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Dear Minister

Congratulations on your recent re-appointment as Minister for Public Health. We would like to request a joint meeting with the organisations below to discuss the Government's position and future plans with regards to growing concerns about the links between exposure to harmful chemicals, ill health and disease.

An increase in adult and childhood obesity, a growth in diabetes and the alarming prediction that half of us will suffer from cancer at some point in our lives, is placing an enormous and unsustainable burden on the NHS and could have catastrophic effects on our economy, unless more is done to improve public health. Whilst we welcome the Government's recognition that there is an urgent need for better prevention measures, we are disappointed that these measures do not yet include plans to tackle exposures to harmful chemicals, such as endocrine disrupting chemicals (EDCs), at home, in the workplace or the wider environment.

As you will know, there is growing global concern¹ and an increasing wealth of scientific data that suggests there is a link between our daily exposures to harmful chemicals and our vulnerability to ill health. There is now strong evidence to suggest that EDCs are linked to a wide range of illnesses and diseases including a number of endocrine-related cancers (e.g phthalates and parabens in breast cancer^{2,3}, organochlorine pesticides, PCBs and aluminium in prostate cancer^{4,5,6} and methoxychlor, an organochlorine pesticide and triclosan, in ovarian cancer⁷); obesity⁸ and diabetes⁹ as well as infertility, reproductive problems, miscarriage¹⁰, immune system performance (e.g. children's response to vaccines¹¹); and neurodevelopmental disabilities such as autism and attention-deficit hyperactivity disorder^{12,13}. The estimated cost to the EU of endocrine disrupting chemical exposures is thought to be well in excess of €157 billion a year (£108.5 billion)¹⁴. One study estimated that the health cost to the UK of endocrine related diseases is likely to be excess of €80 million a year (£58million)¹⁵.

In 2012 the World Health Organisation stated that; "worldwide, there has been a failure to adequately address the underlying environmental causes of trends in endocrine diseases and disorders. Health-care systems do not have mechanisms in place to address the contribution of environmental risk factors to endocrine disorders. The benefits that can be reaped by adopting primary preventive measures for dealing with these diseases and disorders have remained largely unrealized."¹⁶

The EU is slowly taking steps to establish criteria for identifying EDCs, the USA has convened specialist panels to discuss and implement improved measures to tackle environmental exposures and the French Government has produced a National Strategy on EDCs.

It is in the interests of public health that the UK plays its part in ensuring that the public are protected from EDCs, both through national action and through acting as a positive player at EU level. This is why we would like to meet to discuss what plans your Department has with regards to UK and EU action on EDCs.

We hope you can find time in your diary to meet with us to discuss this important subject.

We look forward to hearing from you.



Lynn Ladbrook
Chief Executive
Breast Cancer UK

Jamie Page
Executive Director
Cancer Prevention
& Education Society

Helen Lynn
Coordinator
Alliance for Cancer
Prevention

Michael Warhurst
Executive Director
CHEM Trust



¹ See for example:

WHO/UNEP (2012) State of the science of endocrine disrupting chemicals <http://www.who.int/ceh/publications/endocrine/en/>;
President's Cancer Panel (2008-2009) Reducing Environmental Cancer Risk, What We Can Do Now http://deainfo.nci.nih.gov/advisory/pcp/annualReports/pcp08-09rpt/PCP_Report_08-09_508.pdf;

Parliament Magazine (January 2015) 'Europe-wide cancer group calls for action on hormone disruptors'

<https://www.theparliamentmagazine.eu/articles/opinion/europe-wide-cancer-group-calls-action-hormone-disruptors>

European Environment Agency (2012). The Weybridge+15 (1996–2011) Report: The impacts of endocrine disruptors on wildlife, people and their environments <http://www.eea.europa.eu/publications/the-impacts-of-endocrine-disruptors>

Report of the Interagency Breast Cancer and Environmental Research Coordinating Committee (IBCERCC) (2013). 'Breast Cancer and the Environment Prioritising Prevention Prioritising Breast Cancer'. http://www.niehs.nih.gov/about/assets/docs/ibcercc_full_508.pdf

2013 Berlaymont Declaration on Endocrine Disruptors found at http://www.ipcp.ch/Berlaymont_August_7.pdf (Accessed September 2013) http://www.brunel.ac.uk/_data/assets/pdf_file/0005/300200/The_Berlaymont_Declaration_on_Endocrine_Disruptors.pdf

² Jobling, S, et al., (1995). A variety of environmentally persistent chemicals, including some phthalate plasticizers, are weakly estrogenic. Environmental Health Perspectives **103**: 582-587. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1519124/>

Kang, SC and Lee, BM (2005). DNA methylation of estrogen receptor α gene by phthalates. Journal of Toxicology and Environmental Health, **68**:1995-2003. <http://www.ncbi.nlm.nih.gov/pubmed/16326419>

Aksglaede, L., et al., (2006). The sensitivity of the child to sex steroids: possible impact of exogenous estrogens. Human Reproduction Update **12**: 341–349. <http://www.ncbi.nlm.nih.gov/pubmed/16672247>

³ Darbre PD and Harvey PW. (2014). Parabens can enable hallmarks and characteristics of cancer in human breast epithelial cells: a review of the literature with reference to new exposure data and regulatory status. Journal Applied Toxicology **34**(9):925-38. <http://onlinelibrary.wiley.com/doi/10.1002/jat.3027/abstract>

⁴ Ritchie JM, et al., (2003). Organochlorines and risk of prostate cancer. Journal of occupational and environmental medicine **45**(7): 692-702 <http://www.ncbi.nlm.nih.gov/pubmed/12855910>

⁵ Soto AM, et al., (1995). The E-SCREEN assay as a tool to identify estrogens: an update on estrogenic environmental pollutants. Environmental Health Perspectives **103** (7): 113-22. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1518887/>

⁶ McGrath, KG (2009). Apocrine sweat gland obstruction by antiperspirants allowing transdermal absorption of cutaneous generated hormones and pheromones as a link to the observed incidence rates of breast and prostate cancer in the 20th century. Medical Hypotheses **72**: 665–674. <http://www.ncbi.nlm.nih.gov/pubmed/19307063>

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- ⁷ Kim, JY, et al., (2014). Methoxychlor and triclosan stimulates ovarian cancer growth by regulating cell cycle- and apoptosis-related genes via an estrogen receptor-dependent pathway. *Environmental Toxicology and Pharmacology* **37**(3): 1264-74. <http://www.ncbi.nlm.nih.gov/pubmed/24835555>
- ⁸ Newbold RR, et al., (2007). Developmental exposure to endocrine disruptors and the obesity epidemic. *Reproductive Toxicology* **23**: 290–296. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1931509/>
- ⁹ Sargis, R. M. (2014). The Hijacking of Cellular Signaling and the Diabetes Epidemic: Mechanisms of Environmental Disruption of Insulin Action and Glucose Homeostasis. *Diabetes Metabolism Journal* **38**:13-24. <http://www.ncbi.nlm.nih.gov/pubmed/24627823>
- ¹⁰ Lathi, RB, et al., (2014). Conjugated bisphenol A in maternal serum in relation to miscarriage risk. *Fertility and Sterility* **102**(1): 123-128. <http://www.ncbi.nlm.nih.gov/pubmed/24746738>
- ¹¹ Grandjean, P., & Budtz-Jørgensen, E. (2013). *Immunotoxicity of perfluorinated alkylates: calculation of benchmark doses based on serum concentrations in children*. *Environmental Health* <http://www.biomedcentral.com/content/pdf/1476-069X-12-35.pdf>
- ¹² Grandjean, P. and Landrigan, P.L. (2014). Neurobehavioural effects of developmental toxicity. *The Lancet Neurology* **13** (3): 330 – 338. [http://www.thelancet.com/journals/laneur/article/PIIS1474-4422\(13\)70278-3/abstract](http://www.thelancet.com/journals/laneur/article/PIIS1474-4422(13)70278-3/abstract)
- ¹³ Boas M, et al., (2012). Thyroid effects of endocrine disrupting chemicals. *Molecular and Cellular Endocrinology* **355** (2) 240-248. <http://www.ncbi.nlm.nih.gov/pubmed/21939731>
- ¹⁴ [http://www.newswise.com/articles/estimated-costs-of-endocrine-disrupting-chemical-exposure-exceed-150-billion-annually-in-eu?ret=/articles/list&channel=&category=latest&page=4&search\[status\]=3&search\[sort\]=date+desc&search\[has_multimedia\]=15](http://www.newswise.com/articles/estimated-costs-of-endocrine-disrupting-chemical-exposure-exceed-150-billion-annually-in-eu?ret=/articles/list&channel=&category=latest&page=4&search[status]=3&search[sort]=date+desc&search[has_multimedia]=15) (HEAL 2014) Health costs in the European Union 'Hoe much si related to EDCs' http://env-health.org/IMG/pdf/37_18122014_final_health_costs_in_the_european_union_how_much_is_related_to_edcs.pdf
- ¹⁶ UNEP/WHO (2013). State of the science of endocrine disrupting chemicals 2012 <http://www.unep.org/hazardoussubstances/Portals/9/EDC/StateOfEDCScience.pdf> and European Environment Agency (2012). The Weybridge+15 (1996–2011) Report: The impacts of endocrine disruptors on wildlife, people and their environments <http://www.eea.europa.eu/publications/the-impacts-of-endocrine-disruptors> and Report of the Interagency Breast Cancer and Environmental Research Coordinating Committee (IBCERCC) (2013). 'Breast Cancer and the Environment Prioritising Prevention Prioritising Breast Cancer'. http://www.niehs.nih.gov/about/assets/docs/ibcercc_full_508.pdf and also 2013 Berlaymont Declaration on Endocrine Disruptors found at http://www.ipcp.ch/Berlaymont_August_7.pdf (Accessed September 2013)