Jefferson Translations

Volume 1 | Issue 2 Article 1

2009

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(2009) "Download full PDF issue-Jefferson Translations-Vol. 1, No. 2, Spring 2004," *Jefferson Translations*: Vol. 1: Iss. 2, Article 1.
Available at: http://jdc.jefferson.edu/translations/vol1/iss2/1

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Jefferson Translations

Volume 1, No. 2, Spring 2004

for the friends and colleagues of the Department of Medicine at Jefferson Medical College

Center for Translational Medicine Opens Its Doors

Howard Weitz, MD, thanks Eugene Feiner for his generosity in supporting one of the Center for Translational Medicine's new laboratories, as Department Chairman Arthur Feldman, MD, PhD (far left), and Center Director Walter Koch, PhD (far right), look on.

On November 14, 2003, the Department of Medicine celebrated the opening of the new Center for Translational Medicine. Located on the 4th floor of the College Building at 1025 Walnut, the new Center boasts state-of-the-art laboratory space as well as offices for its growing staff.

In his remarks Arthur Feldman, MD, PhD, Magee Professor of Medicine and Chairman of the Department, noted, "as there are only five such centers in the country, this facility demonstrates Jefferson's commitment to the most progressive efforts in medicine."

Center Director Walter Koch, PhD, also thanked business leader Eugene Feiner, whose generosity helped make possible the Center's Laboratory for Vascular Biology and Thrombosis. "We are proud to contribute research that will make a difference in the lives of many patients for years to come," said Dr. Koch.

Dr. Feldman and Dr. Koch join Andrea Eckhart, PhD, who heads the Laboratory for Vascular Biology and Thrombosis, and benefactor Eugene Feiner in celebrating the opening of the Center.

In attendance at the opening were many of Mr. Feiner's friends and family, as well as a large number of Department of Medicine Staff. Geno Merli, MD, remarked that this was "a great day to celebrate the future of the Department of Medicine."

For more information see the profile of Eugene Feiner on p. 5 and the profile of Dr. Koch on p. 2.

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From the Chairman

This issue of *Translations* highlights some landmark events in the history of the Department of Medicine here at Jefferson. First, Phase I of our new Center for Translational Medicine opened after nearly a year of renovation. I hope you will enjoy a profile of the Center's Director, Walter Koch, PhD. Future issues will feature interviews with other new recruits for the Center. The naming of the Eugene Feiner Laboratory for Vascular Biology and Thrombosis is the first of what we hope will be several investments from friends and patients in the very best we have to offer the future of medicine.

The Center for Translational Medicine is the newest but not the only effort in the Department to move discoveries at the laboratory bench to the bedside. This issue of *Translations* focuses on several other new and exciting changes and advances made in the field of technology transfer as well as the divisions of Medical Oncology and Infectious Diseases.

I was thrilled to take part in the hospital's 125th Gala event honoring one of our very best and brightest: Dr. Bernard Segal, who continues to chart our course in cardiology in these changing times. More than a mentor to his colleagues, and more than a doctor to those under his care, Bernie is an exceptional individual who raises the quality of life of all he touches. We all look forward to many more years of good work together.

In these exciting but also challenging times I am proud to list the many ways in which the Department of Medicine is making critical contributions. I look forward to sharing those advances with you in the coming months.

Arthur M. Feldman, MD, PhD
Magee Professor of Medicine
and Chairman of the Department

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Koch Directs the Growth of the Center

Some of the University's most exciting research efforts are being conducted under the leadership of Walter J. Koch, PhD. A distinguished researcher from Duke University Medical Center, Dr. Koch joined Jefferson in September 2003 as Director of the Center for Translational Medicine, the Department of Medicine's progressive initiative to use cutting-edge laboratory research to create the best in clinical care.

Walter J. Koch, PhD, the W. W. Smith Professor of Medicine and Director of the Center for Translational Medicine

Dr. Koch feels the Center offers a unique research and clinical opportunity to bring laboratory discoveries "from the bench to the bedside." "There are other cardiology research institutes," he says, "but the Center seeks to do more all-encompassing research that will allow physicians potentially to tailor drugs and other therapies to individual patients, and use genetic indicators to alter disease outcomes."

Of the center's four main cores, gene and cell therapy is Dr. Koch's area of expertise. This changes the function of organs and/or cells by turning on certain mechanisms. He has used genetically engineered mouse models and viral mediated genes and transferred them to larger animal models ("I'm very successful at curing heart failure in mice," he notes modestly). In rabbits, for example, Dr. Koch delivered genes through a single coronary artery. He noticed changes within just eight hours and found he could prolong the animals' lives. The goal here at Jefferson," says Dr. Koch, "is to take that paradigm of cellular studies, small and large animal studies, and expand them to other areas of targets and diseases."

An initial focus for Dr. Koch as Director of the Center has been to recruit new faculty for the Center's four main cores. "New recruits will build upon the strong foundation laid by Dr. Paolo Fortina as well as the research goals of the Department of Medicine and the institution," says Dr. Koch.

"We seek to have the science in place as a resource, so that any Jefferson doctor can come to us, describe a unique situation in a patient, and engage our assistance, through basic and translational research," says Dr. Koch. "This is a gradual process, but we are confident that the impact will be significant."

Medical Oncology

Flomenberg Builds on Past Success

2003 was a year of recognition for Neal Flomenberg, MD. He was awarded Jefferson's distinguished Simon Gratz Research Prize and also named Director of the Division of Medical Oncology, of which he has been Acting Director since 2001. Professor of Microbiology and Immunology and a bone marrow transplant expert, he was named the Leukemia and Lymphoma Society's 2003 Man of the Year for Eastern Pennsylvania. Since coming to Jefferson in 1994 he has also been Director of Medical Oncology's Hematologic Malignancies and Hematopoletic Stem Cell Transplant Program.

"My success has largely been based on the success of my colleagues, junior faculty, and staff," Dr. Flomenberg says. But his strong leadership also reflects a vision for translating the hard work of his team into powerful results. He feels his team excels in conducting clinical trials simply and quickly.

"I am proud that several of the ideas we are currently working on were hatched right here at Jefferson," says Dr. Flomenberg. Other ideas grew out of developing novel ways to use existing research. The division recently received FDA approval and NCI funding for trials that use the agent LLME (Leucyl-Leucine Methyl Ester) in new ways beyond bone marrow grafts. He has worked with Robert Korngold, PhD, of the Kimmel Cancel Center, and Joanne Filicko, MD, to analyze the products and review the data from these trials.

At its current size, the Medical Oncology faculty is not able to address all of the clinical, educational, research, and translational needs of the Department. Dr. Flomenberg hopes to recruit six new physicians to bolster clinical efforts in the areas of lung cancer, gastrointestinal malignancies, genitourinary oncology, gynecologic oncology/breast cancer, and developmental therapeutics.

He also sees possibilities in the area of solid tumors. "Exciting things can also be translated from the Kimmel Cancer Center to clinical care," says Dr. Flomenberg. "The growth of Medical Oncology will mean that even more of the latest research in Jefferson's basic laboratories can find its way to clinical trials that are performed here."

Neal Flomenberg, MD (far right), reviews results of recent clinical trials with (left to right) Joanne Filicko, MD; Robert Korngold, PhD; and Thea Friedman, PhD.

Pomerantz Leads Jefferson's Efforts in Biodefense

Since Roger J. Pomerantz, MD, was recruited to head the Division of Infectious Diseases fourteen years ago, the field has changed dramatically. The tragic events on September 11, 2001, brought his research into the limelight. Building upon the work of Lance Simpson, PhD, the Division of Environmental Medicine was merged into the Infectious Diseases Division, forming a collaboration that Dr. Pomerantz says "has made Jefferson the only medical research center in Philadelphia that covers all aspects of bioterrorism."

An internationally recognized AIDS researcher, Dr. Pomerantz is also Director of the Center for Human Virology and Biodefense. Started in 1993, the Center brings together eighteen full-time faculty and more than one hundred others to explore how the virus works on a molecular level, as well as vaccine development, viral vectors, and gene therapy. The Center's Mike Root, MD, PhD, has focused on other biodefense genetics, including SARS research and the Ebola virus.

Dr. Pomerantz is quite sober about the fact that, "though humans have unleashed agents on each other for thousands of years, we do it better now." Of the viruses (smallpox, influenza), toxins (Botulinum), bacteria (Anthrax), and fungi, he focuses on not just what is dangerous but what is easy to make and distribute. He describes the necessary defense against bioterrorism as threefold: prevention, response, and research, and feels that a good vaccine with few side effects is one of the best modes of prevention.

Since September 11 Dr. Pomerantz has testified twice in Congress to underscore the need for a better smallpox vaccine, since the current vaccine was developed in the 1790s. "Trying to use an 18th-century vaccine on a 21st-century population is a problem," says Dr. Pomerantz, "since today there are so many people with suppressed immune systems." The smallpox vaccine is still moderately effective, but has side effects, as Dr. Pomerantz learned when he got it himself two years ago.

He explains that the Department of Medicine has developed a bioterrorism response plan, to prevent patients going into surgery or the ER if beds are needed by others. This plan has become a model for the entire hospital. The good news is that physicians training today will be better equipped to react to these extreme situations. This year the Infectious Diseases and Internal Medicine boards finally feature questions on bioterrorism, and this knowledge will be required for any internist. The exceptional research of Dr. Pomerantz and his team will continue to be one Jefferson's best defenses.

Roger Pomerantz, MD, leads Jefferson's research in the area of biodefense.

Faculty News

New Faculty in the Department

New to the Center of Translational Medicine are Andrea Eckhart, PhD; Donna Souders Woulfe, PhD; Erhe Gao, MD, PhD; and Kurt Chuprin, PhD. Christopher Hansen, MD, has joined the Division of Cardiology as Director of Nuclear Cardiology. Paul Mather, MD, is the new Director of Heart Failure. Both come to Jefferson from Temple University.

Internal Medicine has added several new faculty members, including Jenny Wang, MD; G. Robert Witmer, MD; David Axelrod, MD; and Sammy Zakaria, MD. Joining Clinical Pharmacology this year is Inna Chervoneva, PhD. New to Gastroenterology and Hepatology is David Loren, MD. New to Infectious Diseases is Renee Daniel, PhD. John Friedewald, MD, has joined Nephrology, and Chris Derk, MD, has joined Rheumatology.

Education

Implementation of the 80-Hour Workweek

As of July 1, 2003, Jefferson introduced a new initiative to be in accordance with the Accreditation Council for Graduate Medical Education (ACGME), which limits to 80 the number of hours residents in the department can work per week.

Gregory Kane, MD, Associate Professor of Medicine and Director of the Residency Program, emphasizes that the Department has taken the new guidelines quite seriously. "We have adapted our schedule to afford time off for residents so we can maintain the high quality of patient care while residents purse their educational goals," he says.

The rationale for the guidelines is to avoid accumulated sleep debt that can result in deterioration of performance. "Residents have always had one day off a week during every inpatient block," says Dr. Kane. "The new plan increases attention to hours during the week and changes the on-call day so residents get eight hours off for sleep on the night they are on call. It also ensures that there is a backup system for overwhelmed or fatigued residents."

Among the areas that are most changed are the Intensive Care Units, where a "float" resident has been added to cover nights. Extra intern staff also have medical responsibilities in the ICU, where there are now four instead of three interns during most blocks. During weeknights on the floors, residents go home at 10 p.m. and are on call, instead of being up all night and admitting patients on a 36-hour schedule. When residents do stay overnight on weekends, the maximum period for admitting new patients is 24 hours, and residents always go off duty within 30 hours.

Dr. Kane stresses the importance of Jefferson acting as a national leader in demonstrating compliance with the regulations. "The Department feels this is the right thing to do in order to train the most outstanding internists," he says. He notes that the regulations bring the U.S. more in line with countries in the European Union and elsewhere internationally. The Department's Internal Medicine Residency recently received notification of continued full accreditation through the ACGME with a five-year cycle length.

Giving Jefferson Ideas Broader Access

Steven E. McKenzie, MD, PhD, has been Director of the Cardeza Foundation for Hematologic Research and the Division of Hematology in the Department of Medicine since 2000. In July 2003 he was also appointed Vice President for Science Policy and Technology Transfer. In this new capacity Dr. McKenzie seeks to help Jefferson faculty translate their ideas in a way that can be of use to other physicians.

The Bayh-Dole act of 1982 mandated at a federal level that academic medical centers receiving NIH funding also had to convert their ideas into marketable products. As a result several products have emerged from the Department of Medicine science labs, such as discovery tools that enable more and better research; preclinical models of discovery, including mouse and other animal models; and devices and agents that are used for diagnosis, therapy, and prevention of disease.

As a physician-scientist who sees patients and also conducts research, Dr. McKenzie interfaces between clinical and scientific faculty and the university's professional Office of Technology Transfer (OTT). Located in Jefferson Hall and directed by Katherine Chou, this office brings together OTT professionals with Jefferson physicians and scientists.

"In much the same way that most advanced medical science is done in teams, this effort requires input from multiple disciplines," he says. The Technology Transfer Advisory Committee – composed of Dr. McKenzie, Ms. Chou, University Counsel Alan Kelly, and Chief Financial Officer Richard Schmid – unites the various knowledge sources in order to achieve these goals.

(Left to right): Steven McKenzie, MD, PhD, worked with Saul Surrey, PhD, and Paolo Fortina, MD, PhD, to translate their work with genetic mutations into patentable methods.

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Project CARE

DeCaro Oversees Implementation of Project CARE in CCU

In July 2003 Matthew DeCaro, MD, Clinical Assistant Professor of Cardiology, assumed the newly created position of Coronary Care Unit Director. In this role he is responsible for 24-hour patient care, overseeing patient admissions and flow, and managing the triage of high-acuity patients so that only the most critical are admitted to the CCU.

Matthew DeCaro, MD, reviews Project CARE patient guidelines with Heather Miller, RN, MSN, at left, and Mary Vergara, RN.

Dr. DeCaro also oversees the implementation of new in-patient guidelines from Project CARE (Coordinated Approaches Redesigned for Excellence). The initial stages of Project CARE created detailed but streamlined guidelines for acute coronary syndrome and congestive heart failure, which account for a significant percent of CCU admissions. After being formalized to meet ACC and AHA standards, the guidelines were introduced last fall in 22 beds on 5 West, which Dr. DeCaro says "acts as a testing ground for the implementation of Project CARE on the unit overall." The paper order sets have been in place for several months and will be also be available electronically when the order entry goes online.

Dr. DeCaro stresses that the efforts of Howard Weitz, MD; Geno Merli, MD; and Rebecca O'Shea, Vice President for Clinical Program Development, have been critical to the implementation of Project CARE. He meets monthly with an executive oversight group to review the integration of CARE guidelines.

Recently Dr. DeCaro has begun to track statistics in order to compare outcomes from patients treated under the new guidelines, "in terms of quality of care and how they impact patients' length of stay," he explains. The preliminary review shows that patients are being discharged earlier, which helps with patient flow. There has also been an increase in efficiency, "since the house staff has a critical mass of patients on the unit and spends most of their time there," he says. The executive committee will soon begin work on the next two diagnoses (atrial fibrillation and community-acquired pneumonia).

Dr. DeCaro says he appreciates the opportunity to focus on education and to champion with the administration issues raised by the nursing and house staff. "Critical to our success have been the efforts of Heather Miller, RN, nurse manager, and Mary Vergara, RN, on our implementation team," says Dr. DeCaro. "Their leadership has already made this a very successful team effort."

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Eugene Feiner Makes a Habit of Making a Difference

The opening on November 14, 2003, of the Center for Translational Medicine and the Eugene Feiner Laboratory for Vascular Biology and Thrombosis was an historic event for the Department. But it was a bit more routine for Gene Feiner, for whom philanthropy is part of everyday life.

Always a forward-thinker, Gene took great pride early in his career in making new possibilities a reality. He began to work for the Acme Manufacturing Company, then a modest local business, and over the decades built it into one of the largest manufacturers of its kind in the United States.

Close friend and colleague Martin Coopersmith, who has known Gene some forty years, says Gene's "belief in the premise of giving back and his interest in knowing and helping people comes from the modest circumstances he himself once knew." Gene feels that generosity is part of his success: "There is enough for everybody," he says.

Philanthropic efforts have been a commitment since Gene was a young businessman, but since selling his company in 1997 he has made it a priority. A member of the Thomas Jefferson University President's Club, he was also the Variety Club's Man of the Year in 2001.

A special interest in Israel has led Gene to fund a number of initiatives there, including a school library and recreation center in Haifa, where in June 2001 he received the key to the city. When asked about the five Russian orphans he sponsors in Israel, he says, "to save one person is to save the world," citing the Hebrew expression "Tikkun olam" (repair the world).

Gene met Geno Merli, MD, and Howard Weitz, MD, some ten years ago, and has been a patient and friend of Jefferson ever since. "Meeting doctors as personable as Geno and Howard, you sense their compassion as well as their expertise," he says. "That is the best that medicine today has to offer. It inspires me to help make possible research that will impact the livelihood of future generations in such an important way."

Eugene Feiner (right) and Geno Merli, MD, celebrate the opening of the Eugene Feiner Laboratory for Vascular Biology and Thrombosis on the 4th floor of the College Building.

To learn more about giving opportunities or to make a donation to the Department of Medicine or one of our physicians, please contact Susan Schiffrin at 215-955-7556 or via e-mail at susan.schiffrin@jefferson.edu.

Recent Gifts

A plaque in honor of Margaret Kennedy Detwiler was dedicated at a ceremony on the 8th floor of the College Building on October 24, 2003. In her honor the Roberts and Detwiler families made a gift to the Department of Medicine and the Department of Family Medicine. There to honor Mrs. Detwiler were (below, left to right): cardiologist Reginald Ho, MD; Gregory Kane, MD, representing Pulmonary Medicine; her husband Donald Detwiler; her daughter Aileen Roberts and son-in-law Brian Roberts, Chief Executive Officer of Comcast; and Anthony DiMarino, Jr., MD, Director of Gastroenterology and Hepatology.

The Datz and Murray families came together on October 21, 2003, in gratitude for the work of the Division of Rheumatology in the area of scleroderma. A gift was made in memory of John Murray, who helped raise significant funds for research that helped many fight the disease. Mr. Murray was tragically killed in the World Trade Center on September 11, 2001. In attendance were (above, left to right) his daughter Alyson Murray, wife Rory Murray, father Philip Murray, and sister Cathy Datz, as well as Director of Rheumatology Sergio Jimenez, MD.

In Memoriam: Daniel M. Tabas

We have been greatly saddened by the loss of Daniel M. Tabas in 2003, who was not only a patient, but also a good friend of Jefferson and Drs. James Burke and Roger Daniels for many years. Among the many examples of Mr. Tabas's generosity was the new nephrology suite he made possible at 833 Chestnut Street, 7th floor (below), which now serves our patients with improved space and equipment. We recognize the legacy Dan left to the Tabas Family, his wife, Evelyn, their children, Lee and Nancy Tabas, Linda and Murray Stempel, Jo Ann and Howard Wurzak, Carol Tabas, Robert and Janine Tabas, and Susan Tabas Tepper, and know that Dan's spirit of philanthropy will live on through them.

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Segal Honored at 125th Gala

On Thursday, November 20, Bernard Segal, MD, Chief of the Division of Cardiology and Director of the Jefferson Heart Institute, was honored at the Thomas Jefferson University Hospital Anniversary Gala. This event was held in the Grand Ballroom of the Philadelphia Marriott Hotel, in celebration of the hospital's 125 years of service to the greater Philadelphia community.

Honoree Bernard Segal, MD (right), receives congratulations from his wife, Idajane Segal, and hospital President and CEO Thomas J. Lewis.

Dr. Segal received the hospital's first Achievement Award in Medicine, for attaining excellence in his profession and for actively contributing to the growth and development of his field. A video tribute to Dr. Segal featured the praise, esteem, and thanks of many of his Jefferson colleagues. In his remarks, Dr. Segal gave thanks to the many people who worked with him in the field of cardiology over the years.

Co-chairs for the 125th anniversary gala were Lynne and Harold Honickman, Geraldine and Richard Fox, Jane and Leonard Korman, and Josephine C. Mandeville. "Bernard Segal truly exemplifies service to Jefferson University Hospital and the Delaware Valley," said Lynne Honickman. "It is through his tireless efforts that Jefferson University Hospital is one of the finest hospitals in our region and across the country."

Technology Transfer

Continued from page 4

One example of technology transfer grew out of the work of Paolo Fortina, MD, PhD, of the Center for Translational Medicine, and the Cardeza Foundation's Saul Surrey, PhD. With funding from the National Cancer Institute (NCI), they developed new ways for detecting and diagnosing genetic mutations in disease. This led to funding and patent applications for these new methods. "We hope now to license this technology in order to get it into the hands of other investigators," says Dr. McKenzie. Similar partnerships are currently in the works at Jefferson in the areas of vascular biology research, red blood cell and hemoglobin disorders, and bone marrow disorders and hematological malignancy.

Dr. McKenzie points out that the goals of Technology Transfer in many ways represent the best in medicine. "This division is a microcosm of what we do in the university as a whole – join with members of other departments to generate ideas in order to best help patients." For more information visit www.jefferson.edu/ott/.

Translations

Translations is published three times a year by the Department of Medicine, Jefferson Medical College, of Thomas Jefferson University (www.tju.edu/medicine). For more information call 215-955-6946 or write to the address below.

Arthur M. Feldman, MD, PhD, Magee Professor of Medicine and Chairman of the Department

Edited by Alison Rooney Design: JeffGraphics
Photography: Robert Neroni, Medical Media Services

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Department of Medicine
1025 Walnut Street, Suite 822
Philadelphia, PA 19107-5083

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