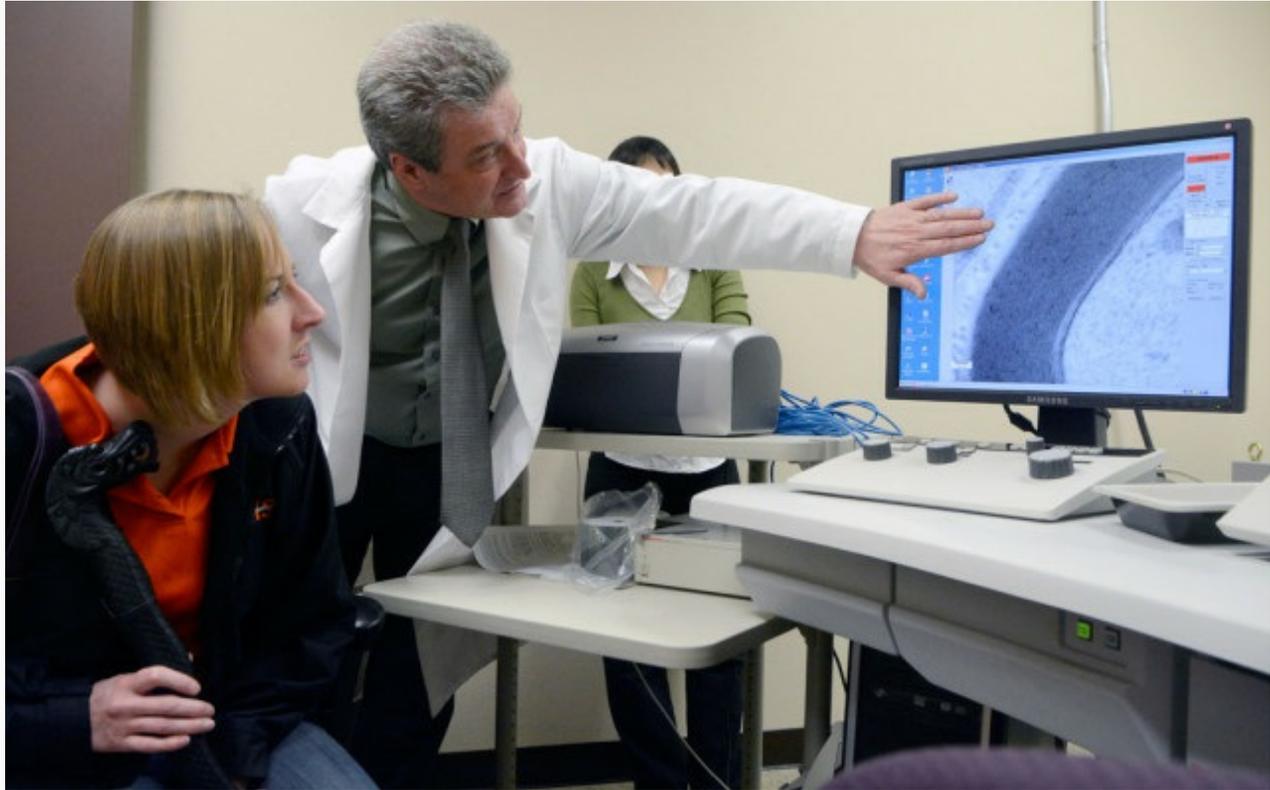


Summit sheds light on disorders

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Dr. Oscar Bizzozero, a professor and chair of UNM's Department of Cell Biology & Physiology, explains an electron microscope image of a sciatic nerve cell to Krista Hein, who has multiple sclerosis, or MS. The Health Sciences Center's new Brain & Behavioral Health Institute will host a national conference on Friday. (Greg Sorber/Albuquerque Journal)

Eight years ago, 10 days shy of her 24th birthday, Krista Hein woke up to discover she was blind in her right eye.

It was optic neurosis – in her case a symptom of MS, multiple sclerosis.

“It was like being punched in the gut, to get diagnosed,” she recalls. “All you can think of is the wheelchair (that you know is) coming in so many years.”

If there was a saving grace for Hein, it was landing a job with the national Multiple Sclerosis Society. “It lets you know you’re not alone, that other people have MS too,” she says.

MS is a severe neurological disorder in which immune system cells attack the brain, optic nerves and spinal cord. It involves neural cell death and nervous system damage, particularly to the protective sheath surrounding nerve cells. MS is one of many brain disorders under study at the Brain & Behavioral Health Institute at the University of New Mexico’s Health Sciences Center.

On Friday, — Neuroscience Day — the institute is hosting a national conference in the hope of advancing understanding of such disorders and to give researchers a forum to meet, share ideas and discuss findings.

The need is real: As Alfred “A.J.” DeGuio says, “It all goes back to the brain. The brain leads the way, and

nobody's got that figured out.”

More than 20 years ago, something scary happened to DeGuio. He was driving home one day on Interstate 40 near Juan Tabo, when suddenly his eyes slammed shut and would not reopen. Fortunately, he managed to come to a safe stop.

“It scared the hell out of me,” the now 82-year-old airline industry retiree says.

After a number of misdiagnoses, DeGuio learned he has blepharospasm, one of more than a dozen types of brain disorders known collectively as dystonia. It affects the muscles of the eyelids and sometimes the brow. “Blepharo” is Greek for eyelid. Victims have normal vision.

When it first happened, DeGuio stopped driving until he could be treated. Every eight to 10 weeks, he still needs injections of a Botox-like medication. He also had plugs surgically implanted under each eye that lessen the constant need for eye lubricants.

Bill Shuttleworth, a Regents Professor in UNM's Department of Neurosciences, is hoping the new Brain & Behavioral Health Institute will grow to the stature of UNM's highly regarded Cancer Center.

Keynote speaker at the conference will be Luis Parada, chair of development biology at the University of Texas Southwestern Medical Center. Oscar Bizzozero, chair of UNM's Department of Cell Biology & Physiology, also is excited about getting together with colleagues in the field, many of whom are not from New Mexico. His research focus is MS. In recent years, science has made great strides in understanding MS and treating people like Krista Hein, but the cause or causes of the inflammatory sickness remain elusive. Researchers believe it is triggered by environmental factors in those with genetic predispositions.

Bizzozero and other HSC researchers recently obtained a grant of \$374,000 to help develop drugs to counteract the effects of MS.

Hein, the mother of a 6-year-old girl, is legally blind in her right eye, and needs a cane to get around. Hein, who is now color blind, had no family history of MS, although in retrospect she knows that symptoms began early on in life. When she was 2, for example, she couldn't see a cow on the side of the road. Later, an unexplained fall was attributed to her not sleeping well the night before. “It was always written off,” she says.

She believes, however, that her MS can be traced to a severe reaction and high fever following an inoculation when she was a baby.

Since her diagnosis, she suffered blindness in her left eye for six days and has had several recurrences in her right eye. Last year, doctors prescribed a new medication. While she isn't sure if it's helping, she said her last MRI showed no changes, “and that's a good thing.”