Dear member states, dear Chair of the meeting:

Thank you all for the opportunity to speak today. We represent a global membership of physicians and scientists from over 120 countries whose expertise has defined what we know about the endocrine system: what hormones are, what they do and how they do it. Our positions are established by scientific evidence and supported by numerous national and international endocrine professional communities.

Our community is united in our view that the Plastics Treaty represents an opportunity to protect human and ecological health from the adverse effects of plastic pollution by minimizing exposures to endocrine-disrupting chemicals (EDCs). Decades of peer-reviewed research has demonstrated that these chemicals, including bisphenols, phthalates, and PFAS, are pervasive and linked to serious adverse effects on endocrine systems, leading to diseases such as infertility, diabetes, cancer, and altered neurological development. Our community has led the way in documenting the costs to society of chemicals used in plastic materials. The effects are concentrated in the most vulnerable, including children, pregnant women, and workers with disproportionate exposures. It is therefore critical that the proposed core obligations of the treaty include banning, phasing out and/or reducing the use of problematic and avoidable plastic products, and also chemicals of concern. To accomplish this, the treaty should aim to:

- Reduce hazardous chemical use in plastic products through strict safety standards and criteria with consideration for EDCs, which have effects at extremely low, biologically relevant levels.
- Incorporate public health objectives, for example through biomonitoring studies that can evaluate the body burden of plastic pollution, with special consideration for disproportionately impacted countries and communities.
- Establish an independent advisory body to provide relevant scientific information that includes academic scientists free of conflicts of interest who are actively publishing and engaged in endocrine research, to provide advice e.g. on measures to minimize exposure to EDCs.

We are encouraged by this important opportunity to address the interconnected goals of eliminating pollution and exposure to harmful chemicals, and improving health. Our community of scientists and clinicians look forward to contributing to the success of the instrument towards our shared goals of reducing the global incidence of disease worldwide. Thank you.
Appendix: List of endorsing organizations

1. Association of Endocrinologists and Diabetologists of the Republic of Srpska
2. Austrian Society for Endocrinology & Metabolism
3. Bosnia & Herzegovina Society of Endocrinology and Diabetology
4. Croatian Society for Diabetes and Metabolic Disorders
5. Croatian Society of Endocrinology and Diabetology
6. Cyprus Endocrine Society
7. Dutch Society for Endocrinology
8. Endocrine Society
9. Estonian Endocrine Society
10. European Society of Endocrinology
11. Finnish Endocrine Society
12. French Endocrine Society
13. Georgian Association of Endocrinology and Metabolism
14. German Society for Endocrinology
15. Hellenic Endocrine Society
16. Irish Endocrine Society
17. Italian Association of Clinical Endocrinologists
18. Italian Society of Endocrinology
19. Japan Society of Endocrine Disruptor Research
20. Lithuanian Society of Endocrinology
21. Macedonian Scientific Association of Endocrinologists and Diabetologists
22. Norwegian Society for Endocrinology
23. Pan American Neuroendocrine Society
24. Portuguese Society of Endocrinology
25. Romanian Psychoneuroendocrine Society
26. Romanian Society of Endocrinology
27. Serbian Endocrine Society
28. Slovak Society of Endocrinology
29. Slovenian Endocrine Society
30. Sociedad Latinoamericana de Endocrinología Pediatrica
31. Sociedad Uruguaya de Endocrinología y Metabolismo
32. Society of Endocrinologists from Republic of Moldova
33. Society of Endocrinology and Metabolism of Turkey
34. Spanish Society of Endocrinology and Nutrition
35. Swedish Endocrine Society
36. UK Society for Endocrinology
Chemicals Used in Plastic Materials Harm Human Health and the Economy

The Endocrine Society has led the way in documenting disease burden and associated costs due to hazardous chemicals used in plastic materials. Its Second Scientific Statement published in 2015 by Andrea Gore and colleagues\(^1\) identify the following chemicals used in plastic that contribute to disease and disability:

- Flame retardants (used as stabilizers in plastics)
- Phthalates (used as a softener in polyvinyl chloride plastics)
- Bisphenols (used as a building in polycarbonate plastics)
- Perfluoroalkylsubstances (used in high-density polyethylene plastic containers)

Expert panels organized by the Endocrine Society and led by Leonardo Trasande and colleagues in 2015 conservatively estimated the costs of diseases in the European Union.\(^2,3\) Teresa Attina and colleagues expanded these to the US in 2016,\(^4\) and Julia Malits and colleagues expanded these to Canada in 2022.\(^5\) Trasande and colleagues have also estimated cardiovascular mortality due to phthalates,\(^6\) and Vladislav Obsekov and colleagues estimated PFAS costs, both in the US.\(^7\)

These are conservative estimates because:

1. They are limited to a subset of chemicals in plastic materials that contribute to disease and disability.
2. They are limited to a subset of diseases due to the few chemicals we studied.
3. The cost estimates represent a subset of the entire costs due to the disease studied.

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Life stage of exposure</th>
<th>Outcome</th>
<th>US</th>
<th>Canada</th>
<th>EU</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Disease Burden</td>
<td>Economic Cost (USD)</td>
<td>Disease Burden</td>
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<tr>
<td>Brominated flame retardants</td>
<td>Prenatal</td>
<td>IQ point loss &amp; intellectual disability (ID)</td>
<td>11 million IQ points lost; 43,000 ID cases</td>
<td>$266 billion</td>
<td>374,395 IQ points lost; 1610 ID cases</td>
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<tr>
<td></td>
<td>Prenatal</td>
<td>Cryptorchidism</td>
<td>4300 cases</td>
<td>$35.7 million</td>
<td>567 cases</td>
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<tr>
<td>Phthalates</td>
<td>Adult</td>
<td>Obesity</td>
<td>5900 cases</td>
<td>$1.7 billion</td>
<td>2093 cases</td>
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<td>Adult</td>
<td>Type 2 Diabetes</td>
<td>1300 cases</td>
<td>$91.4 million</td>
<td>225 cases</td>
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<td></td>
<td>Adult Females</td>
<td>Endometriosis</td>
<td>86,000 cases</td>
<td>$47.0 million</td>
<td>10,151 cases</td>
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<td>Adult Males</td>
<td>Male infertility</td>
<td>240,100 cases</td>
<td>$2.5 million</td>
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<td>Adults</td>
<td>Cardiovascular mortality</td>
<td>90,800 cases</td>
<td>$39.9 billion</td>
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<td>Bisphenol A</td>
<td>Prenatal</td>
<td>Childhood Obesity</td>
<td>33,000 cases</td>
<td>$2.4 million</td>
<td>1023 cases</td>
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<td>PFAS</td>
<td>Prenatal</td>
<td>Low birth weight</td>
<td>10,053 cases</td>
<td>$1.4 billion</td>
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<td>Prenatal</td>
<td>Childhood Obesity</td>
<td>127,362 cases</td>
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<td>Children</td>
<td>Pneumonia</td>
<td>447-6759 cases</td>
<td>$1.5-22.5 million</td>
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<td>Pregnant People</td>
<td>Gestational Diabetes</td>
<td>6061 cases</td>
<td>$414-852 million</td>
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<tr>
<td>Category</td>
<td>Condition</td>
<td>Cases/Prevalence</td>
<td>Cost</td>
<td></td>
<td></td>
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<tr>
<td>Adult</td>
<td>Obesity</td>
<td>4,294,379 cases</td>
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<td>Adults</td>
<td>Kidney cancer</td>
<td>142 cases</td>
<td>$184 million</td>
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<td>Adult Females</td>
<td>Couple infertility</td>
<td>593-26,160 cases</td>
<td>$37.6 million - $1.7 billion</td>
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<td>Hypothyroidism</td>
<td>14,572 cases</td>
<td>$1.3-5.2 billion</td>
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<td>Type II Diabetes</td>
<td>1728 cases</td>
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<td>696-18,062 cases</td>
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<td>Breast cancer</td>
<td>421-3095 cases</td>
<td>$555 million - $4.1 billion</td>
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References