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Thermo Fisher, NUS study Singapore's water

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Singapore: Thermo Fisher Scientific and National University of Singapore's (NUS) Environmental Research Institute (NERI), have formed a collaboration to study how metabolism in plants and bacteria affects water quality and the ecosystem in-and-around Singapore.

In the study, researchers from NERI and the Singapore Center on Environmental Life Sciences Engineering (SCELSE), an interdisciplinary Research Center of Excellence (RCE), funded by the National Research Foundation, Singapore Ministry of Education, NUS and Nanyang Technological University, will examine how metabolomes (all the metabolites present in an organism at a given time) relate to the functioning of microbes in the urban water cycle.

The team will employ a wide range of analytical tools including state-of-the-art liquid chromatography/mass spectrometry (LC-MS) systems to identify and measure metabolites in samples. One-of-the-goals is to better understand and enhance the self-purification capacity of urban waterways that use natural processes to reduce or remove nutrient and contaminant loads in surface water. Another goal is to understand the metabolic basis of wastewater purification in order to improve the processes involved.

Professor Ong Choon Nam, director, NUS Environmental Research Institute, said that, "Safe and sustainable quality water is fundamental to both human and ecosystem health. By understanding better how plants and microbes affect our water quality, we could look into developing improved tools or methods that could significantly increase our ability to identify health and environmental threats more prudently." said

Mr Bhaskar Narayanaan, VP and GM, Thermo Fisher Singapore, said that, "NERI and Thermo Fisher Scientific share the vision of helping to make the world healthier, cleaner and safer, which is why we are so delighted to team up with this group of expert scientists in environmental sciences. This combination of research expertise with Thermo Scientific analytical technology creates tremendous synergy."