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**Testimony of Charles Cole, Founder & Executive Director
The Brain Injury Research Foundation
Before the Ohio House Workforce & Higher Education Committee
In Support of HB91, The Traumatic Brain Injury Treatment Accelerator Program**

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

Thank you for the opportunity to testify in support of HB91, the Traumatic Brain Injury Treatment Accelerator Program (TBITXL). My name is Chad Cole, and I am the founder and executive director of The Brain Injury Research Foundation (TheBIRF), based in Cincinnati. I am also a traumatic brain injury (TBI) survivor and a passionate advocate for scientific research into this often-overlooked condition.

In 2015, I sustained a traumatic brain injury while wakeboarding. As a college student I lived an active lifestyle enriched by studies, relationships, and sports and could not have imagined the dramatic changes that would befall me after my head injury. I was bewildered to find myself incapable of returning my way of life many months after my accident due to debilitating migraines, visual agnosia, and other devastating neurological effects. At the time, I searched tirelessly with great hope for a remedy, only to discover that not a single therapeutic clinical trial was actively recruiting TBI patients in the United States. Fast-forward ten years, and the reality remains the same: there are still zero FDA-approved treatments for TBIs.

I share my story not because it is unique, but because it is far too common. In Ohio, the impact is particularly significant. Over 113,000 Ohioans received emergency room care for TBIs in 2021. It is a leading cause of death and permanent disability in people under 45 years of age, and according to the Ohio Department of Health Bureau of Vital Statistics and the Ohio Hospital Association, TBI's currently cost taxpayers \$6 billion each year as a result of hospital expenses and lost wages.

Despite the scale of this silent epidemic, our statewide response remains inadequate and funding for TBI therapeutics remains a major challenge. The Association of University Technology Managers (AUTM) Licensing Activity Survey Report shows that universities in Ohio commercialize fewer than 10% of their patentable discoveries, far below the national average, due to a lack of funding for translational research—the phase that focuses on the discovery

and development of therapeutics. Despite being the 7th largest state by population, Ohio ranks 10th in NIH funding due to the absence of a dedicated funding model.

To accelerate the lack of brain injury research made available through federal and existing state programs, many states have added surcharges to DUIs, speeding tickets, and traffic accidents to fund TBI research, but these programs fund observational studies rather than new drug development. A lack of a targeted and dedicated funding model has left a gap for Ohio's TBI therapeutics research that we must urgently fill.

This urgency led me to establish The Brain Injury Research Foundation, with one mission: to fund and develop the first drug to treat life-threatening traumatic brain injuries. The outcome of this research is so that no one has to experience this traumatically life-changing event without therapeutic relief. To that end, we've spent the last two years building TBITXL, a bold, collaborative model designed to accelerate neurotrauma research and drug development.

TBITXL is built around two flagship programs: PRECEPT and SynapX.

PRECEPT—the Preclinical Candidate Evaluation and Screening Platform for TBI—is a grant initiative that will position Ohio as the national biohub for neurotrauma drug development. Researchers from across the country can submit drug candidates to be screened, and if awarded, will be blindly tested at two universities in Ohio. Successful applicants will receive mentorship from pharma industry veterans and direct commercialization support rooted right here in Ohio.

SynapX is a parallel collaborative initiative among multiple Ohio universities and institutions to co-develop the first-ever combination of new investigational drugs for TBI. This initiative moves beyond single-drug approaches by using multiomics data to build combination therapies with real-world efficacy. Institutions receiving SynapX grants must match awards with funding from federal, institutional, or private sources—ensuring a strong return on Ohio's investment.

Together, SynapX and PRECEPT are designed to foster deep collaboration. Unlike traditional, slow-moving NIH grants, SynapX will organize planning sessions where researchers identify challenges, co-develop solutions, and submit joint proposals to a multidisciplinary scientific panel representing 13 universities in Ohio. Once approved, these teams will use a collaborative platform, Synapse, to coordinate work, share results, and track milestones.

The current research ecosystem lacks speed, focus, and risk-tolerance. Scientists today spend over 50% of their time writing grants rather than working in labs. TBITXL aims to restore urgency and creativity by giving the best minds the tools, funding, and freedom they need. It's a startup-inspired model built for action—not bureaucracy.

We have to think differently if we ever want to move from zero to one.

The U.S. Economic Development Administration ranked Ohio 23rd in venture capital investment per capita and 23rd in R&D spending as a percentage of GDP (2.47% vs. the 3+%

U.S. average). Foreign nations are racing ahead. The last three breakthrough neurology drugs originated out of Japan. If we want to remain competitive, we must invest more in our own neurological research efforts.

TBITXL is designed to eliminate the barriers slowing scientific progress. Our model avoids the NIH's long grant approval cycle which can take anywhere from 1-2 years, by making decisions in real time. If a promising idea arises, it doesn't wait for committee approval—we act.

Importantly, The Foundation does not use any state funding for overhead. Every dollar supports research. We leverage our existing infrastructure to ensure 100% of this funding accelerates therapeutic discovery. The Foundation provides the infrastructure needed to coordinate data, streamline analytics, and optimize visualization tools, ensuring that every project benefits from the latest scientific insights.

Our two main areas of focus are:

- Acute intervention: creating therapies that immediately address traumatic events.
- Chronic prevention: investing in treatments that prevent long-term consequences such as stroke, seizures, and CTE.

This research will benefit millions of TBI sufferers, including stroke victims, motor vehicle accident survivors, current and former military members, athletes, and the elderly. The Foundation and its partners are laser-focused on enhancing our comprehension of neurodegenerative pathways that hold limitless therapeutic potential.

Chairman Young, Vice Chair Ritter, Ranking Member Piccolantonio, and members of the Committee, thank you once again for the opportunity to speak today. I welcome your questions and look forward to working together to bring about urgent solutions to this problem.