Department of Life Science

Bioinformatics and Systems Biology study of Omics

My research interest mainly focus on the bioinformatics, genomics, and biotechnology to study the environment chemicals-induced responses and mechanisms related to genomics and epigenomics effect. Multiple NGS platforms, including gene expression, methylation, and microRNA are performed to dissect how genomic variations and transcriptional modulations regulate cellular functions after environment chemicals exposure.

Techniques used in study

Bioinformatics Systems Biology Medical genomics Environmental toxicogenomics Epigenomics Modelling

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Backbround:

PhD in Bioenvironmental Systems Engineerin National Taiwan University, R.O.C.

Funding:

Ministry of Science and Technology National Taiwan Normal University





Publications

- 1. Platform for Computing Relevance between Endocrine Disrupting Chemicals and Human Genome, Invention No. I693612, Invention Patent of the Republic of China, 2020-2038.
- Su EC, Chen YS, Tien YC, Liu J, Ho BC, Yu SL, Singh S*. 2016. ChemiRs: a web application for microRNAs and chemicals. BMC Bioinformatics 18;17:167.
- **3.** Singh S, and Li SS., "Phthalates: Toxicogenomics and Health Effects" Phthalates: Chemical Properties, Impacts on Health and the Environment, Nova Science Publishers, Inc. August 2012

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