Fruit Fly Research May Lead to Cancer Treatments

Researchers, led by Ross Cagan, PhD, Professor and Associate Dean at Mount Sinai School of Medicine, are pursuing a novel approach to cancer treatment that uses the *Drosophila* fruit fly to target multiple genetic pathways. The method, which differs from the more traditional focus on finding and hitting a single protein, was published in the June 6, 2012, issue of *Nature*. Dr. Cagan says fruit flies have the same tissue and signaling pathways as humans, and offer a relatively quick and inexpensive approach to screening drugs using the whole animal.

The team's *Drosophila* research has evolved since 2004, when the investigators helped discover a drug for thyroid cancer. Since then, they have developed a new class of drugs that are moving toward clinical trials as early as 2013. Dr. Cagan says that when tested in human cell lines, the novel drug AD80 was shown to be 500 times more effective than the current standard of care and with less toxicity.

Nurses Honor Four Physicians of the Year

Mount Sinai nurses recently presented four physicians with their 25th Annual Physician of the Year Award in a spirited ceremony that recognized excellence in patient care and a commitment to fostering strong collaborative relationships. The event, held on Monday, June 25, at times resembled a roast, as colleagues honored the recipients through photographs, videos, and testimonials. The physicians were nominated and selected by nurses and Nursing leadership.

The 2012 recipients were:

- Patricia A. Bloom, MD, Associate Professor, Brookdale Department of Geriatrics and Palliative Medicine, and Department of Medicine (Internal Medicine), who received the Special Recognition Award;
- Bruce Darrow, MD, PhD, Assistant Professor of Medicine (Cardiology) and Interim Chief Medical Information Officer, who received the Attending Award;
- Kai Tsao, MD, Fellow, The Tisch Cancer Institute, Division of Hematology/Oncology, who received the Fellow Award;
- Katharine Maglione, MD, Radiology Resident, who received the House Officer Award.

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Nurses Honor Four Physicians of the Year (continued from page 1)

Carol Porter, DNP, RN, Chief Nursing Officer and the Edgar M. Cullman, Sr. Chair of the Department of Nursing, presided over the ceremony. “The physicians we are celebrating today collaborate with the Nursing staff in achieving great clinical outcomes, along with providing an outstanding patient experience,” she said. “When nurses select physicians for excellence, you know that they really deserve the honor.”

Dr. Porter briefly explained why each was selected.

“Dr. Bloom arrives to the practice early so she can participate in our daily huddles to discuss patient care issues,” said Dr. Porter. “She is an excellent teacher and role model who makes us feel confident in ourselves. Dr. Bloom is an exemplary icon of how a physician can interact positively with staff, patients, and families.”

Dr. Porter told the audience that Dr. Darrow “is always willing to teach, whether he is giving constructive criticism of a technique, or discussing evidence-based practice. He supports the nurse practitioners as they pursue initiatives that challenge us. He is the epitome of professionalism.” Dr. Porter also praised Dr. Darrow’s “exceptional leadership during the Epic electronic medical record ‘go-live,’ which transcended nursing to reach every corner of the hospital.”

She summarized that Dr. Tsao “spends time with each team member and consistently goes above and beyond his scope of practice to assure that we all meet or exceed the expectations of patients and their families, and that each patient receives the most outstanding plan of care and experience.”

Dr. Porter recognized Dr. Maglione “for having a level of inquisitiveness and motivation not normally seen in the second-year resident. The words that nurses have used to describe Dr. Maglione are ‘humble, approachable, compassionate, and open-minded.’”

There were sobering moments of shared experiences and light reminiscences between the nurses and physicians. “I have always relied on the kindness of nurses,” Dr. Bloom told the guests. “I know how lucky I am to be at Mount Sinai.”

Dr. Darrow said, “It's a privilege to work side by side with nurses, my touchstone for clinical excellence every day. They are not participants in patient care—they are leaders in patient care.”

Dr. Tsao thanked his mentors and recognized the contributions of nurses and all members of the cancer team, and said, “Without them, cancer care is not possible.”

Dr. Maglione looked at her father, a physician, seated in the audience, and recounted that he often expressed to her that nurses have the hardest job in the hospital. “I feel very honored,” she said.

FROM LEFT: Bruce Darrow, MD, PhD; Katharine Maglione, MD; Kai Tsao, MD; Patricia A. Bloom, MD; and Carol Porter, DNP, RN

Fruit Fly Research May Lead to Cancer Treatments (continued from page 1)

“Since the early 1990s, finding one protein that drives disease and hitting it with high-specificity drugs has been the holy grail,” Dr. Cagan explains. “But the assumption that the driver of a disease is the best drug target is often wrong. These proteins are fundamental to our body's biology and drugging them can prove toxic to a patient. Overall, the one target concept has had mixed success. Only a small percentage of cancer drugs that make it into trials get approved.”

One of the most successful drugs on the market, says Dr. Cagan, is metformin, which is used to treat type 2 diabetes. The drug hits many targets, he says, because there is no single target for diabetes. That may be true for tumors, as well, with their hundreds if not thousands of mutations.

Dr. Cagan calls his approach to drug discovery “rational polypharmacology.” Working with medicinal chemists, Tirtha Das, PhD, a postdoctoral fellow at Mount Sinai, scanned a chemical library of drugs to identify the best one. The investigators found that, in some cases, reducing a protein made the drug work better, indicating the drug needed to hit this “target” harder. In other cases, reducing a protein made the drug more toxic and animals died more readily. This led to the concept of an “anti-target,” a protein target to be avoided.

By improving “targets” and removing “anti-targets,” the Mount Sinai team and Kevan Shokat, PhD, and Arvin Dar, PhD, their collaborators from the University of California, San Francisco, developed AD80 to target four proteins that shrink tumors and avoid a key anti-target, leaving it less toxic in mice than drugs that are currently available.

“One principle we can take any drug and give it more efficacy and less toxicity,” says Dr. Cagan. His team is now looking for drugs that treat lung and colorectal cancers.
A Recognition of Employee Excellence

Amid noisemakers, cheers, and applause, colleagues, friends, and family helped salute 12 teams of employees and 33 individuals who received 2012 Recognition of Excellence Awards, an annual two-day event sponsored by The Mount Sinai Medical Center Employee Recognition Program. The awards ceremony occurred during nine days of employee-appreciation festivities that included special recognition of 846 individuals who celebrated milestone anniversaries of 10 to 45 years of service.

Award recipients were recognized for extraordinary passion and professionalism in their jobs, compassion for patients, innovative solutions, exceptional leadership skills, energy, and versatility.

Kenneth L. Davis, MD, President and Chief Executive Officer of The Mount Sinai Medical Center, presented the 2012 Mount Sinai Presidential Service Award to two individuals: Susan Bernstein, DSW, Director of the Department of Social Work Services, and Ricardo Lazala, Senior Director of Cardiothoracic Clinical Services. This award honors individuals who exemplify the highest level of dedication to Mount Sinai, compassion toward patients, and leadership among staff.

“Susan Bernstein helped shape Mount Sinai’s reputation for excellent care, as well as its responsiveness to the needs of patients across cultures, languages, and socioeconomic groups,” Dr. Davis told the audience. “She initiates new programs and encourages new ideas because ‘it’s the right thing to do.’ It may not always be the easy thing to do, but if it is the right thing, you’ll find Susan doing it.”

Dr. Davis said of Ricardo Lazala: “If you could weigh energy and passion, Ricardo’s would be off the charts. One of his army of admirers says ‘he binds us into a cohesive and functional team.’ Relying on an extraordinary set of skills, he is able to tackle the toughest challenge and handle it with poise, always leading with a dedicated patient-first philosophy.”

To learn more about all the employees who were honored, view the Employee Recognition Program digital screen outside the Plaza Café.

Mount Sinai Student Wins a Spot on U.S. Olympic Team

On August 11, Maria Michta, a graduate student at Mount Sinai School of Medicine, expects to fulfill her dream of representing the United States in race walking at the 2012 Summer Olympic Games in London. She received the coveted spot on the U.S. Track & Field Team at the Olympic trials in July, after competing against 14 other women. In her qualifying race, she covered 20km in 1:34:52, for an average pace of 7:38 minutes per mile for 12.4 miles. In race walking, the athlete must maintain contact with the ground. The front leg must land before the back leg comes off the ground.

Ms. Michta—who will be starting her fifth year as a PhD student in microbiology this fall—discovered her talent for race walking as a high school freshman on Long Island. Throughout high school, college, and graduate school, she has competed internationally.

During the school year, Ms. Michta heads out early each morning to train in Central Park for her first workout of the day. If she misses her second workout in the evening, she trains in the exercise room in Mount Sinai’s Jane B. Aron Residence Hall where she lives.

Managing a hectic schedule as a graduate student and researcher specializing in the hepatitis C virus, and as an Olympic athlete requires tremendous discipline. “It would have been very easy for me to stop training and focus only on school, but I’ve always been in love with the Olympics and had come too far to give it up,” she says. “I am someone who knows what needs to be done and makes sure that it gets done.”

Ms. Michta’s mentor, Matthew J. Evans, PhD, Assistant Professor of Microbiology, says she has “demonstrated terrific dedication and toughness,” in her research at Mount Sinai. “It amazes me,” he adds, “that Maria could handle training for the Olympics and pursuing her PhD at the same time. Of course, to make it to the Olympics she must be an extremely motivated athlete. This spills over to her research as well.”

Maria Michta was No. 1 in race walking at the Olympic trials in Eugene, Oregon.
Events

Weight Management Program

Mount Sinai's medically supervised Weight Management Program is holding a weekly orientation session, "Toward Lasting Better Health." The program is geared to helping people who need to lose more than 30 pounds, and is led by physicians and dietitians. To attend a session, call 212-241-4991.

Mondays
5 pm
Atran Building
Fourth Floor
Conference Room A84-11

Grand Rounds Anesthesiology

Vladimir Nekhendzy, MD, Clinical Associate Professor, Stanford University, presents "Difficult Airway Management in the 21st Century: Old Dilemmas, New Solutions?"

Tuesday, July 17
4 - 5 pm
Radiology Education Center Conference Room MC Level

Grand Rounds Neurosurgery

Jamie Ullman, MD, Associate Professor, Department of Neurosurgery, presents "Quality Assurance: Elmhurst Queens Hospital," followed by resident case presentations.

Wednesday, July 25
Grand Rounds: 7 - 8 am
Resident Case Presentations: 8 - 9 am
Annenberg Fifth Floor Board Room

Laboratory Medicine Seminar Series

Samuel De Sousa, Director of Information Systems, Center for Clinical Laboratories, presents "Strategic Concepts for an Effective Laboratory Information System and Management."

Tuesday, July 17
8 - 9 am
Icahn Medical Institute 8-40 Conference Room

Interdisciplinary Adrenal Center Conference

Mount Sinai physicians present "The Year in Adrenal Disorders: An Update from the 2012 Endocrine Society and American Association of Endocrine Surgeons Meetings."

Tuesday, July 17
4 - 5 pm
Radiology Education Center Conference Room MC Level

Promoting Wellness

As part of Mount Sinai's "Live Well, Eat Well, Stay Well, Be Well" initiative, all employees are encouraged to visit their primary care providers or attend one of six health screenings on campus before the new 2013 Benefits Open Enrollment period begins on Monday, October 15. Individuals who provide their accurate height, weight, blood pressure, and cholesterol figures on the United Healthcare Risk Assessment Survey will receive a 30 percent offset in their 2013 health insurance copay.

Health Screenings

Health screenings will be conducted in Guggenheim Pavilion, from 8 – 10 am, on the following dates:

Tuesday, September 11
Thursday, September 13
Tuesday, October 16
Thursday, October 18
Tuesday, October 23
Thursday, October 25

Education

Summer Course In Clinical Research

Leading experts in clinical and translational research will cover a variety of topics, among them secondary data analysis; EMR and personalized medicine; biostatistical strategies in clinical trial design and handling of missing data; multicenter trials; social network analysis; and drug discovery and innovation. Sponsored by Conduits —The Institutes for Translational Sciences, the Center for Patient Oriented Research, Training, Education and Development (CePORTED), and the Graduate Medical Education Office. For registration and additional information, visit http://register.mssm.edu/seminar/CLR9011.

Tuesdays and Thursdays through Thursday, August 9
8 – 9 am
Annenberg 13-01*

*Note: The class on Thursday, July 19, is in Stern.

The Page and William Black Post Graduate School for Continuing Education

The Office of Continuing Medical Education (CME) offers seminars, conferences, grand rounds, and live webcasts for physicians and other health professionals to extend their knowledge and remain current in their specific fields. For more information on courses, visit http://www.mssm.edu/education/continuing-medical-education/courses or call the Office of CME at 212-731-7950.

Do You Need a Primary Care Physician?

You can make an appointment today with Mount Sinai Primary Care Associates. Call 212-241-6585 or visit www.mountsinaifpa.org.

2013 Benefits Fair

Wednesday, September 12
8 am – 3 pm
Annenberg West Lobby

Inside Mount Sinai

2012 Marketing & Communications
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