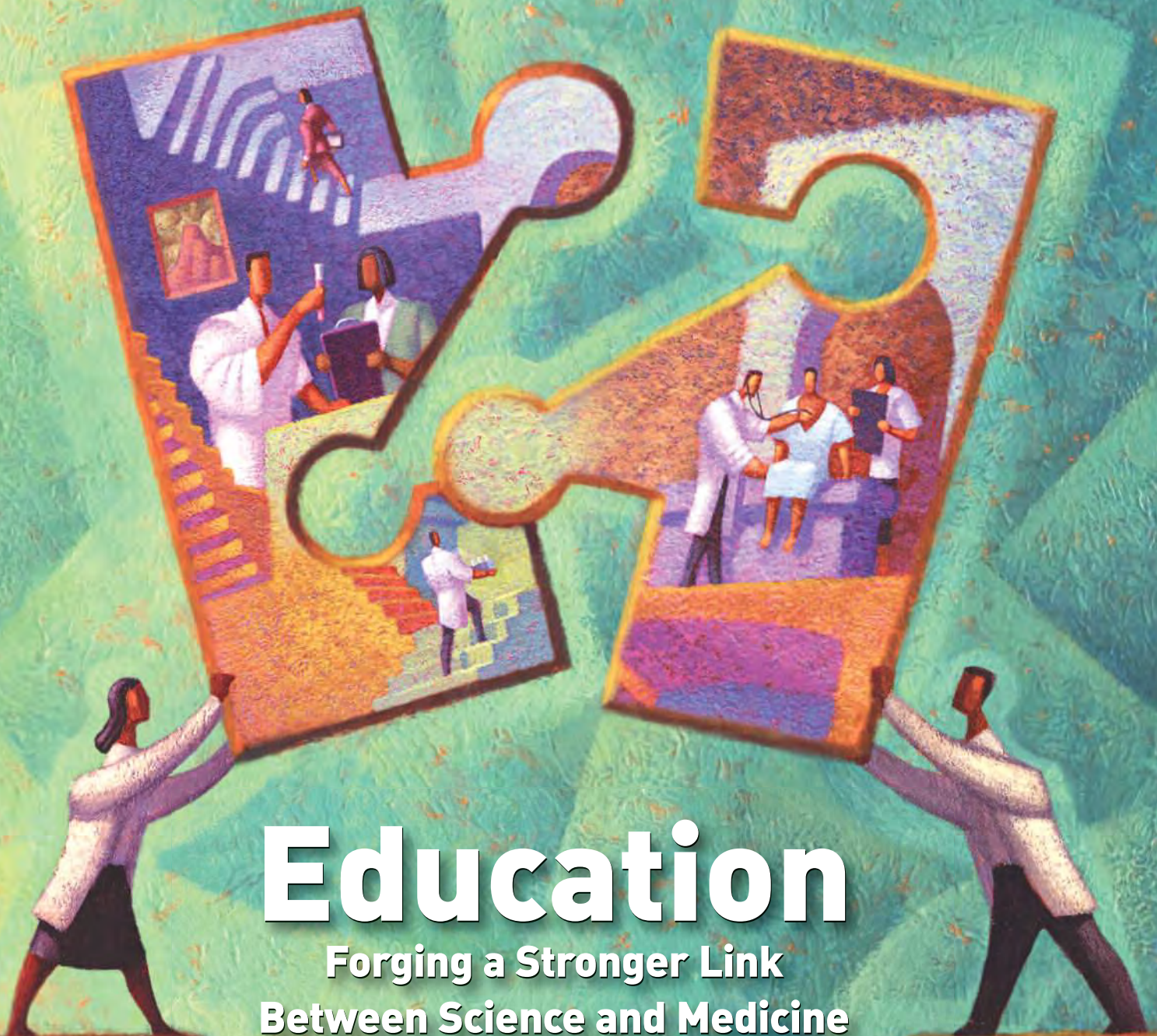


Robert Wood Johnson MEDICINE



Education

Forging a Stronger Link
Between Science and Medicine

By Kate O'Neill

MANUEL JIMENEZ, MD '06, SELECTED FOR CAPITOL HILL HEALTH FELLOWSHIP

The Joseph P. Kennedy Foundation selected **Manuel E. Jimenez, MD '06**, for a one-year fellowship on Capitol Hill. Dr. Jimenez is working on health and disability policy issues in the office of Senator Jeanne Shaheen, Democrat from New Hampshire.

In 2008, Dr. Jimenez was the lead author among students, alumni, and faculty of an article published in the *Journal of Healthcare for the Poor and Underserved*. The article, "The Promise Clinic: A Service-Learning Approach to Increasing Access to



COURTESY OF MANUEL JIMENEZ, MD '06

Health Care," discussed the success of a project created in 2004 and operated

by RWJMS medical students, including Dr. Jimenez. The goal of the clinic, which continues to thrive, is to increase access to primary care for an underserved population, while strengthening the cultural competence of medical students.

"This is a great story about the success of a student with a community health and policy focus," says Alfred F. Tallia, MD '78, MPH, professor and chair, Department of Family Medicine and Community Health. Dr. Tallia, who mentored Dr. Jimenez at RWJMS, adds, "This highlights the importance of our community health mission and demonstrates how our students learn and prosper from it."

Dr. Jimenez recently completed a residency in pediatrics at Children's National Medical Center in Washington, D.C. He will join the Robert Wood Johnson Foundation Clinical Scholars Program at the University of Pennsylvania in 2010, when his wife, Jennifer Endres Jimenez, MD '07, begins a pediatrics fellowship in gastroenterology at the Alfred I. duPont Hospital for Children in Wilmington, Delaware. — K.O'N.

Mahalia Desruisseaux, MD '00

Fighting Malaria with Head and Heart

Every 30 seconds, malaria takes the life of a child. Cerebral malaria (CM) is part of the spectrum of severe malaria, which is caused for the most part by infection with *Plasmodium falciparum* and results in 30 percent mortality. In children, the mortality rate is much higher, particularly in Africa, where children less than five years old account for 8 percent of malaria-related deaths worldwide. Death comes quickly, and while survivors may be afflicted with profound lifelong neurological complications, including ataxia, hemiplegia, learning disabilities, and memory impairment, long after their malaria has been successfully treated.

Mahalia Desruisseaux, MD '00, instructor of medicine, Albert Einstein School of Medicine of Yeshiva University, is committed to identifying the pathogenesis of this devastating disease. After a clinical fellowship in infectious diseases at Einstein, Dr. Desruisseaux decided to pursue her interest in CM.

"She brought the topic to our lab. It was her own initiative," says her mentor Herbert Tanowitz, MD, professor of pathology and laboratory medicine at Einstein. "She developed the project to study CM in a mouse model. She made interesting observations about the possible role of endothelin in the pathogenesis of CM and how its expression may contribute to an array of related neurological dysfunctions. She is an excellent scientist, a wonderful human being, and we are delighted to have her here."

— Continued on Page 68

MARK YOUR Calendar:

May 20, 2010

Graduation Banquet
Westin Hotel, Princeton

May 24, 2010

Convocation

May 26, 2010

Commencement

For additional information,
Contact Roberta Ribner at
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email: ribnerrs@umdnj.edu.

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YOUNG ALUMNI

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COURTESY OF ALBERT EINSTEIN COLLEGE OF MEDICINE

In addition to pursuing her research, Dr. Desruisseaux sees patients in the HIV/AIDS clinic at Montefiore Medical Center. Her warm personality and her fluency in French, her first language, have made her popular with the clinic's many patients from West Africa and the Caribbean, says Dr. Tanowitz, adding, "Everyone wants to see Dr. Mahalia."

In humans, CM develops when sporozoites of mosquito-borne *Plasmodium falciparum* invade and destroy red blood cells, which mass in the endothelial lining of cerebral capillaries. Mechanical blockage ensues when white blood cells and platelets respond to the mayhem, further obstructing cir-

ulation in the brain, leading to a vasculopathy and resulting in the encephalopathy that occurs during CM. Untreated, the disease often leads to death within days.

By studying the host response, as well as the alterations in the expression of endothelin mRNA in the brains of CM-infected mice, Dr. Desruisseaux analyzes the mechanisms that can lead to injury of cerebral vasculature and to downstream nerve damage in survivors. Someday, she hopes, her findings will

Mahalia Desruisseaux, MD '00, instructor of medicine, Albert Einstein School of Medicine of Yeshiva University, is committed to identifying the pathogenesis of malaria.

help lead to adjunctive therapies to mitigate the neurological sequelae of the disease.

In 2007, Dr. Desruisseaux won a five-year Burroughs-Wellcome Fund Career Award for Medical Scientists, established to increase the number of physician-scientists conducting biomedical research. It was her first award from Burroughs-Wellcome and the latest in a series of grants that began during her residency at North Shore University Hospital and continued dur-

ing her fellowship in infectious diseases at Einstein and Montefiore. Other awards have included the Colin L. Powell Minority Post-Doctoral Fellowship in Tropical Disease Research, from the Infectious Diseases Society of America's Education Research Foundation and the National Foundation for Infectious Diseases.

Ronny Drapkin, MD '98, PhD Shifting the Paradigm of Ovarian Cancer Research

Early detection of ovarian cancer — a common, treatment-resistant, and often fatal disease — is the research focus of Ronny Drapkin, MD '98, PhD, assistant professor of pathology, Harvard Medical School. Dr. Drapkin is an associate member of the Center for Molecular Oncologic Pathology, a joint venture between the Dana Farber Cancer Institute (DFCI) and Brigham and Women's Hospital (BWH), where he is a principal investigator/scientist. His laboratory is funded by grants from the National Cancer Institute of the National Institutes of Health as well as the Ovarian Cancer Research Fund, Novartis Pharmaceuticals, and private foundations.

Dr. Drapkin was a leading participant in a multi-institutional project that identified HE4, a new biomarker for ovarian cancer. In October 2008, the U.S. Food and Drug Administration (FDA) approved an HE4 blood test for ovarian cancer. This was the first new biomarker approved by the FDA since



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His laboratory continues the work on the genetics of ovarian cancer that he began as a post-doctoral researcher at the DFCI at Harvard, with David Livingston, MD. Later, in collaboration with a former clinical mentor, Christopher Crum, MD, at BWH, Dr. Drapkin focused on the pathogenesis of the disease. “Dr. Drapkin was one of the few investigators involved in a paradigm shift in ovarian cancer research,” says Dr. Crum.

Dr. Drapkin initiated an analysis of the P53 sig-

Early detection of ovarian cancer is the research focus of

Ronny Drapkin, MD '98, PhD, assistant professor of pathology, Harvard Medical School.

CA125 was approved more than 20 years ago. Ongoing translational and clinical studies are aimed at defining the efficacy of HE4 in predicting ovarian malignancies early, while they are still localized and potentially treatable.

“Blood tests for HE4 are now available and could be performed in the community setting, by a gynecologist. These patients could then be referred to the proper center for further treatment and testing,” says Dr. Drapkin. HE4 testing may well supplement the widely used serum biomarker CA125, a cancer antigen that produces frequent false-positive results. “Unlike CA125, HE4 does not seem to be triggered by benign conditions,” adds Dr. Drapkin.

nature gene for evidence of DNA damage and created a cell culture model to study early DNA damage in the epithelium of the fallopian tubes — not the ovaries, where these cancers had been thought to arise. “This is proving to be an important pathway in the genesis of this common and lethal form of ovarian cancer,” adds Dr. Crum.

Located at the DFCI, Dr. Drapkin’s lab integrates genomic studies of human ovarian cancer, new culture model systems, and rigorous protein biochemistry and molecular biology to explore three complementary approaches — pathogen-

esis, genetics, and tumor markers — in the quest to understand ovarian cancer. Assisted by six post-doctoral researchers, Dr. Drapkin also uses mouse models to investigate cancers arising in the fallopian tubes.

Another project focuses on the BRCA 1 and 2 genes and their role in the DNA repair process and carcinogenesis. In addition, his lab is studying Elafin, a biomarker that may help guide efforts in early detection and prognostication of gynecologic cancers.

Dr. Drapkin ensures that everyone in his lab feels invested in the work, moves forward with his or her own work, and gets published. He also teaches at Harvard Medical School, where he stimulates students’ interest in research, and enjoys helping them choose among career options.

“My mentors were a highlight of my experience at RWJMS,” he says. “All of my professors were inspired teachers, genuinely interested in our growth as young doctors. Dr. Robert Trelstad and Dr. Danny Reinberg, not only influenced my career path, but also shaped the way I now approach science and mentorship of my own students and fellows.”

The UMDNJ-Graduate School of Biomedical Sciences (GSBS) at RWJMS awarded its 2008 Distinguished Alumnus Award to Dr. Drapkin. “Ronny distinguished himself as a graduate student at GSBS at RWJMS and has continued to do excellent work as an independent scientist and mentor to the next generation of young scientists,” says Terri Goss Kinzy, PhD, professor of molecular genetics, microbiology, and immunology and senior associate dean, GSBS. **M**

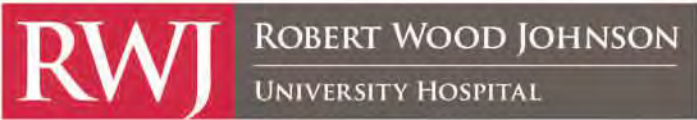


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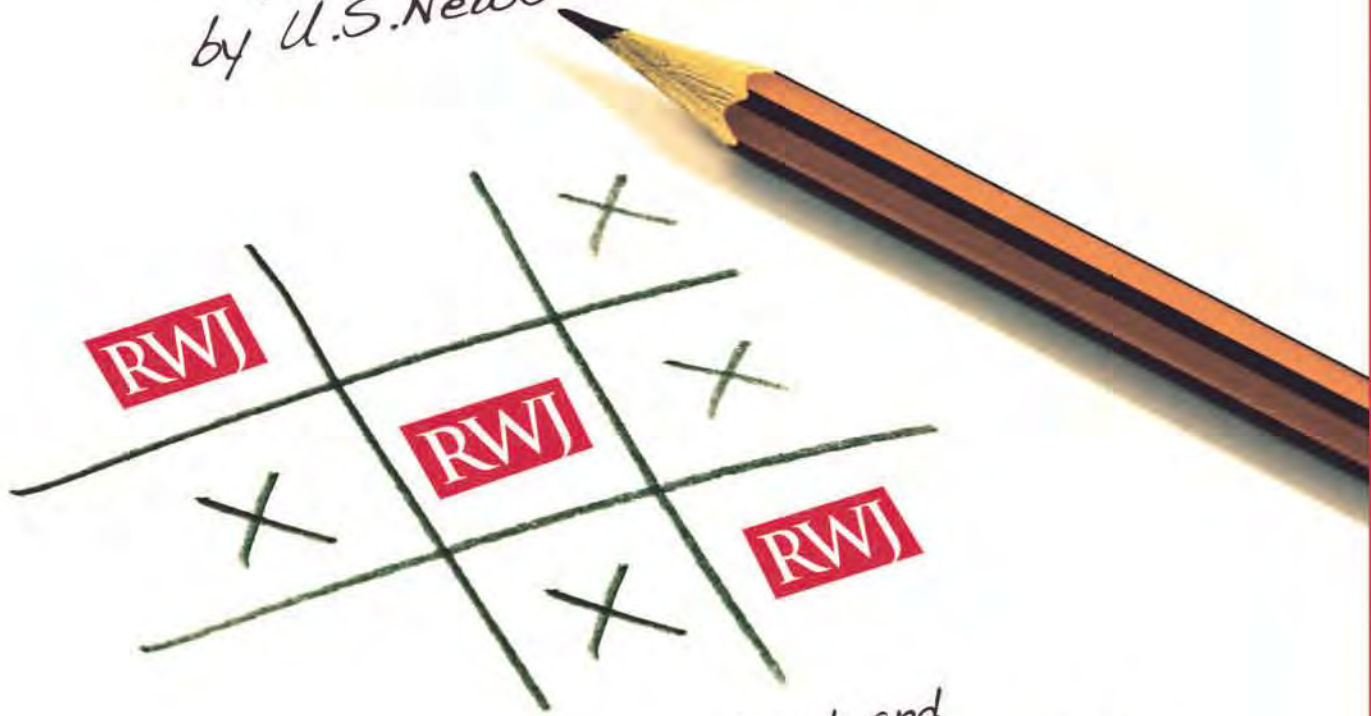
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