THE UNIVERSITY OF
MELBOURNE

Centre for Epidemiology and Biostatistics, Melbourne School of Population and Global Health, Faculty of Medicine, Dentistry and Health Sciences, and School of Mathematics and Statistics, Faculty of Science

Professor in Biostatistics

POSITION NO	0043741
CLASSIFICATION	Professor, Level E
WORK FOCUS CATEGORY	Teaching & Research
SALARY	$187,654 p.a.
SUPERANNUATION	Employer contribution of 17%
WORKING HOURS	Full-time
BASIS OF EMPLOYMENT	Continuing
OTHER BENEFITS	http://about.unimelb.edu.au/careers/working/benefits
HOW TO APPLY	Online applications are preferred. Go to http://about.unimelb.edu.au/careers, select the relevant option ('Current Staff' or 'Prospective Staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY	Prof. Julie A Simpson Telephone: +61 3 8344 0732 Email: julieas@unimelb.edu.au *Please do not send your application to this contact*

For information about working for the University of Melbourne, visit our website:
about.unimelb.edu.au/careers

Position Summary

The Melbourne School of Population and Global Health (Faculty of Medicine, Dentistry, and Health Sciences) and the School of Mathematics and Statistics (Faculty of Science) at The University of Melbourne seek jointly to appoint a Professor who will provide leadership within a new Biostatistics Research Hub. This Hub will provide a focal point for biostatistics research, and related interdisciplinary collaboration, research training and teaching in the two faculties. In particular, the appointee will be expected to make major contributions in research, with an emphasis on the development of modern statistical methods relevant to health and biomedical research, and contribute to teaching excellence of undergraduate and graduate course offerings in biostatistics. The appointee will also be expected to contribute to the strengthening of multi-disciplinary research that relies on expert biostatistical collaboration. There will be opportunities to collaborate with biostatisticians located at the Biostatistics Research Hub as well as other Statistics and Mathematical and Computational Biology research groups affiliated with the Hub and the numerous health and biomedical researchers based at the University and University-affiliated hospitals and institutes.

The successful applicant will primarily report to Professor Julie Simpson, Head of Biostatistics Unit, Centre for Epidemiology & Biostatistics, Melbourne School of Population and Global Health.

This position description should be read in conjunction with the University of Melbourne. Expectations of a Professor: https://staff.unimelb.edu.au/human-resources/academic-careers-@-melbourne/promotion/ExpectationsOfAProfessor.pdf

1. Key Responsibilities

1.1 RESEARCH AND RESEARCH TRAINING

- ▶ Contribute to the advancement of the discipline by playing a leading role in the initiation and conduct of major research projects, both methodological and collaborative.

- ▶ Publish scholarly research in peer-reviewed journals, and present it at relevant conferences and seminars.

- ▶ Attract and actively supervise high quality graduate research students.

- ▶ Lead and contribute to a range of research proposal submissions to external funding bodies.

- ▶ Provide leadership in developing external research networks.

- ▶ Contribute to the advancement of public awareness of educational and scientific developments, and promote critical enquiry and public debate within the community.

- ▶ Initiate activities to engage with University of Melbourne affiliated hospitals and research institutes, and Melbourne Academic Centre for Health.

- ▶ Seek membership of senior advisory groups to government.

- ▶ Obtain recognition by national or international professional bodies (awards, fellowships, honorary memberships etc.).

1.2 TEACHING & LEARNING

▶ Support and develop high quality teaching practice across a wide range of settings (undergraduate to postgraduate, specialist biostatistics to general education for non-specialists).

▶ Contribute in a leadership role to the delivery and management of undergraduate and graduate course offerings in biostatistics and related disciplines.

1.3 LEADERSHIP & SERVICE

▶ Play a leadership role in the development of biostatistics across the University, as well as through national and international learned societies, or other relevant bodies, and editorial service to prestigious journals.

▶ Mentor and support the development of early and mid-career academic staff within the Biostatistics Research Hub and more broadly in the University.

▶ Develop policy and take appropriate administrative roles at different levels within the University.

▶ Liaise effectively with external networks to foster collaboration and sharing of ideas.

▶ Effective demonstration and promotion of University values including diversity and inclusion and high standards of ethics and integrity.

2. Selection Criteria

2.1 ESSENTIAL

▶ PhD in biostatistics or statistics or equivalent professional qualification in a relevant discipline.

▶ Evidence of recognition as an eminent international authority in biostatistics.

▶ A distinguished research career, including an excellent publication record in high impact peer reviewed journals.

▶ Commitment to excellence in, and capacity for leadership and innovation in undergraduate and postgraduate teaching.

▶ Commitment to advancing the discipline of biostatistics and related areas of data science.

▶ Demonstrated sustained success in obtaining research grants and external research income (with emphasis on competitive, international and peer-reviewed).

▶ An excellent record in attracting graduate research students, and providing supervision to completion.

▶ Demonstrated ability to establish and maintain productive collaborations within biostatistics and with other disciplines in health and biomedical research.

▶ Exceptional interpersonal and communication skills, with proven success in working collaboratively with diverse stakeholders including academic peers, clinicians, industry, community, policy makers and government.

▶ Ability to provide strategic focus and direction, fostering a culture of innovation and collaborative academic achievement.

▶ Ethical leader who values diversity and works effectively with individual differences.

2.2 DESIRABLE

▶ International standing in at least one specific area of application of biostatistical methods, e.g. clinical effectiveness research, clinical trials, population health and epidemiology, statistical genomics or similar areas of data-intensive biology.

▶ Experience and expertise in modern computational methods.

▶ Interest in communicating the importance of biostatistics and the role of key statistical concepts and methods in other disciplines.

▶ Excellent management skills.

3. Equal Opportunity, Diversity and Inclusion

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the University's People Strategy 2015-2020 and policies that address diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people's age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous deserve to service for excellence and reach the targets of Growing Esteem.

4. Occupational Health and Safety (OHS)

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

http://safety.unimelb.edu.au/topics/responsibilities/

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

5. Other Information

5.1 BIOSTATISTICS RESEARCH HUB, CENTRE FOR EPIDEMIOLOGY AND BIOSTATISTICS, MELBOURNE SCHOOL OF POPULATION AND GLOBAL HEALTH

The Biostatistics Research Hub is being established in order to expand and strengthen high-level expertise in biostatistics research and training. The primary goal of the Hub is to provide a focal point within the University for the core discipline of biostatistics, with a mission to develop the modern statistical methods that underpin biomedical research, strengthen multi-disciplinary research that relies on expert biostatistical collaboration, and ensure that biostatistics teaching and training are abreast of current advances in statistical methods and computing.

The Hub will include the following five new positions:

- Professor and Director (joint position with School of Mathematics & Statistics),
- Two Level C positions (joint with Peter Doherty Institute of Immunity and Infection and the Victorian Comprehensive Cancer Centre),
- Two Level B positions (joint with School of Mathematics & Statistics).

In addition, the Hub will bring together a critical mass of biostatistics teaching and research staff from the Melbourne School of Population and Global Health (presently 3 senior biostatisticians, 9 postdoctoral researchers), statisticians from the School of Mathematics & Statistics including the Centre for Statistical Genomics (led by Prof. David Balding) and Statistical Consulting Centre (led by Prof. Ian Gordon), as well as biostatisticians within the Melbourne Medical School, in particular within the Department of Paediatrics and Murdoch Children's Research Institute, Royal Children's Hospital (led by Prof. John Carlin). Opportunities for collaborative multidisciplinary research are available through the Centres and Institutes named above as well as the Melbourne Clinical and Translational Science Research Platform (Biostatistics node led by Prof. Julie Simpson), which primarily provides research methods support to the Melbourne Medical School.

The Biostatistics Research Hub will lead undergraduate teaching, working with the two level B positions joint with Mathematics and Statistics to develop a new major in biostatistics within the BSc degree, integrated with new programs in Computational Biology and Data Science. S/he will also oversee postgraduate training in biostatistics, including training of non-specialists in biomedical and clinical PhD degrees.

5.2 CENTRE FOR EPIDEMIOLOGY AND BIOSTATISTICS

The Centre for Epidemiology and Biostatistics (http://mspgh.unimelb.edu.au/centres-institutes/centre-for-epidemiology-and-biostatistics) is one of 4 Centres and an Institute that comprise the Melbourne School of Population and Global Health.

Our Centre's units include:

i) Allergy and Lung Health

ii) Australian Twin Registry

iii) Biostatistics

iv) Breast Cancer

v) Colorectal Cancer

vi) High Dimensional Analytics

vii) Male Health

viii) Modelling and Simulation

ix) Sexual Health

x) Neuroepidemiology

xi) Teaching and Learning

The Centre for Epidemiology and Biostatistics is at the forefront of a preventive health revolution. Big data, changing infectious diseases patterns and multi-disciplinary collaborations   are transforming the ways public health disciplines are researched and taught. Our Centre aims to be a leader in this evolving environment.

Epidemiology and biostatistics provide solutions to global public health challenges that demand multi-disciplinary responses. Our Centre's approach to research, teaching, and research training reflects this reality. We combine deep expertise with a broad range and reach – through our nine units, and our active links to other renowned institutions. This ensures our researchers and graduates are ready to contribute to preventing and alleviating the world's common, debilitating and burdensome health issues.

5.3   THE MELBOURNE SCHOOL OF POPULATION AND GLOBAL HEALTH

The Melbourne School of Population Health (http://mspgh.unimelb.edu.au/) was established in the Faculty of Medicine, Dentistry and Health Sciences in 2001. It became the Melbourne School of Population and Global Health in 2013. Approximately 300 academic and professional staff work across the School and its partner agencies. The School's total budget is in excess of $50m. There are approximately 120 higher degree research students (predominantly PhD).

The School aims to strengthen the understanding, capacity and services of society to meet population health needs and to improve the quality and equity of health care. It employs a population health framework that incorporates public health and preventative medicine, health promotion, clinical medicine and allied healthcare disciplines and an equity and evidence-based approach to health care and health policy. Its research programs aim to elucidate the genetic, environmental, social and economic determinants of health, and to focus on the evaluation of the health systems, programs and services that seek to prevent disease and injury and to promote health. The School provides research and professional development opportunities for medical undergraduates, postgraduates in a wide range of disciplines, clinicians in all sectors of the health care industry, scientists, professionals and leaders in population health.

The School is currently composed of four Centres, one Institute and two partnership units:

- Centre for Health Equity (CHE)

- Centre for Health Policy (CHE)

- Centre for Epidemiology and Biostatistics (CEB)

- Centre for Mental Health (CMH)

- The Nossal Institute for Global Health (NIGH)

- Vaccine and Immunisation Research Group (VIRGo)

- Global Burden of Disease Group

5.4 FACULTY OF MEDICINE, DENTISTRY AND HEALTH SCIENCES

www.mdhs.unimelb.edu.au

The Faculty of Medicine, Dentistry & Health Sciences has an enviable research record and is the University of Melbourne's largest faculty in terms of management of financial resources, employment of academic and professional staff, teaching of undergraduate and postgraduate (including research higher degree) students and the conduct of basic and applied research. The Faculty's annual revenue is $628m with approximately 55% of this income related to research activities.

The Faculty has a student teaching load in excess of 8,500 equivalent full-time students including more than 1,300 research higher degree students. The Faculty has approximately 2,195 staff comprising 642 professional staff and 1,553 research and teaching staff.

The Faculty has appointed Australia's first Associate Dean (Indigenous Development) to lead the development and implementation of the Faculty's Reconciliation Action Plan (RAP), which will be aligned with the broader University – wide plan. To enable the Faculty to improve its Indigenous expertise knowledge base, the Faculty's RAP will address Indigenous employment, Indigenous student recruitment and retention, Indigenous cultural recognition and building partnerships with the Indigenous community as key areas of development.

4.6 SCHOOL OF MATHEMATICS AND STATISTICS

The University of Melbourne's School of Mathematics and Statistics is one of Australia's leading mathematics and statistics schools. It has achieved this status through the high quality of its research and teaching programs. The School offers a wide range of subjects to undergraduate and postgraduate students and is involved in aspects of community life that impact on the interests of the School and the discipline. Infrastructure support for research and basic information technology facilities are provided to all members of the school.

The School of Mathematics and Statistics (http://www.ms.unimelb.edu.au) has a total of 57 continuing teaching and research staff; 27 research only staff and consultants; 5 teaching specialists, 3 academic specialists; and 12 support staff. The School has over 100 casual and honorary staff. In 2016, there are 88 Research Higher Degree and 78 Coursework Master of Science students. Four members of the School staff and one Emeritus Professor are members of the Academy of Science.

4.7 FACULTY OF SCIENCE

www.science.unimelb.edu.au

The Faculty of Science was formally constituted in 1903, although science has been taught since 1854 when the first Professors of mathematics and natural science joined the University. It is one of the University's largest faculties with some 7,000 undergraduate and postgraduate students, and has an annual budget in the order of $200M.

The Faculty of Science has a deserved reputation for the delivery of high quality teaching and research programs across a breadth of disciplines. The subjects and courses offered are integral to the quality of a significant number of the educational programs in other faculties. The Faculty has a long-standing and distinguished record of providing

postgraduate education at the Masters and Doctoral levels and it has established strong international research and research education linkages within the USA, Europe and throughout the Asian region.

The Faculty is made up of seven Schools as follows: Schools of Biosciences, Chemistry, Earth Sciences, Ecosystem and Forest Sciences, Geography, Mathematics and Statistics and Physics. The Faculty also has custodial responsibility for the Bio21 Molecular Science & Biotechnology Research Institute and Office for Environmental Programs.

The Faculty, through its Schools and Research Centres, is active in professional development, continuing education nationally and internationally, and in links to schools and the community.

5.5   THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville is recognised as the hub of Australia's premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide-range of knowledge-based industries. With outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded.

Further information about working at The University of Melbourne is available at http://about.unimelb.edu.au/careers.

5.6   GROWING ESTEEM, THE MELBOURNE CURRICULUM AND RESEARCH AT MELBOURNE: ENSURING EXCELLENCE AND IMPACT TO 2025

Growing Esteem describes Melbourne's strategy to achieve its aspiration to be a public-spirited and internationally-engaged institution, highly regarded for making distinctive contributions to society in research and research training, learning and teaching, and engagement. http://about.unimelb.edu.au/strategy-and-leadership

The University is at the forefront of Australia's changing higher education system and offers a distinctive model of education known collectively as the Melbourne Curriculum. The new educational model, designed for an outstanding experience for all students, is based on six broad undergraduate programs followed by a graduate professional degree, research higher degree or entry directly into employment. The emphasis on academic breadth as well as disciplinary depth in the new degrees ensures that graduates will have the capacity to succeed in a world where knowledge boundaries are shifting and reforming to create new frontiers and challenges. In moving to the new model, the University is also aligning itself with the best of emerging European and Asian practice and well-established North American traditions.

The University's global aspirations seek to make significant contributions to major social, economic and environmental challenges. Accordingly, the University's research strategy *Research at Melbourne: Ensuring Excellence and Impact to 2025* aspires to a significant

advancement in the excellence and impact of its research outputs.
http://research.unimelb.edu.au/our-research/research-at-melbourne

The strategy recognises that as a public-spirited, research-intensive institution of the future, the University must strive to make a tangible impact in Australia and the world, working across disciplinary and sectoral boundaries and building deeper and more substantive engagement with industry, collaborators and partners. While cultivating the fundamental enabling disciplines through investigator-driven research, the University has adopted three grand challenges aspiring to solve some of the most difficult problems facing our world in the next century. These Grand Challenges include:

▶ Understanding our place and purpose – The place and purpose grand challenge centres on understanding all aspects of our national identity, with a focus on Australia's 'place' in the Asia-Pacific region and the world, and on our 'purpose' or mission to improve all dimensions of the human condition through our research.

▶ Fostering health and wellbeing – The health and wellbeing grand challenge focuses on building the scale and breadth of our capabilities in population and global health; on harnessing our contribution to the 'convergence revolution' of biomedical and health research, bringing together the life sciences, engineering and the physical sciences; and on addressing the physical, mental and social aspects of wellbeing by looking beyond the traditional boundaries of biomedicine.

▶ Supporting sustainability and resilience – The sustainability and resilience grand challenge addresses the critical issues of climate change, water and food security, sustainable energy and designing resilient cities and regions. In addition to the technical aspects, this grand challenge considers the physical and social functioning of cities, connecting physical phenomena with lessons from our past, and the implications of the technical solutions for economies, living patterns and behaviours.

Essential to tackling these challenges, an outstanding faculty, high performing students, wide collaboration including internationally and deep partnerships with external parties form central components of Research at Melbourne: Ensuring Excellence and Impact to 2025.

5.7 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at http://www.unimelb.edu.au/governance

The Leadership Roles of Melbourne Professors

Academic Careers @ Melbourne

THE UNIVERSITY OF MELBOURNE

The rank of University of Melbourne professor brings with it expectations of distinguished leadership within and beyond the University. As the roles and activities of Melbourne professors are highly diverse, their leadership contributions are made in a variety of ways. This document frames the leadership expectations for professors and highlights the differing domains in which they may exercise influence for the betterment of the University and society.

Professors who, upon retirement or resignation, have provided distinguished and sustained service to the University through scholarship, intellectual and institutional leadership and have created an enduring legacy may be recognised with an appointment as Professor Emeritus.

The University of Melbourne has a large and diverse professorial community. The University has some 700 salaried professors (of which 30% are women and 70% men), constituting approximately 16% of the overall salaried academic staff. In addition, over 1000 honorary professors collectively make an extraordinary contribution to the University's research, teaching and engagement across faculties and graduate schools, affiliated hospitals and research institutes.

University of Melbourne salaried professors (2016)

Pie chart:
- Teaching and Research: 76%
- Research Focussed: 18%
- Teaching Specialist; Academic Specialist: 6%
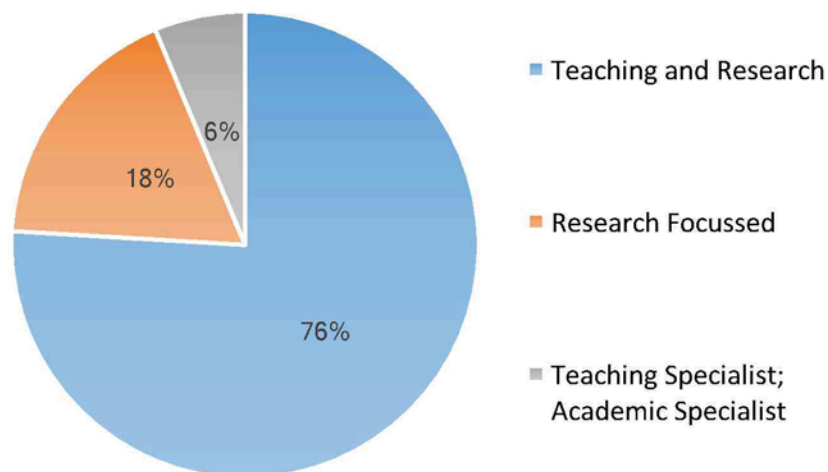
Regardless of the specific nature of their appointments and roles, all Melbourne professors are expected to be ambassadors for the University who advance the capacity and standing of the institution. This can be achieved in a number of ways. For many professors, their leadership contributions are research-focussed; for others, it may be through teaching, learning or engagement; for many, it is a combination of these.

The leadership of professors is of course essential to achieving international excellence for the University. Melbourne professors have global and national prominence as intellectual leaders in their fields. It is expected that professors will work within and beyond established boundaries and discipline norms to produce research and teaching of the highest standard.

The Leadership Roles of Melbourne Professors

Academic
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Melbourne professors also make distinguished contributions to shaping and advancing undergraduate and graduate teaching in their department and faculty, as well as the wider University. As inspirational teachers, professors serve as role models and mentors to students and academic staff and lead the achievement of world-class graduate attributes and educational outcomes for Melbourne's students.

The Melbourne professoriate includes professors who are prominent and critically-engaged public intellectuals who make authoritative contributions to government, industry, business and communities that improve society, creating an institutional environment that values and harmonises academic quality alongside societal impact and influence. Melbourne's Enterprise Professors make particular contributions that build the University's engagement with industry, business and government.

Professors of the University of Melbourne may make formal leadership contributions, such as through designated management and governance roles at faculty and University-wide level. Less formally, all professors are expected to be exemplary leaders of both academic and professional staff. They should actively develop others and actively contribute to the life of the University.

Professors are also expected to uphold and symbolise the highest levels of ethical practice and academic and professional integrity and to serve as role models in their relationships with students, professional staff and academics at all levels.

Examples of professorial leadership include:

- Professors may help early career academics and the University's students to forge influential research careers of their own. Actively nurturing and developing the research skills of other researchers, professors lead collaborative research teams, secure research grants that build institutional capacity and create opportunities for younger staff to meet and work alongside senior colleagues.

- Professors may make important contributions to education policy and practice through influential scholarship on teaching, learning, curriculum and assessment. Providers of expert educational advice to government and peak bodies, many professors influence national and international educational thinking and policy. At the University, Professors may build the nexus between teaching and research, establish curricula and teaching that is engaged with industry, business and communities, create work-integrated learning opportunities and introduce educational innovation.

- Beyond the University, many professors lead national and international academic, professional and community organisations and make intellectual contributions of significant value to public discourse, culture and institutions. The University strives to be one of the finest in the world in its engagement with society and commitment to public value, and professors may lead and serve on expert committees, participate in national and international reviews and lead community engagement and development programs.