A. Context and problem

The Endocrine Society welcomes the proposal to revise the European Union (EU) legislation on registration, evaluation, authorization, and restriction of chemicals (REACH) to align legislation with the objectives of the Chemicals Strategy for Sustainability (CSS). As the world's experts on chemical interference with endocrine systems, we propose recommendations that will allow regulators to more effectively minimize exposure to endocrine-disrupting chemicals (EDCs) and reduce the incidence of chronic diseases linked to EDCs such as cancer, diabetes, neurodevelopmental disease and infertility[1].

B. Objectives and Policy Options

1. **Reforming authorization and restriction processes**
    a. **Extend the generic approach to risk management to EDCs**: We agree with the CSS assertion that consumer products should not contain hazardous EDCs. EDCs effects are often seen at extremely low doses consistent with routine exposure and often effects at low levels are different or more harmful than effects seen at higher doses. Biomonitoring studies consistently show widespread exposure to a variety of hazardous EDCs at levels that would be expected to influence the development of disease[2]. We support extension of the generic approach, i.e. a hazard-based approach, to EDCs similar to the approach for CMRs. A rapid response or fast-track mechanism for acting on suspected EDCs would provide more certainty for consumers.
    b. **Move towards grouping approaches:** The exponential growth in chemicals used in commercial products has created a complex set of background exposures and entire classes of EDCs with similar structure or properties (e.g., phthalates, bisphenols)[3]. We are concerned about the potential for regrettable substitutions and endorse advancing grouping approaches to chemical regulation, as supported by the Environment Council conclusions.

2. **A protective mixture assessment factor (MAF) is needed**: Endocrine systems often involve complex communication networks between different organ systems where chemicals may act synergistically on the same or closely related pathways to produce new or additive effects[4]. Disadvantaged or marginalized communities may also have different or heightened background exposure profiles that put them at greater overall risk of toxicant exposure. We support the inclusion of a protective MAF that takes into account these myriad exposure profiles and scenarios.

3. **Revision of the registration requirements:** There is an urgent need to improve and update data provisions for effects on endocrine systems and other particularly concerning hazards e.g., to neurodevelopment and immune systems. New testing and screening methods should be developed and implemented that take advantage of the latest science to use more sensitive,

[1] https://academic.oup.com/edrv/article/36/6/E1/2354691
[2] https://www.sciencedirect.com/science/article/pii/S0160412021001884
[3] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6427910/
[4] https://pubmed.ncbi.nlm.nih.gov/32593051/

clinically relevant endpoints within these hazard domains, such as mammary gland and brain development to provide sufficient data for accurate identification.

C. Assessment and Impacts

Our members are encouraged by commitments in the CSS to improve health by minimizing EDC exposures. Revisions to REACH should advance these commitments and prioritize protections from EDCs. In doing so, regulations will be able to advance the social benefits of the CSS and achieve more equitable public health outcomes in particular for susceptible populations such as infants, pregnant women, and adolescents; and also low-income communities and other marginalized groups who may face disproportionate EDC exposures and effects. By addressing the recommendations above the revision to REACH legislation will better protect public health and reduce the impact of disease on EU citizens. Any forthcoming impact assessment studies need to adequately consider these benefits.