

FIGHTING THE INCURABLE:

Office of Technology Transfer
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To Dr. Mark Mannie, Multiple Sclerosis may be daunting, but it isn't unfightable. Mannie has developed a treatment to improve the quality of life for MS patients, who total more than 2.5 million people worldwide. MS is an autoimmune disease that affects the central nervous system, and more particularly, the myelin material that surrounds and protects individual nerve fibers. The body's own immune system attacks the myelin, leaving behind lesions and scarring that interrupt electric impulses traveling to and from the brain. Patients suffer a multitude of symptoms, including fatigue, difficulty in walking, reduced cognitive function, dizziness, depression, pain, visual impairment, and more. Mannie, of ECU's Department of Microbiology and Immunology at the Brody School of Medicine, has developed a unique fusion protein that, when tested in the widely accepted experimental autoimmune encephalomyelitis (EAE) rat model, produced a dramatic



DR. MARK MANNIE

tolerogenic effect. Rats, whether pretreated or treated following exposure to the EAE stimulating agent, exhibited decreased incidence, reduced symptoms, and delayed onset of attack. Dr. Mannie's work on a model of EAE in mice is projected to lead to clinical trials.

Other Applications

- Diabetes type I
- Rheumatoid arthritis
- Crohn's disease
- Lupus
- Hyperthyroidism and hypothyroidism
- Other autoimmune disorders