THOUGHT LEADERS, SHAPING HEALTH.

FACULTY OF HEALTH SCIENCES
INTRODUCTION

At the University of Sydney’s Faculty of Health Sciences we have an important role to play in improving the health and wellbeing of our communities by sharing our expertise, ideas and discoveries.

As dean it gives me great pleasure to bring you a small snapshot of some of the exciting activities, projects and partnerships that have been keeping our people busy.

As you will see in the following pages, our faculty is a world leader in health sciences and allied health research, and attracts the world’s best and brightest minds. Together, we are committed to research of the highest quality and to a transformative and challenging educational experience for our students that is second to none.

In line with national priorities for ‘promoting and maintaining good health’, our research is focused on preventative health and improving quality of life for those who experience impairment, injury, illness, chronic health conditions or disability.

The international ranking of our research and our success in attracting research funding, both competitive and philanthropic, is testament to the quality of our work, while our academic, industry and community collaborations ensure that it is relevant and has a direct impact.

As we head into 2013, we are excited about where the faculty is going and the growing number of students, supporters and sponsors interested in our work.

I hope you will take the time to read on and learn more about our people and our projects, and about how you too can be involved in initiatives that have the potential to shape the health and wellbeing of future generations.

Professor Kathryn Refshauge
Dean, Faculty of Health Sciences
CONTENTS

03 ABOUT THE FACULTY
03 Faculty overview
04 Strategic directions
06 The year in review
08 Staff awards and honours 2011–12
10 Professorial appointments
12 Research highlights

15 OUR PEOPLE AND PROJECTS
16 Saving lives through improved breast cancer screening – Professor Patrick Brennan
17 A career dedicated to rehabilitation following breast cancer treatment – Professor Sharon Kilbreath
18 Learning to communicate together again – Professor Leanne Togher
19 Discovering life-changing stuttering treatments – Professor Mark Onslow
21 Exercise for the prevention and treatment of chronic disease – Professor Maria Fiatarone Singh
21 Charles Perkins Centre
23 A national approach to debilitating nerve and muscle disorders – Professor Kathryn Refshauge and Associate Professor Joshua Burns
25 Supporting young people with developmental disabilities and their families – Professor Stewart Einfeld
25 Centre for Disability Research and Policy

26 LEARNING AND TEACHING INITIATIVES

28 COMMUNITY PARTNERSHIPS

29 WORKING WITH US

31 A WORD OF THANKS
“The Faculty of Health Sciences attracts an amazing variety of staff and students, all of whom are dedicated to improving health and wellbeing.”

PROFESSOR
MICHELLE LINCOLN
PROFESSOR IN SPEECH PATHOLOGY, DEPUTY DEAN
About the Faculty

The Faculty of Health Sciences had its beginnings in the 1970s as a college of advanced education for physiotherapy, occupational therapy, speech therapy, orthoptics and nursing. Initially named the New South Wales College of Paramedical Studies and subsequently the Cumberland College of Health Sciences, the college was formally established as part of the University of Sydney in 1991 and rebadged as the Faculty of Health Sciences.

In a short time the faculty has grown to become an international leader in health sciences and allied health research and education, and today is an integral part of the University of Sydney health and medical offering.

The Faculty of Health Sciences is managed through the Faculty Executive and portfolios, each reporting to the dean. The dean also maintains a Health Sciences @ Sydney Advisory Board comprising up to four individuals from outside the University who have significant expertise in government and business activities and an interest in the strategic direction of the faculty.

For more information, visit sydney.edu.au/health-sciences/about

Faculty Overview

9 allied health professions represented by our professional preparation programs

4500+ students currently enrolled

Around 100 countries represented by our student body

In the top 25 universities in the world for clinical, pre-clinical and health*

29 percent increase in the number of professors since 2010

Double the number of students on higher degree research scholarships from 2009 to 2011

17,000+ alumni worldwide

*Times Higher Education World University Rankings 2012–2013

Information correct as at October 2012
**Goal 1: Develop and sustain a critical mass of researchers in a limited number of areas that are self-evident as health sciences/allied health research.**

We have:
- reviewed the faculty’s research performance to identify, publicise and provide targeted support to those working in our research themes of healthy ageing, communication and speech disorders, arthritis and musculoskeletal disorders, disability and medical imaging
- implemented a Research Compact to support initiatives such as travel and mentoring for early career researchers, and equipment grants in our areas of research focus
- developed and implemented a process to optimise enrolment of high-quality higher degree research students, and enhanced induction and orientation processes
- developed and implemented a higher degree research training program
- developed and implemented a process to optimise, capture and record all research outputs.

**Goal 2: Ensure we deliver high-quality, research-enriched learning and teaching programs.**

We have:
- conducted major reviews of our physiotherapy and diagnostic radiography undergraduate programs. As a result, students commence in the revitalised physiotherapy degree from 2013
- instigated an e-community for academic staff to showcase and share initiatives in learning and teaching, particularly research-enriched learning and teaching
- established the Student Staff Consultative Committee
- updated curriculum and assessment in research methods to better equip students to plan, carry out and critically evaluate research
- provided access for students to the latest technology through upgrades to our medical radiation sciences laboratories and occupational therapy learning and teaching facilities
- increased the effectiveness of the Student Course Experience questionnaires.

---

**PROGRESS AGAINST GOALS**

In 2011 the Faculty of Health Sciences launched a new five-year strategic plan designed to guide our focus to 2015. After only a year there has already been much progress and many achievements on the road to achieving our vision.
Goal 3: Increase participation of students from culturally and socially diverse backgrounds.

We have:
- implemented the Early Offer Year 12 scheme, giving students from low socio-economic backgrounds the opportunity to show us more about themselves and their enthusiasm for our courses. See sydney.edu.au/e12
- furthered recruitment and support for Aboriginal and Torres Strait Islander students, offering eight students places in three disciplines in 2012 under the Cadigal program. This increased the number of Aboriginal and Torres Strait Islander students within the faculty to 40, with all students supported by our Yooroang Garang Indigenous Student Support Unit
- participated in a number of strategic awareness-raising and recruitment events which encourage high school students from diverse backgrounds to explore the possibilities of higher education – such as the Smith Family University Experience Day and the Future Direction Network south-west Sydney event.

Goal 4: Be present in the public domain, nationally and internationally, through our writing, research, commentary and presence.

We have:
- been called on to contribute to important Commonwealth-led developments, including the Healthy Kids Check (Professor Stewart Einfeld), the design of the National Disability Insurance Scheme (Ros Madden) and the Stronger Futures Bill (Vanessa Lee)
- increased proactive media releases by 17 percent on the previous year
- contributed public commentary on high-priority issues such as the National Disability Insurance Scheme, the federal budget, population ageing, the sterilisation of disabled women and girls, and drugs in sport
- welcomed more than 5000 people to our research and recruitment events during 2012, where our academics shared their knowledge and expertise.

Goal 5: Develop and sustain a network of supporters and strategic partners.

We have:
- successfully secured $1.025 million from the National Breast Cancer Foundation to support research into the early detection and diagnosis of breast cancer
- raised more than $1.1 million in additional philanthropic support during 2012, a significant increase on 2011
- in this same period, increased the number of donors to the faculty by 70 percent, including donations by more than 100 alumni
- reconnected with more than 250 alumni, who attended public lectures, reunions and professional development events throughout 2012
- added more than 2000 new contacts to our alumni database.
THE YEAR IN REVIEW

At the Faculty of Health Sciences it’s not only our teaching and research that distinguish us. Our staff, students and alumni are continually making news on a number of fronts. Below is a retrospective of some of our recent activities.

For the latest information visit sydney.edu.au/health-sciences/leaders/achievements

OCTOBER 2012

Our alumni shine
The University Alumni Awards were presented on the evening of 12 October. The Faculty of Health Sciences was very well represented, with two finalists recognised in the medal categories – Aboriginal PhD graduate Reuben Bolt and lecturer Dr Melanie Nguyen – and alumna Alex Croak winning the Nigel C Barker Medal for Sporting Achievement.

SEPTEMBER 2012

Sydney Ideas lecture: Hon. Susan Ryan AO
On 12 September the faculty co-hosted a Sydney Ideas lecture with the Hon. Susan Ryan AO, Age Discrimination Commissioner from the Australian Human Rights Commission. Titled ‘The challenges of an extra lifetime in the 21st century: How do we prepare for living into our nineties?’, the lecture addressed the challenges of population ageing.

AUGUST 2012

Our students and alumni at the London Olympics
Health Sciences students and alumni represented Australia in the London 2012 Olympic Games. Diagnostic radiography undergraduate Nicola Zagame scored one of the goals that saw the women’s water polo team defeat Hungary and come home with bronze, while physiotherapy alumna Brooke Pratley took out silver in the rowing women’s double sculls.

JULY 2012

Appointment to WHO Expert Group
Professor Gwynnyth Llewellyn, Director of the Centre for Disability Research and Policy, was appointed as an expert member of the World Health Organization Expert Group for the development of health-related rehabilitation guidelines. Anticipated to be released in 2014, the guidelines are intended to support the implementation of the rehabilitation aspects of the UN Convention on the Rights of Persons with Disabilities.
MAY 2012
Official opening of VERT Suite
The Virtual Environment for Radiotherapy Training (VERT) Suite was officially opened at the Cumberland Campus on 22 May. Funded by the Australian government, VERT is a 3D virtual-reality learning suite that provides students with life-like experience of radiation therapy clinical scenarios.

APRIL 2012
International Foot and Ankle Biomechanics Congress
Close to 300 participants from more than 20 countries attended the iFAB Congress hosted by the Faculty of Health Sciences from 11 to 13 April. The program covered both basic and clinical aspects of foot and ankle biomechanics from the perspectives of podiatrists, physiotherapists, orthopaedic surgeons, biomedical engineers, athletics trainers, biomechanists and other allied health professionals.

MARCH 2012
NDIS Community Forum
Around 100 local residents attended a community forum on the National Disability Insurance Scheme at the University of Sydney on 28 March. Hosted by the federal Minister for Health, Tanya Plibersek, and the Every Australian Counts Campaign, the forum included a panel of our experts who spoke on the importance of the proposed scheme.

FEBRUARY 2012
Get Healthy @ Sydney
While many people associate student life with parties and junk food, at this year’s O-Week students were given the chance to find a healthy alternative. The Faculty of Health Sciences ‘Get Healthy @ Sydney’ stall provided new students with incentives to develop healthy habits, including free pedometers, fresh fruit (provided by Harris Farm Markets) and a healthy recipe book, as well as a variety of information on health and nutrition.

DECEMBER 2011
Symposium on the World Report on Disability
On 5 and 6 December the University, in co-sponsorship with the World Health Organization, hosted a symposium on ‘The World Report on Disability: Implications for Asia and the Pacific’. The aim was to provide a forum for free, open and vigorous discussion of the report’s implications for research into policy and practice.
Over the past year or so, our talented and dedicated academics have earned a number of prestigious awards and honours.

LOUISE ADA
Australian Association of Consultants in Rehabilitation Medicine Prize
Inaugural prize conferred by the Royal Australasian College of Physicians.

JENNIFER ALISON
Thompson Fellowship
To enhance the careers of high-achieving academic women and address the under-representation of women in senior academic positions.

KIRRIE BALLARD
Australian Research Council Future Fellowship
To attract and retain the best mid-career researchers in areas of critical national importance.

ROGER BOURNE
Australian Learning and Teaching Council Citation for Outstanding Contributions to Student Learning
For the development of innovative curricula and teaching tools that inspire students to learn.

ANITA BUNDY
Membership of the Academy of Research in Occupational Therapy
Established in 1983, the academy recognises individuals who have made exemplary and distinguished contributions towards the science of occupational therapy.

Australian Awards for University Teaching Citation for Outstanding Contributions to Student Learning
For more than three decades of skilful mentoring of research students and shaping the journey to match students’ unique interests, abilities and skills.

JOSHUA BURNS
National Health and Medical Research Council Career Development Fellowship
To further develop Australian health and medical early to mid-career researchers.

CORINNE CAILLAUD
Thompson Fellowship
To enhance the careers of high-achieving academic women and address the under-representation of women in senior academic positions.

LINDY CLEMSON
National Health and Medical Research Council Career Development Fellowship
To further develop Australian health and medical early to mid-career researchers.

PATRICIA McCABE
Australian Awards for University Teaching Citation for Outstanding Contributions to Student Learning
For leadership in the development and implementation of innovative case-based speech pathology curricula to facilitate an evidence-based approach to learning and professional practice.

LYNDA MATTHEWS
Australasian Society for Traumatic Stress Studies Lifetime Achievement Award
For outstanding contribution to the field of trauma counselling and exceptional dedication and support of the society.

SEYED JAVAD MOUSAVI
University of Sydney Postdoctoral Research Fellowship
To further develop outstanding researchers within one to six years of the award of their PhD.

NATALIE MUNRO
Brown Fellowship
Enabling recipients to re-establish or enhance their academic careers after undertaking sustained primary caring duties.

TRUDY REBBECK
National Health and Medical Research Council Early Career Fellowship
Fosters career development at the postdoctoral level by encouraging the beneficial experience of a different research environment.

KATHRYN REFSHAUGE
Australian Learning and Teaching Council Citation for Outstanding Contributions to Student Learning
For creating an inclusive learning environment with opportunities for each student to develop a variety of individually meaningful attributes in preparation for diverse careers.

HARMEN REYNGOUDT
University of Sydney Postdoctoral Research Fellowship
To further develop outstanding researchers within one to six years of the award of their PhD.

LEANNE TOGHER
NHMRC Research Fellowship
Provides support for experienced researchers to undertake research that is of major importance in its field and of significant benefit to Australian health and medical research.
“It is still largely a mystery how we convert our thoughts into fluent speech. This fellowship will allow me to bring together experts in speech pathology, neuroscience and computer modelling to create a new model of speech production to advance our understanding of speech development, ageing, and mechanisms of recovery after injury.”

ASSOCIATE PROFESSOR
KIRRIE BALLARD
ARC FUTURE FELLOW
PROFESSORIAL APPOINTMENTS

We made five new appointments at the professorial level. From a wide range of backgrounds and specialisations, our new professors contribute to the richness of learning, teaching and research expertise in the faculty.

PROFESSOR ERIC EMERSON
Professor and Chair of Disability Population Health
Professor Emerson, who joined the faculty in late 2011, is one of the leading researchers in the faculty’s new Centre for Disability Research and Policy. His work, which explores the health and social inequalities faced by people with a disability, is internationally recognised and he maintains strong collaborations with Lancaster University and the English Specialist Public Health Observatory on intellectual disability.

PROFESSOR PATRICIA HOWLIN
Professor of Developmental Disorders
Professor Howlin is a leading international authority on autism, known for her work on long-term outcomes for adults on the autism spectrum and on evaluating the effectiveness of a wide range of intervention programs for the condition. She currently also holds the position of Emeritus Professor of Clinical Child Psychology at the Institute of Psychiatry at King’s College London.
PROFESSOR LINDY McALLISTER
Professor of Work Integrated Learning, Associate Dean (Work Integrated Learning)
Professor McAllister became Associate Dean (Work Integrated Learning) in early 2012. Her previous appointments include Associate Dean (Academic) at the Faculty of Health Sciences, University of Queensland, and Deputy Head of the School of Medicine, also at the University of Queensland.

PROFESSOR LUIS SALVADOR-CARULLA
Professor in Disability and Mental Health
Professor Salvador-Carulla recently joined the University of Sydney from the University of Cádiz (Spain) where he held the position of Professor of Psychiatry in the School of Medicine. His field of interest is integrated support decision systems and policy in long-term care. He is a member of several international networks, including person-centred medicine, and bridging knowledge and practice between disabilities and ageing. He was a member of the advisory committee of the national strategy on mental health at the Spanish Ministry of Health and Social Policy, and has collaborated with the European Commission and the World Health Organization as an external adviser.

ASSOCIATE PROFESSOR KAREN WILLIS
Associate Professor in Qualitative Research, Associate Dean (Learning and Teaching)
Associate Professor Willis recently joined the faculty from the University of Tasmania. She is a health sociologist and qualitative researcher in health. Her research examines how social ideas and health policies shape people’s health behaviour. Associate Professor Willis took up the role of Associate Dean (Learning and Teaching) in November 2012.
In line with national priorities for ‘promoting and maintaining good health’, our academics are carrying out pioneering research into preventative health strategies and improving quality of life for individuals and families who experience impairment, injury, illness, chronic health conditions or disability.

**PROMOTING HEALTHY AGEING**

Population ageing is a global phenomenon and one of the major social challenges of the 21st century, but healthy ageing is about more than just medical treatment. Work, environment, social connections and lifestyle all have a critical impact on the health, productivity and wellbeing of older people.

Our researchers are focused on ways to improve wellbeing throughout the lifespan. They achieve this through creating greater understanding of the concept of ‘active ageing’ and the importance of engagement in life roles and activities, environmental design, exercise and nutrition, mobility, neuropsychological ageing, and healthy and sustainable workforce participation.

**OVERCOMING COMMUNICATION AND SPEECH DISORDERS**

Communication and speech are fundamental to everyday life. We build our social and occupational networks around being able to communicate with others. Many of us take this for granted, but one in seven Australians cannot, due to a communication disorder. Whether temporary or permanent, these conditions can have a devastating impact on quality of life.

Our researchers are passionate about finding the best ways to improve outcomes for people with communication disorders. They are pioneering new models of intervention, treatment and support.
ADVANCING THE TREATMENT AND PREVENTION OF PAIN AND INJURY

If not effectively treated, arthritis and musculoskeletal conditions – such as sports injuries, back and neck pain, and knee, foot and ankle problems – can lead to chronic pain and disability. This has a huge economic impact on the community each year – not to mention the personal and social burden these problems place on individuals and families.

Our researchers are carrying out pioneering work to advance the diagnosis, treatment and prevention of pain and disability. They achieve this through an international multidisciplinary approach that aims to better understand pain and find new interventions to improve the quality of life, productivity and independence of sufferers.

A BETTER LIFE FOR PEOPLE WITH DISABILITIES

The first ever World Report on Disability (WHO and World Bank, 2011) acknowledges that people with disabilities generally have poorer health, lower educational achievement, less economic participation and higher rates of poverty than people without disabilities.

As an organisation at the nexus of research, teaching, policy and practice, we have an important role to play in innovation and knowledge translation in the field of disability. Through the Centre for Disability Research and Policy our researchers aim to influence policy and practice to make a lasting difference in the lives of people with disabilities.

For more information visit sydney.edu.au/health-sciences/research/highlights

INNOVATION IN IMAGING FOR DISEASE DIAGNOSIS AND TREATMENT

Our imaging scientists are committed to making scientific discoveries that can be translated into improved health outcomes for patients with debilitating diseases.

The interdisciplinary team of leading researchers brings together complementary strengths to make discoveries focused on the development and application of new imaging techniques that improve our ability to understand, diagnose and treat disease.

Their work, predominantly carried out at the Brain and Mind Research Institute (BMRI), is underpinned by a partnership with the Australian Nuclear Science and Technology Organisation (ANSTO) and membership of the National Imaging Facility (NIF).
“We are looking at a number of ways to improve the detection of cancer through medical imaging and have learned that new technology has to be introduced in a very careful and considered way if real benefits are to be evident.”

PROFESSOR PATRICK BRENNAN
PROFESSOR OF DIAGNOSTIC IMAGING
OUR PEOPLE AND PROJECTS

Our people drive research that makes a real difference, reaching beyond our laboratories and clinical sites to the wider community, both locally and internationally. The following is a summary of the work of some of our leading researchers.
In Australia, on average 37 women are diagnosed with invasive breast cancer each day. The good news is that survival rates are improving. This can generally be attributed to a rise in the number of women participating in national screening programs. Professor Patrick Brennan’s research aims to ensure that improvements to screening technologies and techniques continue to evolve.

Professor Brennan is an internationally recognised leader in medical imaging optimisation and radiological perception. He investigates novel technologies and techniques that enhance the detection of diseases such as breast cancer, while minimising risk to the patient.

“Reading mammograms is one of the most challenging tasks in radiology,” says Professor Brennan. “Furthermore, the rate of technological advancement in this field presents huge opportunities and challenges for our profession and for patients.”

Under recently awarded funding from the National Breast Cancer Foundation (NBCF), Professor Brennan, in collaboration with key clinicians, is carrying out two projects with the potential to revolutionise breast cancer screening.

The first is the BreastScreen Reader Assessment Strategy, directed by Professor Brennan and Professor Warwick Lee and managed by Kriscia Tapia. Globally known as ‘BREAST’, the national program has been designed to monitor the performance of radiologists in detecting and diagnosing abnormalities in breast x-rays.

The web-based program, a world first, allows users to run through a series of test sets on their own screening equipment and gives instantaneous feedback if the user has correctly identified abnormalities on the mammograms and correctly interpreted whether the lesions identified pose a risk of breast cancer.

**FROM PILOT PROGRAM TO IMPLEMENTATION**

After successful pilot programs funded by the Department of Health and Ageing and the Royal Australian and New Zealand College of Radiologists, the NBCF awarded the BREAST team a $1.025 million Infrastructure Grant. The grant will be used to support the implementation of the program at 500 BreastScreen locations Australia-wide.

“As well as improving individual performance, the data collection will allow further research into the types of lesions that are creating difficulties for readers, either through underdiagnosis or overdiagnosis, and has huge potential for improving standards in the future,” comments Professor Brennan.

His second project is a collaboration with Professor Mary Rickard, chief radiologist at Sydney Breast Clinic, and Hologic, a medical imaging company specialising in women’s health. The aim is to investigate the effectiveness of a new screening technology called Digital Breast Tomosynthesis (DBT). DBT has the ability to reconstruct sequential slices of breast tissue using advanced computer technology so that accurate three-dimensional pictures of the breast can be displayed.

“While existing screening programs have been effective in boosting early detection rates, new technologies are increasingly showing promise,” suggests Professor Brennan.

**MORE INFORMATION**

Patrick Brennan  
Professor of Diagnostic Imaging  
E patrick.brennan@sydney.edu.au  
sydney.edu.au/health-sciences/staff/patrick_brennan
Following her own battle with breast cancer, Professor Sharon Kilbreath was eager to improve the evidence base available to women about physical rehabilitation following breast cancer treatments. In particular, she wanted to investigate the risks associated with conditions such as lymphoedema – swelling of the arm following surgery or treatment.

Professor Kilbreath was awarded one of the first National Breast Cancer Foundation Career Fellowships to further this work, which tackles the myths associated with the causes of lymphoedema and also looks at the potential of novel interventions such as exercise.

“We are challenging the assumptions and showing that many of the do’s and don’ts are not supported, which means that women can get on with their life and not be fearful whenever they use their arm,” comments Professor Kilbreath.

MORE INFORMATION
Professor Sharon Kilbreath
National Breast Cancer Foundation Career Research Fellow
E sharon.kilbreath@sydney.edu.au
sydney.edu.au/health-sciences/staff/sharon_kilbreath
“Of those who survive brain injury, more than 70 percent of people will go on to have long-term communication problems which can have devastating impacts on a person’s ability to develop or maintain relationships and carry out everyday tasks,” says Professor Togher.

Chronic communication disorders such as aphasia (difficulty in producing or comprehending language) and dysarthria (where mouth, face and respiratory system muscles become weak, move slowly, or do not move at all, resulting in slurred speech) can also occur following a brain injury.

Professor Togher and her team at the University of Sydney were the first to demonstrate the effectiveness of including family members and friends in communication training sessions for such conditions. “We were the first to show that significantly better outcomes were evident when communication partners were involved in training on positive communication strategies, rather than the usual practice of training patients alone.”

In 2012 she was awarded a prestigious National Health and Medical Research Council (NHMRC) Senior Research Fellowship to further this work. Among her many achievements to date has been the release of TBI Express, a multi-media communication training program for people with traumatic brain injury (TBI), their families, friends and other everyday communication partners.

“Again as well as teaching individuals with TBI coping strategies to manage friendships, we will also be focusing on training interventions which involve the wider peer network.”

As part of her involvement in the NHMRC Centre for Clinical Research Excellence in Aphasia Rehabilitation (funded by a $2.5 million NHMRC grant from 2010 to 2014), Professor Togher is promoting the exchange of information related to such practices through a Community of Practice, which includes clinicians, researchers and people with acquired brain injury and their families.

**MORE INFORMATION**
Professor Leanne Togher
Professor of Communication Disorders following Traumatic Brain Injury
E leanne.togher@sydney.edu.au
sydney.edu.au/health-sciences/staff/leanne_togher
Professor Mark Onslow, Director of the Australian Stuttering Research Centre, is internationally known for pioneering the first evidence-based stuttering treatment for preschool-aged children. Known as the Lidcombe Program, it is now used worldwide.

Under an NHMRC Program Grant of close to $5 million, Professor Onslow and his team are currently exploring ways to offer the Lidcombe Program and other such treatments via the internet and video applications with the aim of maximising accessibility and minimising costs.

“Stuttering is a huge public health problem and there are not sufficient resources to treat it,” says Professor Onslow. “With our technology-driven treatment we could tackle the problem worldwide.”

MORE INFORMATION
Professor Mark Onslow
Director, Australian Stuttering Research Centre
E mark.onslow@sydney.edu.au
sydney.edu.au/health-sciences/asrc/about_us/director

“More than 70 percent of severe brain injury survivors will go on to have long-term communication problems.”

PROFESSOR LEANNE TOGHER
NHMRC SENIOR RESEARCH FELLOW

DISCOVERING LIFE-CHANGING STUTTERING TREATMENTS
PROFESSOR MARK ONSLOW
“Exercise is extremely powerful both as a preventative strategy and as a treatment strategy across the whole lifespan, but particularly with older adults.”
Everyone knows that exercise is an important part of a healthy lifestyle, but do we really know just how powerful exercise can be for health promotion and disease prevention across the lifespan? Professor Maria Fiatarone Singh is carrying out leading work in this area, providing the evidence base needed to justify the role of ‘exercise as medicine’.

For more than 25 years Professor Fiatarone Singh has conducted clinical trials in the USA and Australia investigating the role of exercise, nutrition and body composition on ageing, disability, and chronic disease prevention and treatment. Her pioneering work has seen the development and promotion of effective exercise interventions for common conditions such as osteoarthritis, Type 2 diabetes and sarcopenia (degenerative muscle loss), as well as neurological conditions like dementia.

Her newest project is a collaboration with Bond University, the Australian Institute of Sport (AIS) and the University of Queensland Diamantina Institute. Its aim is to advance sports science research so as to identify proactive ways to manage the health, fitness and potential for injury of both athletes and the wider community.

Under this Collaborative Research Network (CRN), Professor Fiatarone Singh and colleagues from the Faculty of Health Sciences’ Discipline of Exercise and Sport Science will provide a rich source of physiological data gathered from clinical trials and exercise physiology studies which have enrolled athletes, healthy, and clinical cohorts from the age of six to 103.

REDUCING THE BURDEN OF DISEASE

“The aim of this basic and translational research is to help us identify individuals at risk of injury or disease, and assess existing or new lifestyle interventions – such as exercise or diet – which can be applied to modify these risks and improve health status.”

Led by Bond University, the $14 million research project – with $5.75 million contributed by the Commonwealth government – brings together some of Australia’s most prominent sports science experts. Professor Fiatarone Singh will be working alongside Professor Bon Gray from Bond University, Professor Nicholas Brown, AIS Deputy Director (Research and Applied Science), and Professor Matthew Brown, musculoskeletal science expert from the Diamantina Institute.

The combination of world-class expertise and long-term investment on this project will position Australia at the forefront of research in sports science and health.

MORE INFORMATION
Maria Fiatarone Singh
John Sutton Chair of Exercise and Sport Science
E mari.fiataronesingh@sydney.edu.au
sydney.edu.au/health-sciences/staff/maria_fiatarone-singh

CHARLES PERKINS CENTRE

The University of Sydney’s Charles Perkins Centre is a cross-disciplinary research and teaching initiative dedicated to critically examining and challenging existing approaches to obesity, diabetes and cardiovascular disease. They are the leading causes of mortality and disease burden in Australia.

The centre draws together and enhances existing research across the University and is focused on turning academic discoveries into solutions that improve and transform lives.

The centre will achieve this by:
- conducting world-class research
- translating the knowledge we develop into practical solutions
- developing innovative, cross-disciplinary teaching programs to inspire the next generation of researchers
- forging new research partnerships within and beyond the University to enable the centre to deliver unique insights and results.

For more information visit sydney.edu.au/perkins
“Because of the life-long and relentless nature of neuromuscular disorders, they are identified as having the highest burden of disease of any National Health Priority Area.”

ASSOCIATE PROFESSOR JOSHUA BURNS
NHMRC CAREER DEVELOPMENT FELLOW
A national team of leading researchers – including Professor Kathryn Refshauge and Associate Professor Joshua Burns from the Faculty of Health Sciences – have come together to form a new national Centre of Excellence focused on the diagnosis, prevention and treatment of neuromuscular diseases.

The term ‘neuromuscular disease’ is not well understood by most people. This is due to the variety of nerve and muscle disorders it encompasses and the fact that many conditions still remain undiagnosed and medically inexplicable. But for those who live with disorders such as motor neurone disease or Charcot-Marie-Tooth it is a reality that can affect every aspect of life.

“While there is a wide range of severity in nerve and muscle disorders, most patients who go onto adulthood live with chronic pain and lifelong disability which has huge implications for an individual’s wellbeing and that of their families,” says Professor Refshauge.

CENTRE OF RESEARCH EXCELLENCE IN NEUROMUSCULAR DISORDERS

Funded from 2012 to 2016 by the National Health and Medical Research Council and led by Professor Kathryn North, the Centre of Research Excellence in Neuromuscular Disorders (CRE-NMD) will examine causes, treatment and potential cures.

The CRE-NMD brings together a multidisciplinary team from the university and research sector, hospital and treatment sites, and patient and advocacy groups.

“We are working together to transform the management of nerve and muscle disorders from merely compassionate assistance to better diagnosis, targeted therapy and prevention,” says Associate Professor Burns. “The other important component is training the next generation of health professionals who will go on to become specialists in this field – where there have previously been very few.”

The University of Sydney is leading the allied health stream of the CRE, which is focused on understanding the severity of each person’s condition and how they respond to treatment.

“If we can’t measure the disease severity we can’t effectively treat it,” comments Associate Professor Burns.

1000 NORMS PROJECT

One of the projects central to this work is the 1000 Norms project, which will take a range of measurements from 1000 healthy people across the lifespan. Once completed, it will provide a reference of normative measures for the development of future clinical trials nationally and internationally.

Another important component of the allied health stream is conducting national trials of interventions with different devices and therapies, such as exercise and orthoses, used to improve quality of life in the absence of a cure.

“Australia is the first country to look at neuromuscular disorders on a national scale,” says Professor Refshauge. “The CRE will allow us to communicate the latest research findings in this area and to speed up the process of translating these research developments into improved clinical practice.”

MORE INFORMATION

Professor Kathryn Refshauge
Professor of Physiotherapy
E kathryn.refshauge@sydney.edu.au
sydney.edu.au/health-sciences/staff/kathryn_refshauge

Associate Professor Joshua Burns
NHMRC Career Development Fellow
E joshua.burns@sydney.edu.au
sydney.edu.au/health-sciences/staff/joshua_burns
“Good mental health needs to be supported by a healthy brain. If one has significant impairments to brain function, then that very frequently manifests in significant behavioural and emotional disturbances that are sometimes severe enough to constitute mental disorders.”

PROFESSOR STEWART EINFELD
CHAIR OF MENTAL HEALTH
People with developmental disabilities can experience any of the same mental health conditions as anyone else but have a much increased vulnerability – they are almost three to four times more likely to experience mental health problems than the general population. A new study led by Professor Stewart Einfeld is hoping to change this.

"The extent of mental health conditions in young people with developmental disability has only relatively recently been appreciated and understood, but it is in fact a substantial public health problem," says Professor Einfeld.

Developmental disabilities are life-long conditions that manifest during childhood. They include intellectual disabilities and syndromes such as autism spectrum, a group of disorders that now affects as many as one in 150 children.

Professor Einfeld says that although the impact of mental and behavioural disturbances on individuals and their families is better understood, services are not yet able to respond.

Under a $5.2 million Program Grant awarded by the National Health and Medical Research Council, Professor Einfeld and colleagues from Monash University and the University of Queensland are developing a new parent training program to provide support to families caring for children with developmental disabilities.

They will be building on the Stepping Stones program, an adaptation of the highly regarded, evidence-based Triple P (positive parenting program) intervention specifically designed for parents who have a child with a disability.

TAILORING THE PROGRAM

However, unique to this study, and based on Professor Einfeld’s work on the Australian Child to Adult Development longitudinal study, will be the tailoring of the program modules to take into account the cause of each disability and the behavioural problems associated with it.

"Our longitudinal study has demonstrated that the genetic cause of the disability has a strong influence on behavioural and emotional problems. For example, there is a vast difference between the severity of behavioural disturbance with subjects with Prader-Willi syndrome compared to those with Down syndrome."

Working with parents, carers and a range of health and social care professionals of young people aged four to 12 years, the program is being trialled across three Australian states to determine if this early intervention lessens the development of mental health conditions as the children get older.

MORE INFORMATION

Professor Stewart Einfeld
Chair of Mental Health, Senior Scientist, Brain and Mind Research Institute
E stewart.einfeld@sydney.edu.au
sydney.edu.au/health-sciences/staff/stewart_einfeld
Our learning and teaching programs aim to develop a new generation of allied health practitioners and corporate health professionals. To achieve this we offer a range of opportunities and strategies to enhance the traditional study environment and provide our students with a range of perspectives.

FHS ABROAD
The faculty’s FHS Abroad program offers undergraduate and graduate entry master’s students an international experience in low-income countries in South-East Asia as part of their study program.
In partnership with two well-established Australian volunteer agencies, we offer students the chance to gain hands-on experience in community development, learn about new cultures and new perspectives on global health and health care, and put their skills to practical use in a supportive environment. At the same time students also make a meaningful contribution to a community in need.
In its first year, FHS Abroad had just five participants. Today we enrol an average of 40 students per semester. Our goal is to reach 100 students per semester by 2015.

MORE INFORMATION
Dr Elaine Ryan
Director, FHS Abroad
E elaine.ryan@sydney.edu.au

HEALTH SCIENCES LEARNING AND TEACHING HUB
The University of Sydney strives to develop thinking that transcends borders. To help Health Sciences students achieve this goal, the faculty is developing a learning and teaching hub at the Cumberland Campus. The hub will offer high-tech communication and teaching tools so students can benefit from working with experts, patients and research organisations remotely. It will also provide modern and collaborative work spaces using some of the most advanced equipment available.
We are committed to providing a world-class standard of teaching and learning to maximise the potential of our graduates.

MORE INFORMATION
Associate Professor Karen Willis
Associate Dean (Learning and Teaching)
E fhsassocdeanlt@sydney.edu.au
EMBEDDING ABORIGINAL AND TORRES STRAIT ISLANDER CULTURE INTO LEARNING, TEACHING AND CAMPUS LIFE

Building on the University of Sydney’s Aboriginal and Torres Strait Islander Reconciliation statement, the faculty has developed a vision for all graduates and staff of Health Sciences ‘to have positive appreciation of Aboriginal and Torres Strait Islander culture and heritage and excellent capacity to contribute to optimising Aboriginal and Torres Strait Islander health’. To achieve our vision we are reframing our curricula and providing cultural competency training for our staff, so that we can clearly articulate how our graduates can meet these changing needs.

We have developed a strategic plan that complements the University’s Aboriginal and Torres Strait Islander Integrated Strategy, Wingara Mura – Bunga Barrabug.

Our achievements under our plan include:

– reviewing, updating and relaunching Aboriginal murals around the campus
– ensuring that the library has up-to-date Aboriginal and Torres Strait Islander resources
– development of a staff intranet site containing Aboriginal and Torres Strait Islander resources
– creating a publication for staff and students explaining the Aboriginal history of the land on which the Cumberland Campus is situated
– framing Aboriginal language maps, which are displayed in each building on the Cumberland Campus
– developing ‘Acknowledgement of Country’ cards with explanations of use, for staff and postgraduate students
– developing listening posts for students and staff to hear Aboriginal stories.

MORE INFORMATION
Vanessa Lee
Senior Lecturer in Indigenous Health
E vanessa.lee@sydney.edu.au

1. Master of Physiotherapy student Alexandra MacDonald on her FHS Abroad placement in Cambodia
2. An example of the modern and innovative learning and teaching spaces at the University
3. The revived murals at Cumberland Campus. These were originally created by Indigenous artist Patricia King in 1993 for the World Indigenous Peoples’ Conference to celebrate woman of all cultures and remind students of other perspectives on healing.
COMMUNITY PARTNERSHIPS

We are focused on building strategic partnerships that benefit our local communities, allowing our students to experience the diversity of allied health and advance research into health and wellbeing, with the potential for broader application. Below is a snapshot of some of our ongoing partnerships.

WORKING WITH THE BROKEN HILL COMMUNITY
Our partnership with the Broken Hill Department of Rural Health grew out of community needs. It works on a school-based placement model: students studying speech pathology, occupational therapy, physiotherapy and orthoptics undertake clinical placements in schools in the region with the aim of improving access to much-needed services. Diagnostic radiography students have also undertaken placements in the local hospital.
To date, more than 200 Health Sciences students have participated, with more than 1000 primary schoolchildren coming into contact with the program. This work is supported by Health Workforce Australia.
For more information visit sydney.edu.au/medicine/drh

SPINAL CORD INJURIES AUSTRALIA – WALK ON PROGRAM
Through a unique partnership arrangement that embeds community-based service delivery into teaching and research, the faculty hosts the first New South Wales Spinal Cord Injuries Australia Walk On program. The program provides a vital exercise rehabilitation service for the community and an avenue for transformative research in the area of spinal cord injury. The program encompasses PhD research, as well as clinical placements for exercise and sport science, exercise physiology and physiotherapy students. It currently employs three alumni as on-site therapists.
For more information visit scia.org.au/walk-on

PARTNERSHIPS FOR BETTER HEALTH IN WESTERN NEW SOUTH WALES
The Wobbly Hub and Double Spokes project investigates the delivery of timely and efficient therapy services for people with a disability, and addresses ongoing problems with recruiting and retaining therapists to work in rural and remote communities. The project is run in collaboration with Ageing, Disability and Home Care in the western region of New South Wales under a National Health and Medical Research Council Partnerships for Better Health grant.
Through community consultation, the project team is exploring the current issues around service delivery in western New South Wales and aims to produce and evaluate evidence-based policies to improve therapy service.
For the latest information visit sydney.edu.au/health-sciences/community/partnerships/local
WORKING WITH US

There are many ways you can be involved in or support the learning, teaching and research happening at the Faculty of Health Sciences.

GIVING YOUR TIME AND/OR EXPERTISE
We recognise the importance of providing access for our students to the broader community. We also recognise the crucial role that industry, government, non-government, community partners and, importantly, our alumni, play in helping to develop our students’ skills and workplace readiness, as well as informing our research. There are numerous ways to make a contribution, from guest speaker roles and mentoring to clinical supervision and participation in our research studies.

For more information visit sydney.edu.au/health-sciences/community/get-involved

RESEARCH HIGHER DEGREE OPPORTUNITIES
Studying for a research higher degree is a unique opportunity to push the frontiers of knowledge, develop and prove your ability, and expand your career prospects. The Faculty of Health Sciences offers PhD and master’s research programs that are taught by internationally leading academics in our areas of research excellence. We welcome your interest.

For more information visit sydney.edu.au/health-sciences/future-students/courses/research-degrees

FINANCIAL SUPPORT
We rely on the generous support of our corporate and individual donors to further our research and give our students the opportunities they need to reach their full potential.

By supporting us you will become part of a tradition of giving that has transformed learning, teaching and research, encouraged intellectual discovery and advanced health care nationally and internationally. A range of giving opportunities allows donors to invest in the faculty’s future. Whether large or small, your gift will make a significant difference.

For more information visit sydney.edu.au/health-sciences/community/supporters
“With the support of a number of our generous donors we are working towards launching an internet-based program that has the capacity to increase access to life-changing stuttering treatment for preschool children in Australia.”

PROFESSOR MARK ONSLOW
DIRECTOR, AUSTRALIAN STUTTERING RESEARCH CENTRE
A WORD OF THANKS

The Faculty of Health Sciences gratefully acknowledges funding and gifts from the following organisations. This support sustains our research endeavours and helps our students realise their full potential.

6A Foundation  
Ageing, Disability and Home Care, Department of Family and Community Services (NSW)  
Alzheimer’s Association (USA)  
AMTI  
Apex Foundation for Research into Intellectual Disability  
ASICS Oceania  
Aspen Pharmacare (Australia) Pty Ltd  
Australia China Council  
Australia Malaysia Institute  
Australian Agency for International Development  
Australian Institute of Nuclear Science and Engineering  
Australian Institute of Sport  
Australian Orthotic Group  
Australian Podiatry Education and Research Foundation  
Australian Research Alliance for Children & Youth Research Network  
Australian Research Council  
Australian Respiratory Council  
Australian Rotary Health Research Fund  
Australian Society of Rehabilitation Counsellors  
Beiersdorf Australia  
Bertec  
Besen Family Foundation  
Bill and Melinda Gates Foundation (USA)  
Biomechanix  
BUPA Foundation Limited  
Cancer Australia  
Cancer Institute New South Wales  
Carestream Health Australia Pty Ltd  
Cerebral Palsy Alliance  
Clive and Vera Ramaciotti Foundations  
Council for Arab Australian Relations  
Cure Cancer Australia Foundation  
Cystic Fibrosis Australia  
Delsys  
Department of Communications, Information Technology and the Arts (federal)  
Department of Health and Ageing (federal)  
Department of Industry, Innovation, Science, Research and Tertiary Education (federal)  
Diabetes Australia Research Trust  
Educational Speech Pathology and Therapy Services  
Eli Lilly Australia Pty Ltd  
Exercise and Sports Science Australia  
Foundation for Prader-Willi Research  
Garnett Passe and Rodney Williams Memorial Foundation  
HCF Health and Medical Research Foundation  
Hoc Mai Foundation  
International Association for the Study of Pain (USA)  
International Mechanical Diagnosis and Therapy Research Foundation  
International Tennis Federation (UK)  
Janssen-Cilag Pty Limited  
JC Measurements  
Kistler  
Konekt  
Macau Hypertension Alliance
A WORD OF THANKS

MD Solutions Australasia
Meat and Livestock Australia Ltd
The Myer Foundation
Motor Accident Authority of New South Wales
National Breast Cancer Foundation
National Climate Change Adaptation Research Facility
National Health and Medical Research Council
National Institutes of Health (USA)
National Relay Service
National Stroke Foundation Australia
Novel
NSW Institute of Sport
NSW Institute of Trauma and Injury Management
NSW Podiatrists Registration Board
NSW Sporting Injuries Committee
Office for Learning and Teaching
(Formerly Australian Learning and Teaching Council)
Office for Science and Research (NSW)
Parenting Research Centre
Parkinson’s New South Wales Incorporated
PepsiCo Australia
Physiotherapists Registration Board of New South Wales
Physiotherapy Research Foundation
Prader-Willi Syndrome Association of NSW
Rotary Australia
Sanofi Pasteur Australia
Schizophrenia Fellowship of New South Wales Inc
South Sydney Rugby League Football Club
Speech Pathology Association of Australia
St George Medical Research Foundation
Taylor & Francis
Tekscan
Workers Compensation Dust Diseases Board of New South Wales
World Anti-Doping Agency (Canada)
World Health Organization (Switzerland)
Worldwide Universities Network

We also acknowledge the support of our individual donors.

Includes current grant funding bodies and supporters of faculty prizes and scholarships as at October 2012.
“The University’s collaboration with the Australian Nuclear Science and Technology Organisation allows access to state-of-the-art medical imaging facilities and is a great example of organisations working together to solve big-picture problems.”

PROFESSOR STEVEN MEIKLE
PROFESSOR OF MEDICAL IMAGING PHYSICS