

# Innovation and Discovery

## An Interview with Evan L. Flatow, MD, President, Mount Sinai West

**EDITORS' NOTE** Dr. Evan Flatow is President of Mount Sinai West (formerly Mount Sinai Roosevelt), part of the Mount Sinai Health System. Prior to this appointment, he served since 2006 as the Bernard J. Lasker Professor of Orthopaedic Surgery and Chair of the Leni and Peter W. May Department of Orthopaedic Surgery at the Icahn School of Medicine at Mount Sinai and Director of the Orthopaedic Surgery Service at The Mount Sinai Hospital. A nationally and internationally recognized leader in shoulder surgery, he has made many clinical, educational, and research contributions to the care of shoulder disorders. Since joining Mount Sinai in 1998, Dr. Flatow has established an internationally renowned shoulder service, training numerous shoulder fellows and residents. He, along with others, helped to develop a comprehensive shoulder replacement system that is widely used by shoulder surgeons around the world. Dr. Flatow established a tendon basic science research group at Mount Sinai, serving as principal investigator on a National Institutes of Health R01 grant based on a new animal model of tendon damage. Dr. Flatow spent the 11 years prior to joining Mount Sinai on the faculty of Columbia-Presbyterian Medical Center. Dr. Flatow has received numerous honors and awards, and has written or edited five books and more than 170 articles and book chapters. He has served as President of American Shoulder & Elbow Surgeons, Chair of the Trustees of the Journal of Shoulder and Elbow Surgery, and as Chair of the Publications Committee and of the Council on Education of the American Academy of Orthopaedic Surgeons. A 1977 graduate of Princeton University, Dr. Flatow received his medical degree from Columbia University College of Physicians and Surgeons in 1981. He completed a surgical residency at Roosevelt Hospital, and an orthopaedic residency and a year of shoulder fellowship under the direction of Charles S. Neer, II, MD, at Columbia-Presbyterian Medical Center.



Dr. Evan L. Flatow

has been home to the C.V. Starr Hand Surgery Center and one of the oldest teaching hand surgery fellowships in the country since 1952, and is renowned for multiple surgical specialties, its robust maternity service, and delivering the highest quality, patient-centered care. The hospital has a 24/7, state-of-the-art emergency department on 59th Street between Ninth and Tenth Avenues that sees more than 65,000 patients a year, and has been named a designated stroke center by the New York State Department of Health. It is also a teaching facility for the Icahn School of Medicine at Mount Sinai, preparing the next generation of physicians for their careers in medicine.

### How do you describe Mount Sinai Health System's culture and how critical is Mount Sinai's commitment to innovation as part of its culture?

Mount Sinai's culture is one of innovation and discovery. Our CEO, Ken Davis, and our Dean, Dennis Charney, are both renowned physician scientists. Unlike most medical schools which are embedded in a larger university, our medical school was formed by our hospital and our medical and graduate schools and hospitals report to one CEO and one board of trustees. This relationship and structure is incredibly valuable for transitioning discoveries from bench to bedside, but also our community of clinicians are directly in the pathways of discovery.

### Will you provide an overview of your role and areas of focus?

I've served for nine years as Chair of Orthopaedic Surgery, and then for the last nine years as President of Mount Sinai West, formerly Roosevelt Hospital, on West 59th Street in Manhattan.

As Chair, I focused on recruiting and retaining the very best orthopaedic surgeons, and supporting them in delivering timely, equitable, compassionate, and cutting-edge care to our patients, often in a team approach among several disciplines. For example, we built a multidisciplinary spine center with orthopaedic spine surgeons, neurosurgical spine surgeons, non-operative physiatry spine experts, and even a chiropractor, all working in an integrated fashion with the patient as the center of our care model. Further, we recruited one of the world's top spine research scientists to join our

basic science labs and collaborate with our spine clinicians in developing treatments at the forefront of science and medicine. Spine is just one example among many areas.

As President of Mount Sinai West, I have been responsible for the application of system level strategy through renovation and expansion of our facilities and programs, growth of our outpatient footprint on the West Side, and development of an academic campus. We have some stellar programs that are unique centers of excellence for the Health System, such as kidney stone disease, movement disorders, adult epilepsy, and orthopaedic hand and upper extremity surgery. In other areas we are a major hub, though not the only site, for spine surgery, joint replacement, and mother-baby care. Of course, we also had to confront the immense challenge of COVID. Mount Sinai West had the very first patient admitted in the health system, and it is not over yet. It drew us all together not only here at Mount Sinai West, but across the Health System.

### What have been the keys to Mount Sinai West's strength and leadership in the industry?

I think two major things: commitment and purpose. First, our commitment is evident in the sustained, thoughtful way we have built up and sustained Mount Sinai West. I was born at Mount Sinai Morningside (then St. Luke's Hospital), have lived all my life on the West Side, and was a surgery intern and resident at Mount Sinai West, then Roosevelt Hospital, from 1981 to 1983. Becoming President was like coming home for me. While there may always be some disagreements on policies and plans, I believe the faculty and staff at Mount Sinai West know that I and my leadership team will do all in our power to support them and advance Mount Sinai West as a leading center for patient care and a wonderful place to work.

Our purpose is evident in the determined and relentless way we execute our thoughtful, multi-year plans even while coping with the crises encountered every day. We have just opened a state-of-the-art breast center combining imaging, breast surgery, plastic surgery for breast reconstruction, genetic counseling, and oncologic services in one welcoming center, with an ambulatory surgery center soon to open so that women can have all their care in one comprehensive manner. We have broken ground on an entirely new vision for neuroscience in a center



Mount Sinai West

combining clinicians and scientists in movement disorders and epilepsy in one integrated facility: neurosurgeons, neurologists, psychiatrists, and scientists, working together to usher in the most novel and effective approaches to some of our most recalcitrant problems, such as Dr. Helen Mayberg's pioneering research in brain circuit therapeutics, holding up the possibility that techniques in deep brain stimulation and other modulations developed for Parkinson's Disease might offer hope to those suffering from depression.

We live in a revolutionary period in medicine and science, in which molecular genetics, artificial intelligence, and many other exploding technologic advancements are opening up undreamed of opportunities to advance human health and well-being. At Mount Sinai West, we intend to stay at the forefront of discovery and innovation.

**What was the vision for creating the new Center for Surgical Innovation at Mount Sinai and will you provide an overview of the Center?**

Many academic medical centers have institutional facilities and laboratories to aid in the development of new therapeutics, such as small molecule agents, antibodies, and vaccines, but surgical and device innovation has not been similarly supported. So surgeons with ideas for doing things differently and better usually had to team up with a device company, many of which are located in the Midwest. For example, I worked most of my career with Zimmer, now Zimmer Biomet, based in Warsaw, Indiana. While we had several notable successes, there were several challenges. First, the constant travel to the Midwest was a strain on my time and practice, something many surgeons who are innovators are not willing to do. Second, these types of arrangements generally involve working with industry engineers to the general exclusion of Mount Sinai colleagues and scientists. Much cross-discipline synergy is thus lost. Finally, the "iteration time," that is the time a device or retractor (a tool to aid the surgical approach, often to reduce tissue trauma through a "minimally invasive" approach) is modified until a repeat lab can be scheduled, is often long.

I have long dreamed of building a surgical innovation lab and ecosystem where Mount Sinai surgeons work across disciplines to develop new surgical technologies and practices. Mount Sinai Biodesign is an amazing program established by Dr. Bederson in the Department of Neurosurgery which now includes projects in most surgical departments. It serves as an incubator for new ideas and devices that might be conceived of and by surgeons, interventional radiologists, and neurointerventionists. The ability to talk through problems, rapidly develop 3D-printed models, and partner with the technology transfer team has led to several companies being spun off. Biodesign was a natural partner to develop the plan for the Center for Surgical Innovation. The Center will have 10 operating stations where cadavers, animals, or models may be used to develop or validate new surgical ideas. It will be simple to bring in robots and imaging devices for trials or the development of new approaches. There will be a material testing lab to evaluate new devices, for example to see if a device to fix a spine fracture can withstand the loads encountered. There will be a conference center on the top floor linked by video feed to the lab and to the main hospital operating rooms and interventional suites across the street.

**How will the Center for Surgical Innovation at Mount Sinai benefit patients, contribute to job creation and economic growth in New York City?**

The companies spun off will generate jobs in New York, contributing to economic growth. The innovative devices and approaches will result in better surgical care for patients with reduced morbidity through less invasive approaches.

**You have been with Mount Sinai for more than 20 years. What has made the experience so special for you?**

Mount Sinai welcomed me and let me pursue my passions: shoulder surgery, surgical education, and tendon science. At that time, I was not eager for leadership roles. But Mount Sinai in general, and Dr. Davis in particular, had other plans for me. Gradually, I learned the skills of team building and leading by example that have been so important to my career. I have been a service chief, a lab director, a department chair, and a hospital leader, all without leaving Mount Sinai. That is one of the greatest things about Mount Sinai – the investment in our people allowing personal growth and fulfillment. It has certainly made the experience special for me.

**What do you tell young people interested in medicine about the type of career the industry offers?**

I tell young people that there is no more rewarding or exciting career than medicine, in which every one of us can make a difference in peoples' lives every day. The special excitement of surgical innovation is that one can help hundreds or thousands of other surgeons better treat their patients. Despite all the challenges we face, what could be more thrilling or rewarding? ●