

CARDIFF
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SCRIPT

magazine

2021



INSIDE:

Celebrating 100 years
of the School of Pharmacy &
Pharmaceutical Sciences



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Welcome

from **Professor Mark Gumbleton,**
**Head of School of Pharmacy and
Pharmaceutical Sciences**

First of all, may I express huge gratitude and admiration to colleagues, students, alumni and friends of the School who are working tremendously hard under such difficult conditions at the clinical front line or in a close supporting role to help the COVID-19 effort. Pharmacists and the wider Pharmacy team have been instrumental in supporting continuity of care for patients during the pandemic and public support for the profession has never been higher.

Clinicians, academic, research and professional services staff, health profession students and postgraduate research students throughout the College of Biomedical & Life Sciences have also volunteered their time and expertise to the NHS. The response has been nothing short of heroic and I am proud to be part of a scientific community that has responded so creatively and flexibly to the pandemic.

The COVID-19 pandemic has had an immense impact on us all. As a University, the move to remote forms of teaching, assessment and supervision of students was undertaken by a range of colleagues with colossal effort and speed - all the while ensuring we maintain professional standards and have the support systems in place for both our students and staff. I have been humbled by colleagues' ingenuity and commitment in rising to multiple challenges over the last 15 months and our students' professionalism and positive engagement with entirely new forms of learning.

As the University progresses delivery and planning of student recruitment, teaching activity and research in the current and future academic year, we have to take a broad range of possibilities into account and be prepared to be flexible and agile in order to deal with challenges that we cannot predict with any certainty.

Looking forward, the recent publication of the GPhC's new standards for the initial education and training of Pharmacists, to be implemented gradually from 2021 onwards, brings the emerging professional development needs of our students and the staff who support them into focus. We now embark on a significant review of our Pharmacy professional programmes. We need to ensure that our students are able to play an expanded role in providing clinical care to patients and the public from their first day on the register, including through prescribing medicines.

Working with stakeholders in all sectors, we will strengthen clinical skills development and embed the foundational preparation for Independent Prescriber status in our MPharm programme. We are working closely with Health



Education & Improvement Wales (HEIW), our statutory education body, on substantial reforms to the pre-registration year, including the development of a quality-assured foundation training programme.

We are also reviewing our postgraduate provision targeted at professional development of the existing pharmacist workforce. One model we are considering is a flexible programme that will allow qualified pharmacists to accumulate credits towards a postgraduate qualification from topics of professional interest studied at a pace to meet individual needs.

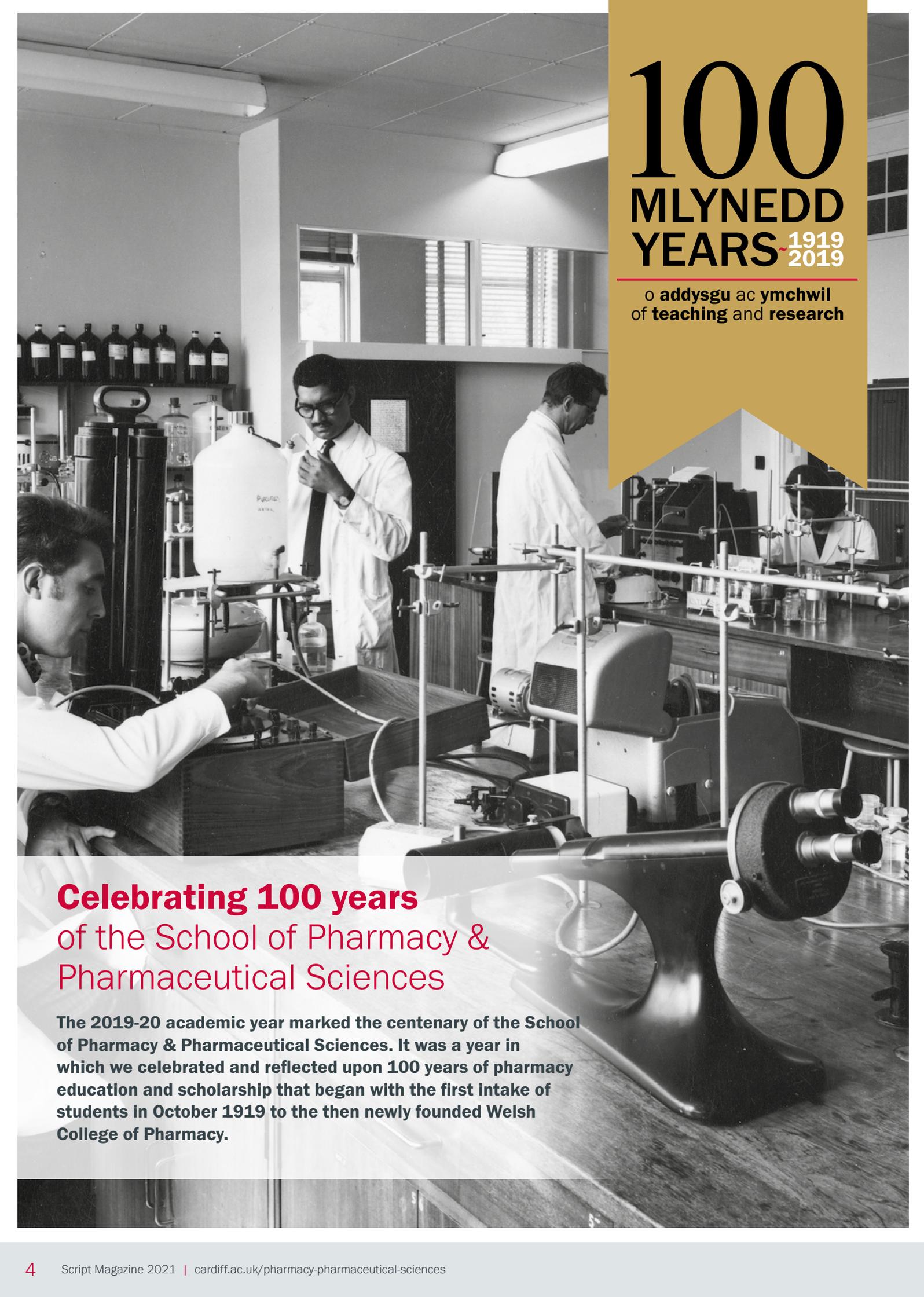
Whilst both strands represent a significant programme of work for the School, the new standards open up exciting opportunities for the development of the profession and recognition of pharmacists' unique expertise and contribution in the wider health professional community. I look forward to working with many of you on these important developments. Your insights and input are invaluable in bringing our programmes to life and enriching our students' learning experiences.

We very much hope that you enjoy reading this edition of Script which gives us an opportunity to summarise the end of our centenary and share with you news of how the profession, our students and the School have responded to the crisis. Indeed, we would be interested to hear and share your own professional news and views too in future editions.

With very best wishes

Professor Mark Gumbleton

**Head of School of Pharmacy
and Pharmaceutical Sciences**



100 MLYNEDD YEARS ¹⁹¹⁹₂₀₁₉

o addysgu ac ymchwil
of teaching and research

Celebrating 100 years of the School of Pharmacy & Pharmaceutical Sciences

The 2019-20 academic year marked the centenary of the School of Pharmacy & Pharmaceutical Sciences. It was a year in which we celebrated and reflected upon 100 years of pharmacy education and scholarship that began with the first intake of students in October 1919 to the then newly founded Welsh College of Pharmacy.

Centenary Conference

The launch of the centenary celebrations began with a special Centenary Conference in the Haydn Ellis building on 19th September 2019. The event marked a hundred years of scholarly excellence and reflected on the future challenges and opportunities for pharmacy.

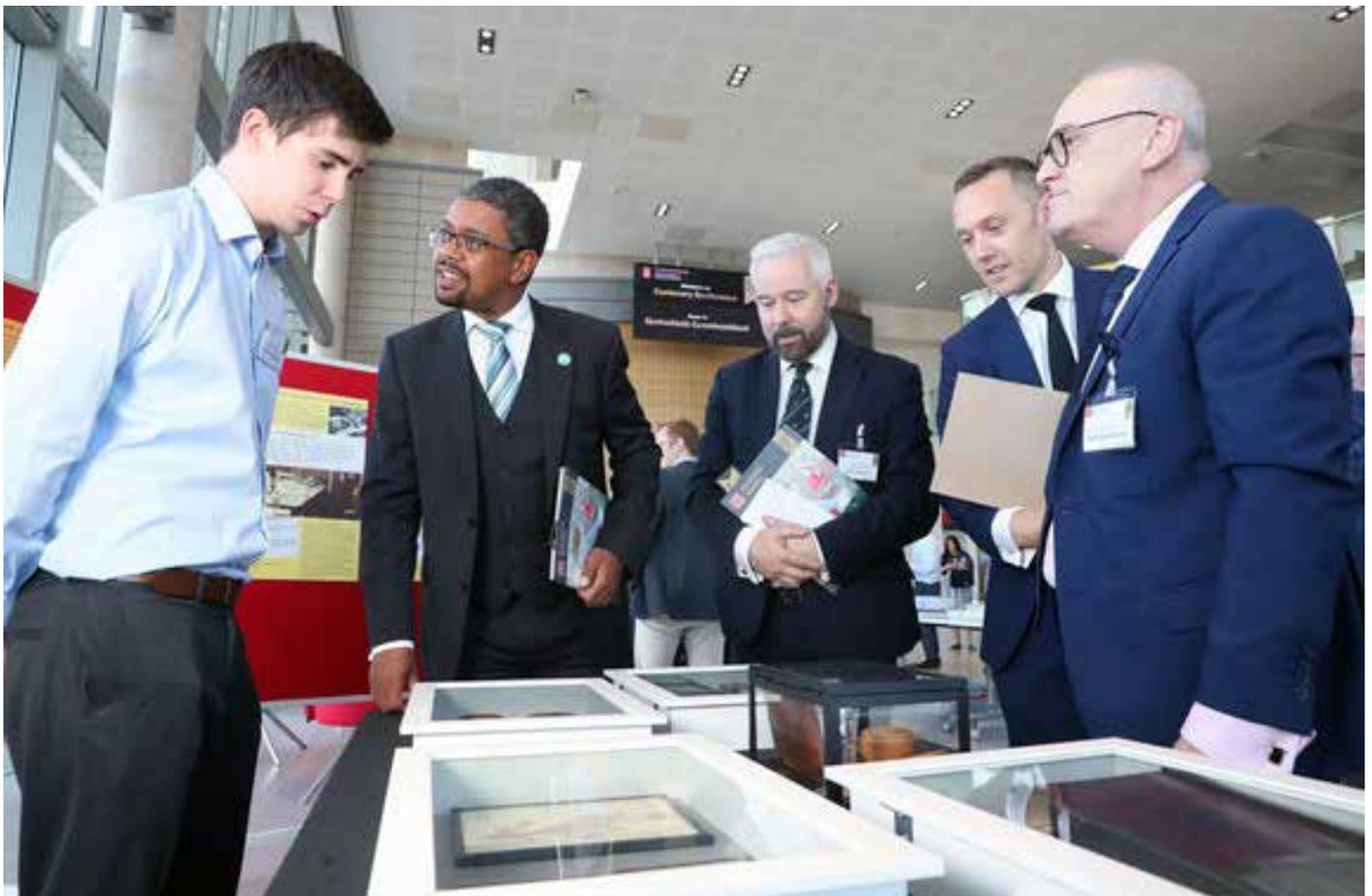
Several high profile guests were invited to speak at the event including the former Minister for Health and Social Services, Vaughan Gething AM. The Minister spoke about the future of pharmacy in Wales and the excellent work being done by Cardiff University in training the pharmacists of the future.

“The School of Pharmacy and Pharmaceutical Sciences is, rightly, acknowledged as one of the top UK schools of Pharmacy,” he said, adding, “As part of multi-professional teams working in our communities pharmacists provide a hugely valued service by helping to manage ongoing conditions, dispensing advice and prescriptions, and offering the Common Ailments Service.”

Following the Minister’s address, the Chief Pharmaceutical Officer for Wales, Andrew Evans, built on these ideas, describing the road map for pharmacy towards 2030 when pharmacists will improve patient knowledge of their conditions and their medicines, focus on optimising therapeutic outcomes using tools that include prescribing, and drive innovation and equitable access to medicines, providing seamless care.

The final guest speaker of the day was Gino Martini, RPS Chief Scientist, who spoke about the way treatments will change in the coming decades and how that will impact the role of the pharmacist. He also presented Professor Gumbleton with a 100th birthday card for the School.

Professor Gumbleton said, “Today we looked to the future and how as a leading School of Pharmacy we can continue to shape, and adapt to the education and training required to support the aspirations of individuals, of the pharmacy profession and of patient care. As a School we recognise this huge responsibility which is very appropriately shared in partnership with many others. I continue to be inspired by what modern practice looks like, or can look like.”



Teaching Pharmacy's history - A Step Back in Time

For the new intake of MPharm students, the School wanted to do something particularly special to mark 100 years since the then Welsh College of Pharmacy opened its doors for the first time on 8th October 1919.

And so, one hundred years later, pharmacy students donned Edwardian costumes, dusted off their notepads and pencils and enjoyed a day of lectures and workshops as they would have been at the beginning of the twentieth century.

Staff dressed up in the fashion of Edwardian Britain and delivered classes in subjects that students of pharmacy would have received in 1919. Leaf drawing, Latin interpretation, materia medica, powder folding and pill rolling were the order of the day along with lectures on poisons and a chemistry practical involving aspirin.

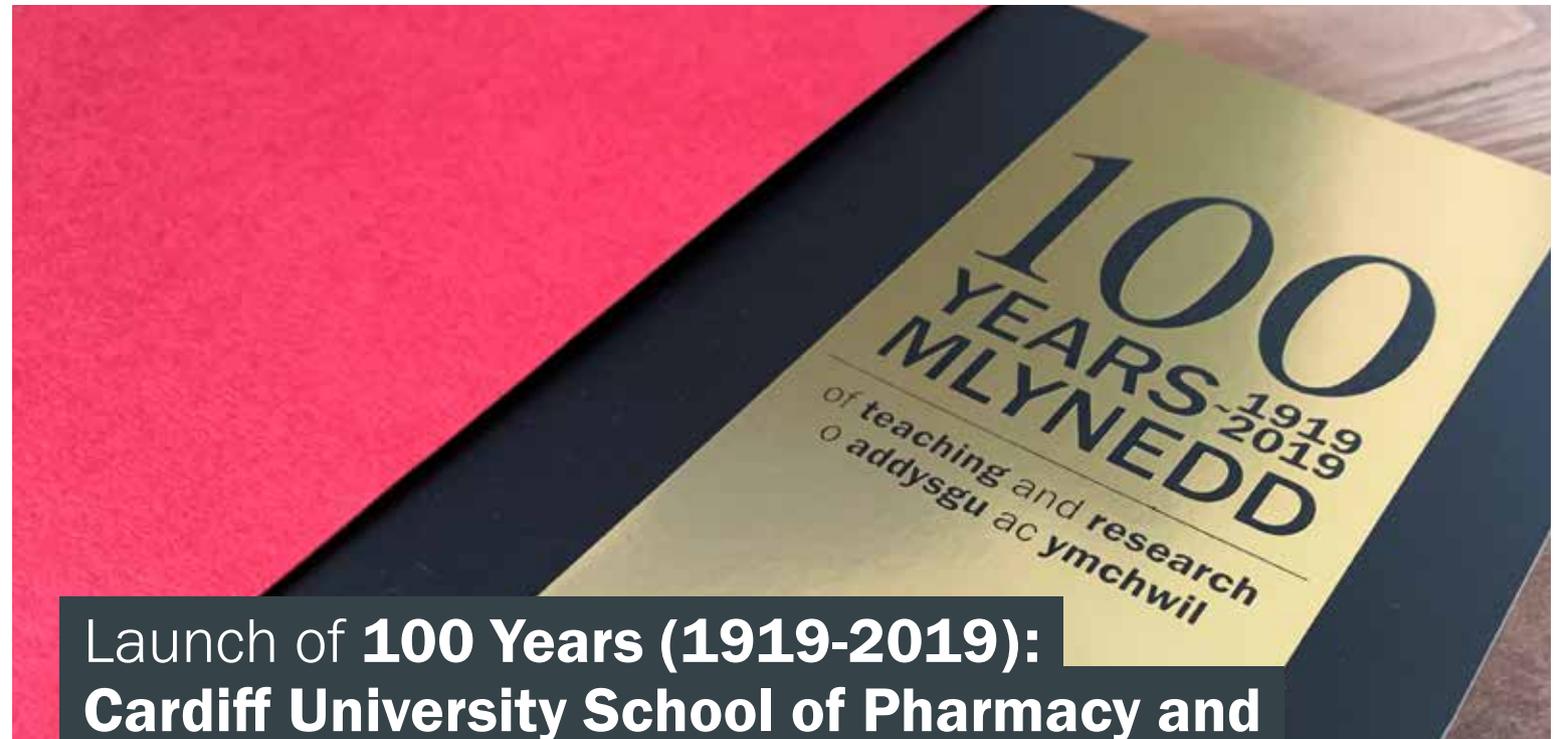
To ensure historical accuracy the School employed the talents of pharmaceutical historian, Briony Hudson, and Heather Pardoe, Principal Curator for Botany at National Museum Wales. Guiding academic staff, they stressed the importance of modern context when producing content, providing a clear line of sight between how things were done in the past and how they led to modern techniques.

"There are as many continuities as there are changes," said Briony. *"The hands-on skills, the professionalism, the attention to detail... and the science behind the medicines – none of that has actually changed its core values."*

Professor James Birchall, Deputy Head of School, added of the day, *"Our Step Back in Time Day was a wonderful opportunity for our staff and students to join together to celebrate our history and achievements and look forward to the next 100 years of pharmacy education excellence in Cardiff."*

A more detailed article on Teaching pharmacy's history: 'Step Back in Time' day at the School of Pharmacy, Cardiff University, written by Briony Hudson can be found in the journal, *Pharmaceutical Historian*, Volume 50, Number 4, December 2020, pp. 109-114(6).





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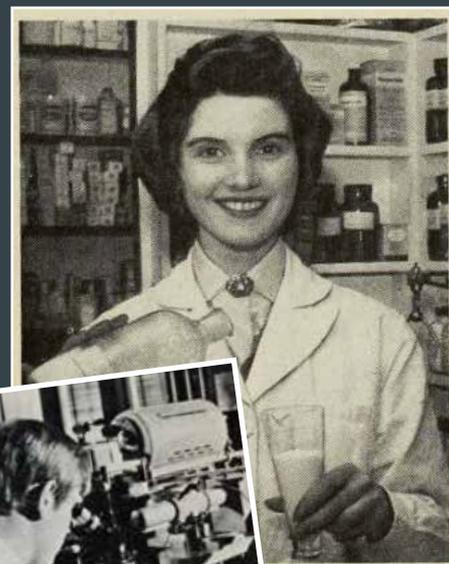
Launch of **100 Years (1919-2019): Cardiff University School of Pharmacy and Pharmaceutical Sciences**

To remember and document the many achievements of our centenary, pharmaceutical historian, Briony Hudson, has written a special 160 page publication to highlight the School's rich legacy of educational, scholarship and research advances, upon which our world-class reputation has been built.

100 Years (1919-2019): Cardiff University School of Pharmacy and Pharmaceutical Sciences is also available for viewing online via a Special Collections repository on the Internet Archive. This allows you to find it via Google, read it online, search within the text, and freely download in a variety of formats. You can view it here: <https://archive.org/details/cu-pharmacy-centenary>

Professor Mark Gumbleton, Head of School said "I would like to take this opportunity to acknowledge the

many thousands of students, staff and external partners who have contributed across the full breadth of the School's achievements over the many generations, and to maintaining the School's welcoming and vibrant character". Professor Gumbleton added, "I also express my gratitude to those who have shared their history in the development of this publication, and give particular thanks to Briony Hudson for researching and authoring this book".



Competition time!

We have a limited number of high quality copies of a 100 Years (1919-2019): Cardiff University School of Pharmacy and Pharmaceutical Sciences available to win in a prize draw.

To be in with a chance of winning your own memento copy, email expressions of interest along with your name and full postal address to phrmy-hos-pa@cardiff.ac.uk. Names will be drawn at random and winners will be notified by email.





Thank you for being part of our first 100 years, from everyone at the School of Pharmacy and Pharmaceutical Sciences

Much has changed in the profession of Pharmacy since we first began teaching in October 1919. Yet, what hasn't altered is our determination and commitment to enhance the profession, meet the changing healthcare needs of the population and improve patients' lives.

For more than one hundred years, we have produced excellent, career-ready, graduates, and have innovated for the benefit of the profession. Today, we are as committed to those objectives as ever.

So, whilst we take great pride in celebrating our achievements over the past century, we aim to use our heritage to help shape the future of pharmacy in the UK and globally.

The Redwood Building became home to the School of Pharmacy and Pharmaceutical Sciences on 2 June 1961. *Credit: Glamorgan Archives*

Our history in brief by Briony Hudson, Pharmacy Historian and Lecturer

In October 1919, the Welsh College of Pharmacy opened as a department of the new Cardiff Technical College. In that first year, 88 students were taught by two members of staff in two lecture rooms and two laboratories in what is now the Bute Building. They could study full or part-time for diplomas and certificates set by the Pharmaceutical Society and the Society of Apothecaries. The School moved quickly to offer the external University of London BPharm degree from 1927, and established a University of Wales degree from 1936.

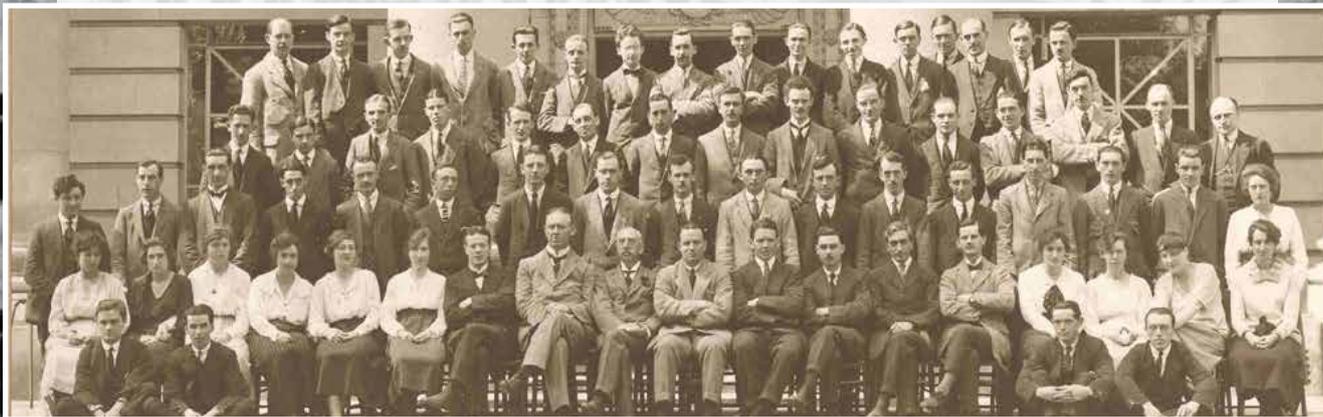
Our first intake of students and staff photographed outside the Technical College (now Bute Building) in August 1920.

By the late 1950s, the School was outgrowing its facilities, and in 1961 the New Building (now Redwood) was officially opened by HRH the Duke of Edinburgh. Originally home to Chemistry, Biology and Navigation alongside Pharmacy, it

offered an opportunity to increase the number of students and staff, and to make significant developments in teaching and research. From its first PhD students in 1961 to ground-breaking discoveries in more recent decades, the School's scientific endeavours have continued to underpin undergraduate teaching.

Key themes throughout the School's history are the support of the local pharmacy community and the great affection with which it's held by past students. Both mean that for more than one hundred years, the School has been central to Welsh pharmacy.

The Redwood Building became home to the School of Pharmacy and Pharmaceutical Sciences on 2 June 1961. Credit: Glamorgan Archives



Reusing face masks: are microwaves the answer?



Researchers from Cardiff University have been testing the feasibility of using microwave-generated steam and dry heat to decontaminate crucial PPE being used to combat the coronavirus pandemic.

It is now acknowledged that SARS-CoV-2, the COVID-19 responsible for COVID-19 pandemic, is primarily transferred via direct contact with infectious droplets. Asymptomatic and symptomatic carriers will shed the virus through droplets when breathing, talking and coughing.

In the early days of the COVID-19 pandemic, the use of respiratory personal protective equipment (PPE) was an essential tool for protecting healthcare workers from exposure to SARS-CoV-2. These items are typically single-use and there was unprecedented and continuing worldwide demand for large volumes of PPE. It has been widely reported that access to respirators and surgical face masks has become restricted in many facilities over the course of the pandemic.

Following a request from Welsh Government, Cardiff University assembled a team of top researchers from the School of Pharmacy and Pharmaceutical Sciences and the School of Engineering to test potential methods for reprocessing personal protective equipment (PPE).

Reporting their findings in the *Journal of Hospital Infection*, the team have shown that certain types of respirators can be effectively decontaminated in just 90 seconds using an industrial-grade microwave oven and a bottle sterilizer containing water.

“Being unable to access adequate PPE puts frontline workers and patients at risk of contracting COVID-19. Whilst masks are usually considered to be single use items, we wanted to find out whether they could be safely disinfected and used again,” said co-author of the study Prof Jean-Yves Maillard, from the School of Pharmacy and Pharmaceutical Sciences.

The researchers believe microwave decontamination could be used in emergency situations to address supply issues and dramatically increase the number of respirators available to frontline staff.

In the study, respirators were exposed to three microwave disinfection cycles and were shown to retain their ability to filter bacteria and viral-sized aerosols. However, the researchers reported that microwaving surgical masks led to a complete loss of their aerosol filtering capacity.

Mike Pascoe, from the School of Pharmacy, said: *“Surgical masks are known to lose effectiveness once they become moist – we suspected that microwave disinfection would lead to a similar loss in their ability to filter aerosols and this was confirmed by our lab observations.”*

The team, which also includes academics from the School of Engineering, also investigated using dry heat ovens as an alternative approach. Dry heat sterilisation does not involve any water and so is compatible with items which are damaged by moisture.

Exposure to 70°C dry heat for 90 minutes was effective at decontaminating both surgical masks and respirators. After three dry heat cycles, both types of mask retained their aerosol filtering properties.

It is essential that PPE is effectively decontaminated between uses. Whilst microwave-generated steam and dry heat have both been shown to effectively kill COVID-19, the researchers wanted to ensure that this method was also effective against bacteria encountered in healthcare environments.

In the study, respirators and surgical masks were purposely contaminated with *Staphylococcus aureus*, a bacterial species highly prevalent in human airways which can cause soft tissue infections and sepsis. *Staphylococcus aureus* is also the accepted biological indicator to test the integrity of a mask.

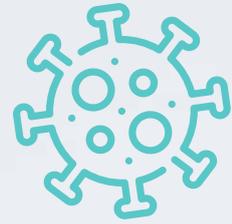
Both methods effectively reduced the number of bacteria on masks to a safe level. As a result of the study, the team have developed a protocol to determine which types of PPE would be suitable for different treatments with dry heat incubators or microwave ovens.

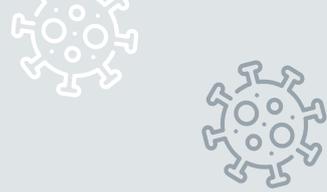
“Mask and respirator models vary considerably and so it is important to ensure the method of decontamination does not compromise their function. Considering the advantages and disadvantages of each approach, we have proposed a reprocessing workflow that practitioners could follow in healthcare settings. Reusing existing PPE could buy vital time during emergencies and save lives”, said Pascoe.

The team warns against members of the public using a similar approach at home. Professor Adrian Porch, from the School of Engineering, said: *“Domestic microwave ovens typically have much lower power, around 800W, and use rotating turntables rather than a rotating antenna. Significantly longer exposure times would be needed to achieve similar results and it is unknown how this would affect the functioning of the mask. Masks which contain thin wires can even catch fire when placed in a microwave.”*



“Being unable to access adequate PPE puts frontline workers and patients at risk of contracting COVID-19. Whilst masks are usually considered to be single use items, we wanted to find out whether they could be safely disinfected and used again.”





Supporting patient care on the front line during the pandemic:

Reflections from Pharmacy Students at Cardiff University

Published by the Royal Pharmaceutical Society on 14 July 2020 written by Cardiff MPharm students, Holly Breeze-Jones and Rebecca Penney

As third year pharmacy students, we have been proud to stand alongside the pharmacy profession and to support patient care during a time of unprecedented challenge. Here we share our experience and insight into dealing with the pressures of the COVID19 pandemic and to highlight the importance of putting education and training into practice.

Positives of working through a pandemic

One thing that has really stuck out for us during these hard and unprecedented times is the level of patience and understanding shown by the vast majority of the public, which pharmacy teams have hugely appreciated. With a massive increase in script volume, prescriptions can take up to a week to dispense rather than the usual 48-hour rule of thumb, which understandably could cause distress for patients.

It has filled us with pride to hear patients taking the time to thank the pharmacy teams for their hard work and highlighting that pharmacy staff are undoubtedly key workers. Additionally, the teamwork shown between members of staff has been phenomenal, which has made us feel immensely proud to work in community pharmacies. With staff members being left no option but to shield for their own safety, or the safety of their family, staff levels have been reduced at the busiest time ever faced.

Staff have been working extra hours and days to ensure that patient centered care is met to the highest standards, as well as being there to support each other in such a stressful

and demanding environment. These positives have allowed us to reflect on our experiences and taught us invaluable life lessons that we will carry with us as we develop into the next generation of pharmacists.

Challenges faced whilst working during a pandemic

Doctors surgeries reduced face-to-face contact with the general public whilst visitors to community pharmacy greatly increased, with demand for minor ailment consultations and healthcare advice increasing dramatically and many people requested 2 or 3 months' worth of their medication. Stock was regularly depleted with high-demand regularly out of stock, phone lines saturated and queues never-ending. It was touching to see how patients were finally seeing value of high street access to healthcare services, particularly with many using the common ailment service as it was easier to see a pharmacist than a doctor.

But at the same time, it was stressful. We were managing an increased workload, and everything was taking longer than usual due to the challenges faced. But we were also desperate to provide the best care possible.

Holly Breeze-Jones



Rebecca Penney

It felt like we were working under pressure, from both ourselves and patients, and fuelled by adrenaline.

Patients were understandably very scared, and we did our best to comfort them. But we also had the fear of catching COVID ourselves and bringing it home to family members who were vulnerable or also frontline workers, especially as it took a while for PPE to become available for pharmacies. However, working through these difficulties has shown us that we're capable of a lot more than we thought and made us more prepared for the future.

Putting teaching into practice - how our studies at university have helped.

As future pharmacists, we are taught to uphold the 9 standards for pharmacy professionals, with the core standard being person centered care. During this pandemic we have been able to really see this being put into practice every single day with pharmacists being placed in new and challenging situations in which they always try to resolve issues with the best interest of the patient at heart.

Another significant and important part of our training is communication. We have never felt so grateful for the masterclasses and workshops we've had at Cardiff University that prepared us so well. For example, with ourselves and patients wearing facemasks for PPE we have had to rely on non-verbal communication and body language to pick up on patient's reactions and needs. Just simply knowing to ask leading questions to further understand their worry, showing empathy and really responding to their concerns has meant we can help patients with more than just providing them with medication.

New perspectives

It's been a crazy few months, with many challenges faced, problems solved, and lessons learnt, and we, like many other pharmacy students across the country helping on the front line find ourselves more resilient, strong and adaptable as a result of our experiences.

About the authors

Holly Breeze-Jones

Holly is a third-year Pharmacy student at Cardiff University. Having worked at her local independent Pharmacy in Penclawdd in Swansea for the past 4 years, Holly was committed to return to work at this pharmacy when she was able to in mid-March.

Holly's experiences working through the pandemic has been stressful and hard at times, however it has taught her so much and made her realise how important teamwork and communication really is. While Holly felt nervous returning to work in such unprecedented circumstances, and had upcoming 3rd year exams to think about, she felt proud to be returning to work to help out such a motivated and supportive team who needed the extra help due to a huge increase in demand.

Rebecca Penney

As a third-year pharmacy student at Cardiff University, Rebecca started working in Neath Pharmacy as soon as face to face campus teaching reverted to online teaching, just before the lockdown started. Rebecca was aware that pharmacy teams were facing a huge increase in workload and she felt compelled to help during the pandemic and contribute on the frontline, using her experience from both working in the pharmacy previously and knowledge gained from her studies.

Rebecca felt really good to be able to help out in this way, committing to 2-3 days per week initially while also preparing for online assessments. Rebecca identified that working during the pandemic had unique challenges; it was stressful, with pharmacies being pushed to limits like never before. But seeing everyone in the pharmacy pulling together proved how much teamwork can make a difference and she recounts it was amazing to be a part of that.



Cardiff pioneer Wales' only in-house university COVID-19 screening service

Like other Higher Education Institutes around the world, Cardiff University found itself in the eye of the Covid storm in March 2020. For a dangerous virus that thrived on close human contact (particularly indoors), the university had to respond in an agile way to rapidly transform its educational provision and invest in a range of unprecedented measures to develop a Covid-secure campus for its students and staff.

Led by the Vice-Chancellor, the University rapidly established a COVID-19 Taskforce of senior staff to oversee all aspects of a safe re-opening the University and its day-to-day business during the COVID-19 crisis. Meanwhile a University Scientific Advisory Group was also assembled, chaired by Professor Westwell including Professor Jean-Yves Maillard and leading School of Pharmacy researcher, Dr Oliver Castell. The scientific advisory group worked alongside colleagues in the Schools of Biosciences and Medicine to provide practical help and advice to Public Health Wales (PHW) and Microbiology colleagues based at University Hospital Wales.

In the Spring of 2020, the PHW labs at Heath Park were processing the majority of Welsh patient swab samples for COVID-19 testing, prior to the establishment of the high-throughput national lighthouse facilities. The University's supply of key reagents and laboratory space was instrumental in keeping the Welsh testing facilities running.

During the course of the virus, it became evident that the high prevalence of asymptomatic, infectious populations, particularly among young adults, is one of the most dangerous aspects of COVID-19. National testing facilities still overwhelmingly focus on symptomatic populations. However, groups living in high density settings such as halls of residence posed a very real risk of spread to older adult populations, with potentially devastating consequences. By early Summer 2020, the University's Scientific Advisory Group started to develop ideas to

screen asymptomatic students and staff, building on internationally leading facilities and expertise within the university's School of Biosciences.

And so, in July 2020, Cardiff University took the pioneering decision to invest its own resources to rapidly introduce its own saliva-based asymptomatic screening facility for students and staff. Cardiff University remains the only university in Wales to screen students using the PCR method for COVID-19 infection, and is one of the few leading Russell group universities to do so.

Saliva provides a convenient, robust and operationally straightforward medium for sample collection, and university buildings with appropriate space and ventilation have been re-purposed for safe sample collection.



Cardiff Researchers supporting patients and enhancing NHS capacity during COVID-19

A team of researchers from the School have been supporting Cardiff and Vale University Health Board (UHB) through collaboration during COVID-19.

The research collaborative group between the School and Cardiff and Vale UHB has been in place for several years. However, closer working relationships have evolved during the last year with the group supporting the UHB to ease NHS Covid pressures.

School staff including Drs Allan Cosslett, Chris Thomas and Helen

King worked with UHB quality control teams to carry out critical stability studies where capacity to undertake this important work within the NHS had been exceeded.

The studies conducted by the team focussed on facilitating ambulatory care such as chemotherapy and cardiac clinical services and home parenteral nutrition. Demonstrating the stability of medicines in ambulatory delivery devices allows for extension of the shelf lives, meaning that in-patients can be safely discharged home.

Dr Sarah Hiom, All Wales Specialist Pharmacist at Cardiff and Vale UHB said, "The support we have received from the group has been invaluable. It has not only reduced risk of hospital acquired infection to vulnerable patients but increased available bed space. Importantly, a positive impact on patient wellbeing and overall satisfaction has been achieved by enabling patients to receive treatment in the comfort and safety of their own homes".



The service, based on the highly sensitive RT-PCR method, and has sufficient robotic capacity to process >2,000 samples per day.

Professor Andrew Westwell from the School of Pharmacy said "Since the screening facility opened at the beginning of the 2020/21 academic year, the University has screened >25,000 students and staff. Importantly, the service has discovered several hundred asymptomatic positive cases that have been confirmed by NHS testing and subsequently isolated. This has prevented further spread of the virus amongst the community including clinical placement students in high-risk environments".

The screening service database and samples stored at the University biobank provide a valuable and unique resource for ongoing research studies in areas such as long-term COVID-19 immunity.

Data dashboards can be found at: www.cardiff.ac.uk/coronavirus/covid-19-case-numbers

University news story, including a video tour of testing facilities can be found here: www.cardiff.ac.uk/news





Staff Spotlight:

Simon Taylor MRPharmS

In the spring of 2020, as the UK began to feel an increasing impact of the COVID-19, Boots Ltd began working with the NHS and the UK Government to set up drive through testing stations for people with symptoms of COVID 19. Simon Taylor, Teacher Practitioner at the School and Healthcare Academy Trainer for Boots tells us about his work.



What is your background?

I graduated from Cardiff University in 2004 but began working with Boots in 2001 as a summer placement student. I qualified as a pharmacist in 2005 and worked across England and Wales for Boots as an in-store pharmacist. In 2011 I won the “Improvements in Medicines Management” award at the Welsh Pharmacy Awards. A year later, I was part of the Boots team (Queen Street, Cardiff branch) who won “Pharmacy of the Year” in the UK Chemist and Druggist Awards.

My practice has mainly focussed on delivery of NHS & private services for Boots including vaccinations services, travel services and support for Care Homes including medicines administration training. In 2018 I became a Healthcare Academy Trainer to support the development of pharmacy colleagues including pre-registration and foundation pharmacists, as well as becoming a Teacher Practitioner for the School of Pharmacy and Pharmaceutical Sciences at Cardiff University.

Tell us about your latest role at Boots

Boots has been at the heart of UK healthcare for 171 years and has a long history of supporting its communities in times of need. I had the privilege of being part of the Boots team who set up our COVID-19 testing process and created hundreds of trained testers across the UK.

The COVID-19 testing service started out as an initiative to get NHS workers back into work if they tested negative, or confirming the need to isolate if positive. Soon however, the operation expanded to include other healthcare workers, key workers and ultimately anyone who thought they could be at risk of having COVID 19. Millions of tests were conducted and thousands of NHS workers were able to resume working on the frontline to keep NHS services going.

A key part of this operation was the people who put themselves forward as testers, some of whom were volunteers. These people ensured they worked clinically and safely to perform accurate tests, helping people to get their results quickly.

One of the drive-through sites that I helped set up at Bristol had a second year MPharm student from Cardiff, Kierra Martin, join the team of testers, spending her time outside in varying weather conditions to perform tests. This particular site regularly tested more than one thousand symptomatic people each day and I am really proud of the effort that each and every tester put in.

Kierra was also part of the in-store testing service in Cardiff too. I know she really valued the experience and skills she acquired which have proved not only to help her in her studies but will stand her in good stead for the future too.

How has the testing service evolved over the last few months?

More recently we have seen the UK start to roll out mass testing. Boots continues to support the Government and local authorities across the UK to provide support and solutions. I continue to support training programs to create more testers for these initiatives. This includes testing in Boots pharmacies and recent mass testing efforts in England and Wales. Providing tests is still hugely important in helping people return to work, to facilitate travel and to understand the spread of the virus.

What do you like about your role as both Trainer and Teacher Practitioner?

I love working in a team that has such a huge resource of people, ideas and enthusiasm. This year has been a real challenge but lots of people and organisations are showing the agility to change the way they work, ensuring they can continue to provide the services and care that people need.

It's great to be back in the School of Pharmacy teaching face to face and remotely with blended learning. It's a tough time for everyone, but so far I've had great interactions with students, helping to bring the practical aspects of community pharmacy to life and demonstrate the value of the profession on the frontline.

Celebrating the pioneers and rising stars in Drug Discovery

The School hosted the Inaugural Chris McGuigan Symposium on 26 September 2019, to celebrate outstanding work in drug discovery across the world.

The symposium was created to honour the memory of Professor Chris McGuigan, a highly regarded and respected former member of staff at the School of Pharmacy and a world-leading scientist in the field of drug discovery.

Professor Chris McGuigan was a specialist and gifted drug designer and developer who was at the very heart of vital scientific research for more than 30 years. He was one of the UK's leading scientists in the field of anti-cancer drug discoveries. His research expertise also extended into new drug discovery and development for HIV, hepatitis B and C, and central nervous system disease. He was responsible for inventing four new experimental drugs to enter human clinical trials, published over 200 scientific papers and submitted in excess of 100 patent applications.

The biennial Chris McGuigan Drug Discovery Awards celebrates Professor Chris McGuigan's legacy of excellence and innovation in drug discovery science. Nominations are made by academics within the College of Biomedical and Life Sciences. There are three awards available to researchers who have excelled in their field.

Winners of the Inaugural Chris McGuigan Drug Discovery Awards 2019

The inaugural Chris McGuigan Symposium presented three awards to winners who have excelled in the field of drug discovery.

The McGuigan Outstanding PhD Thesis Award was given to Dr Gilda Giancotti for her work on c-FLIP inhibitors. Dr Giancotti completed her PhD in Medicinal Chemistry at Cardiff University in 2018 under the supervision of Professor Andrea Brancale, working on the development of novel anti-cancer agents for the treatment of breast cancer. Gilda is currently working as a medicinal chemist for the Medicines Discovery Institute at Cardiff University, to develop novel drugs to treat mental health conditions.

The McGuigan Outstanding PhD Thesis Award

An award of £1,000 to recognise the best thesis in drug delivery related research by a successfully awarded Cardiff University doctoral graduate

The McGuigan Rising Star Award

An award of £4,000 is given to an early career researcher (within 5 years of PhD/MD) who has made a significant, original and internationally recognised impact in drug discovery sciences.

The McGuigan Award for Distinguished Work in Drug Discovery

An award of £10,000 to recognise a senior researcher in academia or industry with an international reputation and proven track record of leadership in initiating or progressing new scientific principles; or in translating drug discovery to the development of human medicines.

Speaking about her award, Dr. Giancotti said, 'I am truly honoured to receive the McGuigan Outstanding PhD Thesis Award. This award represents one of the most significant achievements of my early career, and a further motivation to pursue my work in the research field.'

The McGuigan Rising Star Award was won by Dr Joana Rocha-Pereira of KU Leuven. Dr Rocha-Pereira was given the award for her work on creating new model systems for the discovery of medicines that target norovirus. Dr Rocha-Pereira said "Drug discovery is why I chose to study pharmacy, and being here in the Symposium in memory of a man who's given so much to drug discovery is very special".

The McGuigan Award for Distinguished Work in Drug Discovery was awarded to Professor Ralf Bartenschlager of Heidelberg University, for his work on finding a cure for hepatitis C. Professor Bartenschlager's work over the last thirty years has included innovative imaging methods and cell culture systems with the aim of achieving detailed insights into the complex interactions between the host and its pathogens. These in-depth cell biological studies have led to



the development of drugs that can cure hepatitis C in 94-99% of patients following a twelve week course, with minimal side effects.

Professor Bartenschlager said "This is a true honour and recognition of the work my team and I did, and I am extremely thankful. I consider the work of Chris McGuigan a prime example how research in medicinal chemistry and virology has contributed to antiviral therapy. It's been a true privilege to have been part of the developments that laid the ground for curative therapy of chronic hepatitis C"

The next Chris McGuigan Symposium will take place in the autumn of 2021. To register your interest in attending the symposium please contact mccguiganaward@cardiff.ac.uk

For more information about the Chris McGuigan Drug Discovery Awards visit www.cardiff.ac.uk/chris-mcguigan-drug-discovery-awards

Support us

The Chris McGuigan Drug Discovery Awards and Symposium is made possible thanks to a generous donation from Dr Geoff Henson, a friend of Professor McGuigan.

Cardiff University can save, change and enrich lives through your support. Donations are making our pioneering research possible and giving talented students the foundations to flourish.

To find out how you can support our work visit www.cardiff.ac.uk/donate

Spotlight on School Research – enhancing treatments to fight cancer

The School of Pharmacy and Pharmaceutical Sciences is involved in world-leading research aimed at improving human health. The excellence of our pharmaceutical science and health related research is recognised internationally. Here we explore some of the ground-breaking research from within the School that's currently under development to enhance cancer treatments.

Cancer ProTides prodrugs in clinical trials and development

A series of anticancer ProTide prodrugs, designed at the School, are now in clinical trials to improve the performance and tolerability of a number of cancer therapies.

ProTide delivery technology was pioneered at Cardiff University School of Pharmacy and Pharmaceutical Sciences by the late Professor Chris McGuigan. ProTide technology allows the efficient and effective delivery of nucleoside-based drugs (antivirals and anticancer agents) into target cells. This technology has been proven to dramatically improve the therapeutic activity of antiviral nucleoside drugs. Now, a series of anticancer ProTide prodrugs discovered by the same team at the School - led by Dr Magdalena Slusarczyk with Dr Michaela Serpi - are currently undergoing clinical trials in collaboration with NuCana plc.

Nucleoside analogues are a major class of anti-cancer chemotherapeutic agents used for treating a variety of tumours. They prevent tumour growth by inhibiting the replication of DNA, which leads to cell death. However, the effectiveness of nucleoside-based drugs is often reduced, due to innate or acquired cancer cell resistance, resulting in poor survival outcomes for patients. This resistance is due to various factors including poor drug uptake by tumour cells (deficiency in nucleoside transport proteins), poor activation (drugs must be phosphorylated to nucleotides to be effective) and rapid metabolic degradation of the drug. In addition, chemotherapy drugs target healthy cells, as well as cancer cells, resulting in severe side effects for patients; the School's ProTide technology addresses and overcomes these limitations.

Cancer ProTides in clinical development include Acelarin® which is being evaluated in a global Phase III study for the treatment of patients with advanced biliary tract cancer. In June 2019, U.S. Food and Drug Administration granted orphan drug designation for Acelarin® for the treatment of biliary tract cancer.

Other cancer ProTides in clinical development include NUC-3373, a ProTide transformation of floxuridine (FUDR), which is being evaluated in Phase I study in patients with different advanced solid tumours and in Phase 1b in a combination with other agents for the treatment of patients with advanced colorectal cancer. NUC-7738, a proTide modification of the nucleoside 3'deoxy adenosine, is also in clinical trial Phase I for both solid tumour and haematological malignancies.



New compounds developed to fight cancer

Researchers at the School, in collaboration with the University of Birmingham, have developed new molecules that can initiate an immune response against cancer cells.

Immunotherapy is one of many state of the art strategies currently being explored and used to treat cancer. It involves creating an environment where the immune system mounts an attack on cancer cells and tumours that were previously undetectable. Some immunotherapy approaches are already in clinical use, and the technology was recognised in 2018 when two of its pioneers, James P Allison and Tasuko Honjo, were awarded the Nobel Prize for Physiology or Medicine.

Aiming to develop new immunotherapeutics, a team of researchers led by Dr. Youcef Mehellou from the School and Prof. Ben Willcox from the University of Birmingham, have developed a series of compounds that selectively target and activate one type of immune cell, which is thought to be important in fighting cancer. This sub-type of immune cell was then shown to be effective in eradicating bladder cancer cells. Although the team previously reported a series of compounds that perform the same function, the new series are far more potent than the first generation and have better chemical properties that are likely to make them better medicines.

Dr. Youcef Mehellou, who co-led the study at the School of Pharmacy and Pharmaceutical Sciences, said:

“This new series of compounds have great promise to be developed into much needed anticancer therapeutics. Working with our expert collaborators and partners, our focus now is on identifying the cancers where these compounds will have optimal therapeutic effects and progressing the compounds to studies in humans as soon as possible.”

The 2021 Research Excellence Framework - An important year for our research

The Research Excellence Framework (REF) is the system for assessing the quality of research in UK higher education institutions. As part of Cardiff University's REF21 submission earlier this year, three Impact Case Studies from the School of Pharmacy and Pharmaceutical Sciences were included as examples of how our research is having a positive impact, beyond academia, under a unit of assessment entitled 'Allied Health Professions, Dentistry, Nursing and Pharmacy.' These case studies explored how our research into drug discovery and drug delivery have led to company growth for three of our commercial partners.

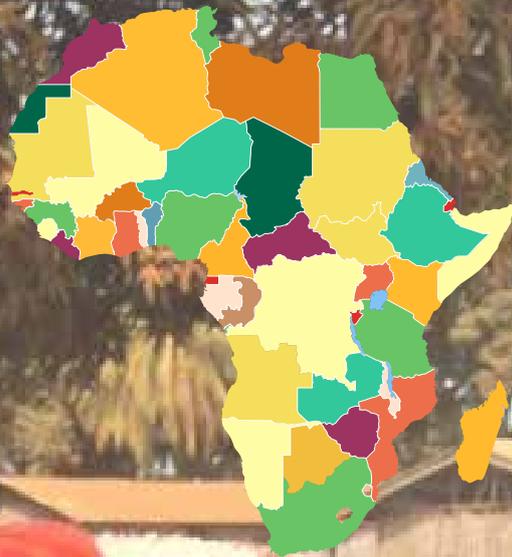
One of these case studies explored how the development of our anticancer ProTide prodrugs, mentioned above, has enabled NuCana plc to grow and deliver a range of new clinical trials. A second case study gave details of how our long-standing research into the efficacy of dry powder inhalers has led to commercial growth for Qualicaps®, a leader in the field of inhalation. Lastly, we demonstrated how research into the effectiveness and use of antimicrobial wipes, used to minimise the spread of bacteria in hospital settings, has led to a new International Standard for the testing and use of antibacterial wipes, as well as substantial growth for a leading UK wipe manufacturer GAMA Healthcare.

The results of the 2021 Research Excellence Framework will also reflect the significance and originality of research publications and the excellence of our environment to support high quality impactful research discoveries. Watch this space!



Cardiff Pharmacy students help save thousands of lives in Africa

A maternal health charity working to address the tragedy and injustice to women who die every year in pregnancy and childbirth in Sub-Saharan Africa benefits from Cardiff Pharmacy student society's sterling fundraising efforts.



The Welsh Pharmaceutical Students Association (WPSA) aims to enrich the lives of its student members while they are studying Pharmacy at Cardiff University. The WPSA hosts socials, sporting events and an annual charity ball. The society is a great way for members to integrate with other students and get a helping hand during their MPharm degree.

Each year, the WPSA raises money for its nominated charity. Previous benefactors include the children's palliative care charity, Ty Hafan.

In 2019/20 the WPSA's nominated charity of the year was Life for African Mothers, a registered maternal health charity. Over 303,000 women die every year from complications in child-birth which occur mainly in Sub-Saharan Africa. 99% of all these deaths are avoidable with the right medical care and resources. The charity takes direct action by providing medications and midwifery training.

Through their range of student socials and sporting events, and sale of centenary branded merchandise, the WPSA raised £3702.63. The WPSA's donation funded a shipment of 120,000 tablets of Misoprostol to Sierra Leone with the potential of saving thousands of lives.

Dafydd Rizzo, Chair of the WPSA said **"This is what our society is about, not just about great social events for Pharmacy students, but to raise money in the process for brilliant causes that change and saves lives. We should all be proud of what we've achieved"**

Alongside the WPSA, the School would like to offer congratulations to Angela Gorman, Chief Executive of Life for African Mothers, for being awarded an MBE in 2020 for her charitable work. Following the success of their Mental Health campaign in the Spring of 2020, the WPSA will be raising money for Mind Cymru in the 2020-21 academic year.

A word from WPSA

WPSA Triumph in Varsity

The success of the WPSA over the last year doesn't stop with their fundraising efforts. The WPSA triumphed in Varsity 2019 with a treble sporting win over their arch rivals, the students of the School of Optometry and Vision Sciences. Although the WPSA perhaps met their match in February 2020 with a Student vs School staff football match, played in torrential rain at Talybont, which resulted in a 5-5 draw.

WPSA Centenary Ball

Following the staff vs student football match, the WPSA hosted a ball in honour of the School's centenary at the Hilton Hotel Cardiff. The ball was attended by staff and students and featured a special guest appearance from the School's staff band, Bad Medicine. The band featured Wyn Davies (Teacher/Practitioner) of Only Men Aloud fame on vocals, Dr Chris Thomas (Lecturer) on drums, Dean Routledge (Research & Engagement Administrator), Sebastiano Rizzo (PhD research) on bass and former PhD postdoctoral School researcher, Dr Chris Jeans, on a number of instruments with backing vocals from Jo Blankley (School Marketing Officer). There were even guest vocals from Deputy Head of School and ball MC, Professor James Birchall.

Last but by no means least to WPSA's memorable year was their staggering achievements in the Cardiff Half Marathon run alongside other Cardiff University staff and students.

Professor Mark Gumbleton, Head of School said

"On behalf of the School, we offer hearty congratulations to the WPSA and all the students for their achievements and offer thanks to the outgoing Chair, Dafydd Rizzo. We also wish every success to the new WPSA committee for the year ahead, and a warm welcome to the new Chair, and former WPSA Secretary, Hannah Blowers".





A fond farewell to a unique member of the pharmacy profession

School of Pharmacy and Pharmaceutical Sciences remembers esteemed colleague, and creator and benefactor of the Turner Collection, Terry Turner OBE (pictured left).

Terry Turner OBE, former Senior Lecturer and founder of the Surgical Dressings Research Unit at the former Welsh School of Pharmacy and Pharmaceutical Sciences died on Sunday 13th October 2019 at the age of 90.

Terry registered as a pharmacist in 1955 and, throughout his long and varied career within the profession of pharmacy, was always one of its principal protagonists. He began his academic career in the Welsh School of Pharmacy in 1957 as a Lecturer in Microbiology and progressed to become Senior Lecturer in Pharmacognosy and Head of the Pharmacognosy department. He gained his MPharm in 1960 for work on the pharmacognosy of certain species of *Strychnos*.

Terry became a specialist in surgical dressing research and was the founding Director of the School's Surgical Dressings Research Unit. In 1969 he initiated the first quality control and evaluation programme of wound management in the UK. In 1970, he was appointed Chairman of the Pharmaceutical Society of Great Britain (PSGB) Committee on Surgical Dressing Performance, and also to the British Pharmaceutical Codex Sub-Committee on Surgical Dressings. He acted for many years as consultant pharmacist to the Welsh Office and the All Wales Dressings Committee.

He was co-editor of the Journal of Wound Management and a member of the European Pharmacopoeia advisory group. In 1980 he joined the Committee on Dental and Surgical Materials. He was also a member of the founding Committees for the European Wound Management Association and the Veterinary Wound Healing Association. He was actively involved with the Welsh Executive of the PSGB from its inception in 1976 until 2000. He chaired the Executive between 1980 and 1981.

He was also a founding member of the British Society for the History of Pharmacy which was established in 1967. In 2017, Terry was presented with their Leslie Matthews Medal in recognition of his original and scholarly work on the history of British pharmacy. He was also a past President of the Welsh History of Medicine Society.

Terry was designated a Fellow of the PSGB in 1976 for 'distinction in the profession of pharmacy', was awarded an OBE in 1989 for Services to pharmacy in Wales. In 1991 he was awarded the Royal Pharmaceutical Society of Great Britain's Charter Silver Medal.

An avid collector of historical pharmaceutical artefacts and materia medica, in the early 1980s he curated a display - known as the Turner

Collection - in Redwood Building, home of the School of Pharmacy and Pharmaceutical Sciences. He also established an exhibition of pharmacy history at the National Botanic Garden of Wales in 2000. He acted as guest curator and advisor on pharmaceutical artefacts to the National Museum Wales, bequeathing many of his fascinating collection to them.

To colleagues and students alike, all knew he cared about their ambitions and their development. He was full of wisdom framed through a great many anecdotes from his past.

Terry was a unique member of the pharmacy profession who will be widely missed. Many of his former students would agree that they would not have achieved their career success without his initial support and encouragement.

The legacy of Terry Turner continues with an on-campus summer internship carried over into 2021 for an MPharm undergraduate to work on an exciting joint project between Cardiff University and National Museum Wales. The project will initiate a contemporary review of 469 *Materia Medica* specimens in the Museum's collection with the aim of making them more accessible and of relevance to modern day medicine and pharmacy practice.

The School offer thanks to Sarah Cockbill, Mair Davies and Bryony Harmer for use of their Tribute to Terry Turner published in *The Pharmaceutical Journal*, 11 NOV 2019

Student success at the British Pharmaceutical Students Association Conference

The BPSA Annual Conference is the flagship event of the British Pharmaceutical Students Association. The 78th Annual Conference was due to take place on the 8th April 2020 at Aston University in Birmingham but due to the pandemic was celebrated online on 17th October.

The BPSA conference explores matters most relevant to pharmacy. It provides insight into key areas through workshops, panel discussions, keynote speakers and debates. The BPSA Conference aims to inform students learning whilst providing opportunities to debate relevant pharmacy issues.

BPSA competitions were held at the School in the autumn semester of 2019. Pitched against other pharmacy schools at regional competitions and later at the finals at the BPSA conference, the School are immensely proud and would like to offer heartfelt congratulations to the following Cardiff students for their success and achievements.



Winner of the Alliance Healthcare and Alphega Pharmacy Business and Enterprise Competition - **Maddyson Chan**, 4th year MPharm

This competition encouraged students to learn more about the business aspects of operating a pharmacy alongside enhancing confidence and presenting skills. The student was given 15 minutes to research and then prepare for a business pitch.

"I am so grateful for the opportunity to take part in the competition. Hearing feedback from peers who had previously competed inspired me to give it a go, and I would encourage everyone else to try it too! The competition itself really opened my eyes to the world of pharmacy business and getting to attend a BPSA conference allowed me to meet other pharmacy students. I had lots of fun competing at each level of the competition and surprised myself with how I tackled each challenge. I'm proud of the ideas I pitched - not to mention the amazing prizes I won!"



Winner of the Boots Clinical Competition - **Caitriona O'Driscoll**, 4th year MPharm

This competition aimed to improve students' clinical and consultation skills and also enhance and boost confidence alongside soft skills.

"I am absolutely amazed to have won the clinical skills competition and to retain the title for Cardiff University for a second year in a row. The competition has been a brilliant opportunity for me to gain confidence and meet other pharmacy students from different universities."

Professor James Birchall, Deputy Head of School said

"As a School we are extremely supportive of providing our excellent students with these learning and professional networking opportunities. It is great to hear that our students are embracing these opportunities and excelling in the competitions. We are very proud of them".



Winner of the Lloyds Public Health Campaign Competition - **Lucy Whitehouse**, 4th Year MPharm

During this competition, students were required to design a public health campaign on the topic of 'Mental Health First Aid: How to respond to a person in crisis', by means of a video presentation. Lucy based her video on the BPSA Mental Health campaign which was ran in the Redwood Building in early March 2020.

"Taking part in the Lloyds public health competition was a brilliant experience. We researched the importance of Mental health campaigns which helped us expand our knowledge around the subject we had been studying as part of the MPharm. This competition has left us with a lasting memory of a highlight moment during our 3rd year of studies"

The success doesn't stop there! No less than three Cardiff students were elected to the BPSA Executive 2020/21 following the October 2020 elections:

- Vice President - **Bella Shah**, 4th year
- Education Development Officer - **Ahlam Nagi**, Pre-reg, Ex-Cardiff
- Western Area Coordinator - **Yusif Elmi**, 3rd year

If any students would like to know how to get more involved with BPSA please contact **Lucy Whitehouse, BPSA WPSA Representative:** WhitehouseL4@Cardiff.ac.uk

Paving the way for current and future leaders in Pharmacy

The annual Welsh Pharmacy Awards recognise the most innovative initiatives and celebrate the achievements of the industry and profession working on the frontline to cultivate and deliver outstanding patient care.

The 2019 prestigious awards ceremony, held in honour of our healthcare heroes and rising stars, attracted over 300 guests to the Vale Resort – from leaders to learners; newcomers to staple caregivers.

Host for the evening, Journalist and Presenter, Sian Lloyd, along with esteemed sponsors and judges, announced the recipients in the 10 categories, which ranged from Hospital Pharmacy Team of the Year, and Medicines Counter Staff Training, to Innovations in Quality and Efficiency through Technology in Community Pharmacy. The Special Recognition Award was presented to Suzanne Scott-Thomas for her contribution to Welsh pharmacy; particularly as Clinical Director and Head of Medicines Management at Cwm Taf University Health Board, and Chair of the Royal Pharmaceutical Society (Wales).

In a year of uncertainty – and against conditions unforeseen and pressures unprecedented – Welsh pharmacists have showcased their professional commitment more than ever before.

In response to COVID-19 guidelines the 2020 Welsh Pharmacy Awards ceremony transitioned online on 9th December where key healthcare representatives and award sponsors submitted videos and winner announcements.

Keeping pace with Wales' ever-evolving delivery of healthcare services, over 10 awards were announced with categories spanning from Hospital Pharmacy Team of the Year, to Management of Diabetes in GP Practice and Community Pharmacy, and Pharmacy Student Leadership.

The recipient of 2020's prestigious Lifetime Achievement Award was a former clinical pharmacy postgraduate of the School, Paul Harris, in recognition of his exceptional contribution to patient care, going above and beyond the call of duty in his roles as Director of Community Pharmacy Wales and Welsh Pharmaceutical Committee Chair.

Leadership at a young age is a sure sign of a strong future voice for the pharmacy profession, whether

MPharm students go on to work in the community, hospital, GP practice, research or in the academic arena, they are encouraged by the School and professional bodies to forge ahead with new innovative ideas.

Staff at the School of Pharmacy and Pharmaceutical Sciences were delighted to nominate two exemplary fourth year MPharm undergraduate students who demonstrate such leadership qualities for a new Pharmacy Student Leadership Award category.

The School offer congratulations to Dafydd Rizzo, former WPSA Chair, for winning the Pharmacy Student Leadership Award 2020 and to additional category nominee, Rafal Latif, Chair of the Student Staff Panel. We also offer congratulations to all other winners, nominees and healthcare heroes.

Full winners of the 2020 Welsh Pharmacy Awards
www.welshpharmacyawards.info/



MPharm in Cardiff rated by students

The MPharm course in Cardiff achieved an overall satisfaction score of 93% in the most recent National Student Survey.

The National Student Survey is an independent survey which asks students to rate the quality of their Higher Education experience. It is widely recognised as a key measure of student satisfaction and is a useful tool for prospective students when making study choices.

Thank you to all our students who voted and to our wonderful School staff who continue to ensure we provide a learning experience that enables us to remain one of the top Schools of Pharmacy in the UK.





Professor Chris McGuigan Memorial Garden named as one of country's best green spaces

The Professor Chris McGuigan Memorial Garden at Redwood Building has achieved the prestigious Green Flag Community Award for the fourth year running in recognition of its dedicated volunteer involvement, high environmental standards and commitment to delivering great quality green space.

Keep Wales Tidy has unveiled the 2020 Green Flag Award winners – the international mark of a quality park or green space. 127 community managed green spaces across the country met the high standards needed to receive the Green Flag Community

Award. This means that Wales still holds a third of the UK's community Green Flag sites.

The Green Flag Award programme is delivered in Wales by environmental charity Keep Wales Tidy, with support from Welsh Government. Independent green space experts volunteered their time in early autumn to judge applicant sites against eight criteria, including biodiversity, cleanliness, environmental management, and community involvement.

Lucy Prisk, Green Flag Coordinator at Keep Wales Tidy said "The pandemic

has shown just how important high-quality parks and green spaces are to our communities. For many of us, they have been a haven on our doorstep, benefitting our health and well-being. The success of Cardiff University's memorial garden in honour of drug discovery pioneer, Professor Chris McGuigan, in achieving the Green Flag Community Award is a testament to the volunteers of both staff and students at the School who have maintained excellent standards under the most challenging circumstances. I'd like to congratulate and thank them all for their outstanding commitment."

Enriching Student Lives

The Enriching Student Life Awards 2020 organised by Cardiff University Students Union celebrates students and staff who have enriched student lives over the past academic year.

Sixteen members of School staff were nominated by students and University staff for their inspiring and supportive work.

The School would like to congratulate Dr Julia Gee and Dr Emma Kidd who were recognised as the ESLA 2020 winners of both the Personal Tutor of the Year Award and the Enriching Student Life Award.

Also, huge congratulations to all sixteen School staff nominees and to those shortlisted.

CBE awarded to Professor Tony Campbell in the 2021 New Year Honours List

A wonderful and wholly appropriate honour of a CBE (Commander of the Order of the British Empire) was awarded to a member of our School's staff, Professor Tony Campbell in this year's New Year Honours List.

The prestigious award was made to Tony for services to Biochemistry. Services which have not only seen Tony make substantial contributions at a scholarly level but also in the translation of his science into medical diagnostics 'tools' that are in routine and widespread clinical use.

Tony is an international authority in cell signalling - which lies at the heart of how hormones, neurotransmitters and drugs affect the human body - and is also a world authority on bioluminescence. One of his discoveries, using chemiluminescence, is

now used in several hundred million clinical tests per year worldwide and has been hailed as one of the top 100 inventions from UK universities in the past 50 years. For the past 15 years his research focus has been lactose and food intolerance, which has led to a new hypothesis on the cause of irritable bowel syndrome.

Tony is also a passionate communicator of science toward enhancing public understanding and in inspiring School pupils and students through cutting edge science. In 1993 Tony founded the Darwin Centre based in West Wales which encourages curiosity amongst young people and communities in STEM subjects. He won the Inspire Wales award for Science and Technology in 2011. In 2016 Tony, with this wife, Stephanie, set up The Young Darwinian, an international journal for school students to publish their projects and scientific experiences.

As a recipient of the CBE in the 2021 New Year Honours List we are delighted for Tony and his family, and proud he is affiliated with our School.

MSc Ymchwil Glinigol

Datblygu sgiliau ymchwil rhagorol i ddatblygu gyrfa mewn ymchwil glinigol. Mae'r cwrs hwn yn darparu gwell dealltwriaeth o brosesau a rheoleiddio treialon clinigol, gan gynnwys mewnwelediad i'r ystod amrywiol o feysydd therapiwtig a'u triniaethau mewn perthynas â chofrestru cyffuriau a diogelwch cyffuriau.

Nodweddion Nodedig

- Gwybodaeth a dealltwriaeth fanwl o arferion gorau sy'n berthnasol i gynnal treialon clinigol.
- Profiad o hyfforddiant manwl mewn maes datblygu cyffuriau, treialon clinigol, safonau rheoleiddio ac ennill cymeradwyaeth ar gyfer mynediad i'r farchnad fyd-eang.
- Derbyn y datblygiadau diweddaraf mewn Ymchwil Glinigol gan arbenigwyr yn y diwydiant.
- Cefnogaeth gan diwtor personol profiadol ac adborth gan dîm academiaidd profiadol.
- Cyfle i wneud prosiect ymchwil gyda chefnogaeth gan Ysgol ymchwil a gydnabyddir yn rhyngwladol.
- Hyblygrwydd i deilwra'ch astudiaeth tuag at ddiddordebau eich cyflogwr gyda modiwlau dewisol a phwnc prosiect ymchwil.

Ynglŷn â'r cwrs

- Rhaglen fodiwlaidd, ran-amser a dysgu o bell sy'n caniatáu hyblygrwydd i astudio wrth weithio.
- Cyfres o sesiynau tiwtorial ar-lein ac ymarferion ffurfiannol, fforwm trafod cymar-i-gymar gyda mynediad i lyfrgell ar-lein helaeth y Brifysgol.

- Yn cynnwys 3 modiwl astudio (60 credyd) ym Mlwyddyn 1, 3 modiwl astudio (60 credyd) ym Mlwyddyn 2 gan symud ymlaen i ddyfarnu MSc mewn Ymchwil Glinigol gyda 60 credyd ar ôl cwblhau prosiect yn seiliedig ar ymchwil yn llwyddiannus ym Mlwyddyn 3

Gofynion mynediad

- Yn addas ar gyfer graddedigion gofal iechyd, gwyddorau bywyd neu bwnc cysylltiedig â gofal iechyd.
- Gall ymgeiswyr sydd â phrofiad mewn ymchwil glinigol a threialon fod yn gymwys yn amodol ar gymeradwyaeth.
- Rhaid i ymgeiswyr nad Saesneg yw eu hiaith gyntaf gael sgôr IELTS gyffredinol o 6.5.

Gyrfaoedd

Wedi'i gynllunio i ddatblygu neu wella'ch gyrfa ym maes Ymchwil Glinigol, mae graddedigion blaenorol yn mwynhau gyrfaoedd llwyddiannus yn y diwydiant fferyllol, gwasanaeth iechyd, ymchwil gontract, sefydliadau, awdurdodau rheoleiddio, rheoli data sefydliadau neu mewn ysgrifennu meddygol. Mae eraill wedi mynd ar drywydd ymhellach ymchwil trwy PhD.



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MSc in Clinical Research

Develop outstanding research skills to advance a career in clinical research. This course provides enhanced understanding of clinical trial processes and regulation, including an insight into the diverse range of therapeutic areas and their treatments in relation to drug registration and drug safety.

Distinctive Features

- Advanced knowledge and understanding of best practice applied to running clinical trials.
- Experience in-depth training in the field of drug development, clinical trials, regulatory standards and gaining approval for global market access.
- Receive the latest developments in Clinical Research from a range of industry experts.
- Access to personalised support and feedback from an experienced academic team.
- An opportunity to undertake a research project with support from an internationally recognised research School.
- The flexibility to tailor your study towards your employer's interests with optional modules and research project topic.

Course delivery

- A modular, part-time and distance learning programme that allows the flexibility to study whilst working.
- A series of online tutorials and formative exercises, peer-to-peer discussion forum with access to University's extensive online library.

- Comprises of 3 study modules (60 credits) in Year 1, 3 study modules (60 credits) in Year 2 progressing to award of an MSc in Clinical Research with 60 credits on successful completion of a research-based project in Year 3.

Entry requirements

- Suitable for graduates from healthcare, life sciences or a healthcare related subject.
- Applicants with experience in clinical research and trials may be eligible subject to approval.
- Applicants whose first language is not English must obtain a IELTS score of 6.5 overall.

Careers

Designed to advance or enhance your career in Clinical Research, previous graduates enjoy successful careers in the pharmaceutical industry, health service, contract research organisations, regulatory authorities, data management organisations or in medical writing. Others have pursued further research through a PhD.



Interested? Get in touch

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