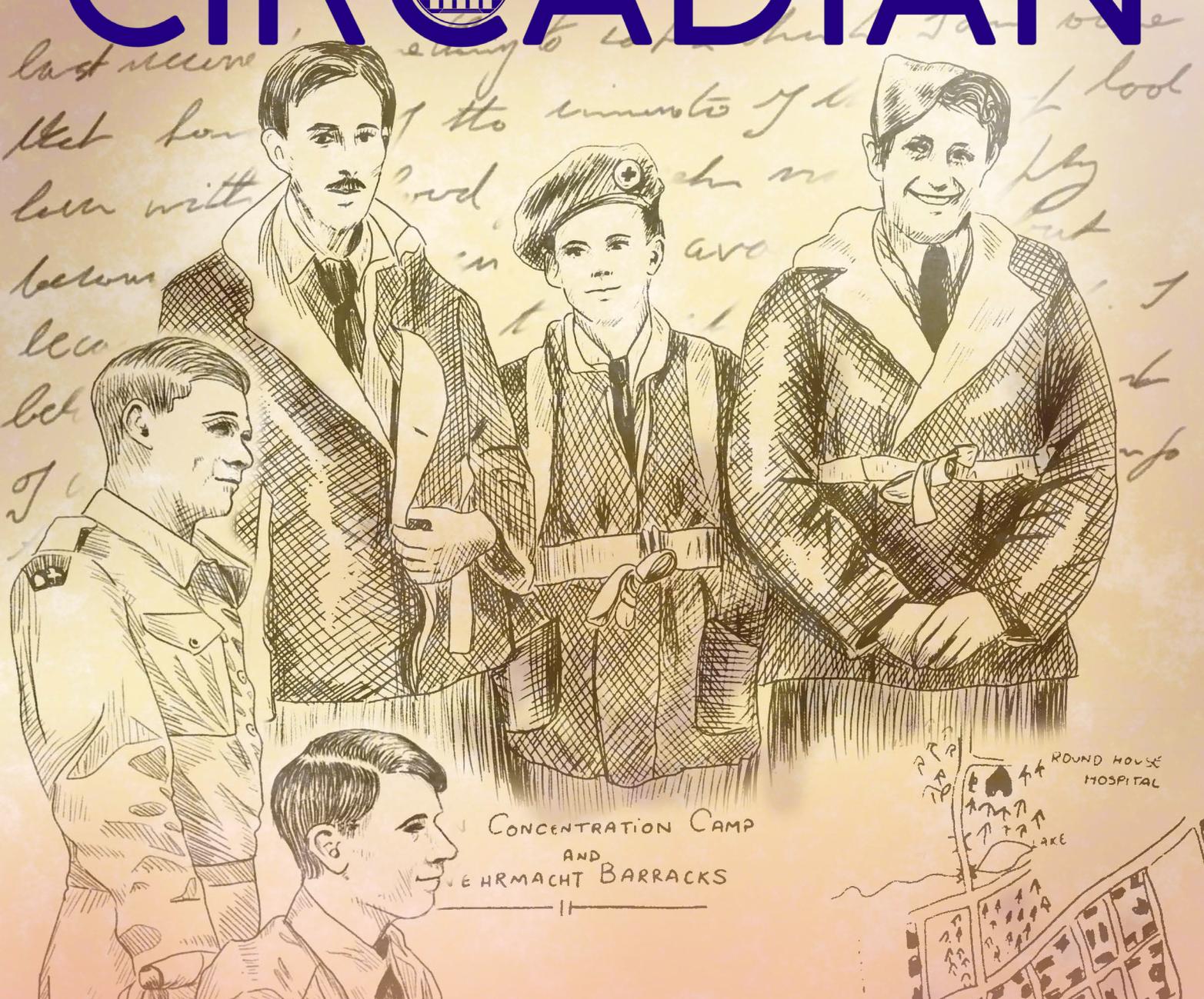




CIRCADIAN



THE STUDENTS OF BELSEN

THE STORY OF TWENTY ONE STUDENTS FROM THE LONDON & BARTS AND THEIR ROLE IN LIBERATING A CONCENTRATION CAMP

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OUR TEAM



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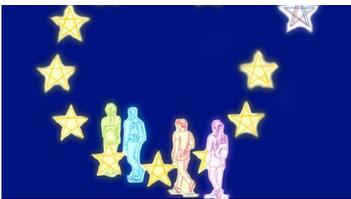
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WANT TO GET INVOLVED?

We're always looking for people who want to write about the latest developments in healthcare, student life or just anything that matters to them!

If you have an idea for an article, don't hesitate to contact any of the people above and we'll do our best to get it published! If you have any questions or want to send in an article, you can contact us by emailing circadian@bartslondon.com.

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EDITORIAL

What makes Barts and The London a special place to study? When asked that question, perhaps at an open day or when challenged on their obsession with identity, students often fall back on familiar themes; community, student activities, and of course, history. They are familiar for a reason of course; for most of us studying here, they ring true.

Part of the reason for starting this magazine was to strengthen these reasons, to bring together our community, to hear about what our students were doing, and to better understand our history.

The history of Barts and The London is long and varied, but because of this, commonly simplified. Even those of whom are not historically driven will know of Rahere founding St Bartholomews in 1123, and of notable alumni who have buildings named after them, like Abernathy, Blizzard or John Vane. Indeed it is also a history that is still being written; Sir Peter Ratcliffe winning this year's Nobel Prize for Physiology or Medicine is testament to this.

However, even with many of us who want to know more about our past, there are many chapters of this history that have

slowly started to fall through the cracks; not due to malice or intention, but lack of attention. It is in this vein that we bring you 'The Students of Belsen', the first part of a regular series of articles which look to retell stories that deserve to be remembered.

The ethos of Barts and The London is kept alive by the students and staff who know the weight of what those words mean. If we are to keep that Barts and The London way alive, we will have to do more to understand what that meant to the students who walked this path before.



AS THE END OF THE SECOND WORLD WAR SLOWLY APPROACHED, the people of Europe were left facing the effects of a war which had ravaged the Continent for over five years. If however, people had thought the end of the war would bring an end to the suffering, they would be sorely mistaken. The increasing desperation of the Nazi Government resulted in them committing atrocity after atrocity at an escalating rate; in their eyes, if they couldn't win, then no-one should.

Early in April 1945, the British Red Cross and the War Office put out a notice seeking twelve medical students from each Medical School in London to volunteer to fight one of these atrocities - the blockade and subsequent famine that had affected the population of the Netherlands. The response was astounding with so many students applying that they had to introduce a ballot system to narrow it down to the final students in the party. Of the hundred students chosen, twelve volunteers were from The London Hospital Medical College, and nine were from St Bartholomew's Hospital Medical College.

FEATURES

THE STUDENTS OF BELSEN

BY HARRIS NAGESWARAN
WITH THANKS TO BARTS HEALTH MUSEUMS AND
ARCHIVES & THE KYNDT FAMILY



The chosen students, after being inoculated against 'a variety of diseases' and being issued their uniform, were told to meet at the Headquarters of the British Red Cross. It was here, just as the first part of their journey was about to begin, they were told of a new destination - Bergen-Belsen Concentration Camp.

"THE GERMANS MADE A FEEBLE AND CYNICAL ATTEMPT TO CURB THE EPIDEMIC, BUT WHEN THE CAMP WAS ABOUT TO BE OVERRUN THEY ASKED FOR A TRUCE, NOTIFYING OUR MEDICAL CORPS THAT THERE WAS TYPHUS IN THE CAMP, AND THAT IT HAD BEEN BEYOND THEIR POWERS TO CONTROL IT. WHETHER THIS WAS BY ACCIDENT OR DESIGN WAS NOT CERTAIN, BUT IN ANY CASE THE TRUCE WAS GRANTED AND FIGHTING WAS FORBIDDEN IN THE BELSEN AREA."

Thomas Gibson, a student from The London, writing in The London Hospital Gazette.

Upon arrival, the students were faced with the gravity of the task ahead. Conditions, while having marginally increased in the two weeks the camp had been liberated, were still horrific. The newly assigned Senior Medical Officer of the camp wrote in his report that it "was full of emaciated and apathetic scarecrows – without beds or blankets and some completely naked. The females are worse than the males and most have only filthy rags. The dead are lying all over the camp and in piles outside those blocks, miscalled hospitals, housing the worst of the sick. There are approximately 3,000 corpses in varying states of decomposition. There is no sanitation, but there are pits, some with birch rails. From apathy, or weakness, most defecate in the huts or anywhere."

"THE CONDITIONS IN THESE HUTS WERE NEVER TO BE FORGOTTEN. WE WHO WERE THERE CANNOT ALLOW SUCH APPALLING INHUMANITY OF MAN TO MAN TO BE ERASED FROM THE CONSCIOUS OF ALL PEOPLE, EITHER BECAUSE THEY DO NOT BELIEVE OR DO NOT WISH TO BELIEVE. WE SAW IT, AND IT WAS IRREFUTABLY WORSE THAT WE COULD POSSIBLY HAVE IMAGINED IN OUR WILDEST DREAMS."

Thomas Gibson, a student from The London, writing in The London Hospital Gazette.

Of the two hundred huts in total, students were placed in charge of one or two huts each, often in pairs. Their task was unenviable, supervising the removal of the dead and cleaning of the huts, in an effort to prevent the spread of typhus and reduce the death count - approximately 500 a day.

Perhaps even more difficult was managing the refeeding of a severely malnourished population in the camp. Refeeding syndrome had yet to be well understood, and indeed reports from this camp were some of the earliest to describe refeeding syndrome. Immediately after the liberation of the camp, the British Army had fed inmates full Army rations; the resulting electrolyte imbalance in inmates was deadly with an estimated 2,000 people to have died in these first two days.

Following their arrival,

students were assigned to the cook-house to carry out new suggestions as well as distribute glucose solution and "comforts" such as chocolate and cigarettes. Unsurprisingly due to the poor treatment they had received, many of those held were focused on their own welfare ahead of everyone else's, often stealing supplies and food from those who were weaker. One student, Charles Kyndt, noted that "from the very beginning of my work amongst these people I had to fight against their selfish attitude to their neighbours". This behaviour hampered efforts to treat those in the worst conditions and it took a great deal of time and persistence for students to be able to gain the trust of their charges and truly help those in their care.

Slowly but surely, the death rate steadily fell and people were returning to a state in which they could make the journey back to whatever remained of their homes and communities. For reasons of sanitation, but possibly also of symbolism, the huts were burned and dynamited one by one until Belsen concentration camp was no more. There is no doubt however, that it remained in the collective minds of students long after they returned home, the students who would go on to be some of the first to practice in our newly formed National Health Service. As student Thomas Gibson put it so eloquently, "Thus Belsen, with all that it stood for, came to an end. But although it has ceased to exist materially, it will never be forgotten in the minds of those who were there, in whatever capacity. We know the ideology of the people who were responsible for Belsen Camp. We must never forget their creed and we must always fight against it."

It is perhaps hard for us, as students currently at Barts and The London, to be able to contemplate the mood and actions of these students at this time and see how it might apply to us. I however, think that nothing could be more relevant. We pride ourselves in the idea that here, at Barts and The London, we learn something more than can be taught in any book. We learn that one's character is not only judged by how well we do on a test, but in how much we do for the people and community around us, regardless of colour or creed or tongue or gender. And we learn, in the words of The London Hospital Medical College, that as we are human, nothing of human concern is foreign to us.



A photo from a hut at Belsen Concentration Camp



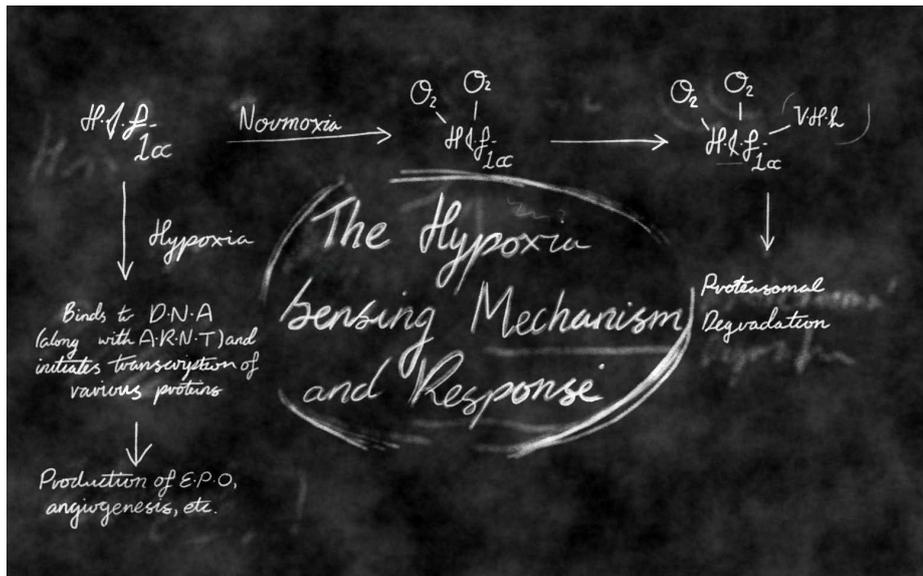
A sketch of Belsen Concentration Camp

What was Belsen-Bergen Concentration Camp?

Belsen was a concentration camp deep in the Saxony region of Germany. Formerly a military training camp, the onset of the Second World War saw some of the huts being used to hold prisoners of war from Belgium, France and Poland and eventually, as the war advanced, from the Soviet Union. In 1943, part of the camp was taken over by the German SS, at which point it became a concentration camp divided into subsections for Hungarians, Polish Jews, Neutrals and Dutch Jews. Conditions in the camp severely deteriorated as the war turned against the Axis Powers, with the advance of the Russian Army resulting in concentration camps in Eastern Europe being evacuated with at least 85,000 people being transported to Bergen in this time. The rapid increase in numbers, from around 7,300 people in July 1944, to 67,000 people upon its liberation resulted in the opportune overcrowded conditions for a variety of diseases to spread; typhus, tuberculosis, typhoid and dysentery, along with malnutrition to name a few. As the British and Canadian Forces approached, the camp was handed over by German Forces, who had lost control of a deadly typhus epidemic.

BARTS IN THE SP(O₂)LIGHT

BY KRISHNA SRUTHI VYDALA, GLOBAL HEALTH EDITOR



Take a deep breath in. And hold.

Heart racing, a tightness in your chest, and eventually, loss of consciousness. Such is the power of oxygen; we are entirely dependent on it for mass production of the Adenosine Triphosphate molecule, involved in providing energy for everything from muscle contraction to hormone production. Oxygen diffuses into the bloodstream through the lungs as we inhale, and is carried to tissues by red blood cells (RBC) to take part in aerobic respiration (the ‘mitochondria is the powerhouse of the cell’ process). So what happens when we don’t have enough RBCs (e.g. due to cancer/kidney disease)? What about if there is a barrier for oxygen diffusion into the bloodstream (e.g. lung fibrosis)? In short, what happens if our cells don’t get

enough oxygen?

(You can breathe out now).

The Nobel Prize in Physiology and Medicine 2019 was awarded jointly to William C. Kaelin Jr., Gregg L. Semenza, and Sir Peter J. Ratcliffe, for ‘for their discoveries of how cells sense and adapt to oxygen availability’. Sir Ratcliffe (born 1954), is a nephrologist (kidney doctor), who started his training at Cambridge and finished it at St Bartholomew Hospital Medical College. Currently working at Oxford, his lab was instrumental in eliciting the molecular mechanisms of oxygen sensing in cells.

The Science

A well characterised response to hypoxia (oxygen deficit) is through the

kidneys, which sense hypoxia in blood and release Erythropoietin (EPO), a hormone that accelerates the production of RBCs in the bone marrow. Building on this, the researchers found that most cells in the body, not only the kidneys, have mechanisms to sense hypoxia. This involves two players; the Hypoxia Inducible Factor (HIF1), a transcription factor (involved in activating the production of proteins) comprised of HIF-1 α and the ARNT subunits, and the Von Hippel-Lindau protein (VHL). In normoxia, oxygen binds to the HIF-1 α protein, which then facilitates the binding of VHL and other proteins to it. The HIF-1 α has now been tagged for destruction, and is degraded by proteins called proteasomes.

In hypoxia the HIF-1 α subunit is not degraded as oxygen does not bind and hence neither does VHL, and proteasomes do not receive the right signal. The HIF-1 α and the ARNT now combine, and go on to perform functions like activating the EPO gene.

The implications of this discovery are vast; it has been shown that tumours have a raging demand for oxygen due to their uncontrollably replicating cells, and they harness the hypoxia pathway for angiogenesis, i.e. formation of new blood vessels to fuel their needs.

Hence, a comprehensive understanding of the hypoxia pathway paves the way for future research in this area, as well as pharmacological solutions that work on this pathway.

Diagram adapted by Lucy Edgar from the Nobel Prize website (<https://www.nobelprize.org/prizes/medicine/2019/press-release/>)



SIR PETER RATCLIFFE JOINS A LONG LIST OF PREVIOUS NOBEL PRIZE WINNERS FROM BARTS AND THE LONDON:

NOBEL PRIZE FOR PHYSIOLOGY OR MEDICINE

1902

SIR RONALD ROSS

For characterising the lifecycle of the malaria Plasmodium

1932

EDGAR ADRIAN

Work on understanding the function of neurons

1936

SIR HENRY HALLETT DALE

Study of Acetylcholine as a neurotransmitter

1982

SIR JOHN VANE

For research on Prostaglandins (hormone-like compounds)

2019

SIR PETER J. RATCLIFFE

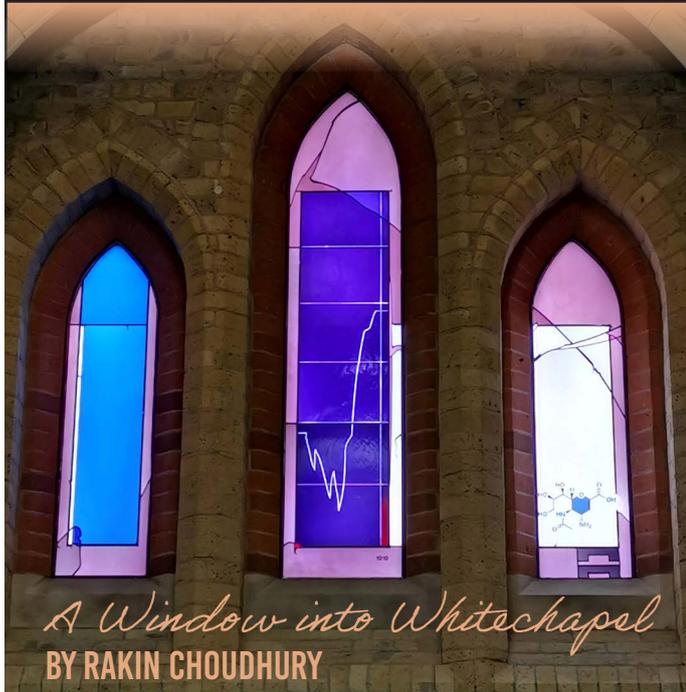
For work on how cells sense and adapt to hypoxia

NOBEL PEACE PRIZE

1995

SIR JOSEPH ROTBLAT

Peace category for his work on nuclear disarmament



To some, stained glass is an archaic art form. To most, stained glass is not an art form at all but a relic of old churches. But among the oddities of Whitechapel Library are these remarkable works of art. If you have ever glanced away from your books, you might notice these radiant windows, each casting its own glow upon the Library and the learners below, blending together as one. The warmth of the glow will depend very much upon when you are there; at the break of dawn or in twilight hours, as the light shifts from warm to cool tones, each hour, there is a new piece to enjoy.

Designed in the late 20th century, as the old church was converted into the medical school's new library, the intricate designs of the windows and the innovative methods employed highlight a peculiar yet wondrous union of religious artwork and scientific subjects, of traditional expressions of beauty and the embrace of pioneering medical research.

I spoke to Caroline Swash, a stained glass artist and wife of Professor Michael Swash, Professor of Neurology at the School at the time and who first proposed these windows for the Library, to find out more.

THE INFLUENZA WINDOW

TITLE: THE INFLUENZA PANDEMIC WINDOW - HEROES AND HEROINES OF 1918-1919

DONOR: JOHN TRAVERS CLARKE OF RETROSCREEN VIROLOGY LTD (WHO SUPPORTED LEADING VIROLOGIST PROFESSOR JOHN OXFORD WITH HIS RESEARCH)

NUMBER IN SERIES: #7

ARTIST: JOHANNES SCHREITER

It is only the dead who have seen the end of war. But it is not only at the battlefield where the consequences are felt. And it is not only during wartime when the consequences are felt. What about those who do not fall? Do they see the end of war in peace, rather than death?

It is only the dead who have seen the end of war. The First World War showed truly the extensive devastation which can result. For while the armistice was signed at Le Francport in France on the 11th of November 1918, and the soldiers who were still clinging to life returned home, they did not return home alone.

They carried with them the demons of war, physical and mental alike. And it was these demons who wrought the most significant damage in the aftermath of the Great War. The soldiers returned home happy, they greeted their families with love, with cheer, with smiles. And the demons smiled as they were let loose.

It was after the First World War where issues such as PTSD were first identified, then described as shell shock. And it was also after the First World War where the true horrors of influenza were recognized. For when the soldiers returned home, back to their villages and communities, nobody

was spared from the demons who had joined them at the battlefield.

It might seem that to those who had survived the nightmare of war, the flu would be a trivial matter. And so the healers, powerless during the War, hoped that they would heal. But before long, death tolls rose and hope was replaced by mourning. Eventually new hope dawned in the place of mourning, but not before millions had died.

We recognize the services of fallen soldiers in the Great War. We solemnly mark its centenary and consider its lessons. We dedicate tombs to the unknown soldier. But here finally, is a monument to those unknown heroes and heroines of the influenza pandemic, just as cruelly claimed as the casualties of the War.

It is in this window, when the light shines through, that we remember not just the soldiers, but those innocent victims of the tragedy of war. It is in this window, when the light shines through, that we remember those nurses and researchers who bravely sacrificed their lives to save the many afflicted. It is in this window, when the light shines through, at the going down of the sun and in the morning, that we will remember them.

EXCERPT FROM CAROLINE SWASH'S "MEDICAL SCIENCE AND STAINED GLASS" ON THE SYMBOLISM:

"Colour in glass has an ancient symbolism particularly in connection with the Church for which red and gold meant triumph, blue the colour of healing and purple the colour of grief and mourning. Schreiter has used blue in this context to suggest the practical and medical help given by people during the pandemic.

Purple is appropriate for the central window, since both the sick and those who nursed them (and subsequently died) are commemorated here. The graph in the window, expressed in tens of thousands, refers diagrammatically to the outbreak of Russian Flu in the 1890s which gave partial immunity to some of the survivors, the quiescent period before the war and the inexorable rise in death in the war's aftermath. The blood red mark above the fateful year 1919 marks this tragedy.

The white area of glass in the right hand window acts as a 'healing field' and suggests the sense of optimism supported by the certainty that molecular science has the capacity to prevent these disasters. The chemical symbol points towards hope, it represents the Neuraminidase compound, a contemporary anti-viral agent."

QUOTE FROM CAROLINE SWASH ON THE WINDOW'S BACKGROUND:

"This was originally the pharmacology window but 'the company we were dealing with, they found out somebody had died using this apparently very good psychiatric drug so it absolutely wasn't usable. And I just didn't know what to do. And fortunately... And I said, well, maybe we should change the subject (of the window)?"

And Johannes was absolutely adamant that it had to be this purple centre to it and that blue. And he practically said "I won't do anymore, we will keep it clear". And I said, no, no, no, no, this absolutely won't work.

Michael found, influenza is the killer flu which killed more people than the First World War. Why does it do that? It could do that again. You have got this shocking statistic and then this blue piece of calm. And then this diagram for the actual formula, that's the anti-viral agent on right-hand side.

The brackets should have been the other way but I think that Johannes, for the War, he really felt that they had to be underturned, as it was so awful.

Now how the blue came in, I do remember him saying that "I have to have a blue" to balance the windows there, there, and there. Johannes was really very fond of this purple, something very mystical about it."

A HISTORICAL TANGENT:

The influenza pandemic took the lives of as many as 100 million people worldwide. Many countries suffered as the flu ravaged the battle-weary nations and the malnourished populations around the globe. But it was Spain, neutral during the Great War, who first widely reported on its outbreak. Spain did not keep its population in the dark, as the Allies did out of desperation to maintain post-war morale.

The Spanish flu is evidence of the far-reaching impact of war. But from such a tragedy, hope can spring too, whatever cruel twist of fate it might take. Sir Archibald Garrod served in the First World War as a Consulting Physician in Malta. He survived, but two of his sons did not. And the third, his youngest son, was claimed by the Spanish flu.

The profound effect of these deaths on Garrod led him to avoid the wards and devote himself to laboratory work. It was through this work that he pioneered the field of inborn errors of metabolism, discovering alkaptonuria as one of Garrod's tetrad of inherited metabolic diseases.

Smells Fishy

by Siraj Abualnaja

IMAGINE A YOUNG 20-YEAR OLD HAVING JUST PASSED HIS DRIVING TEST.

He scraps together every penny that he earns working at his part-time job at the students' union, and somehow manages to not only buy a car, but can afford the ridiculously priced insurance that comes along with it. However, while driving down the motorway, he is involved in a horrific car accident and sustains a traumatic brain injury (TBI). While being rushed to A&E, one of the myriad of treatments that have been administered to him by the doctors and nurses, is omega-3.

Although this may seem dark and twisted, this morbid fascination stems from the reality of most TBI cases. In fact, the leading cause of TBI-related hospitalizations in people aged 15-44 today are due to motor vehicle crashes. Therefore, the search for an effective, safe, and cheap treatment becomes imperative. However, before we take a look at some of the treatments that can be used, let's first look at what defines a TBI and the its different types.

The brain is around 1.3 kg of jelly composed of millions of individual cells called neurons. TBI can cause these cells to malfunction or even die. In brief, there are three main parts of the brain. The cortex is the largest part of the brain and it is here where most of the thinking happens. Here, our personalities, emotions, and speech is formed and monitored. Secondly, located at the bottom-end of the brain, is the cerebellum. The main function of this structure is to modulate coordination, balance, and posture. Finally, arguably one of the most critical parts of the brain, is the brain stem. The brain stem connects the brain to the spinal cord and controls survival functions such as breathing, heart-rate, consciousness, and alertness. The

three structures are protected by the cranium, or skull. Inside of the skull, there are pronounced bony structures with ribbing throughout, while the outside is smooth. If a person is involved in a car-accident, falls, or simply gets hit in the head, the brain can move inside the skull and can be thrust against the aforementioned bony protrusions. This leads to the bruising and tearing of the brain tissue causing injury.

When the brain slams against the skull, damage can occur on the site of impact and on the opposite side of the brain. This is known as coup-contrecoup brain injury. This can be a severe TBI, depending on the strength of the impact, extent of damage, age, and other personal factors. On the other hand, a concussion is a type of mild TBI (mTBI). This is commonly caused by blows to the head. A simple way of describing concussions is to imagine someone vigorously shaking your brain. Although concussions are usually mild, frequent concussions can lead to chronic traumatic encephalopathy, a condition common in boxers. Other injuries can be classified as brain contusions, which are classified as having a bruise in the brain. So, what are the main-stay treatments for most TBIs? Treatments vary from case to case, but commonly involve craniotomies (especially in emergency cases), occupational, physical, and speech therapies, psychological counselling, and much more. One treatment that has emerged more recently is the administration of omega-3 fatty acids.

For a long time, fish and fish oils have upheld their reputation as being a great "brain food". Indeed, the literature has emphasised its role in improving focus, performance, and even aiding cognitive development in babies and young adults. For example, a study in 2012 at the University of Pittsburgh demonstrated that consuming more omega-3 could improve a young adult's working memory. In TBI, it has been shown that omega-3 has a protective benefit, especially if it is

administered shortly after injury. Studies have shown that DHA (one of the long-chained types of omega-3) administration 2 hours after injury improves neurological function, nerve cell survival, reduces inflammation, and decreases oxidative stress. Furthermore, studies from Sweden demonstrated that omega-3 produces a natural molecule called resolvins. When administering resolvins to mice 24-hours prior to injury, they noticed an improved nerve cell function. Neuroscientists in the Blizard Institute here at Bart's have heavily investigated the impact of DHA in spinal cord injuries as well.

Omega-3 helps patients with TBI because of its role in fighting inflammation. Although inflammation can be beneficial, as it acts to recruit cells to the site of injury to help fix it, in cases where inflammation is not controlled, it damages tissues. In the brain, uncontrolled inflammation as a result of low pro-resolution molecules, leads to neuronal damage and ultimately loss of brain function. Hence, omega-3's anti-inflammatory properties can alleviate the damage that occurs in the brain. Nevertheless, DHA is not some magic drug that will resolve all of the complications and issues arising from TBIs. Omega-3 is a family with many members, meaning that DHA alone is not sufficient. Omega-3 administration coupled with the myriad of treatments previously mentioned, can speed up the road to recovery in patients suffering from TBI. Research that investigates possible treatments in everyday food items makes us think that the next big breakthrough in science and medicine could really be in our next takeaway!

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#NOMORETEARS J&J CAN YOU HEAR US?

BY EVA PHILLIPS, NATIONAL ISSUES EDITOR

10 MILLION: THE NUMBER OF NEW CASES OF ACTIVE TUBERCULOSIS (TB) IN 2017.

TB is one of the top ten leading causes of death from a singular infectious agent worldwide.

With 1,600,000 TB-related deaths in 2017, it ranks above HIV/AIDS. South-East Asia, Africa and the Western Pacific are the most severely affected, but there is an annual incidence of over 1,326,000 cases throughout the Eastern Mediterranean, the Americas and Europe. These statistics clearly illustrate the need for effective – and immediate – global intervention.

BEDAQUILINE

Since the development of rifampicin in the late 1960s, there has been little progress regarding drug treatments for multi-drug-resistant tuberculosis (MDR-TB). Furthermore, rates of resistance to rifampicin and isoniazid (another first-line anti-TB treatment) have steadily increased since the start of their usage.

The breakthrough drug bedaquiline was recently developed by the drug company Janssen in 2012. A diarylquinoline, it is the first new effective treatment against MDR-TB. In many cases, it is the only drug left able to treat severe MDR-TB. Bedaquiline works by inhibiting mycobacterial adenosine triphosphate synthase, thus interrupting the bacterium's replication.

Of course, treatment providers wish to prescribe the most effective treatment to patients with MDR-TB with the fewest side effects. Bedaquiline is a curative treatment for MDR-TB, and does not cause many of the terrible side effects of the previous anti-TB

drugs, such as permanent deafness and psychosis.

Although it is largely safer, bedaquiline has been shown to degrade the liver and the heart (especially when used in combination with certain drugs used in the treatment of HIV), so the conditions under which bedaquiline is prescribed should be carefully monitored. Active pharmacovigilance will mean that patients are safely treated when the drug becomes more accessible.

J&J'S MONOPOLY

Janssen, the drug's developer, is a pharmaceutical company of Johnson & Johnson (J&J), the multinational corporation that owns a multitude of well-known brands from Band-Aid to Nicorette, Neutrogena to Benadryl. A giant in the industry, J&J have patented bedaquiline until 2023 in a number of countries in which access is needed most (such as in India). Thus, they greatly control the distribution of bedaquiline worldwide.

INJUSTICE

Bedaquiline is a drug for the people, funded by the people. Taxpayers paid for its development via research funded in the US. Philanthropists and non-profit organisations donated money to the cause. Vital work was conducted in the TB research community, including clinical trials conducted by treatment providers – including MSF. The fact that those whose lives depend on accessing this core new drug treatment for MDR-TB cannot access it is an injustice, and it is costing people their lives. Something must be done.

THE ACCESS CAMPAIGN

Médecins Sans Frontières (MSF) is the largest non-governmental provider of treatment for TB worldwide, providing specific aid in over 25 countries for the treatment of MDR-TB. MSF launched a global campaign on

the 10th October this year demanding that J&J lower the price of bedaquiline to \$1 a day. This is half of the lowest price that J&J currently sell the drug for and is still unaffordable for many people who need it. Although there are now effective treatments for MDR-TB – such as bedaquiline – the price of these drugs remains one of the key barriers against treating everyone, and remains a vital target for change.

Frustratingly, J&J have refused to share their financial information regarding the production of bedaquiline, but external researchers have calculated that the drug could be produced for as little as 25 cents per day. Thus, J&J's statement that they are already losing money by selling bedaquiline at their 'special effort' price of \$2 may well be untrue. Without transparency in the pharmaceutical industry, the fair distribution of drugs becomes even more challenging than it already is. The patent that J&J holds means that generic manufacturers cannot produce an affordable version of the drug for distribution, which continues to prevent access to bedaquiline.

WHAT CAN YOU DO NOW?

Join the protest on Twitter, Facebook or Instagram using the hashtags #NoMoreTears and #JnJCanYouHearUs. Stay informed and updated, and – if you are able – take part in your local global day of action whenever they happen.

TB is a curable disease and must stop being a death sentence. Let us hold J&J to account for their dangerous greed.

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VIRTUAL REALITY IN HEALTHCARE

BY DIANA PIMENTEL AND TUN THA

Virtual reality (VR) is the computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment, such as a helmet with a screen inside or gloves fitted with sensors

- Oxford English Dictionary

Today applications of virtual reality (VR) are vast. From its humble beginnings in gaming VR is exponentially changing the way humans interact with the world. Healthcare is no exception, a recent cluster and network analysis found that surgery alone accounts for up to 7.7% of all VR academic research, other key areas in healthcare include psychology, neuroscience and outpatient therapies. Moreover, the recent appearance of low cost head-mounted displays (HMD's) has made VR increasingly accessible and puts this technology in a unique position to succeed as a digital platform.

Healthcare is poised for disruption, as we move towards patient-centred care, evidence-based medicine and competency-based education. VR shows great potential to be part of this transformation to ultimately streamline, optimise and personalise healthcare delivery in the interest of improved patient outcomes.

This article looks at the ways in which VR can help be used in

healthcare settings:

VIRTUAL REALITY FOR EDUCATION

Virtual simulation was introduced to education in the early 1960s. Today most hospitals having a fully dedicated and equipped centre to deliver simulation-based teaching to healthcare professionals. VR is the natural progression of the already existing technologies, it can be used to improve technical skills but also cognitive skills such as decision making, and teamwork. The full immersion of a user into a computer generated environment allows healthcare professionals to be exposed to realistic scenarios in a low-risk environment

where feedback and reflection can facilitate ongoing professional and personal development. This type of teaching has already been well-received and has consistently been shown to be superior to paper-based approaches.

VIRTUAL REALITY FOR PSYCHOLOGICAL THERAPIES

Since its inception VR simulations have been used as psychological therapy for patients with PTSD and in the management of pain and anxiety. Examples include Bravemind, an innovative exposure therapy programme that helps desensitise patients to fears.

VIRTUAL REALITY FOR PERIOPERATIVE CARE

Multiple enterprises across the world are using VR to help personalise

care. This is particularly true in surgery, today medical image data can be processed and projected into VR. This can give surgical teams 3D information that has not been made available until today. Using this data, surgeons can plan the best approaches for their patients.

VIRTUAL REALITY FOR PUBLIC HEALTH PROMOTION

Public health promotion is a constant challenge for policymakers, healthcare professionals and local authorities. VR could be a great way to engage the general public and educate users on lifestyle choices including sexual health promotion, smoking, smoking cessation, healthy eating and the importance of vaccinations. Further, VR can be used to educate users and teach them about life-saving procedures such as CPR, mental health first aid amongst others.

This rather brief overview outlines the potential of VR in healthcare. In reality the potential application of VR is much greater. Improvements in haptic technologies coupled with the intersection of VR with emerging technologies i.e. artificial intelligence, machine learning, haptics and big data analytics will be nothing short of revolutionary. As the educators, physicians, surgeons and dentists of tomorrow it is critical we remain open-minded to the potential effect these technologies can have on the care of our future patients. In the meantime, researchers and innovators must focus on generating a strong evidence base to ensure a smooth integration of VR into the delivery of clinical care.

WHAT DOES CIRCADIAN MEAN?

BY SIRAJ ABUALNAJA

The newly formed Circadian Magazine is quickly becoming a part of student life at Barts and The London. It finally provides students and societies alike the opportunity to voice their opinions, share new and upcoming research, and practise their satire all in one place. However, many have questions regarding the name; Circadian.

What does it mean? Is it a medical term? If so, how does it all relate?

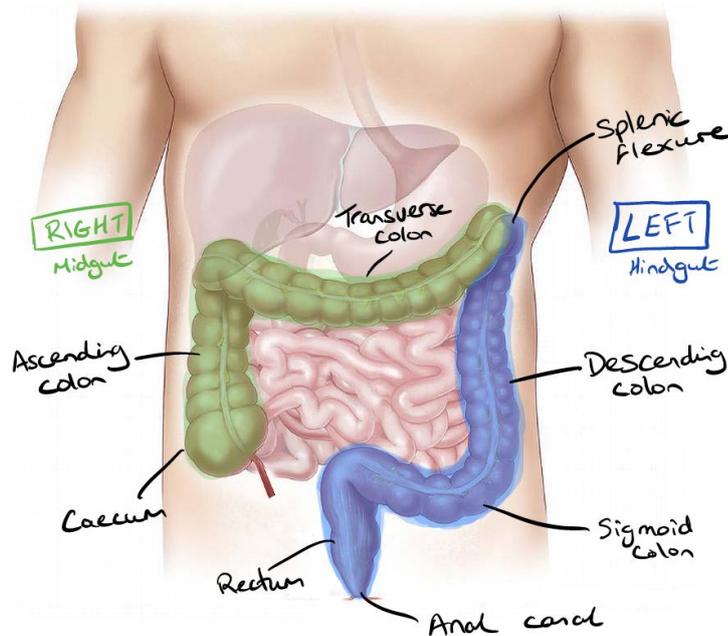
The origin of the word Circadian is derived from the Latin words circa meaning around or approximately and diem as in day, which quickly evolved into Circadian. However, it is most commonly seen in reference to the term 'Circadian Rhythm,' which can be used to describe our internal body rhythm/clock. It includes the analysis of daily, weekly, or seasonal rhythms found throughout our environment. Cycles with 24-hour oscillations are typically called diurnal

rhythms. Hence, humans are generally described as being diurnal, as we are a species that are predominantly active during daytime and inactive at night

Looking at our sleep cycles, let's ask ourselves this question; 'Why do we feel tired at certain times during the day?' The control centre of our circadian rhythm is located in the suprachiasmatic nucleus (SCN), which are a pair of cells found in the hypothalamus. Studies have shown that destruction of this nucleus has led to the absence of regular sleep-wake cycles. Normally, the SCN

RIGHT VS LEFT COLON CANCER

BY THOMAS YAU, MEDICAL EDITOR



COLORECTAL CANCER (CRC) IS THE THIRD MOST COMMON CANCER WORLDWIDE WITH A HIGH MORTALITY RATE AT THE ADVANCED STAGES.

Around 1 in 20 people develop colorectal cancer and 90% of diagnosed cases are in people who are over the age of 60 in the UK. However, the treatment of colorectal cancer is heavily reliant on the anatomical position of the tumour within the bowel. This is due to CRC not being a single type of tumour cell; its pathogenesis depends on the anatomical location of the tumour and differs between right side and left side of the colon. Tumours in the proximal colon (right side) and distal colon (left side) exhibit different molecular characteristics and histology. As a result, CRC has been divided into right sided colon cancer (RSCC) and left sided colorectal cancer (LSCC). The definition of RSCC is cancer of the caecum and the ascending colon up to the hepatic flexure. While the left side is defined as cancer of the splenic

flexure and in regions distal to the splenic flexure, including the rectum. Embryologically, the right side of the colon arises from the midgut while the left side arises from the hindgut. As a result, there are known genetic predisposition of CRC, especially in RSCC, where BRAF mutations are more commonly observed.

After the landmark CALGB/SWOG 80405 study, it was found that overall survival was 14 months better for patients with left-sided tumours, vs right-sided ones. Therefore, right sided colon cancer is associated with poorer prognosis when compared to left sided colon cancer. There are many explanations for this, one being BRAF mutation being more commonly observed in RSCC, which is associated with aggressive CRC hence poor prognosis. Another reason for RSCC exhibiting a poorer response may be due to diagnosis being made much later than LSCC. This observation reflects the tendency for right-sided CRC to produce symptoms only at later and more advance stages of the cancer.

Right-sided colon cancers tend to be diagnosed much later than left-sided colon cancers. This clinical observation reflects the tendency for right-sided colon cancers to produce symptoms only when they are relatively advanced. Stool is liquid on the right side of the colon, and the caecum is a large and wide structure, so the bowel symptoms that typically herald the presence of colon cancer—such as pain, cramps, or blockage—do not occur until an extensive mass has formed, sometimes over many years.

Treatment of CRC is normally reliant on early diagnosis through endoscopy and curative surgery can be performed to remove polyps. Chemotherapy and radiotherapy also play a significant role in pre/post operation to maximise the success of the surgery. Although, in later stages of RSCC and LSCC, systemic treatment relies solely on targeted therapy, chemotherapy and immunotherapy. However, immune checkpoint inhibitors have shown little success in treating CRC, hence targeted agents in combination with chemotherapeutics remain the gold standard. Interestingly, EGFR antibodies appear to work better in LSCC whereas RSCC are more responsive to VEGFR antibodies. These targeted agents will augment the chemotherapy regimens such as FOLFOX (folinic acid, fluorouracil & oxaliplatin) and FOLFIRINOX (folinic acid, fluorouracil, oxaliplatin & irinotecan) in treating CRC. Current research of CRC is focusing on optimising diagnostic time for curative treatment and continual research into the cancer biology will provide a better idea into what signalling pathway can be targeted in treatment of CRC.

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receives the information from the retina. Rod and cone (i.e. light sensitive cells) inhibit the activity of SCN. In the dark, the SCN relays signals down to the pineal gland. The pineal gland is an important structure in the brain that is responsible for regulating a number of endocrine processes, and one of its main function is to release melatonin. Melatonin is believed to be the main neurotransmitter contributing to our feeling of sleepiness. Consequently, our circadian rhythm is controlled by melatonin and the presence of light. In a dark environment, there is an

increase of melatonin. In the presence of light, melatonin release is inhibited. This can explain why everyone around the world sleeps at different times. Inhabitants of Los Angeles for example, will be asleep while for those living in London, the day has just begun.

With all that being said, what is the relationship between the circadian rhythm and Circadian Magazine? Circadian Magazine provides a platform for students at Barts and The London to have a voice. The more voices there are, the more people become inspired, and the more people are

willing to share their stories and ideas. This cycle continues and eventually, a rhythm is established. Every term an issue of Circadian is released. Much like the light that is perceived by our retina to activate the SCN in our circadian rhythm, Circadian will relay its messages throughout the different nuclei scattered around Barts therefore stimulating our thoughts and encouraging us to speak up. Circadian Magazine aims to be the light that prevents us from feeling tired of not having a voice.

UK HIGHER EDUCATION: THE BEGINNING OF THE END?

WILL THE UK'S EXIT FROM THE EUROPEAN UNION LEAD TO THE DECLINE OF BRITISH UNIVERSITIES?

BY MAX HENTGES, POLITICAL EDITOR

For centuries, universities in the UK have enjoyed a reputation synonymous with excellence, steeped in history and home to a community of world-class academics and researchers.

With 17 of the top 100 universities globally located in the UK, the state of higher education appears stable; yet, this may all soon change if the UK follows through on its decision to leave the EU. British universities have persevered through obstacles far more arduous than Brexit—such as two World Wars—and endured with their reputations intact; however, the threat posed by Brexit will have far greater ramifications for higher education than ever previously encountered. While Oxford and Cambridge will likely continue to enjoy their status globally as the *crème de la crème* of higher education, universities trailing behind Oxbridge face a takeover by European counterparts. The English-language education provided to students remains a primary incentive compelling those from abroad to study in the UK. Recently however, many European universities, such as the Free University in Berlin, IE University in Madrid, or Maastricht University in the Netherlands, have begun to offer similar English-speaking programs. This trend poses a tremendous threat to UK universities as EU students will likely no longer see the incentive of paying up to £28,000 for a degree that is comparable to one from a university in the EU and costs a fraction of the price (£2,300 in the

Netherlands and free in Germany). Although the extent that British universities will suffer from Brexit remains unclear, this article aims to outline what effect Brexit has already had on higher education in the UK, what will likely happen if a no-deal Brexit occurs and crucial areas of uncertainty for British universities going forward.

Since the 2016 referendum to leave the EU, the ramifications of Brexit have primarily affected EU student enrolment numbers. In the four years preceding Brexit, EU student enrolment in Russell group universities ranged from 4 to 7%. Two years after the Brexit referendum, this figure fell with a 3 percent decrease in the number of EU students enrolling in the 2018/19 academic year. Especially affected were masters and postgraduate research students with a decline of 5% and 9% respectively. This worrying trend will likely worsen once the UK officially exits the EU. Despite already leading to a decrease EU student enrolment, the consequences of a no-deal Brexit will target four key sectors: EU immigration, student fee status, research grants and qualification recognition.

With over 5% of all undergraduate and 9% of postgraduate research students in the UK originating from EU countries overseas, the matter of immigration is paramount. Whether or not EU students must apply for visas when studying in the UK and under which circumstances they may remain in the country after graduating

are crucial issues that have yet to be resolved. In preparation for a no-deal Brexit, the EU Settlement Scheme was established, allowing 'any EU citizen living in the UK by exit day [...] to apply to this scheme, securing their status in UK law.' Overseas students studying in the UK have until the 31st of December 2020 to apply for the Settlement Scheme and claim their "settled" status in order to legally continue to reside in the country. Although the ability to live in the UK is a prerequisite to study here, a Settlement Scheme would become superfluous if the vast majority of students are unable to afford the costs of university.

Under the current system, EU nationals benefit tremendously from heavy subsidies when paying tuition fees. EU students pay £9,250 annually—the same as students from the UK; however, with Brexit, they could soon face international-student fees reaching up to £20,000 annually. Although the government has published a policy paper 'confirming that eligible EU nationals will continue to benefit from home fee status and can access financial support for the 20/21 academic year', no statement has been made that clarifies whether students after 2020 will also benefit from financial support. An article published by BuzzFeed News reported that within the Department of Education, providing EU students with home-fee status is no longer justified. Prior to Brexit, granting EU students financial support was warranted, as EU Freedom of

Movement meant graduates would likely remain in the country and contribute to the economy. If the UK leaves the EU, students from member states ‘will be subject to new immigration rules, meaning they are less likely to stay and work in the UK, and less likely to repay their student loans. This means that there is no longer a case for offering home fee status and financial support’, according to ministers at the Department of Education. Increased restrictions on immigration and lack of financial support could cause a profound transformation of the student body in universities throughout the UK; however, the greatest threat to the prestige of British universities is a decline in their capacity to conduct meaningful research.

Since 1984, the EU has strived to support and foster research throughout Europe. In doing so, the EU commission allocates vast budgets every six years which are spent on research projects. The current programme, Horizon 2020, has a budget of €77bn and its successor, Horizon Europe, will likely have a budget of over €100bn. Universities in the UK benefit tremendously from the financial support provided by the Horizon programmes. Between 2007 and 2013, the UK received €8.8bn in research funding whilst only contributing €5.4bn to the fund. Between that same time-period, 22.4% of the European Research Council’s budget was spent on research in the UK, resulting in 8% of all research expenditures of UK universities being paid for by the EU. Ultimately, the EU has played a key role in enabling UK universities to secure their title as a major global research community. If the UK withdraws from the EU, the funding from Horizon programmes will be stripped as will those of the European Research Council and the Marie

Skłodowska-Curie Actions, the two European research fellowship councils. Both of these programmes allocate €500m to research annually, of which 17% is spent directly on the Russell Group Universities—more than that of all German universities combined. Research output remains a key benchmark in measuring the quality of universities. Without the veritable support of the EU, institutions in the UK are at serious risk of losing their title as a world-renowned source of ground-breaking research.

Even after graduating, students—especially those studying medicine and dentistry—face another challenge: getting their qualification recognized abroad. In 2005, the EU founded the European Professional Qualification Directive (EPQD). This program aims to ensure that any form of work that would normally have been restricted to a person who received a professional degree within member state would now be open to any person from any EU member state who received a similar qualification. For example, a physician holding an MBBS degree from the UK would also have their degree recognized in any other EU member state. After

Brexit, ‘[there] will be no system of mutual recognition of professional qualifications between the EEA states, Switzerland and the UK’, according to a policy paper published by the UK government.

The ramifications of Brexit will be all-encompassing. The potential decline of EU student numbers, stripping of research funding and discontinuation of qualification recognition could very easily lead to indelible consequences for universities throughout the UK. In addition to the aforementioned effects of Brexit, many uncertainties lie ahead, such as what will replace the European Health Insurance Card or how settlement plans will be implemented for students studying courses that take longer than three years. With an exit from the EU fast approaching, politicians and institutions must refrain being complicit and begin genuinely deliberating on plans to address the implications of Brexit. As students, we are also responsible in holding government and university administrators accountable. If we fail to do so, we risk institutions such as our own, founded centuries ago and revered for their excellence, to fade quietly into oblivion.



WHAT DO WE OWE EACH OTHER?

PART 1: UTILITARIANISM

BY ABHIRAM MAGESH, CORRESPONDENT

IF YOU'RE EITHER A PHILOSOPHY NERD OR TV BUFF, THE TITLE OF THIS ARTICLE MAY RING A BELL.

Philosophy nerds, indeed it is eponymous with T.M Scanlon's book and TV buffs, you've got it, it comes from one of my favourite comedies, The Good Place. Sadly though, unlike Chidi from the show, I do not have a 6-part lecture series, each 3 hours or so long to discuss the intricacies of abstract theories, nor am I in any way qualified to do so. No, in this 'series' (quoted because I have no idea whether I can procrastinate my degree in the future to write these up) I want to introduce some basic philosophical and ethical concepts.

"Why?" I can already foresee my friends asking as they slowly inch away from my incoherent ramblings and ongoing existential crisis. Well, as I see it, modern medicine and healthcare is an ethical minefield. No doubt in our professional lives we'll be facing tough decisions, decisions where there may not be a singular right answer, but one where people's lives can be affected, positively or adversely depending on the choices we make. After all, in healthcare we are in a privileged position to experience the highest points in a stranger's life and observe their harshest lows, and the things we say and do at that juncture may be a critical turning point. And even if you plan to bog from the health sector (don't blame you) and decide to see your bank balance rise so high you forget that the minus sign exists (looking at you dentists); in your day to day personal lives, you'll still be faced with choices that have moral and ethical consequences.

Besides, as much as I do love Epstein lectures, I don't think they're always the best at introducing morality and ethical decision making, especially to those not inoculated with complex and abstract philosophy (just one man's opinion, please don't fail me).

And with that, if you're still reading, let's begin with a nice and

simple one: Utilitarianism. I say simple because it can be surmised in one sentence: the right thing to do is the thing that provides greatest amount of happiness to the greatest number of people. And that's all. Sounds pretty good right? Now of course, it wouldn't be philosophy if there wasn't extras like the action that causes the least amount of sadness etc. but that's the general gist of it. And again, it wouldn't really be western philosophy if there wasn't some association with old white men, in this case John Stuart Mill and Jeremy Bentham.

One important tenant of Utilitarianism, is that intent is sort of meaningless. Let's say my mate does a 'fun' run for charity and she raises £400, but me being the big ego, male chauvinist I am, can't have that. So I decide to run twice as far and earn twice as much for the same charity. Well, in that case, despite my obviously bad intentions to outdo my friend just because of her sex, a Utilitarian would say good job, as I raised more money and therefore made a greater number of people happy. As long as I did a good thing, I am good.

And here I should mention that Utilitarianism is basically a branch of consequentialism, where the intent does not matter, and only the consequence of the action matters. The difference between the two, is that Utilitarianism defines good in relation to happiness while consequentialism leaves good as unspecified.

Another important bit to know is that Utilitarianism is all about the present. The entire theory is about doing the right thing, right now. Stole your mate's iPhone last week? Not a problem. Murdered your mother yesterday? Don't care. Betrayed your nation's international image by withholding vital military aid to one of your allies, Ukraine, unless they provided dirt on your political rival? I mean *ahem* (Please don't assassinate me). That is not to say punishment isn't looked favourably upon for doing bad things

in the past. If punishing you would do the greatest amount good by giving the most people, the greatest amount of happiness, then your sadness or pain at being punished is offset by everyone else's happiness at having you punished/ not reoffending if the punishment is imprisonment.

It is important to note that Utilitarian theory doesn't count your happiness as special. It's equal to everyone else's. So, if everyone in a room you were in, would be happy if you were branded with a rod that was shaped like Boris Johnson's penis, then Utilitarian theory dictates that no matter the shame and pain that may cause you, you should do it as long as your pain and embarrassment is offset by everyone else's happiness.

Now there is variances and subsets to the theory. As you may have noticed by all the examples I've been writing, pure utilitarianism (or act Utilitarianism), is pretty rife for abuse which is why there is another subset within the theory, called rule utilitarianism, wherein an individual must act by a set of rules, which if followed, will produce the overall greatest amount of happiness. For example, under rule Utilitarianism, you can't decide to kill the most annoying person in a room, just because it makes everyone else really happy, as a rule may be "Do Not Kill", which in general would lead to a greater amount of happiness and good overall than if you were to stab the annoyingness out of the guy.

As with everything in philosophy, there are issues and exceptions, and exceptions to those exceptions, and further problems that need to be solved and with each iteration, we delve deeper and further into the abstracted chaos until our mind implodes in on itself and we wait for the sweet release that only death may provide.

So, if you've stuck with me up till now, congratulations. You are now well versed in a very brief and introductory version of a concept of philosophy that still makes many an old white dude scratch their head to

this day.

Just for fun and because I hate myself and apparently you, the reader, I thought I might include some thought experiments to finish off, where Utilitarian philosophy can be applied and the outcome seen clearly and, as a bonus, both experiments can be used to apply other philo-sophical concepts too.

The first is the famous trolley problem: a tram is running down the tracks and the tracks split into two. On the left there's five people who are tied down to the tracks, and on the right there's just one. Because we are living in post Brexit Britain, the brakes, which are usually made in Germany, are non-existent, so you must choose whether to turn the tram right and kill the one person or do nothing and let the tram proceed down the left, killing the five people. There are many variations to this, like what if the single person is a genius holding the key to clean energy or the five people are all part of a gang that steals necklaces from grandmas and so on. But this is the most basic and probably the easiest to apply those Utilitarian principles you've just read all about.

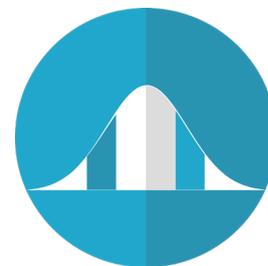
The second thought experiment is also quite famous. A brilliant surgeon who obviously went to Barts, is so amazing that they can transplant any organ. Sadly, there are five patients on the ward, each of whom needs a different organ. One day a traveller comes by for a check-up and as it happens is healthy and a perfect match for those five patients. Now if this person were to disappear, nobody would ever know, so, should the surgeon do the operation or not? Again, there are many variants to this, like what if the traveller is a serial killer, or one of the patients is a Nobel Peace Prize winner (for stopping modern slavery, not being elected as the first African American President of the USA, Obama) and so on and so forth.

Please get in touch and let us know what you think and happy philosophising.

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DECILES: THE HUNGER GAMES OF MEDICAL SCHOOL

BY NAZLI ASARDAG



NO ONE SAID MEDICAL SCHOOL WOULD BE EASY.

We were prepared for this when we decided to come here. All those exams, interviews and work experiences have allowed us to be differentiated from the rest. As a result, we are here. There was a lot of competition to get into medical school, but success makes us feel like we are ready for what awaits ahead of us. Yet a question that often springs to mind: Are we really ready?

It would be naive to think there would be no competition at all in medical schools. You get the highest achieving and the most ambitious kids from school and place them in the same environment. The maths here seems simple. However, I think the pressures exceed that of what we expected. Let's take decision to intercalate or not as an example. This ceases to be a question but a must to secure those 4 extra Foundation Programme Application System (FPAS) points. What if you can't intercalate? This can be due to anything beyond your control. To finance living costs in London for an extra year is not an easy decision. We compete for the top deciles to get the highest FPAS points. We hope all this will be worth it because we will get the best jobs in the end. I do agree that a certain level of competition enhances motivation to do well. This stimulates a hardworking environment that allows the process of molding medical students into good doctors. But doesn't ranking mean no matter how well you do your success is always determined in comparison to others' merits?

This relentless comparison of ourselves to our peers has greater impact on our careers and future patient care than we think. We learn - via unspoken rules- in medical school in order to do better than others in a test, we have to work staying up late compromising our sleep. We go over and over things until we are burnt out. In the end we fall ill, or become fatigued. Do we ever think about taking that much needed break? The answer is no for most of the students. If it is a yes, there is usually guilt attached to it. We are building a culture where taking time off is seen as a sign of weakness. Now think about this scenario as a doctor. The fear of appearing weak,

jeopardising future career options or asking a colleague for help will lead to presenteeism. This will lead to poor patient care. Therefore it is crucial that we learn "smart" working and not just hardworking during our degree. This way we can take good care of both our patients and ourselves in the future.

We won't be taking care of our patients alone. We will be working together with a team which will also have people who we are studying with now. Who wants to work with incompetent colleagues? No one- especially if what you are dealing with is human life. So we better work not just to become good doctors ourselves, but encourage those who we are on the same journey with. Right now not all of us can be in the top deciles. Therefore it is not unreasonable to think: "Why should I share the knowledge I spent time learning with someone else?" Yet 5 years down the line as doctors, we'll be winning together and we'll also be losing together when things go wrong. Therefore if only one individual learns from a mistake it cannot make them a better doctor. In order for this to work, a doctor's job should be in isolation of others. However healthcare is teamwork. The team has to learn. For this we have to share our knowledge and our opinions. Our communication will help us make each other better. So why don't we start doing this at medical school? Surely it must be easier to do as we start as FY1s if we already have 5 years of practice under our belts.

No matter what, medical school will be a competitive environment due to the nature of students it picks. This can be good in a way. Being raised in a high-pressure environment will prepare us for the high-pressure healthcare environment. However in order to shape our culture in the best way possible we should all learn to not lose perspective. Having recently started clinical years I am even more aware that the 5 years is so much more than just getting good grades or being the best. So I propose that we think of our time in medical school as a bowl of ice cream. Being at the top of the class can be the cherry on top. Yet we shouldn't forget that a bowl of ice cream is still wonderful regardless of the cherry on the top.



FAD TO GLOBAL HEALTH SOLUTION: THE PLANT BASED DIET

BY HOLLIE GARDINER

As a recent convert to veganism, I've become tuned into news and opinions surrounding the topic. This is a very controversial area, particularly in the deep-set farming community that I grew up in. With the rise of social media comes a wave of misinformation on both sides and this only inflames the arguments. I chose to become a vegan because of my health – I did a lot of reading to educate myself on my personal nutritional needs and have adapted my diet to satisfy both this and my wallet. But how hard would it be for the majority of the population to give up animal products and adopt a plant-based diet?

My vegan journey started when both my parents were diagnosed with cardiomyopathies at the age of 55. On top of this, all the women in my family apart from myself have had their gall bladders removed, most have high blood pressure and hypercholesterolaemia, and many have hypersensitivity conditions. For a while now, my mother has been on a concoction of six different antihypertensives and there isn't any sign of improvement. With beta-blockers being the next step and all the side effects that come with them, she is trying her best to reduce her stress, increase her exercise and reduce her salt intake – just what the doctor's ordered. Naturally, I've been looking for anything that we could implement which could help these conditions and perhaps prevent myself and future generations from going down the same path. A common theme to many articles and papers that I've read was to reduce saturated fats, salt and processed foods as well as increasing exercise (something that is much easier to say than do!). With my parent's permission, I took a close look at their diet and nutritional intake and to be honest, it wasn't as bad as I was expecting. The only things that were in excess were protein and fat, with no deficiencies in minerals or vitamins. But on closer inspection, meat and animal products were centre-stage of the vast majority of meals, and I wondered if this could be something to change.

My reading suggested that even small reductions in meats and dairy products could result in large reductions in cholesterol, blood

pressure and weight and I was convinced this would be worth trying. However, getting the family on board, with dairy farming a major part of my family tree, wasn't going to be an easy discussion. Quietly, my mother was open to anything to try to improve her health, but was anxious because she didn't know where to start. This is where my veganism began, a kind of DIY project to show my family what was possible.

Much of the arguments surrounding ditching animal products is around nutrition – protein, B12 and more recently choline have favoured in the news and on social media and are the main topics my friends and family bring up when discussing veganism. I'm not going to pretend it's easy. Tracking nutritional intake of any diet is time consuming, difficult and downright confusing with different websites, books, and even nutritionists quoting various numbers and percentages to be concerned about. Every other day it seems there's an article popping up about diet, muddying the waters with each addition. And if you happen to have health conditions that require additional challenges, this can feel near impossible to navigate. In my reading I was recommended time and time again to seek advice from my GP or nutritionist. A 10-minute appointment, a blood test and some extra reading from this helped me to create my plan – make sure I eat more vegetables than fruit, in at least 5 colours with mostly leafy greens, and also drink milks that are fortified with B12, vitamin D and calcium. Beyond this, I needed to revisit the doctors to check my bloods and I had a free reign over which foods featured in my shopping basket. A bit of thinking and some 90-minute Tesco trips (much to my husband's dismay!) gave me my meal plan for the next few weeks. Technology has been a god-send when it comes to dietary changes. Apps can track calories, proteins and fats and the one I love looks at a vast array of micronutrients as well. All this really helped my vegan conversion and the last trip to the doctors gave me the green light to go it alone.

These changes have had a positive effect on my health - I've ditched my inhalers and I've not had a flare-up of my eczema in months.

Through the changes in my own life, I convinced my parents to only have meat in three main meals a week, and to reduce their dairy intake as much as possible. For a family who keeps chickens in the garden producing a dozen eggs a day, this was a huge step and I'm pleased to say my mother's blood pressure has reduced to 145/93 mmHg on her last check. She's also noticed changes to her psoriasis - it now covers less than a quarter of her body where at times, it's been nearing 75%.

This has been such a positive change for my family, long may it continue, but now I've begun to wonder what the world's health would look like if more people adopted a plant-based diet. Looking at the UK, where the majority of adults are overweight or obese and all the known health complications that come with this, it's easy to think the solution is to simply eat more fruit and veg, reduce fat intake and do more exercise. Veganism, if done with nutrition as the focus, could be an answer. But I had to do lots of research, get my GP onboard and micro-manage my diet to make sure I'm not harming myself. Not everyone can access this level of information and support, and I'm in the lucky situation to get input from many sources. It's incredibly time consuming and because veganism has been seen as the flavour of the month, many companies and supermarkets charge extra for their meat-free alternatives. I'd love for everyone to have the same level of knowledge and help to decide whether a plant-based existence is the right choice for them, but until this happens, I feel vegans will remain the minority. Fear of the unknown is a big dissuader for many, my mother included, and with social media and peer pressure having the influence they do, I'm not sure I'll have many more converts from my home town! But encouraging your circle to look at their nutrition honestly and change one or two things for the better is probably the best start for a society as a whole. Veganism may not be the answer for everyone, however the discussion on how our food impacts our health has definitely become much louder since this movement has grown. I hope this will continue and more people feel empowered to change their diets for the better.

VOLUNTEERS ASSEMBLE!

ALL YOU NEED TO KNOW ABOUT CW2019

BY NEHA SADIK, VOLUNTEERING EDITOR

For many students at BL, Charity Week is an established mainstay week of events in October that they have come to know and love. For others, it is simply a Facebook invite that they click on once and proceed to ignore. Well, for all those people in the second group, this is your chance to find out exactly what Charity Week is and what it entails! In its most basic form, Charity Week or CW is a week of various events with the aim of raising money for meaningful causes. This special week doesn't just occur at Barts but across the UK in many different schools and universities, as well as Qatar, South Africa and numerous other countries.

To fully understand the core and vision of Charity Week, we must go back to the year 2000. This is when Dr Wajid Akhter (GP, Islamic Historian, Writer and Barts SSC tutor) was a student at St George's Medical School, dreaming of establishing a week dedicated to charity, starting off with just a shoebox and handwritten poster to fundraise. I asked him a couple of questions about how he founded Charity Week and how far it's come since.

Why did you decide to establish Charity Week? What was the thought behind it?

I looked around at the multitude of problems faced in the world - poverty, racism, oppression or climate change - and realised that the only way we could tackle them was to unite together. Separately, we don't stand a snowball's chance in hell... but working together, there is hope.

Being a medical student at the time, it resonated with me that treating symptoms will never cure us of the disease. All the chaos we see engulfing the world is merely a symptom of a wider disease of disunity.

Charity Week is just one project whose vision is to inspire people towards seeing unity as the default, not the exception.

Did you ever imagine that CW would reach the scale it has?

Yes. This didn't happen by accident. It was planned for; strategies were set and steps were taken. That's why the idea of Charity Week came in late 2000 but the first actual Charity Week was in 2004.

However, it is still humbling to see plans work and dreams come into existence.

What do you think has been CW's biggest achievement, in your eyes?

I guess people expect me to say the millions of pounds raised, the hundreds of thousands of orphans and needy children helped or the number of volunteers engaged in good wholesome activities.

But that isn't it, as grateful as we all are for each of those other benefits.

The greatest achievement, in my opinion, is to bring the idea of Unity and the practical example to the forefront of people's mind. If people realise that if we work together we can achieve so much more than if we don't... It's priceless. It means we can begin the process of changing. And if we change, then perhaps our situation will change too.

What are you most excited for Charity Week 2019?

There is so much to choose from. Finding out if we are funding cancer care and end of life services in Gaza or hepatitis screening in Pakistan is always memorable.

Seeing thousands of volunteers unite their powers and watch this unfold in events, videos and posts throughout the week where up to 250 events will be taking place each night worldwide.

Witnessing the connections being made between all the different volunteers across the world - from Cape Town to Calgary it'll be amazing.

But what I'm most looking forward to? Sitting down and planning CW2020. This isn't the end, it's just the beginning.

FROM ITS HUMBLE BEGINNINGS, CW HAS PROGRESSED AT AN IMMENSELY FAST RATE AND HAS BEEN FORTUNATE ENOUGH TO FUND NUMEROUS AMAZING CAUSES. ONE OF THE UNIQUE QUALITIES OF CHARITY WEEK IS THAT VOLUNTEERS AREN'T JUST PIECES OF A PUZZLE, THEY HAVE A SAY IN WHERE THE MONEY THEY RAISE IS ALLOCATED. PREVIOUSLY, VOLUNTEERS VOTED BETWEEN 4 PROJECTS FOR THE WORTHIEST CAUSE TO SUPPORT, HOWEVER THE VAST INTERNATIONAL EXPANSION OF CW HAS NOW ENABLED ALL 4 PROJECTS TO BE FUNDED, AS WELL CONTRIBUTING TO EMERGENCY RELIEF IN INTERNATIONAL NATURAL DISASTERS, SUCH AS THE 2018 INDONESIA EARTHQUAKE. THIS YEAR, THE 4 PROMINENT FUNDRAISING OPPORTUNITIES ARE PROVIDING HEPATITIS B SCREENING AND VACCINATIONS IN PAKISTAN, CANCER CARE FOR CHILDREN IN GAZA, EMERGENCY AID TO SYRIA/SUDAN AND EDUCATION IN MULTIPLE DEVELOPING COUNTRIES. AS I'M SURE EVERYONE CAN AGREE, THESE PROJECTS ARE ALL NOTEWORTHY AND WELL WORTH SUPPORTING!

NOW TO DELIVER THESE SUPER PLANS, CHARITY WEEK REQUIRES SOME SUPER EVENTS! THIS YEAR'S THEME IS SUPERHEROES, WITH A SPECIAL INTEREST IN MARVEL. THE EVENTS WERE CAREFULLY PLANNED OUT BY SELECTED CW REPS WHO WORKED HARD TO DELIVER EXCITING EVENTS CENTRED AROUND THE AVENGERS AND THE CONCEPT OF UNITY. ONE OF THE STANDOUT EVENTS WAS 'ENDGAME: THE INFINITY MAZE', THE SEQUEL TO THE INNOVATIVE MURDER MYSTERY NIGHT OF LAST YEAR WHICH GAINED INTERNATIONAL ATTENTION. THE EVENT WAS SO EAGERLY ANTICIPATED THAT IT WAS FULLY BOOKED WITHIN A COUPLE OF MINUTES, AN EVENT CARRIED OUT IN OUR VERY OWN GARROD BUILDING! OTHER MARVELLOUS EVENTS INCLUDED IN CW 2019 WERE THE POPULAR CW QUIZ NIGHT, CULTURAL PARTEA, FIFA CHAMPION CUP AND THE BIG EVENT. THE BIG EVENT IS AN ANNUAL AUCTION THAT OCCURS TOWARDS THE END OF CHARITY WEEK IN COLLABORATION WITH QM, WHICH MANAGED TO RAISE AN INSANE TOTAL OF ALMOST £10,000 THIS YEAR, AUCTIONING OFF ITEMS LIKE A CAKE, PRAYER MAT AND EVEN A BANANA. THIS JUST GOES TO SHOW THAT WHILST THE ULTIMATE PURPOSE OF CW IS TO COLLECTIVELY RAISE MONEY FOR GOOD CAUSES, THE SPIRIT OF IT ENCOURAGES US TO CREATE BIGGER AND BETTER EVENTS EVERY YEAR BECAUSE OF THE HEALTHY COMPETITION BETWEEN UNIVERSITIES TO GET THE BIGGEST TOTAL.

FOR THOSE INVOLVED IN CHARITY WEEK THIS YEAR AND IMPORTANTLY, FOR THOSE WHO MISSED IT, I HOPE YOU'RE EXCITED TO VOLUNTEER OR PARTICIPATE IN CHARITY WEEK 2020. LIKE ALL OTHER BRILLIANT OPPORTUNITIES TO VOLUNTEER AT BARTS, IT'S A GREAT WAY TO GET INVOLVED, GIVE BACK AND HAVE A LOT OF FUN!



BARTS AND THE LONDON BOAT CLUB'S 175TH ANNIVERSARY DINNER

BY BEN KOETSIER

On the 13th of September 2019, Barts and The London Boat Club hosted an extraordinary dinner at The Great Hall, St Bartholomew's Hospital in celebration of the club's 175th anniversary.

Over 170 students and alumni came together to celebrate the history, achievements and community that exists at BLBC. Current and previous members of the club enjoyed a drinks reception in the courtyard, followed by dinner and shared stories of their time rowing at Barts and The London.

Groups of friends that qualified together were reunited and alumni attended from as far as Houston, USA and Perth, Australia. Speeches by the current and past club captains addressed the union of BLBC's two founding clubs (Barts BC and The London Hospital BC) and the continued success of the club today.

The Great Hall was buzzing with conversation and a unique sense of commonality that is shared by all BLBC students and alumni. The dinner was generously supported and facilitated by Barts and The London Alumni Association, Barts and The London Student's Association and Barts Great Hall.

A fantastic evening was enjoyed by all and the club looks forward to welcoming everyone back at its 200th anniversary.



HAPPENING AROUND BL



BL FOOTBALL

It's been a great start to the year for SBLHFC! A fantastic turnout at the Freshers curry led to an enjoyable night for all involved. Following this a good amount of talent was on show at trials and plenty of new faces have slotted into our teams. Hard work at training brought a big set of results in our first BUCS matches with wins for the 1st and 2nd XI. We are hoping to kick-on as UH approaches!



BL CRICKET

Our first taster session at the Oval this year was hugely successful and enjoyable. Being able to train at one of the world's most renowned cricket grounds is a privilege, and we only hope to be able to put on these sessions more regularly in the future!

BL ONCOLOGY

While the mentees selection for our mentorship scheme is still in progress, we would like to invite you for our very first talk! We will be hosting Dr Gunnel Hallden who will be sharing a novel treatment method of cancer using viruses! Sounds like a cutting-edge research to us, you definitely don't want to miss out on that one!

BL MEN'S HOCKEY

Stunning 13-1 win for the 1s over Hertfordshire 1s in BUCS



BL CHRISTIAN UNION

Jesus seems like the most irrelevant thing when coming to university - but the Christian union have been exploring what he's actually like and seeing if that's relevant to nowadays.

We're doing "Countercultural" every Thursday 5:30-7pm in Garrod 1.30 looking into what Jesus says about things we all really want, like status and friendships. Could it be that the answer to our deepest desires comes from 2000 years ago?

STUDENT LIFE

BL TENNIS

Beginner and intermediate training sessions have sold out, with superb interest this year! Our volunteering scheme has started with great involvement, showing promise for the future! Keep an eye out for the tennis tournament that will be starting in November!



BL LGBT+

-Our Drag Bingo event in collaboration with the BLSA this Freshers was a massive success! We all had a great time playing along with our talented BL Queens :)
-We also had a great time at our Freshers Brunch and out in Heaven!
-Right now we're hosting a Ru Paul's Drag Race UK watch party every Thursday in the Garrod Building from 7:45-a really fun and chilled way to get to know everyone in the society!



BL DRAMA

We put on our Senior Play, which was Blood Brothers which was a huge success. It saw the introduction of our reusable cups at the Cellar Bar in a move by BL Drama to become more sustainable as a society. We are looking towards consent week where we will be putting on two plays and in the same week our fresher's will take to the stage in 'The Seussification of Romeo and Juliet'.

BL INDIAN

BL Indian Society is back with a bang this year with bigger and better events than ever before. With 60 people coming to our bowling icebreaker, we hope to see as many of you as possible to our FREE Diwali event on the 24th October! p.s. did we mention the free food?



BL NETBALL

BL Netball has now grown to 8 teams! Our 1s are currently undefeated in both LUSL and BUCS with the rest of our competitive teams doing amazingly well in their leagues as well! Our club now has 3 mixed ability development teams that are being trained up by our incredible development officers. We are working with QMN in a social cohesion project to coach netball to girls at local schools to promote an active lifestyle.



BL BADMINTON

BL Badminton has had great attendance at our training sessions (Saturday 2-4pm @q.motion), so far which we hope to keep up for the year. We've started our BUCS league fixtures for the men's team at home to Essex last week.



BL PROJECT PLAY

The start of term has been very productive for Project Play! We have been able to carry out over 20 sessions in the Healing Space of the Royal London Hospital so far as well as recruiting 80 new volunteers to ensure we can continue this for the rest of the year. Last week, we started hosting sessions in the new adolescent room which is an exciting new way to bring a welcome break the teens in the hospital!

BARTS COMMUNITY SMILES

We all know the complications, at least most of them, of diabetes. But do you know that diabetes causes periodontal (gum) disease? Barts Community Smiles is collaborating with the East London Mosque for the first time to raise awareness of diabetes and oral health! Also, our volunteers are visiting local primary schools to educate schoolchildren on keeping their mouths healthy via interactive talks and fun games! :)



BL MEDTECH

BL MedTech Society have started the 2019/2020 academic year with force! We curated and attended the 2019 GIANT Health Event (Europe's Greatest Festival of Healthtech Innovation) on October 15-16th, have organised an AMBOSS student workshop, a breakthrough medical educational platform to teach students to study smarter, not harder (Oct 22nd), and have an exciting upcoming Java programming workshop (Oct 29th). Join us!

WANT TO BE FEATURED IN THIS SECTION? WE'LL BE SENDING OUT A FORM TO STUDENT GROUPS BEFORE THE NEXT ISSUE COMES OUT SO KEEP AN EYE OUT!

'Do It With Thy Might' is a campaign aimed at celebrating the student body and the work they do to make the Barts and The London community so special. If you think someone or some group that should be nominated, let us know!



BL Afro-Caribbean Society, with the support of BLSA Welfare and QMSU ran the Black Business Fair during Black History Month which attracted hundreds of visitors. It is the only fair of it's kind in a Russell Group University, and the second biggest Black Business Fair in the country!

**"DO IT
WITH THY
MIGHT"**

011

GOOD AFTERNOON,

This year BLWD would like to do something for BLACK HISTORY MONTH. During this month we will be highlighting a few influential black men and women in the field of SPORTS, MEDICINE, and HEALTH by showcasing their stories. We will also have a weekly MOVIE and/or BOOK which will range from the real life experiences of how race and racism manifest, to coming of age stories, documentaries and much more. You will get the chance near the end of the month to choose an influential black figure which you think deserves to be acknowledged.

So sit back and relax as BLWD presents to BLACK HISTORY MONTH

Wet Watery Love,
BLWD XXX

BLWD CELEBRATES BLACK HISTORY MONTH WITH



NICOLA ADAMS

NICOLA ADAMS

When female boxing was introduced in the London 2012 Olympics, it was Nicola Adams that took home the gold for Great Britain. She then went one step further and became the first female boxer to be a two-time Olympic gold winner in the 2016 Rio Games.

BLWD CELEBRATES BLACK HISTORY MONTH WITH



ALICE BALL

ALICE BALL

She was both the first woman and first African-American to graduate with a M.S. degree in Chemistry in 1915, at the University of Hawaii. She developed the first successful treatment for those suffering from Hansen's disease (leprosy).

BLWD CELEBRATES BLACK HISTORY MONTH WITH



CHARLES EASON

CHARLES EASON

Dr Eason is deemed as the "Father of Cardiac Surgery in West Africa" by modern scholars. He is a Ghanaian doctor and the first Ghanaian to qualify as a surgeon specialist and the first African Dean of the University of Ghana Medical School. Eason performed the first successful open-heart surgery in Ghana in 1964.

BLWD CELEBRATES BLACK HISTORY MONTH WITH



MARY SEACOLE

MARY SEACOLE

You may know about Florence Nightingale but maybe not the lesser known tale about Mary Seacole. She was born and raised in Jamaica and came over to the UK in 1854. She requested to help the wounded soldiers in the Crimean War, however, she was not allowed to do so. She then self-raised the money and travelled to Balaclava, Ukraine. Once there, she tended to the British wounded soldiers.

BLWD CELEBRATES BLACK HISTORY MONTH WITH

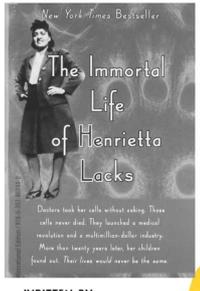


CYNTHIA NNE

CYNTHIA NNE

She is a British Dentistry educator and the first woman to be the head of a British School of Dentistry. Additionally, she has been a Professor of Dental Public Health at the Institute of Dentistry at Barts and The London School of Medicine and Dentistry since 2013. Impressively, she was awarded a CBE in 2006 and has also been included in the Powerlist of the UK's 100 most influential people of Black and Afro-Caribbean descent.

BLWD BLACK HISTORY MONTH BOOK OF THE WEEK



THE IMMORTAL LIFE OF HENRIETTA LACKS

Written by **REBECCA SKLOOT**

THE IMMORTAL LIFE OF HENRIETTA LACKS

This novel tells the story of Henrietta Lacks a poor woman from the South who became immortal as her cells were taken without her knowledge. Known to scientists as HeLa, her cells then became instrumental in the development of the polio vaccine, uncovering the secrets of cancer to the effects of atom bombs, and so much more. Even though she has been dead over sixty years, her cells are still alive today.

NEW POST!



JESSE OWENS

NEW POST!



I AM NOT YOUR NEGRO

Directed by **RAUL PECK**

I AM NOT YOUR NEGRO

This is an award-winning documentary film based on Raoul Baldwin's unfinished manuscript Remember This House. It explores the history of racism in the USA through Baldwin's reflections of civil rights leaders such as Malcolm X and Martin Luther King Jr, in addition to his own observations. Samuel L Jackson narrates the film.

BLWD CELEBRATES BLACK HISTORY MONTH WITH



JAMES MCCLUNE SMITH

JAMES MCCLUNE SMITH

After graduating from Glasgow, Scotland he returned to the U.S. as the first black man to hold and practice with a medical degree. He was also the first black physician to establish and run a pharmacy. He used his training in medicine and statistics to combat common misconceptions about race, intelligence, medicine, and society in general.

BLWD CELEBRATES BLACK HISTORY MONTH WITH

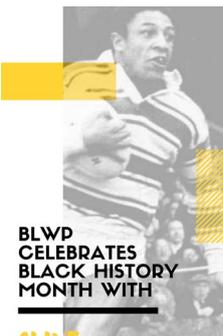


JESSE OWENS

JESSE OWENS

In the 1936 Berlin Olympics, Jesse Owens, a black American, took home four gold medals in 100 and 200 metres sprint, the long jump, and the 4x100 metres relay. This occurred in the Games that was meant to be a showcase for Hitler to show the supposed superiority of the Aryan race.

BLWD CELEBRATES BLACK HISTORY MONTH WITH

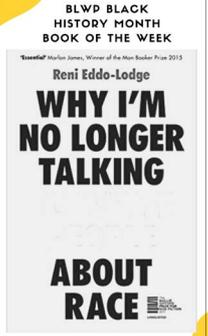


CLIVE SULLIVAN

CLIVE SULLIVAN

A Great Britain and Wales International winger, he played for a few teams in his career. He was also the first black captain of the Great Britain Lions and for any national British sporting side.

BLWD BLACK HISTORY MONTH BOOK OF THE WEEK



WHY I'M NO LONGER TALKING ABOUT RACE

Written by **RENI EDDO-LODGE**

WHY I'M NO LONGER TALKING ABOUT RACE

Reni-Eddo-Lodge, writes about her experiences and frustrations about the way race and racism is discussed in Britain. In her book, she explores topics eradicated from black history to the political purpose of white dominance and whitewashed feminism stemming from the inextricable link between class and race.

BLWD CELEBRATES BLACK HISTORY MONTH WITH



SERENA WILLIAMS

SERENA WILLIAMS

Considered one of the tennis greats that the world has ever seen, in both male and female game. Her records include 34 Grand Slam titles, and four Olympic golds. She was also the first black woman to win a Grand Slam tournament title since Althea Gibson in 1958.

THANK YOU FOR CELEBRATING BLACK HISTORY MONTH WITH US. WE HOPE YOU ENJOYED AND LEARNED SOMETHING NEW :)

BL Water Polo Club ran an engaging campaign throughout Black History Month aimed at celebrating notable black men, women, culture and art. This was the most notable social media campaign run during the Month by a student group and quickly became a highlight of Black History Month 2019.

"DO IT WITH THY MIGHT"



BREAKFAST ON A BUDGET

BY SIDHANT SINGH

Located in the heart of Bethnal Green just 3 shops away from E Pellicci, Cafe 338 is a typical 'greasy spoon' cafe. Serving up a hearty traditional English breakfast and many more delights making up one of the biggest menus I've ever seen.

When you enter Cafe 338 you're immediately greeted with the fragrance of bacon cooking and buttery toast as you make your way to a table amongst hungry diners. Although a smaller venue, the cafe makes up for it with charm and a light and airy interior. We would advise getting there early as the queues build and tables fill up; you'll be happy sitting at your small table waiting for your breakfast with a hot cup of tea or coffee and toast, which comes with all of your orders!

On our visit we ordered the "Mega 338" - their special breakfast which comes with plenty of mushrooms, bacon, bubble & squeak, tomato, black pudding, a jumbo sausage and a perfectly fried egg on a fried slice. Finishing this breakfast is no less than a challenge, making it perfect for the morning after Tables! Some of the biggest hits from the breakfast was definitely the fried slice and the bacon, cooked to perfection with nothing to complain about. The black pudding although delicious wasn't piping hot and the egg close to perfect. While the "Mega 338" is a great breakfast on it's own you can swap or add items to the breakfast. After a night out I was craving nothing more than some beans to have with my toast which they substituted into my meal free of charge. But most importantly the food tasted homemade with thought and attention given to the quality of ingredients and focusing on a simple preparation.

The success of the cafe is not only accredited to the amazing food but the tireless effort of the staff that are very friendly and eager to help you with anything from recommendations to just speaking to you about the restaurant in general.

After my first visit I've been drawn back almost every Thursday morning since and I recommend you all give it a try. Cafe 338 promises you great food with great value promising most breakfasts between £4 - £8 and less than a 15 minute walk from Whitechapel.

I hope to see you there next Thursday!

MUCH TO DO AROUND LONDON

BY ANGELA FITZPATRICK, ARTS & CULTURE EDITOR

I don't know about you, but constant drizzle puts me off getting groceries, let alone entertainment, so these (indoor) picks for the winter are more or less arranged geographically-saving effort AND money. Perfect, given I expect to be short of both money and effort at the end of the year! That said, arrange a day out from anything here, and at minimum you'll have been distracted from work for a day...

If you're interested in climate issues, on the afternoons of 28th November- 1st of December, the Tate Modern will have a free series of seminars and workshops with artists and researchers from around the world. While you're there, see Nam June Paik (trippy) and if you've not seen "In Real Life", you've got until January! While you're in the area it's worth popping into KCL's Science Gallery for the free exhibition "On Edge", which has some interesting art and videos on the subject of anxiety.

For the evening, £7.50 Entry Pass tickets are currently on sale on the National Theatre website, so I'd recommend grabbing a few of those while you can! If you pick one, see *Translations*. Or head to Shakespeare's Globe- November is *Henry VI* and *Richard III*, you can get standing tickets for £5! If you can, see *The Son* at Duke of York's theatre- it finishes on the 2nd so there isn't long! At the Donmar Warehouse see [BLANK] and *Far Away* - you might be able to get free tickets by ballot if you're 16-25 years old.

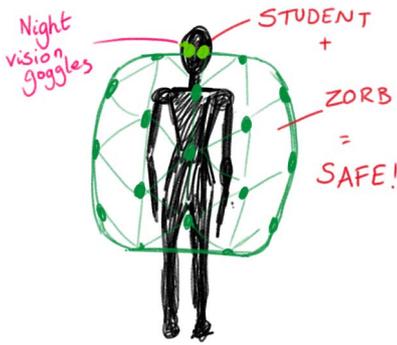
If you're around Euston, the Wellcome Trust has recently opened their "Being Human" exhibition, and on that topic, the Science Museum's extensive history of medicine exhibition opens on the 16th November. While you're there, it's well worth visiting "The Art of Innovation"- also a free exhibition, but booking's required. Around the corner, the V&A is exhibiting the photographer: Tim Walker (rich and surreal- go if you can!) and of course there're free displays as well.

This season the Tate Britain is showing William Blake and Mark Leckey, both of which I'd highly recommend- £5 if you've signed up to Tate Collective. The next late is celebrating the centenary of Bauhaus, but honestly the lates are fun whether you care about the subject or not, and that's on Friday 1st November.

The Barbican Centre is worth visiting pretty much any time- with Young Barbican, everything is very affordable, including the cinema (which depending when you're going isn't anymore expensive than Genesis). There're free exhibitions dotted around, tours of the conservatory, and the exhibition "Into the Night" (clubs, cabaret, and modern art) has live music on a Thursday night. And if you're interested in the classical side of things, do have a look at the London Symphony Orchestra's winter season- tickets will only set you back a tenner.

FEELING SAFER ALREADY?

BY PENNY SILLEN, EX-POLITICAL CORRESPONDENT



©QMUL

Queen Mary University of London have placed safety at the top of their list of things to do when they find the time (but they're really busy right now). University leadership have brought in world-renowned security expert, Macaulay Culkin, who has drafted a set of measures which are set to roll out over the Christmas period.

Following an investigation which led to us obtaining the official drawing you see above, Circadian can exclusively reveal that one of the strategies being drawn up includes buying every student a personal Zorb Ball. It is

believed this is due to the University misunderstanding the results of a focus group where students mentioned that University should be a 'safe space'.

In addition to this, it seems that the University is also listening to student concerns over a lack of adequate lighting on campus, after students complained about how dark and unsafe it is outside of most building in Whitechapel such as the Library, Floyer House, Laird Hall, the Abernathy Building, the Blizzard Building and the BLSA Building. According to University sources, their solution is to invest in library loans of military-grade night vision goggles to tackle this problem.

It remains to be seen if any of these measures will have a tangible effect in real life, but the University is optimistic that the solution lies with students being better prepared rather than making the campus safer or increasing security presence.

VIRTUAL MEDSOC TO BE TRIALLED TO RELIEVE PRESSURES

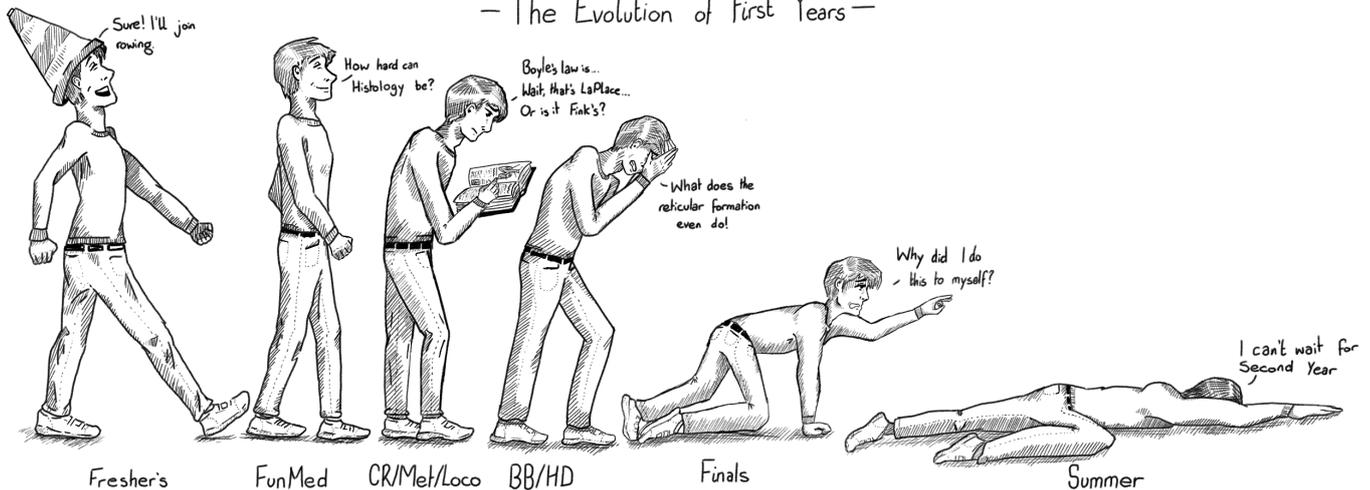
Following recent issues with Medicine in Society, in which there were not enough placements for students, and with medical places continuing to expand aggressively, the Medical School has begun to trial a new initiative in which students are instead placed on a 'Virtual MedSoc'.

According to Virtual Head of Community Based Education, students would meet up in the Garrod Building as with PBL sessions, and sit in silence for the first hour to simulate travelling to the furthest reaches of North-East London. The groups would then be required to pass around character cards, with one student playing the role of the GP, one student having to pretend to be a patient and the others just playing themselves.

Upon questioning, the Virtual Head refused to address rumours that to be as close to reality as possible, one lucky student will get to play the part of a patient that does not attend.

Cartoonology with Lou

- The Evolution of First Years -





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