



POSITION DESCRIPTION:

SECTION A: Position Context

Position Title	Senior Model Developer / Postdoctoral Fellow, Disease Modelling and Health Systems Financing
Position Number	
Classification	Research Officer
Centre	Centre for Population Health
Location	85 Commercial Road Melbourne
Effective Date	November 2015

Overview

Burnet Institute is a leading Australian medical research and public health organisation focused on improving the health of poor and vulnerable communities. The Institute's culture links innovative discovery-oriented research with development and humanitarian action. World-class laboratory and field-based research is integrated into multidisciplinary programs aimed at the prevention, detection and treatment of diseases of global significance. This unique approach allows the Institute to make a tangible and sustainable impact on health in both developed and developing countries.

The medical research and public health programs conducted by Burnet Institute encompass six key themes: infectious diseases, maternal and child health, sexual and reproductive health, alcohol, drugs and harm reduction and immunity, vaccines and immunisation.

The Institute also undertakes innovative epidemiological research, including surveillance and modelling complemented by participatory social research at international and regional levels, and with governments, civil society and communities in more than 40 countries.

Burnet has three Centres – Biomedical Research, Population Health and International Health that represent our key areas of research and public health.

We are looking to fill a number of positions within the Optima Program, situated within the Burnet's Centre for Population Health. We are a dynamic, interdisciplinary team working at the forefront of infectious disease modelling and health systems financing. In close partnership with the World Bank and the University of New South Wales, we have developed the 'Optima HIV' tool to predict HIV epidemiological trends, link program costs to program coverage and program outcomes, perform scenario analyses, and optimise HIV spending. Optima has already been used by over 30 countries across Eastern Europe, Asia, South America, and Africa to guide resource allocation towards the most cost-effective mix of programs, and to assist with national strategic and operational planning.

We are seeking to bring on board professionals and postdoctoral fellows as we expand into new areas of tuberculosis, nutrition, maternal and child health, and possibly other areas in response to strong international demand for our approach.

Position Purpose:

Working with the World Bank, international health agencies, and country governments, the position holder will:

- Develop software tools for modelling major communicable and non-communicable diseases;
- Provide modelling and analytical support to governments and donor partners to optimise resource allocations and improve efficiency in the health sector;
- Facilitate and participate in training and workshops in a wide range of countries;
- Work with a team of mathematical modellers, economists, computer scientists, epidemiologists, and health policy experts on the conceptual development of mathematical and economic models of epidemics of communicable and non-communicable diseases, predominantly in low- and middle-income countries.

Supervision Reporting Relationships:

<u>This</u> positions' supervisor/manager	Prof. David Wilson
Other positions reporting to <u>this</u> position	

SECTION B: Key Responsibility Areas

The key responsibility areas (KRAs) are the major outputs for which the position is responsible and are not a comprehensive statement of the position activities.

	Key Responsibility Areas
1.	Develop software tools in Python (with possible additional use of JavaScript, Matlab, C/C++, and R)
2.	Lead the development of realistic mathematical models of HIV and other disease areas, and analyse the models using statistical, mathematical, and numerical techniques
3.	Communicate with epidemiologists, public health experts, government officials, and global health and international aid agencies
4.	Oversee and contribute to the preparation of documentation required for project initiation, including scope of work and technical supporting documentation
5.	Prepare for and attend major international meetings, conferences, and teleconferences with national and international stakeholders
6.	Travel and contribute to international training workshops and other project-related meetings
7.	Develop and write reports, abstracts, and presentations associated with projects for governments and for internal, national, and international meetings
8.	Produce, and contribute to the development of, scientific papers
9.	Provide input into the conceptual direction of projects, including contributions to writing appropriate grant applications
10.	Coordinate and manage specific research projects with a high degree of autonomy

Occupational Health and Safety

The Burnet has a commitment to providing a safe and healthy workplace in accordance with the Occupational Health and Safety Act 2004. All staff are obliged to take all reasonable care to ensure that their actions do not place themselves or others at risk.

SECTION C: Key Selection Criteria

<i>Qualifications</i>	Essential/ Preferable
Postgraduate degree in mathematics, statistics, physics, computer science,	Essential

	or a similar field	
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<i>Experience / Knowledge / Attributes</i>		
1.	Excellent written and oral communication skills	Essential
2.	Extensive experience with scientific computing	Essential
3.	Excellent quantitative skills, such as mathematical and/or economic modelling and computer programming	Essential
4.	A successful record of writing for peer-reviewed journals and/or writing of reports for non-expert stakeholders	Essential
5.	Demonstrated research experience, including the ability to undertake independent research projects	Essential
6.	Expertise in infectious disease epidemiology	Preferable
7.	Expertise in health costing and economics	Preferable
8.	Evidence of effective mentoring of junior staff and students	Preferable

Other Requirements

The Burnet Institute is a child safe organisation. The incumbent of this position may be required to undergo a Police Check or Working with Children Check as a condition of their employment.

Further Information:

For further information, please contact Professor David Wilson