

Data Scientist Proteomics

- **Make an important contribution to the health of children through medical research**
- **Work with one of Australia's most respected national and independent medical research institutes**
- **Located in Westmead, one of Sydney's and Australia's major biomedical research hubs**

Children's Medical Research Institute (CMRI) was Australia's first dedicated paediatric research facility and is now one of the world's most highly regarded independent medical research centres. Our research focuses on the areas of embryonic development and birth defects, cancer, neuroscience and gene therapy and we have a strong international reputation based on our research outcomes. It is also home to the world-first proteomics project, ProCan, which is changing the way cancer is diagnosed and treated. CMRI's research programs are supported by state of the art facilities and committed research and support staff. Our achievements are made possible by a loyal network of community supporters, highly engaged donors and the very successful Jeans for Genes® fundraising campaign.

A data scientist position is available in the ProCan Cancer Data Science Group, led by Dr. Qing Zhong. ProCan (the ACRF International Centre for the Proteome of Human Cancer) is a world-first initiative developed and launched in September 2016 by Professors Phil Robinson and Roger Reddel, and established with a \$10 million grant from the Australian Cancer Research Foundation (ACRF). Equipped with six SCIEX mass spectrometers and a super computer (800TB / 480 cores), ProCan processes tumour samples through a proteomic method, SWATH-MS, which allows fast mass spectrometric conversion of small amounts of tissue (biopsy level) into a single, permanent digital file representing the quantitative proteome of the sample. One of the goals of ProCan is to measure thousands of proteins in about 70,000 cancers of all types with known treatment outcome and correlate tumour proteotypes with clinical phenotypes. The Cancer Data Science Group aims to develop novel computational tools and sophisticated machine learning algorithms to achieve this goal. Other major focuses of the group are 1) big proteogenomic data mining and management, 2) the genome-proteome association analysis and multi-omic data integration for studying cancer, 3) development of advanced statistical tools to account for batch effects caused by large-scale, high throughput proteomics, and 4) implementation of big data-driven, evidence-based computational tools to achieve predictive, preventive, personalized medicine.



We invite applications from PhD scientists to join our group. Applicants should have a high degree of motivation in academic research, an excellent record of scientific accomplishments with publications in peer-reviewed journals, and the ability to work independently with outstanding communication and writing skills. Candidates should have a strong background in bioinformatics, biostatistics or machine learning. Strong programming skills in R and Python are required. Previous experience in proteomics is essential. You will be responsible for conducting biostatistical analysis, performing scientific data visualization, developing solutions to proteomics research and cancer biomarker discovery.

You will be provided with a competitive remuneration package in accordance with qualifications and experience. Additional benefits include the provision of a Public Benevolent Institution salary packaging scheme and participation in an employer-contributed superannuation fund. First and co-first author publications on high impact journals can be expected. This is a full-time position for three years with the possibility of extension.

Applications should include:

1. A cover letter (citing **PV2032**) with statement of motivation and a detailed description of the qualifications described above,
2. A curriculum vitae including a chronological list of publications
3. Contact details (phone/email) of three professional referees
and be forwarded to recruitment@cmri.org.au

Applications will remain open until filled, however we encourage you to submit your application by **Friday 27th November** as we will interview suitable candidates from that date onwards - We reserve the right to withdraw this ad prior to the closing date.

