

## Position Description

# Postdoctoral Fellow

*Position Number: 00081583*  
*Position Title: Postdoctoral Fellow*  
*Date Written: January 2020*

*Faculty / Division: Medicine*  
*School / Unit: Public Health & Community Medicine*  
*Position Level: Level A*

### ORGANISATIONAL ENVIRONMENT

UNSW is currently implementing a ten-year strategy to 2025 and our ambition for the next decade is nothing less than to establish UNSW as Australia's global university. We aspire to this in the belief that a great university, which is a global leader in discovery, innovation, impact, education and thought leadership, can make an enormous difference to the lives of people in Australia and around the world.

Following extensive consultation in 2015, we identified three strategic priority areas. Firstly, a drive for academic excellence in research and education. Universities are often classified as 'research intensive' or 'teaching intensive'. UNSW is proud to be an exemplar of both. We are amongst a limited group of universities worldwide capable of delivering research excellence alongside the highest quality education on a large scale. Secondly, a passion for social engagement, which improves lives through advancing equality, diversity, open debate and economic progress. Thirdly, a commitment to achieving global impact through sharing our capability in research and education in the highest quality partnerships with institutions in both developed and emerging societies. We regard the interplay of academic excellence, social engagement and global impact as the hallmarks of a great forward-looking 21st century university.

To achieve this ambition, we are attracting the very best academic and professional staff to play leadership roles in our organisation.

### VALUES IN ACTION: OUR UNSW BEHAVIOURS

UNSW recognises the role of employees in driving a high-performance culture. The behavioural expectations for UNSW are below.



Delivers high performance and demonstrates service excellence.



Thinks creatively and develops new ways of working. Initiates and embraces change.



Works effectively within and across teams. Builds relationships with internal and external stakeholders to deliver on outcomes.



Values individual differences and contributions of all people and promotes inclusion.



Treats others with dignity and empathy. Communicates with integrity and openness.

## OVERVIEW OF RELEVANT AREA AND POSITION SUMMARY

UNSW Medicine is a national leader in learning, teaching and research, with close affiliations to a number of Australia's finest hospitals, research institutes and health care organisations. With a strong presence at UNSW Kensington campus, the faculty have staff and students in teaching hospitals in Sydney as well as regional and rural areas of NSW including Albury/Wodonga, Wagga Wagga, Coffs Harbour and Port Macquarie.

The School of Public Health and Community Medicine (SPHCM) is internationally recognised as a leader in Public Health with particular research strengths in Health Systems Research, Adolescent Health, Healthy Ageing, Infection and Immunity, Environmental Health, Global Health, Indigenous Health and Primary Health Care. The School has a core focus to investigate and provide new knowledge to help inform policy, governance, organisation, work and leadership in the health sector through cross disciplinary research with both academia and industry. The School also has strong associations with research centres and institutes throughout UNSW Medicine.

The Kirby Institute is a leading global research institute dedicated to the prevention and treatment of infectious diseases. Established in 1986 in response to the then emerging HIV epidemic, the Kirby Institute now contributes to knowledge on a broad range of diseases, including viral hepatitis and sexually transmissible infections. Focussing on the coordination of national surveillance programs, population health and epidemiological research, clinical and behavioural research and clinical trials, the Kirby Institute's research projects are conducted in partnership with communities most affected by epidemics. Of particular relevance to this position is the strong collaboration between the School and the Kirby Institute in relation to mathematical modelling research on sexually transmitted infections.

The Postdoctoral Fellow will be responsible for the development of mathematical models under two funded National Health and Medical Research Council (NHMRC) project grants relating to population transmission and control of whooping cough and gonorrhoea respectively. Particular foci include structure models of immunity and the role of evolution of the causative agent *Bordetella pertussis* in whooping cough epidemiology and on analysis of improved public health control strategies for gonorrhoea in high-risk populations. This research will be conducted with collaborators both at UNSW and external agencies with additional involvement of community organisations in relation to gonorrhoea.

The role of Postdoctoral Fellow reports administratively to the Associate Professor of SPHCM and the Associate Professor of the Kirby institute and has no direct reports.

## RESPONSIBILITIES

Specific responsibilities for the role include:

- Developing of realistic mathematical models of gonorrhoea transmission in high-risk populations and of whooping cough transmission in the general population and analysis of model outputs using statistical, mathematical and numerical techniques
- Liaising and communicating with relevant stakeholders and collaborators including epidemiologists, clinicians, public health experts, government officials and national and international health aid agencies
- Drafting of scientific papers and where relevant, reports, abstracts and presentations associated with projects for governments and for internal, national and international meetings
- Providing assistance in developing new research funding applications
- Overseeing and contributing to the preparation of the documentation required for project initiation, including scope of work and technical supporting documentation
- Preparing for and attend teleconferences and meetings with the research team, collaborators and other stakeholders
- Cooperate with all health and safety policies and procedures of the university and take all reasonable care to ensure that your actions or omissions do not impact on the health and safety of yourself or others

## Selection criteria

- PhD in computer science, mathematics, statistics, physics, epidemiology or a similar quantitative field
- Highly developed mathematical and computer programming skills, preferably with experience in mathematical modelling of infectious diseases
- Demonstrated experience with data management and performing statistical analyses
- Demonstrated research experience and the ability to undertake independent research projects
- Proven evidence of contribution to publications in reputable journals and ability to prepare research findings for presentation
- Excellent written and oral communication skills
- Proven ability to work in a multidisciplinary team
- Knowledge of health and safety responsibilities and commitment to attending relevant health and safety training

## PRE-EMPLOYMENT CHECKS REQUIRED FOR THIS POSITION

- Verification of Qualifications

*It is not the intention of the position description to limit the scope or accountabilities of the position but to highlight the most important aspects of the position. The aspects mentioned above may be altered in accordance with the changing requirements of the role.*