Dear Chair Rarick and Members of the Committee,

I am writing today to urge you to continue to fully fund the MN SCI/TBI Research Grant Program. I am the daughter of someone living with a spinal cord injury, a spinal cord injury researcher, and a PhD candidate at the University of Minnesota. My research and my education are made possible by this grant program.

My dad was in a diving accident when he was 16 that resulted in a C6/7 incomplete spinal cord injury. He uses a wheelchair to get around because he can't move his legs, and he has limited arm and hand function. Most people have a lot of questions about what it was like for me growing up with a dad who uses a wheelchair. I usually think first about the afternoons spent playing games with him, his commitment to working hard for our family, time spent exploring nature with an adaptive off-road wheelchair, and how thankful I am to have him in my life.

I also think about the challenges that he's faced in trying to interact with our world. The extra time it takes to navigate inaccessible spaces, use the restroom, and do activities of daily living. The effort required to get up an "accessible" ADA compliant ramp with reduced arm function. Autonomic dysreflexia symptoms like low blood pressure, nausea, temperature dysregulation, and headaches. Side effects from medications that are supposed to reduce muscle spasms and regulate blood pressure. The extra work that managing a disability can create for trying to get hired and hold a job. The profound impact that living with an injury that impacts quite literally every aspect of your life can have on your mental health.

This is what has driven me to commit my life's work to developing solutions for people living with spinal cord injury. In the ESTAND clinical trial, we are investigating the use of epidural spinal cord stimulation to improve symptoms of spinal cord injury. So far, participants have seen improvements in: bladder function, bowel function, blood pressure regulation, core stability, temperature regulation, sexual function, muscle spasm management, volitional leg movement when there previously was none, and just feeling more "normal". The implanted device we use is already FDA approved for treating chronic pain. So why isn't this therapy being widely used yet?

The thing most people don't realize is the amount of time, effort, and grant money required to prove to regulatory agencies that this thing actually works. A lot of resources are required to develop validated surveys and quantitative metrics that meet the rigorous safety and efficacy standards of the FDA. With the recent deprioritization of spinal cord injury research in federal funding, it is time for the state of Minnesota to rise to the challenge. The MN SCI/TBI Research Grant Program improves lives, provides hope, and positions Minnesota on the cutting edge of innovative medical device research. Please continue to fully fund the MN SCI/TBI Research Grant Program, the spinal cord injury community is counting on you! Thank you for your time and consideration.

Sincerely, Emily Haag PhD Candidate, Neural Netoff Lab Biomedical Engineering | Neuroengineering University of Minnesota, Twin Cities