Patricia Hymanson
34 High Pine Road
York, ME 03909
Phone: (207) 363-8353
patricia.hymanson@legislature.maine.gov

HOUSE OF REPRESENTATIVES
2 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0002
(207) 287-1400
TTY: MAINE RELAY 711

Testimony of Representative Patty Hymanson in Support of LD 1601 "Resolve, To Establish an Advisory Panel To Study the Implications of Genome-editing Technology for the Citizens of the State"
May 4, 2021

Good morning Senator Claxton, Representative Meyer and members of the Joint Committee On Health and Human Services. I am Representative Patricia Hymanson and I represent House District 4, which consists of parts of York, Wells, Sanford and all of Ogunquit. I come before you today to speak in favor of LD 1601, "Resolve, To Establish an Advisory Panel To Study the Implications of Genome-editing Technology for the Citizens of the State."

Any living thing with DNA can have its genes changed with this technique, CRISPR (clustered regularly interspaced short palindromic repeats). You can buy a home kit from Odin for $40 to insert glow-in-the-dark jellyfish genes into bacteria using CRISPR. It is an easy and inexpensive technique that uses a molecule that cuts the DNA dragged to the right spot by a scouting template. In fact, Jackson Lab in Bar Harbor grows a mouse line that has the cutting molecule already in each cell in the mouse so only the scouting template has to be used. We now have ants that can't smell, coffee beans with no caffeine, mice that don't get fat and salmon that don't lay eggs, as examples. This is a technique that will be used in ways we can barely conceive and there are deep ethical concerns attached to it. Maine can position itself to "capitalize on the potential and avoid the hazards of genome-editing technology (LD 1601)." We can start with enabling the advisory panel and its work as described in LD 1601.

There are diverse ways that CRISPR touches and can touch Maine. Jackson Lab and East Boothbay's Bigalow Lab for Ocean Sciences are two. The University of Maine and the Extension Program working with crop health and insect populations in the face of climate change might be others. The glow-in-the-dark gene can currently be inserted in chickens to sex chicks in the eggs, as an example. Invasive fish species and plant species and tick-borne diseases, crops of oysters whose shells could be hardier in our warming Gulf of Maine could all be approached with CRISPR. Cancer, single-gene genetic disorders such as cystic fibrosis, muscular dystrophy, Huntington's disease, sickle-cell disease and viral diseases are all currently being examined for treatments and cures based on CRISPR use.

The Advisory Panel established by this resolve could be the first step in a state-wide dialogue to capitalize on the potential and avoid the hazards of genome-editing technology. I approach this technology with excitement and deep caution and both of these reasons are ones that would benefit from the passage of LD 1601 to get the conversation started.

Thank you for your attention and consideration. I am happy to take questions and answer them as I am able.