ENDOCRINE SOCIETY
Hormone Science to Health

November 25, 2024

Endocrine Society Opening Statement for INC5

The Endocrine Society is the world's largest and oldest professional society dedicated to the understanding of hormone systems and clinical care of those with endocrine diseases including a global membership of nearly 18,000 physicians and scientists from over 120 countries. Our expertise has defined much of what we know about the endocrine system: what hormones are, what they do, and how they do it. Our members have advanced our understanding of how chemicals in plastics can interfere with the function of endocrine systems and act as endocrine-disrupting chemicals (EDCs) and cause human and ecological health impacts including diabetes, obesity, cancer, infertility and impaired neurological development.

We have been engaged in the INC since its inception, and we encourage delegations to act with urgency given the severe human and ecological health harms from plastic pollution, including chemicals in plastic. The following comments refer to specific articles in the Chair's non-paper, as well as general principles that should be achieved in the final treaty text.

Article 3: Chemicals and Products of Concern

The Endocrine Society considers article 3 of paramount importance for the ability of the treaty to protect human health. We note the non-paper refers to potential challenges due to fragmented national and regional efforts, as well as different regulatory and administrative regimes. However, the fact that some regions and nations have successfully implemented programs to identify and manage chemicals in plastic, including EDCs, should give us confidence that such measures, though ambitious, are possible in practice. Indeed, the treaty can play a unique and necessary role by supporting and reinforcing such measures on a global scale.

We stress the importance of establishing lists of chemicals of concern through the treaty, including EDCs, and recognize and support the hazard-based approach for EDCs as described in the EU regulation on Classification, Labeling, and Packaging. We note that EDCs are not included in the GHS as of yet, and the plastics treaty should address this gap by recognizing the need for immediate action to minimize exposure to EDCs and other harmful chemicals in plastic. A hazard-based approach will be necessary, due to adverse effects of EDCs at environmentally-relevant levels of exposure consistent and the extreme sensitivity of the endocrine system, including during development and other vulnerable life stages. Furthermore, because of the extreme volume of chemicals entering commerce each year and the potential for regrettable substitution, we strongly support a group-based approach for chemicals that addresses data gaps through application of positive hazard data from one chemical to other chemicals in the same group.

On the subject of products, we emphasize that chemical hazards should be taken into account when establishing lists of products of concern, with particular relevance to EDCs and products that may be used disproportionately by vulnerable populations, including children and women.

Article 18: Research and Awareness Raising

We suggest that the advancement of scientific and technological research follow best practices related to community engagement, for example, by having disproportionately impacted communities

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identify the research topics and goals that need to be addressed to answer their questions and meet their needs. Monitoring methods should also include longitudinal biomonitoring studies developed with the engagement of communities impacted by plastic pollution and with funding to support their participation.

Finally, we stress that while many individuals can take action themselves to reduce exposure to harmful chemicals and educational initiatives and awareness-raising are important, such measures must be coupled with aggressive restrictions and limits at the national, regional, and global level to truly minimize exposures and protect human health. We have more than enough scientific evidence of human health impacts due to exposure to chemicals in plastic to support such actions.

Article 19: Health

As a medical and scientific professional specialty society with expertise in hormone biology, we appreciate the dedicated text in Article 19 related to health; however we note that the measures suggested in the text can only be effective if coupled with measures such as identifying and restricting hazardous chemicals, including EDCs. We also note that risk-based approaches may not be appropriate for some chemicals such as EDCs, which have effects at extraordinarily low levels that are biologically relevant for hormones and the endocrine system. Finally, while we appreciate the intent of identifying and protecting populations at risk, all populations are exposed to plastic chemicals at levels considered unsafe. We note the recent decision following from the European Food Safety Agency's revised assessment of bisphenol-A, a chemical often used in plastic, indicating the breadth of harm associated with exposures at extremely low levels. Based on this systematic review, the only safe approach is a ban on the use of this chemical. We contend that other EDCs in plastic may require similar approaches.

Other General Principles

In addition to the specific elements above, we are concerned that continued production of plastic will increase the danger to human and environmental health and urge members to agree upon measures to limit production of new plastic. We caution that recycling alone cannot be a solution to the crisis, as recycling processes do not reduce, and may even concentrate, hazardous chemicals in plastic. Also, scientists with knowledge of the health effects of plastic pollution should be engaged in processes to identify and manage problematic chemicals and plastic products. Importantly, such scientists should disclose potential conflicts of interest (COI), and processes should be in place to manage perceived and actual COI. Engagement of scientists and other knowledge holders, free from COI, is essential for the treaty to be recognized as an unbiased and trusted instrument.

Plastic pollution and its consequent health effects are a complex problem, but we have sufficient knowledge to act now to prevent and minimize the adverse effects of plastics on health. We note that these harms are associated with significant costs, on the order of US $250 billion per year in the United States alone. Thank you for considering our comments, and for the opportunity to be engaged in this important process.

Dec. 1, 2024

Endocrine Society Closing Plenary Statement for INC5 Delivered by Dr. Leonardo Trasande

The Endocrine Society appreciates the progress in ambition through the chair's series of non-papers.

As the INC continues deliberations, we stress the importance of establishing mandatory **lists of chemicals of concern** in Article 3. The lists in the current nonpaper are rightly focused on children's unique susceptibility, but all populations are exposed at levels considered unsafe. We note the European Food Safety Agency's recent decision following a systematic review of bisphenol A, indicating that the only safe approach is a ban. We strongly support an approach that applies positive hazard data from one chemical to others in the same group.

Importantly, the scientists participating in the Review Committee identified in Article 3 should disclose potential **conflicts of interest**, and processes should be in place to manage perceived and actual conflicts. Engagement of scientists and other knowledge holders, free from conflicts, is essential for the treaty to be recognized as unbiased and trusted.

We are concerned that continued production of plastic will increase the danger to human and environmental health and urge members to agree upon measures to limit production. Increases in chronic disease globally, and especially in low- and middle-income countries will continue unless **explicit limits on plastic production** are included in Article 6.

We urge ongoing refinement of Articles 17 and 18 to address the need for **biomonitoring studies** to evaluate human exposure. The treaty's success is in part dependent on measurable reductions in chemical body burden, which will improve public health. Industrializing countries should be supported through resources, including expertise, to participate in studies.

Finally, we urge members to find convergence on the **inclusion of human and environmental health, particularly through Article 19**, but also throughout the treaty. The costs of inaction are real, reaching 250 billion dollars annually in the US alone. Human exposure to fluoropolymer chemicals has caused 400,000 babies each year to be born with a low birth weight, predominantly from Asian regions. We must therefore end the tactics of confusing and clouding the science, and follow the instructions given by the robust body of evidence. Whether we call nanoplastics and chemicals used in plastics leakage or waste or exposures by design, plastic pollution is a human health issue.

We thank the Chair.