

THE EDUCATION UNIVERSITY OF HONG KONG
FACULTY OF LIBERAL ARTS AND SOCIAL SCIENCES

Research Output Prize
for the Dean's Research Fund 2021/22

**Brief Introduction of Awardee's
Research Output/Publication and Future Research Development**

Awardee (Dept):	<u>Dr Deng Wenjing, Assistant Professor (SES)</u>
Publication/Research Output Title/project:	<u>Plasticizer Contamination in the Urine and Hair of Preschool Children, Airborne Particles in Kindergartens, and Drinking Water in Hong Kong</u>

A. *Briefly introduce your research output/publication for which you have received the prize.*

Driven by the increased use of plasticizers in industry and many traditional plasticizers are proven to be toxic and consequently regulated, many new plasticizers have been considered as alternatives and their production and usage has rapidly increased. However, it has been found that these new plasticizers also have adverse health effects. Therefore, common plasticizers and their alternatives have become a global and environmentally ubiquitous problem. Common plasticizers were quantified in urine and hair samples from Hong Kong children and in drinking water (tap water/bottled water) and airborne particles in 17 Hong Kong kindergartens. The results suggested that local Hong Kong children were exposed to a range of plasticizers and their alternatives. The estimated daily urinary excretion (EDE) values of bisphenol analogs by children revealed the exposure pathway of tap water intake and airborne particles inhalation in kindergartens can not be ignored in Hong Kong

This output entitled “**Plasticizer Contamination in the Urine and Hair of Preschool Children, Airborne Particles in Kindergartens, and Drinking Water in Hong Kong**” has been published *Environmental Pollution* with an impact factor of 9.13 (2021).

B. *How you used/will use your prize and perhaps its usefulness to your research development?*

This prize provides a remarkable support to my research development on endocrine disruption chemicals (EDCs) and children health. With this prize, the concentrations of emerging EDCs via indoor PM_{2.5} and food intake will be analyzed in a larger scale. The exposure levels of young children during school hours via breath and dietary intake will also be estimated. The research could provide policy makers with a valuable insight into indoor environments in this global city and help them formulate appropriate preventive strategies, such as searching the main pollution source and regulating usage of common plasticizers and new alternatives.

C. *Expected research outcomes/outputs/impacts arising from this prize.*

This prize can help to create new perspectives to regulate endocrine disruption chemicals (EDCs) problems. Results can be used to improve our society and protect public health, especially for children health. The data can be used for apply a new GRF.