NANYANG TECHNOLOGICAL UNIVERSITY

School of Biological Sciences

Reg. No. 200604393R

Research Theme: Biomedical Data Science/Drug Discovery/Machine learning/Computational Biology

Research Project Title: Development of Ais for predicting medical usage of novel plants based on genomic, proteomic and metabolite profiles

Principal Investigator/Supervisor: Wilson Wen Bin Goh

Co-supervisor/ Collaborator(s) (if any): Adams Kong

Project Description

a) Background:

Tropical herbs have been used in TCM and other traditional medical practices in treatment. However, the genomic, proteomic and metabolic profiles of these plants are not well-characterised. By linking the molecular profiles of local plants against known data repositories of known pharmaceutically-active compounds, the goal is to identify the potential medical usage of these novel plants.

b) Proposed work:

Using a combination of computational biology, machine learning, and data science methods, you will construct appropriate knowledge bases of natural or synthetic compounds and their medical usage. You will devise comparative approaches allowing you to measure compound similarities so that we can transfer appropriate labels and use indicators to novel natural compounds. You will also develop transductive approaches for predicting the appropriate medical usage of novel plants.

c) Preferred skills:

Highly motivated candidates with strong computing/mathematical/statistical skills, computational biology and/or analytical chemistry skills are strongly encouraged to apply.

Supervisor contact:

If you have questions regarding this project, please email the Principal Investigator:
wilsongoh@ntu.edu.sg

SBS contact and how to apply:

Associate Chair-Biological Sciences (Graduate Studies) : AC-SBS-GS@ntu.edu.sg
Please apply at the following: http://admissions.ntu.edu.sg/graduate/R-Programs/RWhenYouApply/

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