Testimony Prepared for Legislative Hearings on
Establishing a Pharmacogenomics Experts Task Force

Prepared by

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Wednesday, March 17, 2021

Good afternoon, Madam Chair and distinguished Committee Members. My name is Pamala Jacobson and I am a professor at the University of Minnesota College of Pharmacy. I am leading a University Grand Challenges Initiative with my fellow faculty members Constantin Aliferis, Susan Wolf, and Catherine McCarty that is looking at how pharmacogenomics could be used for more effective medication use in Minnesota.

I am a pharmacist by training. In the first 10 years of my career I implemented the clinical pharmacy services for the bone marrow transplant unit at the University of Michigan. Through that work I know first-hand the tragedy of cancer drug failure and the despair of life-taking toxicity. Because of those experiences, I have since devoted my career to improving the safety and efficacy of medications, and for the last 15 years have studied pharmacogenomics as a tool to improve medications.

Pharmacogenomics is the science of using an individual's DNA to predict how effective or toxic a medication will be. We already follow this precision medicine approach in cancer care: we do genetic testing of the cancer cells themselves. Cancer medications are then tailored to match a specific DNA mutation in a patient's tumor. It has become the standard of care, and it is working. With pharmacogenomics we can also look at a patient's *inherited* genetics, which can then guide decisions about the medications they use for conditions beyond cancer.

Pharmacogenomics is important for patient safety. Every one of us has taken medication. And four out of five of us has an inherited genetic variant that could affect how effective or safe a medication could be.

Clopidogrel (aka Plavix) is used to prevent heart attacks and stroke. But between roughly 40 and 50 percent of Pacific-Islanders and East Asians have a genetic variation that makes Plavix less effective. In February of this year, the manufacturers of Plavix were ordered to pay the state of Hawaii more than $834 million for failing to properly warn consumers in the state—a significant portion of whom have this ancestry—about the health risks of Plavix.

While a handful of healthcare organizations across the country now use pharmacogenomics clinically, no state has yet undertaken comprehensive implementation. And most Minnesotans do not have access to pharmacogenomics-guided healthcare.

As I mentioned, my University colleagues and I are currently leading a Grand Challenge Initiative to advance the equitable implementation of pharmacogenomics, although our efforts have developed very quickly into a multi-institutional project. Our now 75-person group involves healthcare organizations, pharmacies, clinicians, educators, and researchers from Allina, Children's Minnesota, Essentia, Mayo Clinic and Sanford – all are excited about collaborating to bring pharmacogenomics to the state or to use this technology to benefit their own patients.

But while it seems it may not be necessary to have State involvement to bring together a group of health professionals in exploration, there is a limit to what ***we*** can do without an ***expressed endorsement and mandate*** from this body. That is why we ask for this measure to be passed. This bill before you would provide legislative authorization for a task force of experts to deliver a clear and data informed report on the benefits, opportunities and challenges of pharmacogenomics, and a roadmap for scaling up pharmacogenomics—equitably.

If the State of Minnesota would make a commitment to pharmacogenomics I have no doubt we could lead the nation in the implementation of a cutting-edge science.

Thank you Madam Chair and distinguished Committee Members.