

CARDIFF  
UNIVERSITY

PRIFYSGOL  
CAERDYDD

School of Medicine

Ysgol Meddygaeth

Edition 28 - Spring 2018

# REMEDY

**Delivering  
excellent health  
and social care**

**Inside:**

*Project Sepsis*

*Introducing our new Head of School*

*Medicine Taster Days*

# Welcome

## Welcome to the twenty eighth edition of ReMEDy

This research themed edition highlights the progress and impact of the School of Medicine's Health and Care Research Wales funded Research Centres and Research Units, namely:

### Research Centres

National Centre for Mental Health  
PRIME Centre Wales  
Wales Cancer Research Centre

### Research Units

Wales Kidney Research Unit  
Brian Repair and Intracranial Neurotherapeutics (BRAIN) Unit

The C21 Update acknowledges the importance of research and its application into mainstream clinical practice. Also, in this edition, we put the spotlight on the Project Sepsis team led by Professor Peter Ghazal which effectively brings together basic science and clinical research to the benefit of the patients.

We are in conversation with Dr Ray Freebury, a 1958 graduate of the School of Medicine who has pursued an inspiring career in Psychiatry in Canada. Other features include an update on HealthWise Wales and our fantastic Medicine Taster Days.

Additionally, we are delighted to take this opportunity to introduce Professor Siladitya Bhattacharya who will take up the appointment of Head of the School of Medicine in May. Professor Bhattacharya joins us from the University of Aberdeen where he has been Director of the University's Institute of Applied Health Sciences.

Finally, please be reminded that ReMEDy is available electronically to the School's alumni and to ensure that you receive your copy, please inform us if you have changed your contact email address.

Update your details now:

[www.cardiff.ac.uk/alumni-update](http://www.cardiff.ac.uk/alumni-update)



**Professor Ian Weeks**

Acting Dean, School of Medicine

## C21 update

Ensuring our medical students meet all of the outcomes expected by the General Medical Council is a prime responsibility of the Centre for Medical Education. One of those criteria, the "Doctor as a Scientist", acknowledges the importance of research and its application into mainstream clinical practice. Medical research has been one of the cornerstones of medical education in Wales since its inception.

There are a very large number of student research activities undertaken across the School of Medicine and within the NHS. The growing success of the Student Selected Component (SSC) within the C21 curriculum is evident, as more of our students design their own projects

rather than relying on investigator provided alternatives. This suggests that the course is stimulating our students to come up with questions that they would like to investigate in much more detail. As a result of these projects, and the work done during the intercalated BSc programmes, there is a steady stream of students attending scientific conferences to present their work and further enhance the reputation of Cardiff University.

The Medical Pharmacology BSc requires all students to undertake a final year project within a laboratory environment providing graduates with real skills to enhance their employability. The students on this course can also now undertake a professional placement year in an external

organisation, which will further enhance employability skills and expose students to the way in which research is undertaken in some of the excellent innovative companies around the UK.

We should not understate the importance of a research informed curriculum to our students' future careers and the provision of high quality patient-centred care. We are always looking for extra opportunities for our students and encourage the incorporation of student activity in new and innovative ways.

**Dr Stephen Riley**

Dean of Medical Education

## In conversation with our alumni: Dr D Ray Freebury **MBBCh (1958), D(Obst)RCOG (1960), FRCPC (1968), DLFAPA(1995).**



Ray started his medical career at what was then the Welsh National School of Medicine from which he graduated in 1958, after which he has had a very interesting and varied career. Following retirement, Ray was asked by his daughter Megan Freebury Karnis, to become a psychiatric consultant and Counsellor at the 'Onefertility' clinic, where she is reproductive endocrinologist and medical director. He has now been doing this for almost nine years and has found his psychoanalytic experience invaluable in counselling young women struggling with infertility.

### Why did you choose Cardiff to begin your career?

The reason I chose Cardiff is not a romantic one. The London hospitals that accepted me did not accept Welsh Biology which would mean I would have a year's delay while I took Oxford Botany and Zoology. Luckily the Welsh National School of Medicine was able to offer me acceptance a year earlier, so I came to Cardiff.

### What was unusual about the start to your training?

In 1956 I made myself a rarity by marrying in the midst of my medical training. I lost my education grant from Newport Town Council because of it. I contacted the Daily Mirror hoping some publicity might lead them to change their minds. However the byline for the article was "Ray and Diane beat ban on romance", probably having a negative impact.

### How did your career progress after you graduated?

My wife and I survived in an attic flat on Wordsworth Avenue across from the Cardiff Royal Infirmary. For my first house job I was dispatched to the Caerphilly District Miners hospital, and was working there at the time my daughter was born at Glossop Terrace in what was then the new Obstetric facility

in Cardiff. I took an obstetric position for my second house job which led to a D(Obst) RCOG. A senior house physician post followed at St Mary's Hospital Portsmouth where I had ambitions to study internal medicine. These were dashed when I was conscripted for national service. In order for my pregnant wife and daughter to be posted along with me, I took a three year short service commission and was posted to a fleet repair ship, land-based in Malta.

### And it seems that your travels continued as part of your commission with the Forces?

Yes, my Obstetric diploma led to an appointment to the family planning clinic in Sliema. A four month posting to the aircraft carrier HMS Centaur saw me in the Persian Gulf warding off the first Iraqi threat to Kuwait in 1961. The three years ended with the acquisition of friends for life and a bursary which provided the fare for me to take my family to Canada and a family practice job in Schreiber, a small town on the North shore of Lake Superior and more snow than I had ever seen in my life.

### From your start in Cardiff, your career continued in Canada?

A year in a remote town with limited facilities and certainly no psychiatric help led to my accepting an Ontario Government grant to specialise in Psychiatry. I was greeted in Toronto by the Chairman of the psychiatry department, Professor Aldwyn Stokes who, like me, was an old boy of Newport High School. In 1968 I completed my psychiatric training with specialty qualifications (FRCPC) and joined the staff of Mount Sinai Hospital in Toronto, which had a Psychoanalytic psychotherapy programme.

When the first training programme in psychoanalysis began in Toronto I joined the first class. I graduated in 1974 and, with a part time practice in psychoanalysis, I was also Head of Psychiatric Ambulatory Services at the Mount Sinai, eventually becoming Associate Professor of Psychiatry at the University of Toronto.

Over the years my psychoanalytic experience and practice expanded. I have been president of both the Toronto and Canadian Psychoanalytic Societies and Director of both training institutes. For both societies I chaired committees to plan and institute Ethical guidelines and the means for implementing them. I was the first Ethics Chair for the Canadian Society.

I retired from Psychoanalytic practice in 2006 but maintained my medical licence and did some consulting work for lawyers dealing with ethical violations by psychiatrists.

### What do you miss about Cardiff?

I maintain my emotional contact with my homeland by singing with the Toronto Welsh Male Voice Choir, singing 25% of our repertoire in Welsh with concerts almost monthly. ([www.welshchoir.ca](http://www.welshchoir.ca))

During my time with the Choir, I have had two Cardiff Medical graduates sing with me - Brian Thomas who graduated before me and Stephen Jones who is a later graduate. Brian sadly died but Stephen and I are planning a choir tour of Wales and hope to sing in the 2021 National Eisteddfod. I still correspond with former classmates Frank Navas, Liz David, Tom Powell and Guy Edwards and although I still visit my brother in Cwmbarn (a Cardiff Economics graduate) most years' class reunions are a thing of the past.

### And finally, what are your memories of Cardiff University?

In addition to my memories of my life at University, other happy memories mostly involve playing for the Cardiff Medicals rugby team and singing ribald songs in the pit head baths after games in the valleys.

### Ray's shared alumni wisdom:

'Enjoy and make full use of the many technological advances in medical science and treatment.'

'Always be alert to the emotional consequences of physical illness and how that affects the patients' interaction with you'

'Take the time to appreciate the beautiful City of Cardiff and to enjoy all the music that inevitably surrounds you in Wales.'

### Ray's five words describing Cardiff School of Medicine:

A life  
experience  
to cherish



If you would like to contribute to 'Our Conversation with Our Alumni', please email: [remedy@cardiff.ac.uk](mailto:remedy@cardiff.ac.uk)

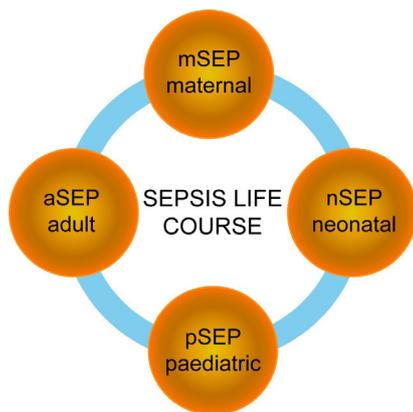
# In the Spotlight: Project Sepsis

Sepsis is a life-threatening complication of infection, responsible for 44,000 deaths every year in the UK. It can develop from several bacterial infections so quick identification of the exact pathogen responsible remains a challenge, especially in babies where signs of infection such as a high temperature may not occur. If sepsis goes undetected, and untreated with the right antibiotics, catastrophic loss of life can occur within hours.

Currently the most reliable way to diagnose the infection is by detecting the bacteria in the blood, but this requires a relatively large volume of blood.

Project Sepsis is a research collaboration across medicine and science disciplines that addresses an urgent medical need for recognising and accurately detecting infection underlying sepsis in extremely vulnerable populations of the very young and old.

Project Sepsis involves studies of Neonatal sepsis (nSEP), Paediatric sepsis (pSEP), Maternal sepsis (mSEP), and Adult sepsis (aSEP):



The Project Sepsis team is led by Professor Peter Ghazal and effectively brings together basic science and clinical research to the benefit of the patients. The team use innovative computer-assisted techniques to decode signals generated from patients' DNA and metabolism. These signals can tell doctors whether or not a bacterial infection is present in the bloodstream, and could help develop a more sensitive, rapid and accurate test that only requires a single drop of blood.



Professor Ghazal explained: **“Just as a Twitter user can send a 140-character message, so our genomes produce short messages or signals which communicate with the immune and metabolic systems so that it can fight the infection.”**

Professor Ghazal's research has identified a 52-character DNA 'tweet' or message that is specific for bacterial but not viral infection.

The team also promotes interaction between patients, researchers, and clinical staff through a newly established Sepsis Patient and Public Engagement Centre (SPPEC), physically located in the Sir Geraint Evans Cardiovascular Research Building at University Hospital of Wales (UHW), acting as an interaction and training hub.

Planned audio-visual exhibitions include “The sepsis life cycle”, an exhibition of simulation wards with featured displays of neonatal intensive care unit (NICU), paediatric intensive care unit (PICU), adult intensive care unit (ICU), and an exhibit for scientific understanding of current and planned future medical tests and treatments for sepsis.

SPPEC aims to engage through outreach events and to promote patient and public involvement (PPI) in research and the clinic to help save lives against sepsis.

Professor Ghazal added: “With its strength in systems immunity and cross-disciplinary research, Cardiff University provides the perfect environment to join up science and clinical medicine to tackle sepsis.”

“Indeed, I believe the future of science is becoming so cross-disciplinary that many fields are no longer single disciplines, the single discipline approach established over 200 years ago through societies and academia is really no longer fit for purpose. Project Sepsis aims to solve an intractable medical challenge through developing a team science approach for improving the outcome of critically ill individuals. Notably, this behavioural change in how we do science and directly connect to medicine has a further benefit of stimulating innovation and enterprise.”

### Project Sepsis Lay Advisory Community

Central to helping reach it's goals are Lay Advisory groups for neonatal, paediatric, and adult sepsis respectively. The role of the Lay Advisory groups is to help review research priorities, identify new lines of research, give input into research proposals, (lay summaries in particular) impact statements and website content, as well as contribute to the dissemination of research findings to relevant target groups.

Lay advisory involvement for Project Sepsis is underway with opportunities to join the pool of lay advisors. Those affected by sepsis either directly, as former patients, or indirectly as family members of former patients are particularly welcome as well as those who wish to get involved out of general interest.

If you would like to find out more about patient and public engagement, please contact: [projectsepsis@cardiff.ac.uk](mailto:projectsepsis@cardiff.ac.uk)



# Introducing our new Head of School: Professor Siladitya Bhattacharya



Professor Siladitya Bhattacharya will take up the Head of School post in May. He will be relocating to Cardiff from Aberdeen where he was Professor of Reproductive Medicine in the University of Aberdeen.

While at Aberdeen, Professor Bhattacharya gained significant leadership responsibility as Director of the University's Institute of Applied Health Sciences. His major research interest is in the field of reproductive epidemiology and evaluation of interventions in reproductive medicine, particularly infertility. Professor Bhattacharya is Chief Investigator in a portfolio of reproductive health trials, and serves on several national and international committees relating to reproductive medicine. He also has extensive experience of teaching and programme development for undergraduate and postgraduate medical curricula.

On taking up the post Professor Bhattacharya said: "I am looking forward to joining Cardiff University's School of Medicine and working with an extraordinarily talented group of colleagues to deliver outstanding teaching and research, which has a real impact on the health and wellbeing of people in Wales and beyond."

"I am confident that the School will build on its existing strengths to deliver the scientific advances and clinical training necessary to support the highest quality of health care."

Professor Bhattacharya continued: "I am excited to be moving to Cardiff and be part of an environment within the School of Medicine where staff and students feel supported and are able to achieve their full potential".

"Outside of work, I really enjoy reading and travelling and am looking forward to learning Welsh."

Professor Gary Baxter, Pro Vice-Chancellor for the College of Biomedical and Life Sciences, said: "I'm delighted that Professor Bhattacharya is taking up the role of Head of the School of Medicine. He will bring a wealth of leadership, teaching and research experience to the position and I look forward to working with him to shape the School's future activities."

## CMO calls for more young people to take part in Cardiff University's pioneering nation-wide health study – HealthWise Wales

Wales' Chief Medical Officer, Dr Frank Atherton, is calling for more young people and males to play their part in shaping the future health of the nation, by participating in the largest Welsh population health study ever undertaken.

Led by Cardiff University and backed by the Welsh Government, HealthWise Wales was launched in 2016 to study the health and wellbeing of people in Wales and help plan health services for the future.

More than 18,000 participants have signed up so far, and analysis of data supplied by the first 10,000 shows that 16-24 year-olds make up just 12% of respondents, compared with 57% who are aged between 45 and 65+, and that 75% respondents are female.

Alongside the disparity in age groups, the data shows that the highest proportion of participants live in South Wales. The lowest uptake has been in Neath Port Talbot, Blaenau Gwent, Anglesey, Wrexham and Flintshire.

Separately, the data shows that 30% of the first 10,000 respondents to HealthWise Wales report being diagnosed with, or treated for, a mental health condition – substantially higher than the Welsh national average of 13%.

To encourage sign-ups, the health initiative recently launched a new national advertising campaign featuring an animated film which was shown on TV, social and digital channels.

Chief Medical Officer, Dr Frank Atherton, said: "The more informed we are about the illnesses facing the nation today, the better equipped we'll be to deal with the health challenges of tomorrow. I would urge everyone in Wales who is eligible to sign up; we need as many people as possible to get involved to make it a success – not least a greater proportion of groups who are currently under-represented. Giving a short amount of your time to provide basic health information could help generate important insights and treatments for future generations."

To find out more and to join the study, visit [www.healthwisewales.gov.wales](http://www.healthwisewales.gov.wales) or call the HealthWise Wales team on **0800 9 172 172 / 02920 768 090** between 8.00am and 6.00pm, Monday to Friday.

### You can help protect the health of generations to come.

Research has been critical in developing treatments for life-changing illnesses like cancer and heart disease, but there's still so much we don't know. By answering a few simple questions about your health and lifestyle, you can make a difference.



**Register today** to protect tomorrow



# Delivering excellent health and social care research

The Health and Care Research Wales funding infrastructure helps to support and increase capacity in research and development that will have a positive impact on the health, wellbeing and prosperity of the people of Wales. In part this is being achieved through the funding of Research Centres and Units. All of which have an all-Wales remit, and involve multi-disciplinary health and social care research teams who have a track record of research excellence in addressing areas of public need.

Research Centres

**Research Centres:** Recently all Centres and Units led by Cardiff University School of Medicine have received confirmation of two years additional funding. Here we explore the progress to date of the 3 Research Centres:

## The National Centre for Mental Health (NCMH)

The National Centre for Mental Health (NCMH) brings together researchers investigating the causes of mental health problems from across Cardiff, Swansea and Bangor Universities.

Professor Ian Jones, NCMH director, said “We are delighted to have received this additional funding from Health and Care Research Wales. This will allow us to build on the significant achievements of NCMH to date and press ahead with new areas of activity.”

These achievements include recruiting more than 10,000 people from across the UK to participate in mental health

research, developing psychoeducation programmes for people with bipolar disorder and people with a learning disability and mood problems, and rolling out new assessments to gather more detailed information on peoples’ experiences of mental health.

“Over the next two years we will be collecting more in-depth data to help us learn more about the complex causes of mental health problems. This will include recruiting more volunteers to complete our new assessments and widening the scope of our bio-sampling work. We’ll continue to work with our partners,

including our public involvement group, to enrich our clinical, social and psychological data.

“Our ever-growing programme of public involvement and engagement will include further developing our psychoeducation courses and influencing policy around health and social care. We will also continue to educate the public about mental health through our podcast, blogs and work with the media,” added Professor Jones.

**NCMH**  
National Centre for Mental Health

## The Wales Cancer Research Centre

The Wales Cancer Research Centre is the latest tool in Wales’ efforts to beat cancer. It was formally launched in October 2015, bringing hope to cancer patients across Wales, and beyond.

The centre has a strong emphasis on collaboration. It brings together several areas of existing strength in Wales to advance research, build knowledge and bring investment into Wales by working with the NHS, academia, cancer charities, research councils and the pharmaceutical industry. The centre’s vision is to work with cancer patients and other partners to deliver cancer

research excellence in Wales, funding staff across seven universities and NHS Health Boards. Over 40 members of staff are employed at all levels of research, including nurses, doctors, laboratory researchers and pharmacists. To date, the centre has generated over £22m from 190 grants and has disseminated 257 research publications.

At every stage of work, the centre involves public and patient representatives. This is based on a strong conviction that ordinary people should not just be the subjects of research,

but should be active participants, working with researchers to plan, conduct and present their work.

The centre received £4.5 million over its first three years of operation. It conducts research at every stage, from understanding the cellular and molecular basis of cancer, to interventions that improve the health and wellbeing of individual cancer patients.



Canolfan Ymchwil Canser Cymru  
**Wales Cancer Research Centre**

## PRIME Centre Wales

PRIME Centre Wales is the Centre for research into the primary and emergency care sectors – essential sectors for research as over 90% of all patient contacts occur here, and efficiency and effectiveness of the whole system depends on strong primary and emergency care sectors working together.

A strong academic base for this is paramount. PRIME Centre Wales has been hugely successful in capturing funding, delivering research, knowledge transfer and impact for this vital area. The Centre has brought together two previously successful entities (Wales School for

Primary Care Research and TRUST Network for Unscheduled Care Research), and added new partners from all of Wales and across disciplines. The new collaborations have been highly synergistic, demonstrating new and valuable research across nursing, dental, medical and social care and allied disciplines. To date, the centre has generated over £18M and disseminated over 160 high research publications and 9 new PhD students showing capacity building for the future.

The Centre addresses policy relevant domains such as cancer care delivery, antibiotic stewardship, health and social

care interface, prudent health care, workforce planning and health inequalities.

Impact has been realised across the sectors, including: building family resilience through health visiting, improving oral health of children, implementing effective emergency care management for older people who fall, or others at high risk of admissions, minimising antimicrobial resistance, improved patient safety, and promoting patient-centred holistic care.



**Research Units: Like the Centres, Research Units focus on more specific areas of research. Two out of the three Research Units are led by Cardiff University, School of Medicine. Here we explore the progress that these Research Units have made to date:**

## The Brain Repair and Intracranial Neurotherapeutics (BRAIN) Unit

The Brain Repair and Intracranial Neurotherapeutics (BRAIN) Unit, brings together experts from Cardiff, Swansea and Bangor Universities, along with colleagues in NHS Wales and industry and is working to develop novel therapeutics for neurological and neurodegenerative conditions.

Achievements to date include successfully delivering the first ever robot assisted EEG electrode placement for epilepsy neurosurgery in Wales and developing effective methods for patients and carers with a range of neurological conditions, to evaluate their own situation and needs

through the use of remote monitoring and wearable technologies or smart devices.

BRAIN also received co-funding from Cardiff University and the Medical Research Council to establish a GMP (Good Manufacturing Practice) laboratory; a licensed facility to prepare and deliver cell therapies for human use in clinical trials.

In addition, the unit has helped establish the Neuroscience Research Unit (NRU) at the University Hospital of Wales. The NRU is a four-bed clinical research facility available for hire to run commercial and non-commercial trials. It was recently

selected for the first ever commercial trial using a gene silencing drug in people with Huntington's disease.

Other key achievements within the last year include 868 people consenting into biobanks, securing additional funding for another NRU nurse, £14 million in grant funding generated by principal investigators and receiving 51 research awards.



## The Wales Kidney Research Unit

The Wales Kidney Research Unit has members from every Renal Unit in Wales and provides core infrastructure enabling researchers, clinical staff, patients, families and carers to work together to answer important health and social care research questions related to kidney disease.

In its first 2 years WKRU had more than 30 research publications, with £6 million grant income generated by more than 40 successful grant awards. The WKRU have also:

- trained three clinical fellows in clinical trial delivery
- had six students gain higher degrees

- been awarded more than twelve best conference presentation prizes
- gained five early career researcher awards at National and International conferences
- developed the Wales Kidney Research Tissue Bank as core infrastructure.

Engaging and involving the public is a major focus of the Unit's activity. Strong links have been established with patient groups, charities and the wider population and these are used to raise awareness and inform the public about the latest research into kidney disease. The WKRU

has taken part in more than thirty visits to schools and community groups and contributed to third sector events across Wales, including individuals and groups from Black, Asian and Minority Ethnic (BAME), disadvantaged, and special needs communities. In July 2016, the WKRU was central to the launch of the UK Renal Research Strategy at the Senedd in Cardiff with Vaughan Gething AM and Kidney Research UK.



ReMEDY will look to update readers on the positive impact these Centres and Units are having in in due course. For further information on the Centres and Units, please visit the following web page where direct web links to all above can be found:

[www.healthandcareresearch.gov.wales/research-infrastructure](http://www.healthandcareresearch.gov.wales/research-infrastructure)

# 10 ways

## MEDIC is MAKING an IMPACT

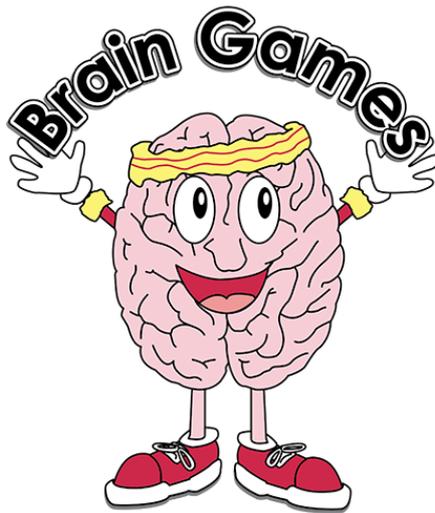
The School of Medicine has a successful track record of contributing to society through its Research, Learning and Teaching, and Innovation and Engagement activity. Efforts by staff and students highlight a rich variety of ways in which the School is engaging and benefitting society. Here are just ten recent examples:

### 1 Inhibiting the Growth of Pancreatic Cancer

A respiratory virus has been used successfully to inhibit the growth of pancreatic cancer, according to an early study by researchers at Cardiff University and Barts Cancer Institute (BCI) of Queen Mary University of London.

The new virus specifically infects and kills pancreatic cancer cells, causing few side effects in nearby healthy tissue. This targeting strategy is both selective and effective and the team have engineered the virus so that it can be delivered in the blood stream to reach cancer cells that have spread throughout the body.

Dr Alun Parker, whose team helped to design and produce the virus added 'This is an exciting advance, offering real potential for patients with pancreatic cancers.'



### 2 Brain Games 2018

From sensory illusions and inflatable brain domes to 'hungry synapses' and 'DIY brain surgery' – the annual Brain Games event showcases the power and mystery of our most vital organ. Held at the National Museum of Wales, Brain Games is a fun way of teaching children about the brain and some of the exciting research being undertaken at Cardiff University, it is also intended to inspire children, in particular young girls, to get into science.

This year's activities included:

- Giant Genes – a new activity designed to help explain how diseases that affect the brain can be caused by damage to our genes.
- Flipped Shoot Out - an activity where people perform a number of activities whilst wearing prism goggles that shift their vision by about 30° to one side.
- Taste Twister – this game challenges you to consider how your sense of taste is influenced by what you can see.

### 3 Transforming Namibian Healthcare

Hundreds of Namibian women who die in childbirth each year could be saved because of a Cardiff University-led project.

The Phoenix project offers a four-year Masters course which is aimed at addressing the shortage of

anaesthetists which leaves patients facing long waiting lists for surgery and a lack of specialist care during emergency procedures.

If Namibia had a proportionate number of anaesthetists to Wales, in terms of population it would have at least 300 qualified specialists or consultants, yet currently there are only 10 state anaesthetists.

Course leader Professor Judith Hall said "The course will create a new body of professionals, to truly transform care."

### 4 Illuminating Research

Over 20 years of research into the way living creatures can generate their own natural lights or 'bio-luminescence' enabled Professor Anthony Campbell and his colleagues, Professor Stuart Woodhead and Professor Ian Weeks, at the University of Wales School of Medicine (now part of Cardiff University) to develop an important new tool for medical and health research.

This research work, which pioneered a new generation of biochemical tests for disease diagnosis, has made a list of sixty standout patents, as the UK celebrates the 400th anniversary of British patent number one.

### 5 Science in Health LIVE

Sixth form pupils from across Wales discovered answers to questions such as 'Why do some microbes cause disease whilst others are harmless?' 'How do cells communicate in order to trigger inflammation and destructive processes?'



The Science in Health event held in March was designed to give pupils an insight into the science behind medicine, showing them first-hand the range of career options open to them in healthcare, biomedical and scientific

fields. Pupils took part in exciting interactive exhibits, talks and tours which could have a big impact upon their attitudes towards science as a career.

Previous Science In Health Live attendee Dr Matt Morgan, Honorary Senior Research Fellow, Consultant in Intensive Care Medicine & Head of Research and Development emphasised the importance of the event; "I'm sure that Science in Health-Live played a part all those years ago in helping me get where I am today. For that I will always be very grateful."

## 6 Direction of Global LIPID Research Being Set at Cardiff Meeting

Lipids (fats) make up 30% of our bodies, and 60% of our brain. These molecules are essential to life.

Lipid researchers worldwide rely on the LIPID MAPS Lipidomics Gateway. This unique database contains over 40,000 curated structures and has over 100,000 users globally. Now supported by a Biomedical Resources grant from the Wellcome Trust, LIPID MAPS has recently relocated to the UK and is now managed from Cardiff University by a consortium including Valerie O'Donnell (Cardiff), with colleagues in University of California San Diego (Edward Dennis, Shankar Subramaniam) and Babraham Institute, Cambridge (Michael Wakelam). LIPID MAPS takes the global lead in curating and collecting new lipid structures into a single "one-stop-shop."

The LIPID MAPS International Advisory Board recently met in Cardiff. International lipid researchers from USA, UK, Asia and Europe worked over two days, redesigning the website to enhance accessibility and usability, and will make key strategic decisions that will assist with the development and sustainability of this unique resource.

## 7 First Step in Development of Pill-based Vaccines

The non-biologic influenza vaccine, which can be delivered orally, could herald a revolution in vaccine delivery.

Stable at room temperature, the new type of vaccine, which could be given in

pill form, does not require refrigeration – a process that can account for most of the cost of delivery of many current vaccines.

Vaccines that do not require refrigeration can be transported more easily and are more suitable for developing countries where it can be difficult to keep things cool.

Professor Andrew Sewell, from Cardiff University's School of Medicine, who led the study, said: "There are many benefits to oral vaccines. Not only would they be great news for people who have a fear of needles but they can also be much easier to store and transport, making them far more suitable for use in remote locations where current vaccine delivery systems can be problematic."

## 8 Preventing Fibrosis

Researchers at Cardiff University and the Wales Kidney Research Unit have discovered a potential new method for preventing the process that causes scar formation in organs. It involves altering the cells responsible for wound healing and tissue repair and could lead to treatments that would prevent and even reverse organ fibrosis – a major cause of illness and death around the world.

Dr Soma Meran said: "We were amazed to discover that the protein Hyaluronidase-2 can bind to RNA in a cell and alter its activity. In the case of the cells responsible for fibrosis and scar formation, we can potentially use this technique to stop them from producing scar tissue. This opens up exciting new research avenues in the study of fibrosis."

## 9 Medical Student Lewis Oliva Wins Silver Medal for Team Wales at the Commonwealth Games!

Cardiff University medical student Lewis Oliva has won silver for Team Wales in the men's keirin at the Commonwealth Games in Australia.

Lewis rode brilliantly in the final after qualifying through the heats of one of the most unpredictable and exciting events in track cycling.

Stuart Vanstone, Head of Sport at Cardiff University, said: "Lewis is a model student balancing his academic work and sport at the highest level. A silver medal is a great achievement and testament to the hard work he has put in over the years.



Lewis said: "I'll wake up in a bit and it will all be a dream. I'm speechless. To have a two year plan like this - the belief of my coaches, my fiancée and my family - for it actually to pay off, it's unreal."

## 10 Outstanding Cardiff University Partnership Scoops St David Awards

A partnership between the University of Namibia (UNAM) and the Phoenix Project has scooped international honours for improving lives in Namibia. It works to tackle three broad areas - women, children and infectious diseases; science; and communication.

Professor Judith Hall, who leads the Phoenix Project, said the award was recognition for everyone involved.

"Without the fantastic, strong relationship that has been built between Cardiff University and the University of Namibia, none of this would be possible. These awards are so beautifully fitting that it feels like you've been honoured by the Welsh Government and the Welsh people."

The St David Awards, presented by First Minister Carwyn Jones at the Senedd in Cardiff Bay, recognise and celebrate the exceptional achievements of people and groups from all walks of life in Wales.

"The Phoenix Project, which has benefited both Wales and Namibia, has made a meaningful contribution to changing people's lives and has been widely recognised for its excellent partnership with the University of Namibia.

# MEDIC people



ReMEDy talks to **Dr Helen Iliff (MBBCh 2016)**, alumnus;  
**Christine Muhota**, undergraduate student;  
**James Griffiths**, postgraduate student  
and **Dr Robert Hywel Jenkins, (BSc 2001, PhD 2005)** member of staff,  
to ask the questions we love to know the answers to!

## What do you listen to first thing in the morning?

**HI** My Alexa telling me the news headlines and weather forecast.

**CM** Usually upbeat music, such as the UK top 50 tracks or old school R&B songs, gets me dancing and motivated for the day ahead.

**JG** I'm usually woken up by my alarm clock blaring Radio 1 Xtra at me. This station normally follows me to the kitchen as I make breakfast.

**RHJ** I would love to say something highbrow like BBC Radio 4. However, as my girlfriend would testify, I am a grump in the morning and simply watch BBC Breakfast. Chewing gum for the brain!

### Dr Helen Iliff

I am a junior doctor working in the ENT department in University Hospital of Wales. In my free time I enjoy rowing, horse-riding and baking.



## As a child what did you want to be when you grew up?

**HI** A pastry chef – I always loved baking and making cakes.

**CM** I had so many different ideas ranging from a TV presenter, to an astronaut, to a professional basketball player.

**JG** Lego was my thing as a child; I used to love making space models. I definitely wanted to be some sort of space engineer for a while. Until science took over maths in high school.

**RHJ** As a kid I would have loved to join the army. Today I still contemplate joining the army reserve.

## Who are your heroes and villains?

**HI** Heroes: My family and friends. Villains: People who are unnecessarily rude.

**CM** Heroes: People who are compassionate and selfless, who go out of their own way to help others.

Villains: People who spend time looking for faults and bring others down to make themselves feel more superior instead of lifting other people up.

**JG** As a Christian in science, Jesus is definitely the main hero. I also run a lot and would love to meet/race the Jamaican sprinter Asafa Powell one day. Not a fan of Swansea City, hopefully Cardiff can secure promotion and re-take their crown of number one team in Wales.

**RHJ** I admire the chef, journalist and campaigner Hugh Fearnley-Whittingstall for his passion and commitment to animal welfare and environmental issues. Secondly, several British mountaineers including Sir Chris Bonington, Kenton Cool and Joe Simpson. They

are all motivated, determined and resourceful individuals.

## If you could change one thing what would it be?

**HI** I would scrap the healthy eating scheme that enforced the ban on sale of chocolate in NHS canteens – sometimes when you're on call it's just necessary.

**CM** The violence and cruelty in the world.

**JG** Climate change frustrates me; maybe we should've started looking for cleaner energy sources a while back (ignore my answer to the next

### Christine Muhota

I am currently in my final year studying Medical Pharmacology and have had a great 3 years in Cardiff with some very memorable moments shall we say! I am looking forward to studying graduate-entry medicine next year and continuing with volunteering, basketball and community projects that I have got involved in. I tend to be easily amused by life and always laughing at something (if not myself!).



question...).

**RHJ** Definitely Brexit!

## What is your secret ambition? (just between us)

**HI** To own a racehorse.

**CM** To travel the world setting up emergency medical centres in different areas where they are needed the most, alongside a charity that can transport and coordinate foreign aid and resources to help treat people who come into the centres.

**JG** I really want a porsche. A 911 GTS in black with all the add ons.

**RHJ** A not so secret ambition is to get a senior fellowship to continue my research. Personally, I would love to learn to ski mountaineer and combine two of my favourite pastimes. This involves climbing

### James Griffiths

I am currently writing up my PhD and have been based in the myeloid cell biology group for the last 3 years.

My research has centred on fungal immunology, specifically investigating why immune-suppressed patients are highly susceptible to Aspergillus disease.



the mountain to be able to ski down amazing off-piste lines and couloirs.

### What does the School of Medicine need more of?

**HI** Biscuits.

**CM** Group study spaces.

**JG** Maybe some social media posts/website updates of public engagement activity, new student/staff publications, notable achievements etc...

**RHJ** Personally, I would like to see a single building on the Heath Park site to house all the Research Divisions. I understand this would require a massive investment. However, some of the current buildings/departments are dilapidated and no longer fit for purpose. A single building would be cost effective to run, allow ease of access to shared resources, enrich staff well-being, and promote internal collaboration.

### What advice would you offer medical students today?

**HI** Work-life balance is important, keep up your hobbies.

### Which book did you re-read most as a child?

**HI** Harry Potter.

**CM** Roald Dahl, 'Matilda'...I am still waiting for the magic to come to me too!

**JG** Hmm I enjoyed A Series of Unfortunate Events and the Alex Rider series. Then when I was a little older we had multiple copies of each Harry Potter book in the house.

**RHJ** I loved Roald Dahl's Danny the Champion of the World. The book creates the feeling of an idyllic life in rural 1950's Britain and the mischief a father and son get up to, to prevent a land developer buying their home.

### Which one question would you really like to know the answer to?

**HI** What time will dinner be ready?

**CM** Why do we have dreams at night?

**JG** The universe is pretty big, anything else out there?

**RHJ** Why people actually like watching reality TV?

### How do you relax?

**HI** Like I said I really enjoy baking and partaking in sports. I find its really important to have friends outside of work, as otherwise work can become life.

**CM** I love cooking food and trying out new cocktail recipes, watching films, having a laugh with friends.

**JG** Writing up the PhD – I don't. But I'm hoping to soon get back into reading, evenings on the playstation and weekends away.

**RHJ** Relaxing to me is to do something fun, mostly walking and rock climbing in Brecon Beacons and Pembrokeshire. We are so lucky in Wales to have great coastline and uplands. After all the exertion, definitely a beer!

### If you could turn the clock back, what would you do differently?

**HI** I would remember to set my alarm yesterday!

**CM** I would tell my younger self to have more confidence and belief in my own abilities and care less about other people's opinions. I would have said yes to those opportunities to get better, such as training with the more advanced teams in dance and athletics.

**JG** I spent a lot of time playing football until I was 16, should've switched to track much earlier.

**RHJ** I am not one for regrets, so

nothing major. Most of my education has focused on biology related subjects, but now I wish I had also learnt a language, particularly French.

### What is your best holiday?

**HI** I love skiing, so anything where there is snow really.

**CM** My best holiday was travelling around India and the Himalayas with my friends, it was breathtaking. It was so sunny, lively and just beautiful. I fell in love with the variety of food and found the best ice cream I have ever had! I am currently planning a trip to go back soon.

**JG** Close between a family trip driving down the west coast of the States and a trip to Rwanda. Would love to go back to both!

**RHJ** No hesitation it has to be skiing. I love everything about it, the exhilaration, cold snowy conditions, amazing scenery, and maybe a few beers.

### Dr Robert Hywel Jenkins

I graduated from Cardiff University with a BSc in Pharmacology in 2001.



The practical aspects of the course ignited my interest in translational research. Subsequently, I undertook a PhD in the Department of Nephrology, Cardiff University. I continued

my postdoctoral research in the Department of Nephrology. I focused on mechanisms of epigenetic gene regulation of fibrosis in acute and chronic kidney disease and peritoneal dialysis, culminating in the award of a Kidney Research UK fellowship in 2013. Currently, I am working in the Inflammatory Arthritis Research group, Cardiff University. This opportunity has allowed me to expand my expertise and apply my knowledge of epigenetics to rheumatoid arthritis.

# Medicine Taster Days



## Cardiff University host Medicine Taster Days to support sixth form pupils planning to study Medicine.

Medicine Taster Days offer a choice of two identical days packed with Medicine-related activities and talks. Two programmes are available on each of the days. One programme is specifically tailored to students and the second is tailored to the needs of parents, guardians, careers advisors and teachers.

The full-day Student Programme covers key elements of becoming a doctor, with talks on the following:

- Cardiff School of Medicine selection process,
- Life as a doctor
- Funding for your medical degree
- Case Based Learning
- Q&A panel.

The programme also features interactive workshops on the following topics:

- Clinical Skills
- Simulation Suite
- Life as a medical student
- Multiple Mini Interviews (MMIs)
- Writing your personal statement.

Medicine Taster Days offer sixth form pupils a great opportunity to find out what medical school is really like; current students are present to chat and answer questions throughout the day and during the complementary lunch.

The full-day Accompanying Person's programme covers most of the same subjects but from a supportive angle, looking at the various ways in which prospective medical students and medical students can be supported.

This year's Medicine Taster Days are on **22nd and 23rd June**.

To book tickets for this popular free event visit:

<https://cumedicine2018.eventbrite.co.uk>



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Feedback and items of interest relating to the School are welcome and should be sent to: [remedy@cardiff.ac.uk](mailto:remedy@cardiff.ac.uk)

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