**SB23 Proponent Testimony**

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Representing Equal Protection for Posterity

Senate Health Human Services and Medicaid Committee

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Chairman Burke, Vice-Chair Huffman, Ranking Member Antonio, and Members of the Senate Health, Human Services and Medicaid Committee,

Thank you for an opportunity to provide additional written testimony in response to SB23. I provided both written and oral testimony on February 19, 2019. During that hearing, there were a variety of questions asked about biologic risk factors. While I was at that hearing representing Equal Protection for Posterity, those questions were not asked of me directly, but were asked of two of the OB/GYNs providing proponent testimony. At this time, I would like to point out that my PhD is in genetic epidemiology, a field in which I have worked for 15 years. This field concerns the identification of genetic and genomic risk factors for disease, along with the ethical design and implementation of those studies. Thus, those questions fall directly into my professional domain, and I would like to respond to them for the record.

One question concerned telomere length being associated with poor health outcomes, and how telomeres (parts of chromosomes) decrease in length as a result of stress. This is in fact cutting-edge science, and there is much more work to be done in this area. However, it is important to point out that the vast majority of this research has been done on individuals who have already been born; that is, adults who have been subject to stressful conditions have been identified as having shorter telomeres. This condition is not unique to babies *in utero*. The second question concerned epigenetic changes caused by maternal stress (epigenetic changes refer to biochemical marks on top of DNA sequence that may influence gene regulation and function). Again, this is a cutting-edge area of science, and much of that work has been done in children who have already been born, and were subject to stress during childhood. If the committee member’s line of questioning was to imply that children subjected to stress *in utero* could potentially (not with 100% certainty, according to the science) have adverse health outcomes, and thus should not be born, then what is to be said about those children or adults who have already been born and later have those changes in their genomes, causing later health complications? With all due respect, that line of questioning fell into the realm of eugenics.

Ultimately, the physicians that responded to those questions had the correct response – that one’s life has no less value whether they might potentially have ill health, and that it is immoral to end one’s life prematurely on the presumption those life circumstances. This is particularly true since these genomic studies are still very much in the early stages, and nothing has been proven with certainty. Many of the testimonies on February 19, 2019 referred to the importance of equal protection under the law, and uncertain risk for medical conditions falls under that as well.

I would be happy to answer further questions on the scientific and ethical aspects of the aforementioned topics.

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