JOB DESCRIPTION

Position Summary
We are recruiting a **Postdoctoral Scientist in Bioinformatics** to assist us in analyzing data generated from genome-wide CRISPR screen in conjunction with other multi-omics data to shortlist drug candidates with biomarkers for validation. In this study, we have collaborated closely with a prestigious research group from Wellcome Sanger Institute to use leading edge technologies in CRISPR screening and computational analysis to delineate the map of essential genes in head and neck cancer lines including Asian-derived unique collection of lines derived at our laboratory. We are now actively looking into integrating multi-omics and drug sensitivity data available in-house and in public databases to help shortlist essential gene and/or drug candidates for head and neck cancer.

Responsibilities
This position requires you to perform integrative bioinformatic analysis using established computational procedures in published literature, as well as design and test new bioinformatics pipelines as necessary:

1) To be able to understand and comprehend the CRISPR screen data in-house and from public database
2) To be able to analyze and integrate multi-dimensional omics data with large-scale drug screening data
3) To use or adapt published computational algorithms or design new algorithms to find genomic features that are correlated with drug sensitivity
4) To shortlist drugs for repurposing in head and neck cancer, with strong statistical and biological evidence of a related biomarker
5) To participate in the design and execution of bioinformatics analyses in order to answer novel research questions
6) To communicate project or test results effectively
7) To resolve problems and to work towards timely and high-quality project completion
8) To assists internal stakeholders to meet external and internal milestones, and to be responsible for drafting and submitting necessary reports

Qualifications

1) PhD level qualification in a quantitative discipline. Relevant fields include biology, bioinformatics, statistics, computer science, or mathematics.
2) Experience with programming and/or the use of bioinformatics tools
3) Skilled in R programming/python

4) Experience with online database accessing and analysis (GEO database, TCGA dataset etc)
5) Experience in machine learning algorithm such as elastic net regularization, random forest is a big bonus
6) Driven by a strong sense of making an impact, with problem solving skills, including conflict resolution skills
7) Ability to prioritize and work to deadlines
8) Adopts a pro-active attitude to work and assumes full responsibilities within the role
9) Ability to work in a team
10) Ability to work creatively and analytically in a problem-solving work environment
11) Passion for CRM's mission.