

Testimony of Bigelow Laboratory for Ocean Sciences in Support of LD 1286

Resolve, to Establish the Blue Economy Task Force to Support Maine's Emergence as a Center for Blue Economy Innovation and Opportunity in the 21st Century

April 11, 2023

Senator Curry, Representative Roberts, and members of the Committee on Innovation, Development, Economic Advancement, and Business, I am Dr. Deborah Bronk, and I am the president and CEO of Bigelow Laboratory for Ocean Sciences. I am here to advocate for the vital importance of bringing people together – of connectivity – with the Blue Economy Task Force.

Bigelow was founded nearly 50 years ago in 1974. We currently have 110 year-round staff, an annual budget of ~\$20M, and a 64-acre campus in East Boothbay, Maine. We study the foundation of global ocean health by focusing on the base of the ocean food web – the microscopic phytoplankton and associated bacteria and viruses as well as kelps and corals – and we use those discoveries to improve life on this planet through education and solutions-based research.

I moved to the gorgeous state of Maine five years ago. When I arrived, I was amazed at the breadth and variety of work being done in the marine science space – in terms of research, education, and commercial activity. The other surprise was the relative lack of connectivity and collaboration between the various marine science entities. This is a missed opportunity.

The challenges we face in the ocean are truly dire, and yet the opportunities the ocean holds to address climate change, or to serve as a source of energy, food, and drugs is enormous. To truly take advantage of the opportunities, however, we need to leverage the many resources across the state and that requires collaboration and relationship building. It requires connectivity.

I will give you a recent example. Bigelow houses the National Center of Marine Algae and Microbiota – you may have heard of seed banks – we are the seed bank for marine microbes for the United States. There is no question in my mind that within our collection there are anti-microbial, anti-cancer, and anti-inflammatory compounds produced by marine microbes. The question is how do we identify and demonstrate the efficacy of individual compounds out of the tens or even hundreds of thousands being produced?

One possible answer – Mount Desert Island Biological Laboratory (MDIBL). Two weeks ago, Jim Strickland, the director of MDI Biosciences, an offshoot of MDIBL, came to give a talk at Bigelow where he described the state-of-the-art tools and expertise they have to do high-throughput screening of



compounds for medical applications. Bigelow can identify and provide the compounds, and MDI Biosciences can screen them to find the ones of value. I believe this is the start of an important connection between our two institutes with tremendous potential for the state.

While I ask that amendments address more specifically what the group will be expected to accomplish, I am here today because there is a real need within Maine for an entity that can catalyze these types of connections and to build the blue economy ecosystem needed to nurture those connections once they are made. Thank you for your time and your service.

Respectfully submitted by Deborah Bronk on April 13, 2023.

