

Written Testimony in favor of LD 416, an Act to promote the growth of Maine's biomedical research and development community:

Chairwoman Rotundo, Chairwoman Sachs, esteemed members of the Committee on Appropriations and Financial Affairs Legislature, my name is Iain Drummond and I am the Scientific Director and Director of the Kathryn W. Davis Center for Regeneration and Aging at the MDI Biological Laboratory, in Bar Harbor. I am here to testify in support of LD 416.

MDI Biological Laboratory is celebrating its 125th anniversary this year. We are a non-profit research and education institution using state-of-the-art biotech tools to explore fundamental mechanisms of aging and regeneration. Our work is opening new therapeutic pathways that will help us live longer and healthier lives.

We lead a partnership of 14 research and higher education institutions around Maine who share scientific resources, technology, and expertise. The network includes most campuses of the University of Maine, Colby, Bates and Bowdoin Colleges, the University of New England, College of the Atlantic and Southern Maine Community College. In part, its mission is to train the next generation of skilled scientists and tech workers for Maine's future as a bioscience leader.

The network has provided hands-on training to more than 2,400 undergraduates studying the biosciences. Ninety percent of enrollees have gone on to careers or advanced degrees in medical or other scientific fields. Twenty-one percent have stayed in Maine, adding nearly 500 people to the workforce that Maine needs for a growing bioscience sector. Two of those young scientists are with me here today and plan to testify as well.

The biotech sector is growing nationally and here in Maine, and new collaborations among institutions, including the MDI Biological Laboratory are raising hopes for more to come. A recent report issued by the Bioscience Association of Maine found that jobs in the life sciences here rose by 42% between 2016 and 2021 to more than 9,500 (although some of that increase was due to COVID-19 product demand.)

MDI Biological Laboratory has grown steadily since 2001, when we first established a year 'round research staff of nine full time employees. Now we operate 12 full-time laboratories on the MDI campus, staffed by scientists, post-doctoral candidates, graduate students and support workers. We employ 96 people with a median salary of \$52,349. And we are on a trajectory for continued growth over the next five years, planning to establish four more laboratories on campus, with a workforce that reaches 150.

We've brought in more than \$40 million in federal NIH research grants since 2017, and we are the third largest recipient of such funding in the state. Maine's Legislature has helped us to leverage that funding, providing \$8.5 million since 2007 to support modernization and buildout of our laboratories, meeting rooms and classroom spaces, which now total more than 40,000 square feet.

And the measure you are considering today could play a vital role in our further growth. Our new subsidiary, **MDI Bioscience**, is working to provide the pharmaceutical industry and bioscience researchers with pioneering technologies for identifying and screening molecules and compounds that could have profound benefits for human health. It's the kind of commercialization, growing out of the basic research we do, that would be supported by this bond.

Finally, I'd like to mention that we feel that the biomedical sector is a bit of an unsung hero of Maine's economy. But we also see that changing fast, because new partnerships are coming on strong.

Just last month the MDI Bio Lab collaborated with the University of Maine to help win an \$11 million dollar NIH award that will power a total of five laboratories on our campuses. These early-career scientists are exploring the molecular mechanisms that govern cell behavior – work that can lead to discover new therapies for infectious disease, brain ailments, and muscle loss.

We are also one of a larger set of Maine institutions that's joining Northeastern University's Roux Institute in Portland on an ambitious federal grant application that could provide \$100 million or more. The group would use the funds for the acquisition of and research with emerging game-changing biotech tools such as CRISPR gene editing, bioinformatics, computational medicine and artificial intelligence. Training Mainers in the use of these tools is at the core of the effort.

LD 416 would not only provide potential assistance to our own commercialization enterprise, but will broadly help to ensure that when we and our partners train young Mainers in the biotech skills of the future, they'll be able to find jobs right here at home.