THE ENDOCRINE SOCIETY

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President José Manuel Barroso
Cc: **Vice-President Antonio Tajani, EU Commissioner for Industry and Entrepreneurship**
Cc: **Commissioner Janez Potočnik, EU Commissioner for Environment**
Cc: **Commissioner Tonio Borg, EU Commissioner for Health and Consumer Policy**

3 June 2013

Dear President Barroso,
Dear Commissioners Tajani, Potočnik, and Borg,

As the European Commission prepares to take action on endocrine-disrupting chemicals, The Endocrine Society submits this open letter urging you to call upon the expertise of endocrinologists in your deliberations. Endocrinologists bring a necessary perspective to the discussion of endocrine-disrupting chemicals (EDCs), as they examine the actions of these chemicals in the context of normal physiology and they understand the subtle and nuanced effects EDCs exert on the endocrine system. Furthermore, fundamental principles of endocrinology must be applied in any program that is intended to identify and/or evaluate EDCs.

Founded in 1916, The Endocrine Society is the world's oldest, largest and most active organization devoted to research on hormones and the clinical practice of endocrinology. Today, The Endocrine Society's membership consists of more than 16,000 scientists, physicians, educators, nurses and students in more than 100 countries, including 24 EU member states. Society members represent all basic, applied and clinical interests in endocrinology. Included among our members are the world's leading experts on hormones and on the endocrine effects of environmental chemicals.

Drawing on the expertise of its members, The Endocrine Society published a Scientific Statement on EDCs in June 2009.[1] This statement presents a comprehensive evaluation of the scientific literature on EDCs, emphasizing their effects on male and female reproduction, breast development and cancer, prostate cancer, neuroendocrinology, thyroid, metabolism and obesity, and cardiovascular endocrinology. Since 2009, a number of additional publications have highlighted the potential adverse health effects of EDCs and have shown that these effects often are observed at very low levels of exposure. The most recent of these reports, from the WHO and UNEP, further highlights the need for better global regulation of EDCs.[2]

As evidence continues to mount, urgency for action increases. The call to action has been heeded by the Strategic Approach to International Chemicals Management, which at its 2012 meeting in Nairobi recognized by consensus the "…potential adverse effects of endocrine disruptors on human health and the environment" and "…the need to protect humans, and ecosystems and their constituent parts that

[1] https://www.endocrine.org/endocrine-press/scientific-statements
[2] http://www.unep.org/hazardoussubstances/UNEPsWork/EndocrineDisruptingChemicalsEDCs/tabid/79616/Default.aspx

are especially vulnerable."[3] We look to the Commission and other international policymaking bodies to take the lead in improving EDC regulations.

Unlike many substances that have detrimental effects on health, endocrine disruptors exert their effects by interfering with endogenous hormone action. Therefore, EDCs must be examined in the context of endocrine principles that arise from decades of careful research into the mechanisms and consequences of hormone action under normal circumstances. That understanding is continuously evolving, and in 2012 the Society outlined key principles of endocrinology that must be incorporated into hazard/risk assessment protocols and must be considered when devising regulations to minimize exposure to EDCs.[4]

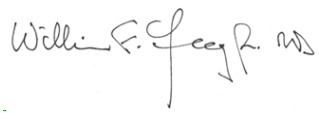
These principles apply equally to EDCs and to endogenous hormones; chief among them are the following concepts:

- Hormone effects are mediated by receptors
- Hormone effects can occur at very low doses
- Hormones exert multiple actions in tissue-, cell-, and receptor-specific fashion
- Hormone effects are dependent upon developmental stage
- Effects of aberrant exposure can be irreversible, especially at critical stages of development
- Effects of aberrant exposure can become manifest latently, years after the exposure occurs
- Effects of aberrant exposure can be passed down for generations

Importantly, it cannot be assumed that a safe "threshold" level of exposure to any given EDC can be identified. Humans and wildlife are currently at risk of exposure to a large number of chemicals in food, drinking water, consumer products, and the air. Because EDC effects can occur at very low levels of exposure, and it is impossible to quantify an individual's or a population's baseline exposure to EDCs, it would be impossible to assign a lower safe limit of additional exposure.

The Endocrine Society and its members stand ready to help you in any way we can during your deliberations. You have before you a large and difficult task; we encourage you to draw knowledge from the advances in the field of endocrinology as you make decisions that will have lasting impact on human and wildlife populations for generations to come.

Sincerely,



William F. Young, M.D.
President, The Endocrine Society

[3] http://www.saicm.org/index.php?option=com_content&view=article&id=458&Itemid=687
[4] http://endo.endojournals.org/content/153/9/4097.abstract