

Industrial chemical Bisphenol S increases cancer risk: China study

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Bisphenol S affects the distribution of tumour-related lipids and proteins



A study led by Hong Kong Baptist University (HKBU) has revealed that different degrees of exposure to bisphenol S (BPS), an industrial chemical widely used in paper products and plastic containers, are associated with the growth and deterioration of breast tumours in a mouse model.

The research results suggest the need for more in-depth and comprehensive research on the potential negative impact of BPS on human health, and the ongoing search for a safer alternative for use in industrial production may be warranted.

Apart from the HKBU scientists, the research team also included researchers from the Shenzhen Institute of Advanced Technology at the Chinese Academy of Sciences and Xi'an Jiaotong University.

In the past, bisphenol A (BPA) was widely used in the production of a diverse range of products, such as baby bottles, food and beverage containers, and the thermal paper used for printing receipts. As previous research has shown an association between BPA exposure and human endocrine system disruption, metabolic disease and an increased risk of breast cancer in recent years, scientists have looked for alternatives to BPA, and BPS has been used as one of the substitutes. Despite reports on the adverse effects of BPS on human health, its impact on tumour progression and how it disrupts the relevant metabolic processes in breast cancer remain poorly understood.

"Our research findings show that BPS may potentially be associated with breast tumour proliferation, and further study is deemed necessary to unveil more about the chemical's possible negative impact on human health. In the long run, industry may need to identify safer substitutes for both BPA and BPS. Policymakers should also establish relevant safety standards and regulations for the use of BPS," said the researchers.

Image caption- A research team led by Professor Cai Zongwei, Chair Professor of the Department of Chemistry and Director of the State Key Laboratory of Environmental and Biological Analysis at HKBU