



California Legislature Senate Committee on Education

8 June 2022 Hearing to Discuss AB1963 “Gene Synthesis Providers”

Testimony of Gigi Gronvall, PhD

Senior Scholar, Johns Hopkins Center for Health Security and Associate Professor, Department of Environmental Health and Engineering, Johns Hopkins Bloomberg School of Public Health

Good afternoon, Members of the Committee. Thank you for addressing biosecurity concerns about gene synthesis with this bill and thank you for the opportunity to offer my support.

My name is Gigi Gronvall, and I am an Associate Professor at the Johns Hopkins Center for Health Security, in the Bloomberg School of Public Health. My background is in the biological sciences, and I serve on a federal advisory committee for NIH on emerging biotech and security.

I’ve also served as a committee member for the 2018 National Academies report on “Biodefense in an Age of Synthetic Biology.” We concluded that one of the most pressing biosecurity risks we face is that a bad actor could use gene synthesis products to make pathogens, particularly small viruses.

This legislation would require that gene synthesis companies screen their orders and that customers only use companies that perform biosecurity screening.



This legislation would make it harder for a nefarious actor to access genetic material needed to make viruses like smallpox, Ebola or influenza. The ongoing COVID-19 pandemic is a clear demonstration of what can happen in a society afflicted by a health security crisis.

This bill can help to make the field of synthetic DNA safer and ensure responsible manufacturing processes, without limiting important biological research.

Many commercial gene synthesis companies already voluntarily screen customer orders but as that costs time and money, those responsible companies, largely in California as well as elsewhere in the US have been at a competitive business disadvantage. This legislation levels the global playing field so that only high-quality organizations take part in this emerging biotech field.

It's my hope that California leads the way for the US federal government and other governments to put regulations in place to ensure that DNA synthesis products do not fall into the wrong hands.

Thank you to the Committee for including me here and thank you for your leadership to guard against biosecurity threats.