

MS researcher gets it in gear



Society fellow joins Bike MS team to raise funds for a cure.

by Mike Knight

There was a problem.

It was Saturday, September 28, 2019. Andrew Mendiola, PhD, a researcher at the Gladstone Institute, an independent state-of-the-art biomedical research institution in San Francisco, straddled his bike at the starting line of the 36th annual Bike MS: Kansas City.

Part of the National Multiple Sclerosis Society's nationwide Bike MS fundraising events, the ride would take 1,500 cyclists up to 165 meandering miles via three separate routes from Olathe, Kansas (a city in the metro Kansas City area) to Lawrence, Kansas, over the next two days, with a goal of raising \$1.2 million to help end the disease. In total, Bike MS: Kansas City has raised over \$28 million since it began in 1983. In 2019, some 80,000 cyclists nationwide rode in Bike MS events, raising over \$65 million. To date, Bike MS cyclists, volunteers, and donors have raised over \$1.3 billion.

Mendiola was a "guest rider" with a local team, the Research Rough Riders, led by surgeon Ted Higgins, MD, a long-time veteran of the event. Higgins, Higgins' wife, Kim, and a group of colleagues and friends began riding in the fundraiser in support of Higgins' friend and coworker, anesthesiologist Dave Tomlinson, MD, who had MS. Tomlinson died at the age of 52 in 2009.

"He was basically my wing-man in the operating room," Higgins says. Over time, Higgins'

team merged with Biscari Brothers Bicycles bike shops in the Kansas City area. Together, the teams have about 100 riders, Higgins says. He estimates they have raised over \$1 million for MS in total.



Andrew Mendiola (right), completed a 120-mile route with the Rough Riders as part of the 2019 Bike MS in Kansas City. Photo courtesy of Andrew Mendiola

From the beginning, Higgins and Tomlinson agreed that their financial support, which included their individual donations, as well as funds raised through Bike MS, should be directed to research focused on repairing the myelin sheath damaged by MS. The National Multiple Sclerosis Society's Postdoctoral Fellowships Grant program provided that opportunity.

Through the Society's program, Higgins and Tomlinson connected with the postdoctoral research candidates doing this work. Over the past 20 years, the funds raised have supported these researchers, and other scientists also got the chance to ride along with Higgins and the teams. It has become a unique opportunity to connect researchers and people whose lives could be changed by the work happening in the lab.

One researcher is Mendiola, who was awarded a fellowship grant for research on blood protein fibrinogen, how it contributes to nerve degeneration in MS, and how better understanding fibrinogen might lead to reducing progression in MS.

The wheels on the bike go 'round and 'round

While visiting his son, Eddie, who lived in San Francisco, Higgins met Mendiola for coffee and

invited him to join the ride. Arriving late to Kansas City the night before the ride, Mendiola was outfitted with a 10-speed bicycle borrowed from one of Higgins' neighbors. A storm had just blown through Kansas City, pushing out the heat and humidity, and replacing it with a clear, cool weather just made for distance bike riding.

An avid runner, the 32-year-old Mendiola was confident he could complete the 120-mile route the Rough Riders would be riding over the next two days, even if he hadn't actually been on a bicycle since he was a little boy. After all, once you learn how to ride a bike you never forget.

Right?

Mendiola's legs pumped furiously as the ride began, but the other cyclists steadily began to disappear as he remained more or less in place. Mostly more. And with two days of bike riding ahead, that presented a problem.

"I get on the bike and the wheels are just spinning like crazy," Mendiola says. "I looked at Ted and said, 'Ted, I think this bike is broken. I'm not moving!' And he's like, 'You've got to shift into gear.' And I literally looked at him and said, 'There are gears on this thing?'"



Bike MS: Kansas City has raised over \$28 million since it began in 1983. Proceeds from the fundraiser support MS research of fellows such as Andrew Mendiola (third from right). Photo courtesy of Andrew Mendiola

After learning how and when to shift gears, Mendiola finished the first day's ride of 78 miles with the rest of the Rough Riders. "He really tuckered himself out," Higgins says. "But then

he got up the next day and we came back and did 38 miles and he was really enthusiastic about it.”

Mendiola was just as enthusiastic about meeting other riders in the event, some with MS, others without, but all part of a bigger family dedicated to ending the disease. “It was amazing,” Mendiola says. “You go through undergraduate, you go to grad school, you go to postdoctoral training, and you’re kind of siloed from the disease that you’re working on. And so that was a unique experience because I got to hear stories and interesting things that are going on in these people’s lives.”

It was an experience Mendiola hadn’t anticipated, and it gave his research a new and different meaning, one he’ll keep with him when he needs it most. “Hearing patients tell you how impactful and meaningful your research is to them and their families is humbling, and it lit a fire in me that during those tough research days will keep me going,” Mendiola says.

Especially on those days when he feels like he’s standing still.

Because of COVID-19, all 2020 Bike MS events will be virtual.

To learn more about Bike MS: Inside Out, the Society’s new build-your-own-adventure cycling event, visit bikeMS.org.

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Learn more about [Bike MS](https://bikeMS.org).