



Dr. José Téllez-Zenteno

One specialist, 5000 patients

When Dr. José Téllez-Zenteno, associate professor in the Division of Neurology, came to the University of Saskatchewan from the National Institute of Medical Sciences-Nutrition in Mexico City in 2006, there had been no epilepsy specialist for adult patients in Saskatchewan for more than 16 years. Now not only does the province have an adult epileptologist, he is an award-winning researcher in a range of neurological disorders that includes migraine headaches and myasthenia gravis as well as epilepsy.

An estimated 5,000 people in Saskatchewan have epilepsy, approximately half of them adults.

“About forty percent of adults with epilepsy have seizures that cannot be adequately controlled with medications,” says Dr. Téllez-Zenteno, who completed clinical fellowships in epilepsy-EEG at the London (Ontario) Health Sciences Centre and the University of Calgary. “Of these, approximately two thirds can be helped with surgery. The

problem is in identifying the candidates for surgical intervention.” In a project funded by the Canadian Institutes of Health Research, Dr. Téllez-Zenteno is currently working in collaboration with Dr. Nathalie Jette from the U of C to create a tool that can be used by family doctors and neurologists to help assess suitability for surgery.

As medical director of the growing Saskatchewan Epilepsy Program, Dr. Téllez-Zenteno works closely with the Royal University Hospital’s pediatric epileptologist Dr. Noel Lowry, neurosurgeon Dr. Venkat Sadanand, and a team of other

patients as well as those with epilepsy, Dr. Téllez-Zenteno is also involved in a wide range of research initiatives.

“I have always had a disproportional interest in research,” says Dr. Téllez-Zenteno, who completed a master’s and a PhD in clinical epidemiology in addition to his medical degree. By the time he had finished medical school, he had already published ten peer-reviewed papers; today these number more than 80. He has received nearly a dozen awards and honours for his clinical research—including the prestigious Bruce S. Schoenberg International Award in Neuroepidemiology from the American Academy of Neurology.

“The University of Saskatchewan provides an outstanding environment for research in this field,” says Dr. Téllez-Zenteno. He is currently implementing a study to explore the cultural context of epilepsy among First Nations people, and the Royal University Hospital Foundation funded his recent study into fatigue in epilepsy patients. In addition, he continues to do research relating to migraines, as well as general clinical neurology research.

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health specialists that includes specialized-care nurses, a neuropsychologist, and neurophysiological medical staff and technicians as well as residents and graduate students. Despite his significant patient load, which includes general neurology



Lisa Kirkpatrick

Student’s study of avian muscle has human implications

For her master’s research, Lisa Kirkpatrick is examining the skeletal muscle spindles of birds for signs of an amino acid protein that is expressed by the PAX3 gene. The protein she is looking for contributes to the development of muscle at the embryonic stage, but its rate of expression by the gene diminishes as the bird matures.

“Muscle spindles are very tiny sensory receptors that help to determine the spatial orientation of parts of the body,” Kirkpatrick explains. “My research involves the manipulation of muscle in mature birds, which causes small amounts of the PAX3

protein to be expressed. We are trying to find out whether the protein, which is associated with young muscle, might assist in the rebuilding of older muscles that have been damaged by injury or disease.”

As the PAX3 protein is also involved in the early development of the ear, eye and face in humans, such research has wide potential therapeutic application.

A native of Saskatoon, Kirkpatrick became interested in the biological sciences during her undergraduate studies at the University of Saskatchewan. Following the second year