**Environmental Research, Technology Demonstration and Conference Project**

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| **ECF Project:** | ECF 2020-48 |
| **Project Title:** | Evaluation of the toxicity of the microplastics in fish and shellfish of Hong Kong to human health using various human cell models |
| **Principal Investigator:** | Dr Wang Yi, Department of Chemistry, Hong Kong Baptist University |
| **Total Approved Grant:** | $496,000 |
| **Duration:** | 1/10/2021 to 30/9/2023 |
| **Project Status/Remarks:** | On-going |
| **Project Scope:** | Microplastics (MPs) are plastics with sizes smaller than 5 mm. MPs are originated from a continual fragmentation of the waste of the plastic products and packaging in the environment, while there are also MPs produced for specific needs in the cosmetics and personal care products. MPs are present everywhere of the environment, including marine and freshwater systems, ice cores, air, and soil. The MP pollution will cause both environmental and health risks. MPs, the surface of which may has toxic substances adhered to or accumulated on, can be mistakenly ingested as food by a variety of aquatic organisms and subsequently consumed by humans as the end of the food chain. The MP contamination in seafood is a serious problem in Hong Kong, since Hong Kong ranks as the world's eighth-largest per capita consumer of seafood. Currently, the specific impact of MPs on human health is uncertain.<br><br>The project will evaluate the toxicity of the microplastics with the attached chemicals separated from the fish and shellfish in Hong Kong on human health. Various human cell models will be applied to study the digestion, absorption, and toxicity of the MPs in human body consumed through seafood. |
| **Summary of the Findings/Outcomes:** | To be available upon completion of the project |