Post doc position in **Integrated "OMICS"**
Detailed Job Description

General Expectation:

1. Determined and fully committed to an academic research career
2. Responsible, plans and conducts experiments related to the agreed (with Dr Rajan) research projects following HKU's research integrity regulations
3. Will contribute for writing new research proposals and grant applications in the lab
4. Presents research findings at internal conferences and take part in organizing lab's conference series such as ISOACC and workshops at HKU
5. Be proactive and enthusiastic in seeking research advice from academic friends and try to bring new research ideas through interdisciplinary collaboration to keep positive energy flowing in the lab
6. Technical skills required: experience in variety of "omics" technology and bioinformatics
7. As employers use both quality and quantity of research papers as one of the important indicators of research performance, the postdoctoral fellow is expected to produce high impactful publications in prestigious journals.

Specific research project details:

This position is sponsored by HKSAR's UGC funded GRF project in 2019 (title: The dynamic multigenerational fate of ocean acidification-stressed oysters). The project is recently, we observed that the larvae of the F1 generation (Hong Kong oyster) whose parents were exposed to ocean acidification (OA) had increased growth and metamorphosis. Here, the post doc will continue our ongoing experiment to investigate whether this expressed positive carryover effect and transgenerational plasticity are further carried forward to the next F2 generation, as well as identify the underlying inheritance mechanisms.

The main objectives of this proposal are to (1) identify carryover effects of OA on various traits over multiple generations by analyzing a set of targeted traits related to physiological fitness and commercial value in individuals from our ongoing multiple generations experiments, (2) compare differentially expressed gene transcripts (using RNA-Seq) for various stress-tolerant pathways, and 3) determine the role of OA-induced DNA methylation on the rapid and inheritable "non-genetic" adaptation in F1 and F2 individuals. All these data are urgently needed and timely to assist aquaculture industries with our molecular breeding programs and to accurately project the capacity of the commercially important shellfish species to cope with climate change.

He or she will have an opportunity to work in close collaboration with coinvestigators of the project, Prof Ziniu Yu of South China Sea Institute of Oceanology (HK oyster genomics) and Prof Steven Roberts of University of Washington (Epigenetics). Besides, the post doc is also expected to work very closely with one or two PhD students. Therefore, experience (as indicated by published papers) in molecular biology, bioinformatics and integrated omics in any organism is essential for this position. Therefore, applicants are encouraged to apply even if they do not have experience in oyster ocean acidification research. Please contact Dr Rajan to discuss further about this exciting project and the position.