

**Dr. Gunnar H.D. Poplawski**

Assistant Professor, Center for Immunotherapy and Immuno-Oncology  
Assistant Professor of Molecular Medicine, Case Western Reserve University  
Associate member of Case Comprehensive Cancer Center

**Testimony of Dr. Gunnar Poplawski, PhD**

Before the State of Ohio House Workforce & Higher Education Committee  
Tuesday, May 13th, 2025

**In Support of HB91: The Traumatic Brain Injury Treatment Accelerator Program (TBITXL)**

Chairman Young, Vice Chair Ritter, Ranking Member Piccolantonio, and esteemed members of the Ohio House Workforce & Higher Education Committee,

Thank you for allowing me the opportunity to testify today in support of HB91, crucial for advancing the Traumatic Brain Injury Treatment Accelerator Program (TBITXL). My name is Dr. Gunnar Poplawski, and I serve as an Assistant Professor at the Lerner Research Institute the Cleveland Clinic. My laboratory focuses on neuronal regeneration in models of traumatic brain injury, spinal cord injury and dementia.

Our research program at the institute is pioneering a novel approach to traumatic brain injury (TBI) by leveraging the potential of neural rejuvenation. We hypothesize that by reprogramming aged neurons to revert to a more immature state, we can reactivate developmental growth programs. This method employs innovative small molecules developed in partnership with Dr. Babal Jha, a leading figure in small molecular chemistry and enzyme research, focusing on epigenetic modifications of DNA.

Our findings to date are promising. We have demonstrated that these drugs promote the rejuvenation of DNA ultimately leading to neuronal regeneration. The potential for these molecules to rejuvenate the brain presents a groundbreaking shift in how we treat TBIs and related central nervous system disorders, including dementia and chronic spinal cord injuries even aging.

To move forward, our research depends on expanded testing beyond mouse models to include larger animal models, such as pigs or non-human primates. This progression is vital for bridging the gap between laboratory discoveries and clinical applications. Here at the Cleveland Clinic, we possess the unique capability to develop these treatments from the bench to the bedside.

However, this research requires significant funding. It is imperative that we secure the necessary resources to continue and expand our work, ensuring that these promising treatments do not languish in the development phase but instead reach those in dire need within a few years.

Therefore, I urge you to pass HB91, a bill that not only fuels scientific innovation but also holds the promise of transforming the landscape of medical treatment for countless individuals suffering from traumatic brain injuries and other debilitating conditions.

Chairman Young, Vice Chair Ritter, Ranking Member Piccolantonio, and all committee members, thank you once again for your time and consideration. I am ready to address any questions you may have regarding our research and its implications for TBI treatment.

A handwritten signature in cursive script, reading "Gunnar H.D. Poplawski", written over a dashed horizontal line.

Dr. Gunnar H.D. Poplawski, PhD

Cleveland, 05.13.2025