

# Protecting and Repairing the Damaged Nervous System

## March 30

Tuesday, 12:30pm

Live Webinar  
via Zoom Conference



**Speaker: John Kessler M.D.**  
Davee Professor  
Davee Department of Neurology  
Director, Northwestern University  
Stem Cell Institute

**Host: Vibhu Sahni, Ph.D.**

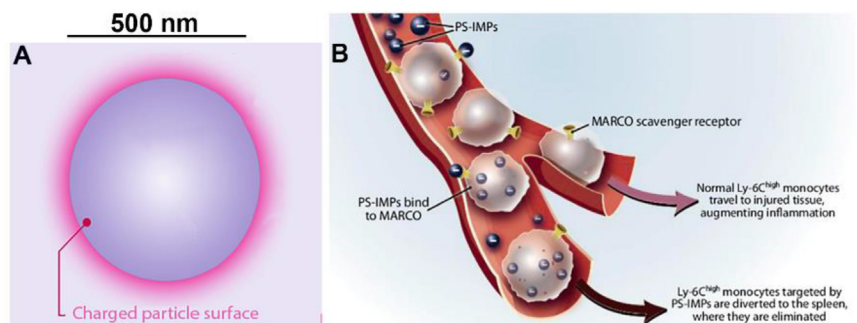
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## Abstract

Stem cell, growth factors, and nanoengineered materials provide the tools that are beginning to make regenerative neurology a reality. The first part of the seminar will examine how immune-modifying nanoparticles can be used to prevent secondary damage after traumatic brain injury. The second part will describe clinical trials of a gene therapeutic approach to painful diabetic neuropathy. The last part will focus on how pluripotent stem cells can be used to begin to understand the pathophysiology of Alzheimer's disease.

### Immune Modifying Nanoparticles (IMP)



1. CKessler, J.A. Chapter F6: Applications of Stem Cell Biology in Clinical Medicine In: D. Kasper, E Braunwald, A Fauci, S Hauser, D Longo, and J.L. Jameson (eds) Harrison's Principles of Internal Medicine, Twentieth Edition, McGraw-Hill, 2017 or Twenty First Edition 2021.
2. Sharma S, Ifergan I, Kurz JE, Linsenmeier RA, Xu D, Cooper JG, Miller SD, Kessler JA. Intravenous Immunomodulatory Nanoparticle Treatment for Traumatic Brain Injury. *Annals of Neurology*; 2020; 87:442-455. PMID:31925846
3. Wadhvani AR, Affaneh A, Van Gulden S, and Kessler JA Neuronal Apolipoprotein E4 increases cell death and p-tau release in Alzheimer's disease. *Annals of Neurology*; 2019 85(5):726-739. PMID: 30840313



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