Research Fellow - Bioinformatics / Molecular Epidemiology - Perinatal and Child Health
Singapore Institute for Clinical Sciences

Job Title Research Fellow - Bioinformatics / Molecular Epidemiology - Perinatal and Child Health

Department Biostatistics

https://www.a-star.edu.sg/sics

Institution Singapore Institute for Clinical Sciences

Singapore, , Singapore

Date Posted Aug. 4, 2022

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Post-Doc

Academic Field(s) Public Health/Biostatistics/Epidemiology

Biomedical Sciences

Health Sciences - General

Job Website https://www.mycareersfuture.gov.sg/job/sciences/sgunitedjobs-research-fellow-biostatistics-sics-astar-research-entities-4ec61a7abc70556183e30094a747d8a7

Apply By Email biostats@sics.a-star.edu.sg

Job Description

A two-year position at the Singapore Institute for Clinical Sciences is available to a highly-motivated postdoctoral researcher in bioinformatics and/or molecular epidemiology in the area of reproductive, perinatal, and pediatric epidemiology, with particular training and expertise in transcriptomics and epigenomics. The candidate will develop a competitive research portfolio using class-leading multimodal data from up to three longitudinal birth cohort studies (GUSTO, N = ~1200 enrolled; S-PRESTO, N = ~1000 enrolled; and MAMS, N = ~2000 anticipated) in collaboration with local research hospitals, top research universities, government research entities, and a broad network of international collaborators.

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The cohorts represent world-class efforts in deep pheno- and geno-typing, with available measures including: clinical characteristics; sociodemographics and spatiotemporal data; parenting and child behaviors; child neurodevelopmental assessment; state-of-the-art brain and body imaging; and numerous –omics (metabolome; (epi)genome; transcriptome; microbiome). A large biorepository (e.g. hair, saliva, urine, blood) has been formed.

Details on available data and samples for GUSTO/S-PRESTO can be found at: gustodatavault.sg

The Fellow will work closely with the PI to develop research based on two competitively-funded projects:

Placental multi-omics linking in vitro fertilization (IVF) and longitudinal child cardiometabolic outcomes. The Fellow will develop and apply methods to investigate mediating mechanisms between IVF and child outcomes utilizing placental multi-omic data (genomic, DNA methylation, and RNAseq).• Early work on this has been published in Huang, et al. Nature Communications. 12: 5613. 2021. The Fellow may contribute to further developing outlined approaches including methods for negative controls for unmeasured confounding, eQTLs, causal mediation, etc.• This work will contribute to a new consortium on placental transcriptomics that includes one of the largest multi-ethnic samples of placental RNAseq (N ~600) across several international cohorts.

The relationships between paternal pre- and perinatal factors on pregnancy and offspring health.• -Omics data (triad (maternal, paternal, child) genomics, epigenomics, and placental RNAseq) will be used to narrow down on windows of paternal influence in the context of supporting potential interventions: e.g. pre-conception, maternal support in pregnancy, postnatal caretaking behaviors• This work will support an interdisciplinary and international translational science team

The Fellow will not have teaching responsibilities and will be expected only to conduct research and knowledge dissemination activities (i.e. data analyses, manuscript writing, grant writing, conference presentations, lectures, workshops, scientific community engagement, etc.).

Opportunities for further training, mentorship, and collaboration, including out-placement with a data science industry partner may be possible. Incumbent will have access to a highly interdisciplinary local research environment at SICS; A*STAR; Duke-NUS; NUS School of Public Health; NUS School of Medicine; NTU, etc. with the goal of supporting the incumbent’s long-term career goals. SICS is a dynamic working environment with dozens of postdoctoral peers working in such diverse domains as eating behaviors, neurodevelopment, allergy, growth and metabolism, parenting, -omics, brain and body imaging, and oral health.

For more information about the position, please contact the PI Jon Huang (jonathan_huang@sics.a-star.edu.sg).

Applications to the position should be emailed to biostats@sics.a-star.edu.sg and include:

A brief cover letter describing research experience and goals, CV, and 2 representative publications (or completed manuscripts). Applicants who are near completion of their doctorate are eligible.

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The position will be open until filled. Apologies as only short-listed candidates will be notified.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact	Jonathan Huang
	Biostatistics
	Singapore Institute for Clinical Sciences
	Singapore
	Singapore
Contact E-mail	biostats@sics.a-star.edu.sg