

Peter Grace, PhD Assistant Professor Symptom Research Antibody Receptor Signaling from Spinal Cord Glial Cells Promotes

Antibody Receptor Signaling from Spinal Cord Glial Cells Promotes Neuropathic Pain

Dr. Peter Grace is an Assistant Professor in the Department of Symptom Research at the University of Texas MD Anderson Cancer Center. The Grace lab investigates neuroinflammatory mechanisms that drive chronic pain, in order to identify new treatment strategies. Dr. Grace completed graduate training in pharmacology at the University of Adelaide, Australia, and a NHMRC CJ Martin postdoctoral fellowship in neuroimmunology at the University of Colorado Boulder. Dr. Grace is the recipient of awards from the American Pain Society, American Australian Association, Brain and Behavior Research Foundation, the Rita Allen Foundation, as well as grants from the NIH and Department of Defense.

Abstract: A hallmark of nerve injury is increased neuroimmune signaling from glial cells in the spinal cord, which can lead to enhanced activity of nociceptive neural circuits. However, it remains unclear what mechanisms control glial cell activation in the spinal cord following nerve injury. In this talk, we will present evidence that neuroimmune-mediator production by spinal cord glial cells is facilitated by activation of Fc gamma receptors (Fc γ Rs), the receptors for immunoglobulin G (IgG) antibodies. Furthermore, inhibiting this signaling axis has the potential to arrest neuropathic pain behaviors. This raises the possibility that glial Fc γ Rs may be targets for novel treatments to alleviate suffering from neuropathic pain.