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Testimony by Ashley Collins
Legal Advisor
Neurorights Foundation
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Good morning, Members of the Senate Committee on Health and Welfare. Thank you for the opportunity to speak. My name is Ashley Collins, and I am a human rights lawyer based in Washington, DC. I serve as a Legal Advisor to the Neurorights Foundation, a non-profit organization with the mission of promoting innovation, protecting human rights, and ensuring the ethical development of neurotechnology. Over the last five years, the Neurorights Foundation has engaged stakeholders such as the United Nations, governments around the world, scientists, the tech industry, and lawmakers in an expansive effort to establish guardrails capable of safeguarding neurotechnology users. The bill we are discussing today is important because it highlights the fundamental rights that must be protected as neurotechnologies advance.

As a starting point, to understand the risks associated with consumer neurotechnology and the importance of robust protections against the abuse and misuse of neurotechnology, it is helpful to examine the current regulatory landscape. There is a significant difference between the regulation of *invasive* neurotechnologies – on one hand – which are implanted in the brain through surgery, must be licensed medical devices, and whose gathered neural data is generally protected under health data privacy laws like HIPAA, and that of *wearable* neurotechnologies – on the other hand – which are subjected to little or no regulation, even though such devices are also medical-grade. There are already more than 30 consumer neurotechnologies available for purchase today, as you saw during my colleague's testimony. In terms of the future, researchers have already used wearable neurotechnology devices combined with generative AI to decode thoughts to text with increasing accuracy. Thus, it's important that this bill looks at issues of artificial intelligence along with neurological rights and neurotechnology. It is possible that these devices, and others like them, will be improved in the next few years and could even be used in consumer devices.

The gaps in regulation are concerning given the extreme sensitivity of neural data. It is important that the bill under consideration calls on the Artificial Intelligence Advisory Council, along with other stakeholders, to review the guidelines and recommendations of the American Medical Association, among other professional organizations. As my colleague shared, the American Medical Association has adopted a resolution on Safeguarding Neural Data that should, in our view, be carefully considered when the Council eventually issues recommendations. It is critical to carefully review guidance from these experts because neural data is capable of revealing such intimate information about consumers, including information about individual mental states, emotions, and neural processing.

The sensitivity of neural data – and the imperative of its protection – heightens privacy risks posed to neurotechnology users. Because neural data contains distinctive information about

the structure and functioning of individual brains and nervous systems, it always contains sensitive information that can link an identifiable individual with their data. And some of these devices are currently capable of revealing information about mental and neurological diseases and decoding about a dozen different mental states. This is deeply intimate information to entrust companies with. Without protections in place, it will be entirely up to those neurotechnology companies to decide what they do and do not do with their customers' sensitive neural data.

To give a sense of the approaches taken to protect neural data, in the United States, four states – California, Colorado, Montana, and Connecticut – have taken important steps to protect consumers who purchase and use neurotechnologies. For example, in California, an amendment to the state's consumer data privacy law defined "neural data" and protected it as "sensitive personal information." This allows users of these technologies to request, delete, correct, and limit the data that neurotechnology companies collect from them, and they can opt out from companies selling or sharing their data. In short, companies in California will now have to treat neural data with sensitivity so that it does not enable undesired disclosures of information or unwarranted violations of privacy. While the exact approaches of US states have differed, legislation has generally followed this format of defining "neural data" and extending the protections of state consumer data privacy laws to protect neural data as "sensitive data" or "sensitive personal information." The Neurorights Foundation has a briefing note that we can share with the Committee that provides a more detailed overview of the approaches to protecting neural data taken by state legislatures.

At the international level, UN entities have also urged action and begun to provide recommendations on what can and should be done to prevent the misuse and abuse of neurotechnology. This includes the UN Human Rights Council's adoption of Resolution 51/3 on Neurotechnology and Human Rights in October 2022; the UN Human Rights Council Advisory Committee's August 2024 report on the impact, opportunities, and challenges of neurotechnology with regard to the promotion and protection of all human rights; and the UN Special Rapporteur on the Right to Privacy's January 2025 report on the regulation of neurotechnologies and the processing of neurodata. All of these reports and resolutions take a human rights focus to these issues, which underscores the importance of this bill's framing around neurological rights. These are, at the end of the day, human rights issues.

Therefore, based on the Neurorights Foundation's experience engaging on these issues with stakeholders around the world, we believe that efforts to establish legal and regulatory frameworks to protect citizens from the potential misuse or abuse of neurotechnologies, especially in unregulated consumer products, must be rapidly accelerated. Laws and policies around the world, including in Vermont, will need to adapt to address the serious human rights concerns raised by the dissemination of neurotechnology, including in relation to the issues of privacy, surveillance, fair access, algorithmic bias, and safety.

While neurotechnologies hold immense promise for deepening our understanding of how the brain and nervous system function, they also create significant risks. As we continue to consider the development and deployment of neurotechnologies in the United States, we should do so with an awareness of both their promises and perils and a commitment to advancing commonsense steps, starting with this bill, to protect all patients and consumers.