

# 21<sup>ST</sup> CENTURY MEDICINE

DO DIETS WORK FOR YOU? If not, it isn't your fault. A/Prof Amanda Sallis has some clever ways to trick the body's 'famine reaction'. BACK PAIN IS THE LEADING CAUSE OF DISABILITY WORLDWIDE. Prof Chris Maher has reassessed the science and tells us what we've been getting wrong & how we can get it right. ARE WE FACING A SUPERBUG APOCALYPSE? That's the worst fear of Profs Jon Iredell & Tom Gottlieb. WHAT IF WE COULD LOOK INTO A TEENAGER'S MIND FOR WARNING SIGNS OF ADULT DEPRESSION? Prof Gin Malhi has been mind reading. MELANOMA IS THE DEADLIEST SKIN CANCER. Prof Graham Mann & Dr Georgina Long can prove that genetic research gives us successful treatments. DOES IT MATTER WHAT TIME YOU'RE BORN? Prof Jonathan Morris' research proves that it does. HEART DISEASE IS THE WORLD'S BIGGEST KILLER. Prof David Celermajer has seen early signs in children and thinks we can prevent it in adults. ARE YOU AND YOUR DOCTOR SPEAKING THE SAME LANGUAGE? Probably not, but Prof Stewart Dunn can tell you how you can.



THE UNIVERSITY OF  
SYDNEY

## LECTURE SERIES

### 21<sup>ST</sup> CENTURY MEDICINE LECTURE SERIES: Today's Research, Tomorrow's Healthcare

WHEN Wednesday evenings, September–November 2013, beginning September 25

WHERE Camperdown Campus and the CBD

COST Free and open to all with registration requested, email [sydney.ideas@sydney.edu.au](mailto:sydney.ideas@sydney.edu.au)

MORE INFORMATION see overleaf and visit [sydney.edu.au/medicine/21st-century](http://sydney.edu.au/medicine/21st-century)

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Sydney Medical School

Co-presented with Sydney Ideas

# 21ST CENTURY MEDICINE PROGRAM

Wednesday  
**25 September**  
6–7.30pm

New Law School Foyer  
The University of Sydney  
Camperdown

## Why diets (usually) fail

### Associate Professor Amanda Salis

NHMRC Senior Research Fellow, the University of Sydney's Boden Institute of Obesity, Nutrition, Exercise & Eating Disorders



A major reason why diets fail is that the body responds to energy restriction with a 'famine reaction' that increases appetite, reduces metabolic rate and alters circulating concentrations of hormones in a way that stimulates fat accumulation. Drawing on insights from her work leading a research team at Sydney University's Boden Institute of Obesity, Nutrition, Exercise & Eating Disorders, Associate Professor Salis will discuss three scientifically based strategies that may reduce the intensity of the famine reaction, thereby increasing the efficiency of weight loss.

Wednesday  
**2 October**  
6–7.30pm

PricewaterhouseCoopers  
Sydney Room, Level 10,  
201 Sussex St, Sydney

## Back pain – time to get it right?

### Professor Chris Maher

Director, Musculoskeletal Division, The George Institute for Global Health, Professor, Sydney Medical School



On any day in Australia one quarter of the population will be suffering back pain. Research demonstrates that the medical profession has failed the large number of people with back pain. Professor Maher will describe the burden of back pain across the life span and outline what we know about best practice in prevention and management. He will then offer some insights into what we are doing wrong and what we should be doing to solve this major health problem.

Wednesday  
**9 October**  
6–7.30pm

PricewaterhouseCoopers  
Sydney Room, Level 10,  
201 Sussex St,  
Sydney

## Beating melanoma – targeting genes

### Professor Graham Mann

Co-Director of Research at the Melanoma Institute of Australia and Professor of Medicine Westmead Millennium Institute; Associate Dean, Research, Sydney Medical School



### Dr Georgina Long

Clinical Researcher and Medical Oncologist at the Melanoma Institute of Australia, Fellow Cancer Institute NSW and Clinical Researcher, Sydney Medical School



Genetic research in melanoma is changing the whole landscape of melanoma research and is giving hope to those with melanoma or at high genetic risk of getting it. The risk of getting melanoma at some stage in a lifetime is 4%, however there are 20 genes which can boost a person's risk by a factor of three. Professor Mann will explain how researchers are coming to grips with melanoma behaviour: the genes that have changed in melanoma, the genes that drive melanoma and which make the difference between the ones that are aggressive and dangerous, and those which are easier to treat. Dr Long will then outline the results of clinical trials which have delivered the first effective drugs against melanoma and the drugs they've developed to target the particular mutations that cancers have. The great news is that for the first time, people with advanced melanoma can be treated with drugs that increase survival rates.

Wednesday  
**16 October**  
6–7.30pm

PricewaterhouseCoopers  
Sydney Room, Level 10,  
201 Sussex St,  
Sydney

## Preventing the superbug apocalypse

### Professor Jon Iredell

Director of Infectious Diseases, Westmead Hospital and Professor Sydney Medical School



### Associate Professor Tom Gottlieb

Senior Staff Specialist, Concord Hospital and Clinical Associate Professor, Sydney Medical School



Antibiotics – the great medical discovery of the 20th century – have produced a monster. While the highly-publicised golden staph threat is being addressed in Australia, the emerging issue is with gram-negative bacteria – bacteria that doesn't survive well in external environments but spreads from person to person. The interconnectedness of everybody's microflora means that gut microbes are shared very effectively. It is not just humans who share them - even migratory water birds transmit them. E. coli from a hospital dump in Dhaka might be ultimately deposited in Toronto, Tokyo or Sydney. It is a global ecological problem with potentially catastrophic effects. Associate Professor Gottlieb will describe the worst case scenario and Professor Iredell will outline the various solutions his research team are investigating in an attempt to avert disaster. Dr Kerry Chant, Chief Health Officer & Deputy Director General Population & Public Health, NSW Health, is chairing the talks.

Wednesday  
**30 October**  
6–7.30pm

Great Hall  
The University of Sydney  
Camperdown

## Early detection of heart disease in the young & preventing it in adults

### Professor David Celermajer

Scandrett Professor of Cardiology, Sydney Medical School, Royal Prince Alfred Hospital and Children's Hospital at Westmead, and Clinical Director Heart Research Institute



The most important diseases of the heart and blood vessels, such as heart attack and stroke tend to manifest in middle to late age. Nevertheless, many of these disease processes take decades to develop and the first changes start to occur in teenage life. Sometimes, the earliest changes can occur in childhood or rarely, in foetal life. Ultrasound techniques developed in Professor Celermajer's laboratory, CT scanning and MRI scanning have given insights into early detection of vascular disease in children and young adults. This new appreciation of the very early onset of disease has opened the window to the possibility of early detection and thus improved prevention of heart disease later in life.

Wednesday  
**13 November**  
6–7.30pm

The University of Sydney  
Business School  
Stockland Building, 17/133  
Castlereagh St, Sydney

## Mapping teenage minds

### Professor Gin Malhi

Head of Psychiatry, Royal North Shore Hospital and Professor of Psychiatry Sydney Medical School



Professor Malhi's neuroscience research group has investigated the minds of teenage girls using the latest and most sophisticated functional neuroimaging techniques and has managed to identify startling changes in the key brain regions that occur before the onset of any clinical problems. These subtle changes in how the brain works provide clues as to how and why emotional disorders emerge. This talk will be presenting cutting edge research findings and address how in the future we may be able to prevent the development of illnesses such as depression.

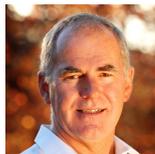
Wednesday  
**20 November**  
6–7.30pm

New Law School Foyer  
The University of Sydney  
Camperdown

## Talking with doctors - views from both sides

### Professor Stewart Dunn

Professor of Psychological Medicine at Royal North Shore Hospital and Sydney Medical School



Doctors are trained over many years to listen to their patients in particular ways. Ways that ensure critical information is not missed. If you understand what is happening in the doctor's mind, it helps you to know what questions to ask, how to ask them and how to get the information you need. Professor Dunn will also examine this relationship from the other side and will share research into how doctors deal with the emotional side of medicine, especially how they cope with people at extremely vulnerable times in their lives.

Wednesday  
**27 November**  
6–7.30pm

The University of Sydney  
Business School  
Stockland Building, 17/133  
Castlereagh St, Sydney

## Does it matter what time you're born?

### Professor Jonathan Morris AM

Professor of Obstetrics & Gynaecology, Sydney Medical School – Northern, Director, Kolling Institute of Medical Research



Events occurring in pregnancy have profound significance for both the mother and her baby. For the mother, pregnancy is like a stress test and provides insights into the likelihood of long term health complications such as diabetes, cardiovascular disease and cancer. For the baby the environment in the uterus and the timing of birth affects short term and long term health and development. This talk will outline the fascinating health implications of pregnancy and some of the research that informs us about the best time to be born.