Protecting the Brain From Bipolar Disorder

Individuals whose siblings have bipolar disorder are at high risk for developing mood disorders themselves. However, siblings who remain psychiatrically healthy may have a natural ability to rewire their brains that compensates for their genetic risk. These findings, led by Sophia Frangou, MD, PhD, Professor of Psychiatry at the Icahn School of Medicine at Mount Sinai, were published in the January 5, 2016, issue of *Translational Psychiatry*.

Bipolar disorder, also known as manic-depressive illness, is a brain disorder that causes fluctuations in patients’ mood, energy, activity levels, and the ability to carry out day-to-day tasks. Most of the risk (up to 80 percent) of developing bipolar disorder is genetic and can be traced to genes that affect brain function.

A Pioneer in Multiple Myeloma Joins Mount Sinai

Bart Barlogie, MD, PhD, a world-renowned physician who introduced the first curative therapy for multiple myeloma, a multidrug regimen known as Total Therapy, recently joined The Tisch Cancer Institute as Director of Research in the Multiple Myeloma Program.

Dr. Barlogie will work with the program’s leader, Sundar Jagannath, MD, Professor of Medicine (Hematology and Medical Oncology), to develop new therapies to treat the disease, which is characterized by cancerous plasma cells that form in the bone marrow and crowd out normal, blood-forming cells. Their collaboration helps make Mount Sinai the nation’s premier myeloma program. About 26,850 new cases of the disease occur in the United States each year, according to the American Cancer Society.

“I’m dedicating my efforts toward improvement of patients with high-risk myeloma in whom we have made only negligible progress, as opposed to the 85 percent of patients presenting with genomically defined low-risk disease where we have a cure expectation of about 50 percent,” says Dr. Barlogie, who served for 26 years as Director of the Myeloma Institute for Research & Therapy at the University of Arkansas for Medical Sciences (UAMS), an institute he founded.

By collaborating with Dr. Jagannath, he says, “We have a unique opportunity to move the field forward.
Studies show that close relatives of a person with bipolar disorder are up to ten times more likely than a typical person to present with a range of mood problems.

The new study examined patterns of brain connections in patients with bipolar disorder and their healthy resilient siblings, and then compared them to unrelated healthy individuals without a family history of the disorder. Siblings selected to participate in the study were in their mid-40s, an age when the chances of developing the disorder are very low.

Functional magnetic resonance imaging (fMRI) results revealed that compared to healthy unrelated individuals, patients with bipolar disorder and their resilient siblings showed similar brain abnormalities when asked to perform tasks that tap into brain functions known to be affected by bipolar disorder. However, the resilient siblings showed additional changes in brain wiring within these networks that were unique to them and, therefore, likely to represent adaptive rewiring that has helped them remain well.

“So far in the field of psychiatry we have focused on risk, and on brain changes that contribute to illness, instead of looking for brain changes that can be protective,” says Dr. Frangou. “The fact is the majority of people at high risk for bipolar disorder remain free of any psychiatric disorder. Recognizing the factors that promote resilience in the presence of significant genetic risk is very important as it shifts the focus from illness to well-being.”

The research suggests “that it is possible for some individuals to develop adaptive changes naturally, and we can promote these connectivity changes in other high-risk people,” Dr. Frangou says. Ultimately, Dr. Frangou expects to develop an algorithm able to reveal the likelihood that a person with a high risk for developing bipolar disorder will actually develop it. She also wants to extend her research to include relatives of people with schizophrenia and to develop a computer-based cognitive training intervention to evaluate whether mental exercises can help promote resilience.

“Looking for biological mechanisms that can protect against illness opens up a completely new direction for developing new treatments,” says Dr. Frangou. “Our research should give people hope that even though mental illness runs in families, it is possible to beat the odds at the genetic lottery.”
A Pioneer in Multiple Myeloma Joins Mount Sinai (continued from page 1)

with our understanding of the underlying mechanisms that cause cells to become malignant.”

The physicians will work with colleagues in the Department of Genetics and Genomic Sciences and Department of Immunology to identify suitable drugs that target gene mutations found in bone marrow samples taken from patients. Mount Sinai offers a unique opportunity to advance the team’s knowledge due to the depth and breadth of its basic science research, says Dr. Barlogie.

Dr. Barlogie’s scientific career has focused on biological and therapeutic research, including chemotherapy, immunotherapy, and hematopoietic stem cell transplantation. He developed the first effective salvage regimen (VAD) for melphalan-prednisone refractory myeloma, introduced autologous transplantation for myeloma, and identified thalidomide as a first-in-class novel agent for the treatment of myeloma. Together with John Shaughnessy, PhD, who also recently joined the Mount Sinai Health System, Dr. Barlogie developed gene expression profiling to identify molecular subclasses of myeloma and established a highly predictive risk model.

A Fellow of the American College of Physicians, Dr. Barlogie has served on the Board of Directors of the International Myeloma Foundation. He has received numerous honors, including the prestigious Jan Waldenstrom Award, the Celgene Career Achievement Award in Hematology Research, and the Robert A. Kyle Lifetime Achievement Award from the International Myeloma Foundation. He was also honored in 2006 with the National Physician of the Year Award by Castle Connolly Medical Ltd.

His published work includes more than 600 peer-reviewed journal articles, including five in The New England Journal of Medicine and 75 book chapters. Dr. Barlogie has served on the editorial boards of Blood, Clinical Cancer Research, and Clinical Lymphoma, Myeloma & Leukemia.
Around the Health System

Thoracic Surgery Patients Perform Free Chamber Music Concerts

Kristin Olson and Nadir Aslam, professional musicians who met when they were treated for recurrent spontaneous pneumothorax (collapsed lung) at The Mount Sinai Hospital in August 2015, ardently believe in the power of music to soothe and heal. After treatment, they asked their surgeons—Andrea Wolf, MD, and Andrew Kaufman, MD, both Assistant Professors of Thoracic Surgery at the Icahn School of Medicine at Mount Sinai—if they could perform free baroque chamber music concerts for staff, patients, and visitors. Ms. Olson, an oboist, and Mr. Aslam, a violinist, have since given two performances with guest musicians in the Guggenheim Pavilion, and now are working with the Mount Sinai Department of Volunteer Services to start a regular series of concerts.

Wholeness of Life Awards

Two Mount Sinai Health System employees recently received 2015 Wholeness of Life Awards from the HealthCare Chaplaincy Network™ for their commitment to teamwork and professional relationships in providing compassionate and respectful care to patients in crisis. A third Wholeness of Life Award was given posthumously to the family of Beth Faitelewicz, RN, a nurse who served in the Emergency Department at Mount Sinai Beth Israel.

Laurie Chameides, LCSW, and Michotte Nabua, RN, received their awards at the HealthCare Chaplaincy Network’s annual gala at the Mandarin Oriental, New York. Ms. Chameides is a social worker in the Obstetrics-Perinatal Bereavement Program at The Mount Sinai Hospital; and Ms. Nabua is a staff nurse, Emergency Department, Mount Sinai West.

The HealthCare Chaplaincy Network—a global, nonprofit organization that offers spiritual care-related information and resources to hospitals and health care institutions—established the awards in 1986 to honor individuals who provide wholeness of care in body, mind, and spirit.

Mount Sinai Beth Israel Opens New Café in Linsky Lobby

Mount Sinai Beth Israel's new café—Who's on First?—opened in December with an expanded menu that for the first time includes non-kosher as well as kosher food options, a “Cuisine of the Day” station, weekly specials, a salad bar, hot food bar, and a “Grab & Go” section. Located in the Linsky Lobby of the hospital's main entrance at 280 First Avenue—the same location as the previous cafeteria—Who's on First? is open 7 am to 7 pm, seven days a week. Four hundred employees participated in a contest to name the new café. The winning entry was from Lydia E. Hosbach, Administrative Assistant, Patient Representative Department, who received a 32-inch flat-screen TV.

From left: Laurie Chameides, LCSW; Rabbi H. Rafael Goldstein, DMin, BCC, Director of Clinical Services, Center for Spirituality and Health, Mount Sinai Health System; and Michotte Nabua, RN

From left: Jay Aldieri, Regional Director of Food and Nutrition Services, Mount Sinai Health System; Nympha Meindel, RN, Chief Administrative Officer, Mount Sinai Beth Israel; and Susan Somerville, RN, President, Mount Sinai Beth Israel, at the ribbon-cutting for Who's on First?
Study Supports Palliative Care for Cancer Patients

Advanced-stage cancer patients who received palliative care required shorter durations of radiation treatment and had shorter hospital stays, according to a recent study at the Icahn School of Medicine at Mount Sinai.

“Radiation therapy is very effective at relieving pain, but the standard two weeks of treatment may be too long or burdensome for some patients, given the state of their illnesses,” says the study’s senior author, Kavita Dharmarajan, MD, M.Sc, Assistant Professor of Radiation Oncology, and Geriatrics and Palliative Medicine, at the Icahn School of Medicine at Mount Sinai. “We showed that shorter course treatments can be equally, if not more, effective, especially when combined with other forms of therapy that put patients first, and not the tumor.”

Dr. Dharmarajan presented the study in October at the Palliative Care in Oncology Symposium in Boston. The researchers evaluated 336 patients with stage IV cancer who were receiving radiation for symptomatic bone metastases. Of the 161 patients who received a combination of palliative care and short-course treatments (five or fewer sessions over the course of a week), the length of hospital stay declined by six days (from 18 to 12), the number of unfinished treatments dropped from 15 percent to 8 percent, and more patients accessed palliative care services within 30 days of finishing radiation (49 percent vs. 54 percent).

In addition, the study reported a slight improvement in the number of patients experiencing pain relief despite the reduction in radiotherapy.

As Dr. Dharmarajan points out, upwards of 40 percent of all patients undergoing radiation as part of cancer treatment do so for palliative reasons, to alleviate or prevent symptoms rather than to cure their disease. “The standard ten fractions (two weeks) of radiation treatment may be overkill for what many of these patients need,” Dr. Dharmarajan says. “I feel strongly that as radiation oncologists, we can better serve these late-stage patients by treating them holistically, with radiation as well as non-radiation therapies, to manage their pain, nausea, fatigue, depression, and anxiety.”

Since many patients are unfamiliar with palliative care, Dr. Dharmarajan says physicians have an obligation to refer patients to palliative care specialists and “to explain how it can help them and their families deal with their illnesses.”

Dr. Dharmarajan says she hopes her study will create awareness that small changes in everyday treatment can significantly impact outcomes. “We’re showing patients that their voices really matter when making decisions about palliative care and radiation treatment,” she says. “They may decide against a lengthy course of radiation, or decide to reprioritize their goals.”

In 2014, the American Cancer Society awarded its prestigious Clinical Research Professor grant to R. Sean Morrison, MD, Director of the Lilian and Benjamin Hertzberg Palliative Care Institute at the Mount Sinai Health System. Dr. Morrison, a pioneer in the field—and the Hermann Merkin Professor of Palliative Care at the Icahn School of Medicine at Mount Sinai—helped launch Mount Sinai’s palliative care program in the mid-1990s. Over the past decade, more than half of U.S. hospitals have begun using hospital-based palliative care models developed at Mount Sinai.

“I feel strongly that as radiation oncologists, we can better serve these late-stage patients by treating them holistically, with radiation as well as non-radiation therapies, to manage their pain, nausea, fatigue, depression, and anxiety.”

— Kavita Dharmarajan, MD, M.Sc
2016 Wall Street Run and Heart Walk T-Shirt Contest

Mount Sinai Heart invites staff to submit a design for its team T-shirt for this event. Email dion.harrigan2@mountsinai.org for instructions.

Submission deadline: Friday, February 26
Event: Thursday, May 19

Grand Rounds / Population Health Science And Policy

Elizabeth G. Nabel, MD, President, Brigham and Women's Health Care, Professor, Medicine, Harvard Medical School, presents the "Sixteenth Annual Aufses-Whitman Lecture: Health Care Reform in 2016, An Academic Medical Center Perspective."

Tuesday, January 26
4 – 5 pm
The Mount Sinai Hospital Campus
Hatch Auditorium

Grand Rounds / Psychiatry

Kenneth Sakauye, MD, Emeritus Professor, Psychiatry, The University of Tennessee Health Science Center, College of Medicine, presents the "Friedfield Lecture: Cultural Issues in Treating Geriatric Patients with Mental Illness."

Thursday, January 28
11:30 am – 1 pm
Mount Sinai Beth Israel
Bernstein Pavilion, Podell Auditorium

Grand Rounds / Geriatrics and Palliative Medicine

Joanne Loewy, DA, LCAT, MT-BC, Director, Louis Armstrong Center for Music and Medicine, Mount Sinai Beth Israel, presents "Music and Medicine: Evidence-Based Clinical Practice."

Thursday, January 28
5 – 6 pm
The Mount Sinai Hospital Campus
Annenberg 10-30

Grand Rounds / Anesthesiology

Lisa Leffert, MD, Division Chief, Obstetric Anesthesia, Massachusetts General Hospital, presents "Obstetric Anesthesia: What’s New That Should Change Your Practice."

Wednesday, February 3
6:30 – 8:30 am
The Mount Sinai Hospital Campus
Annenberg 13-01

February is Heart Month

Mount Sinai Heart is hosting health fairs for staff and the community, as well as other events, to promote heart health and National Wear Red Day.

WEAR RED DAY
FRIDAY, FEBRUARY 5
Wear red to show your support!

Heart Health Fairs

Complimentary blood pressure, cholesterol, and glucose testing; nutrition and diet counseling; body mass index (BMI) screening; heart-healthy cooking demonstrations; and more:

Thursday, February 4
10 am – 2 pm
Mount Sinai Brooklyn, 3201 Kings Highway, Lobby

Friday, February 5
10 am - 4 pm
Mount Sinai Beth Israel, Dazian Building, Second Floor, Rotunda

11 am – 2 pm
Mount Sinai Beth Israel, Phillips Ambulatory Care Center, Atrium
Mount Sinai St. Luke’s, Babcock Lobby, First Floor
The Mount Sinai Hospital, Guggenheim Pavilion, Atrium

Mount Sinai Queens will present free screenings for blood pressure and body mass index, heart health information, and lectures. Registration is encouraged by calling 800-Your-MDS (800-968-7637).

Friday, February 5
3 – 4:30 pm
Church of the Redeemer
30-14 Crescent Street, Astoria, New York

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