support of the Institute will help accelerate the growth that is critical for its success.

Research offers hope

Organ Site Working Group Spotlight Hematology/Oncology

trials in leukemia sponsored by the University of Chicago. Dr. Godwin has published more than 50 peer reviewed articles in the medical literature. All of this experience makes him the obvious choice to head up SIU's clinical and translational leukemia research.



Dr. Aziz Khan recently transferred to SIU from the Keck School of Medicine at the University of Southern California in Los Angeles where he has been a faculty member for the past 16 years. He was involved in the day to day management of patients with hematologic malignancies and

disorders at both the Kenneth Norris National Comprehensive Cancer Center and Los Angeles County USC Medical Center. He also attended the outpatient Hematologic malignancy clinic with Dr. Robert Mocharnuk, who also recently transferred to SIU from USC's Keck School of Medicine. Dr. Khan has served as one of 3 attending physicians for the bone marrow transplant unit at the Norris Cancer Center. Dr. Khan has been involved in a number of clinical trials throughout his career at USC, enrolling large numbers of patients in trials that led to FDA approval of several important new therapies in hematologic malignancies.



Dr. Robert Mocharnuk served on the faculty at USC for the past 7 years. He specialized in AIDS-related hematologic malignancies and has also acquired extensive experience in managing both bleeding and clotting disorders. Prior to joining the USC faculty in 2000, Dr. Mocharnuk worked

with a group of private practitioners in downtown Los Angeles for several years. Like Dr. Khan, Dr. Mocharnuk has engaged in clinical research for many years and has served as a co-investigator for a variety of clinical trials. His position as editor of Hematology/Oncology for Clinical Care Options, a web based medical education resource for physician subspecialists, has also given him access to the latest data on innovative treatments for a wide variety of both hematologic and oncologic malignancies. As editor, he routinely interacts with the major thought leaders and practitioners in

hematology/oncology from all over the United States as well as throughout Europe. He has over 110 publications related to cancer in print and online materials. Therefore, he is uniquely positioned to translate the newest approaches to cancer treatment for patients in Central and Southern Illinois.

All three physicians work at the SimmonsCooper Cancer Institute at SIU as part of a multidisciplinary team in conjunction with surgical specialists, radiation oncologists, pathologists, and various support personnel to provide state of the art cancer treatment to Springfield and the community at large.

The past several years have witnessed the dawn of a new era in cancer treatment. More than 30 years of research efforts have yielded a wealth of information about how cancer is caused by mutations or the abnormal functioning of critical genes that control the behavior of human cells. New insights into the "biology of cancer" have given us new "targets" for cancer treatment. Hematologic malignancies have led the way with the incorporation of many of these new therapies into standard treatment regimens. For example, the natural history of chronic myeloid leukemia, an almost universally fatal hematologic malignancy at five years, has been radically altered by the introduction of imatinib. This single targeted therapy has allowed the vast majority of patients with chronic myeloid leukemia to achieve remissions that are likely to endure for at least 20 years. SIU's hematology team has been involved with the development of imatinib and other novel therapies at both regional and national level for decades. The wealth of experience that they bring to hematologic malignancies reflects SIU's commitment to provide the people of central and southern Illinois with the best care possible, a level of care that has usually been found only at major academic centers in large metropolitan areas. It is with great anticipation that the "heme team" looks forward to the opening of the new clinical facility for the SimmonsCooper Cancer Institute at SIU later this year!

WIT Gala

WIT Gala Update:

On Friday, February 22, 2008, the Wit Gala Premiere Night was held at the Hoogland Center for the Arts. The Pulitzer Prize Winning Drama by Margaret Edson was presented by SimmonsCooper Cancer Institute at SIU and Central Illinois Community Palliative Care Initiative in association with Over the Moon Productions.

Wit is a play by Margaret Edson about a university professor of English who is dying of ovarian cancer. As she copes with her life-threatening cancer she assesses her own life through the intricacies of the English language, especially the use of wit and the metaphysical poetry of John Donne.

Despite this premise, this play is about hope. A New York Times critic called Wit, "the kind of theatrical experience of which legends are made." Neither too intellectual nor too maudlin, the play strikes a chord with audiences.

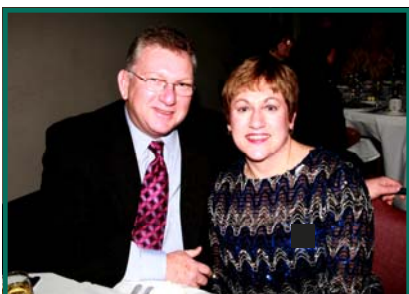
It received its world premiere at South Coast Repertory in 1995. It was produced by the MCC Theater, NY as part of its 1998/1999 season; star Kathleen Chalfant won an Obie Award for her performance

Leigh Steiner, local actor and director, played the lead role of Dr. Vivian Bearing. Others in the cast were Marion Levin, Paul Presney, Jeff Nevins and Megan Dowding. Wit was directed by Kevin Purcell with artistic design by Dave Shaw.

Proceeds from the event will further cancer research at SimmonsCooper Cancer Institute at SIU.



Monica Hay,
Ovarian Cancer Survivor



SCCI Ribbon Cutting

SimmonsCooper Cancer Institute at SIU
Invites you to the Ribbon Cutting of our new home

Thursday, July 10, 2008
Corner of Rutledge and Carpenter Streets

Wednesday July 9, 2008
Research Symposium



More information will be available at www.siumed.edu/cancer

SimmonsCooper Cancer Institute party in Naples, Florida

Evelyn Brandt Thomas and Julie & Pat Noonan hosted a delightful party celebrating SimmonsCooper Cancer Institute at SIU. The event took place on February 29 in Naples, Florida at The Naples Beach Hotel and Golf Club.



Pat Noonan, Dr. Tom Robbins and Evelyn Thomas



Pat Noonan, Evelyn Thomas and Deborah Case

