The University of Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Biomedical Sciences@Nottingham

Department of Biomedical Sciences Newsletter 2017

Life-changing careers begin here

Congratulations to the class of 2017 graduates!

Our undergraduate students engage in international medical research

A degree in Biomedical Sciences will enable you to get involved in the development of treatments for diseases. In addition, there are exclusive opportunities for our Biomedical Sciences students to spend a whole semester and conduct their final year projects in labs on the UK campus.

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http://www.nottingham.edu.my/Biomedsci/About/Index.aspx

http://tinyurl.com/facebook-com-UNMC-BMS

Hello and welcome

We are delighted that you are considering Biomedical Sciences at Nottingham. Starting university is one of life's great adventures. With this in mind we hope our newsletter will provide you with some insights on our excellent teaching staff, teaching and research facilities, and student life on campus. One unique feature of our course is that our students are given the opportunity to apply for transfer or carry out a research project at the Nottingham Campus (UK) in their final year of study. We look forward to seeing you here soon.

Professor Dr Ting Kang Nee
Head of Department
Department of Biomedical Sciences
The University of Nottingham Malaysia Campus

"It is indeed a great pleasure to be able to welcome you to the University of Nottingham. We are a global university based in the United Kingdom, China and of course Malaysia. The Department of Biomedical Sciences in KL is the sister department to the School of Life Sciences in Nottingham. We are building greater links with the UK and a number of our final students will transfer and complete their BScs in their final year in the UK. The UK school has developed a new and exciting degree in Tropical Biology and UK students will spend their second year in Malaysia with extensive field trips.

We do hope that you will enjoy and be challenged by your degree in Biomedical Sciences. This is an exciting opportunity to study aspects of Biology in the context of medicine and its application. We have put together a course which we hope you will stimulating and take to the very latest advances in Biomedical Sciences. But do remember that this will involve a lot of hard work and our aim is that by the end of the course you will become an independent learner; this is a really important skill.

Once again, please accept my very best wishes for your studies and I hope to meet you personally at some stage of your degree.

Professor Michael D Randall
Associate Pro-Vice Chancellor
(Education and Student Experience) School of Life Sciences (UK campus)

Staff profiles: Meet our academic

Dr Chee-Mun Fang holds a PhD in the field of immunology and vaccinology from University of Malaya, Malaysia. Soon after, he joined the Salmonella Live Vector Vaccine Unit at the Centre for Vaccine Development, University of Maryland School of Medicine in USA, focusing on the development of attenuated bacterial live vector, Salmonella, as a carrier for vaccine delivery. He then moved to the Biology Department at John Hopkins University as a senior postdoctoral research fellow working on understanding the role of Interferon Regulatory Factors 5 (IRF5) in development and effector functions of B cells. Prior to joining the UNMC in 2014, he taught immunology and microbiology to medical, pharmacy and life sciences students for several years in local institutions.

His current research primarily focuses on understanding the role of Interferon and Interferon Regulatory Factors (IRFs) in development of lymphoid cells, allergy, autoimmune diseases and carcinogenesis. His work includes vaccine development against various infectious diseases by using Salmonella as a carrier for vaccine delivery as well as characterisation of immunomodulatory properties of bioactive fraction from plant materials.

Dr Fang Chee Mun
Associate Professor

UK academics pay us a visit

Our Year 2 students having a learning and open discussion session with Dr Fergus Doherty.

It is a frequent sight to see our Nottingham UK academics fly in to join us in delivering our learning and teaching activities. In April this year, Dr Fergus Doherty from the School of Life Sciences visited UNMC.

"I was really looking forward to my visit to Malaysia. I lived in KL for a few years when I was very young and was interested to see how the country had changed in over 50 years! I have to say that I was not prepared for the extent to which KL had changed. It was utterly transformed. Now, KL is a big modern, incredibly busy, city. However, some things haven't changed, the heat, the multi-ethnic and multi-cultural population and the great food!"

Talking about his visit in UNMC, he describes, "The opportunity to meet students at UNMC was great. Highlights included the year 1 poster session where I could wonder around and talk to the students, who were highly engaged with their topics and from whom I learnt a lot. I also enjoyed the bioinformatics session with the year 2 students. I was impressed with the openness of students and how friendly they were, it was a truly enjoyable experience.

Besides, we're making substantial changes to our degree programmes in the UK and so it is especially important that staff in the two campuses keep in touch. Also, many of our students have expressed an interest of studying in Malaysia. Hopefully our discussions will help in the development of our courses in both campuses. It was fascinating to visit UNMC and to meet student and staff and I greatly appreciated their hospitality and generosity."

Research Highlights

Year 3 BMS PhD student wins the University of Nottingham Postgraduate Prize Award

On 17th May 2017, Ch'ng Qin Ting (Grace) from the School of Biomedical Sciences was awarded a University of Nottingham Postgraduate Prize Award, which is given out for accomplishments in postgraduate research (including conferences and publications) as well as contributions to the postgraduate community. Prior to the award presentation, Professor O'Malley read out a supporting description by Dr Then Sue-Mian, Grace's supervisor. She described Grace as a dedicated, methodical and passionate researcher in the lab, an active sportswoman and a tireless contributor and supporter to the postgraduate community within the School of Biomedical Sciences and the Faculty of Science. Along with the prize was a cheque for RM750. Grace is honoured and feels motivated with this award and plans to use the prize money for participation in a future conference.

Nominated by our head of department, Prof Ting Kang Nee, Professor Claire O'Malley presented the award to Grace at a ceremony that took place simultaneously over three campuses via video conference. From left: Grace Ting, Professor Claire O'Malley and project supervisor Dr Then Sue-Mian.

Many interesting topics were raised during the symposium and we like to believe that the talks enlightened and encouraged the young scientists in the room to carry out more breakthrough research in their respective fields.

Third Annual Biomedical Sciences (BMS) Postgraduate Research Symposium

The Biomedical Sciences (BMS) Postgraduate Research Symposium is an annual event organized by the Department of Biomedical Sciences. This year's theme "Embracing Life Sciences", signifies the provision of a platform for academics and postgraduate (PG) students to exchange views and discuss the latest research findings in life sciences. We were honoured to have Professor Ian MacDonald, the head of the School of Life Sciences, UNUK, and Associate Professor Kanthi from the Faculty of Medicine, University Malaya, as our plenary speakers. During the keynote lecture sessions, Prof Ian discussed about 'Obesity – Development, Treatment and its Implications for Health' while Assoc Prof Kanthi discussed about the roles of different natural products as potential anti-cancer and anti-obesity agents.

Four third year BMS PG students presented their research talks while 10 PG students from the schools of BMS, Biosciences and Pharmacy, participated in the poster presentation. Together with Professor Sandy Loh from the School of Biosciences, the invited speakers judged our poster presentations. The presented topics ranged from cancer, asthma, metabolic to vascular disease-related research and have encouraged fruitful discussions between the academics and the participants. Mr. Wai Jing Luen from the School of Pharmacy won the best poster presentation award.

Post-graduate research training experience in University of Nottingham, UK

Chai Boon Kheng, a third year PhD candidate had the opportunity to undergo a short training course on a few novel experiment techniques in the lab at our home campus. He recounts his experience and secrets uncovered while at Nottingham, "I was assigned to Professor Bennett's laboratory to learn the novel technique of cell culture - generating liver organoids that are derived from hepatic stellate cell. I realised that this type of culture is better suited for accurate testing of drug response. I also had the chance to watch the isolation and culture of human primary hepatocytes, which is a rare opportunity to have in my research lab".

During his visit, Boon Kheng also participated in The School of Life Sciences Postgraduate Symposium. His presentation on the combination of an anti-diabetic drug and fatty acid isomers on genetically modified mice received many compliments from the audience. "The School houses experts from a variety of fields, from medical scientists to botanists to synthetic biologists, the diversity that was reflected in students' presentation. I was also privileged to listen to the keynote speech by Prof. Sir John Gurdon, who received a Nobel Prize in year 2012 for his discovery of cloning and cellular reprogramming. This was possible thanks to the collective effort of staff and students within the SOLS" stated Boon Kheng.

Boon Kheng with Prof Sir John Gurdon, a 2012 Nobel Prize recipient.

Sugitra Purisothanam from BMS receives an award for her outstanding poster presentation.

BMS student won the best poster prize at 28th Intervarsity Biochemistry Seminar (IBS)

The 28th IBS themed "Achieve and Breakthrough: Unravelling the Biochemistry of Life" was hosted by UCSI on 13th May. This annual event of the Malaysian Society of Biochemistry and Molecular Biology aims to provide a platform for undergraduates to showcase their final year project findings and to encourage scientific discourse and networking among participants and academia from various universities. This year, 10 universities, with more than 20 academicians and about 200 undergraduate students participated in the event.

Six UG students from BMS and the school of Biosciences participated in the oral and poster presentations at the seminar. Sugitra A/P Purisothanam from BMS won the Top 10 best poster presenter award. Her poster was a showcase of her final year project entitled 'An in silico analysis and Molecular Docking of Gamma-Tocotrienol to Multidrug Transporters' supervised by Dr Then Sue Mian. It was a successful and enjoyable event as the research standard of the presenters were said to be of high and the sessions were well paced.

We congratulate all the Nottingham presenters for presenting UNMC in the event!

Graduation of Class 2017

Congratulations to our class of 2017 graduates! This marks the Department's third cohort to successfully emerge as future scientists, innovators, entrepreneurs and educators. The ceremony held at the Great hall at UNMC saw all 25 students joining us in 2014 graduate, 6 with 1st class Hons degrees in hand, on the 22nd July 2017 witnessed by their family and friends, and equally glad lecturers. We are also delighted that 16 of our graduates received the Nottingham Advantage Award (NAA) which makes us the highest number of graduates to receive the NAA amongst all programmes in the Faculty. Completing a NAA reflects the well-rounded professionals they have become during their 3 years with us. Well done to all!

One for the official album in front of the Trent Building.

The 2017 graduates and their lecturers after the commencement.

BMS Annual Academic Awards

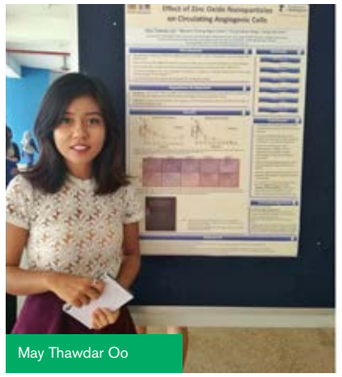
Each year, the Department of Biomedical Sciences awards outstanding students with top academic accomplishments as well as those that showed greatest improvement in their academic performances. The five categories of awards, which comes with cash prizes provided by the School of Life Sciences (UNUK) and our BMS department (UNMC), are given to students who excel in different areas across the 3 years of study under the BMS programme.

Melanie Cheong I-Lyng - Recipient of 'The Best Overall Performance', 'The Best Research Project' and 'The Best Professional Skill'

This year, Melanie turns out to be the proud winner of all three awards that recognises the best performance of students throughout their 3 years of undergraduate study. Her achievement is unprecedented and is undoubtedly well deserved. In her own words, "I was – and still am – rather taken aback by the recognition I received from the department. I honestly thought that I'd only get one of them since no one had ever won all 3 prizes! However, it was a delightful and much appreciated recognition. But if I could do it, you could do it too! This 3-year journey had not always smooth sailing, there were times where I felt demotivated or worse, unsure if this was what I wanted. I find it very useful to just relax and take my mind off whatever that is troubling me at that moment: take a nap, work down a snack bar and do whatever that cheers you up! Then get back to the problem. We are all aware that Biomedical Sciences is hard, but do not let your university life be all about academics. Do not fret too much about exams, just make sure you complete all of the past year questions and you will be fine. Most importantly, love what you are doing!"

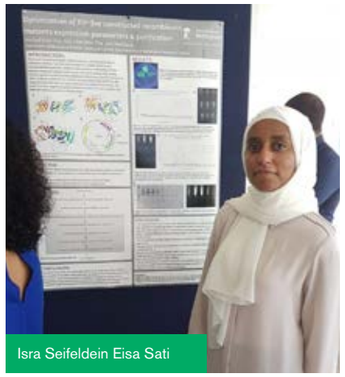
Joined by Prof Ting Kang Nee (left) Melanie receives her award from Prof MacDonald, Head of SOLS (UNUK)

Recipients of “The Best Improved award”



May Thawdar Oo

“This award means a lot to me to be appreciated for my progress. It gave me so much motivation and reminded me of the journey I have gone through to reach this far. I could achieve this only because of the help of my lecturers and friends and I would like to thank each of them. It has been a truly memorable and wonderful journey throughout these 3 years. To all my fellow course mates out there, never stop believing in yourself. When the days get rough, remember ‘Happiness can be found even in the darkest of time, if one only remembers to turn on the light.’ “



Isra Seifeldein Eisa Sati

“I was thrilled, it’s not just about this prize but it’s more like my journey throughout the past 3 years. Studying this programme was never easy for me. The hardships and difficulties I faced were so great that I thought I will not be able to handle them. The amount of times I wanted to give up, especially in my first year, were so many to even count. I learnt that for every hardship, there is a way to get through it. I just need to keep calm, work harder and make a change. To all BMS students, do ask for aid whenever you’re in doubt, never feel shy if this can help you.”

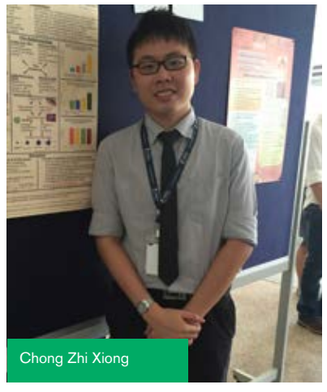
Siti Nur Adibah

‘‘I dedicate my thanks especially to the lecturers that assisted me a lot either in learning and moral support throughout my year 1 and 2 in UNMC. Lecturers in BMS are excellent and committed with their lectures. Next, I would also like to thank my family and friends who encourag me in my studies. I was upset upon failing in the first semester, but this has given me the urge to work harder and put more efforts to study in the subsequent semesters. My story is typical but believe me: as long as we work harder in smarter ways and have passion with what we are doing, the success is already on us!’’

Recipient of “The Best Year 1 Performance”

Chong Zhi Xiong

“I joined BMS programme in UNMC because I have deep interests in biology, especially in medical and pharmaceutical sciences. The programme is far more challenging and harder than what I expected. I am thankful to have great lecturers who are always there to support the students’ learning. I truly appreciate the prizes given by the department and it will be a great momentum for me to move forward to complete my degree. I would also like thank my parents for supporting my studies, both financially and mentally. Last but not least, I sincerely hope that the class of 2018 will be able to complete our studies smoothly and we can graduate together in July next year.”



Chong Zhi Xiong

Dean’s Excellence Award

The Dean’s Excellence Award is a recognition of the top achieving students at the point of progression for each academic year, and is endowed with The Dean’s Excellent Scholarships (DES) amount to a fee reduction of 25%. Recipients of the DEA of year 2016/17 are:

- **Chong Zhi Xiong (Year 2)**
- **Lim Pei Tee (Year 2)**
- **See Lei Shan (Year 2)**
- **Alaa Ahmed Mohamed Lotfi Abbas Abdellatif (Year 1)**
- **Zahraa Ahmed Mohamed Lotfi Abbas Abdellatif (Year 1)**
- **Lim Yen Ting (Year 1)**

Journey through the Nottingham Advantage Award (NAA)

The Nottingham Advantage Award (NAA) programme allows students to participate in numerous activities outside their main course curriculum. These activities aim to build well-rounded and outstanding students with a competitive edge by the time they graduate from university and enter the workforce. The successful completion of the NAA programme is equivalent to a total of at least 30 credits from the modules taken, in which the award is conferred during graduation.

Audrey Lim Yan Li and Brenda Ngu Ying Ying were among the 16 BMS graduates who received the award during their recent graduation in July. Audrey participated in 5 modules worth 60 credits while Brenda participated in 3 modules worth 40 credits, among which are the Global Business Services, Community Services and German language modules.

Global Business Services

Global Business Services (GBS) was a new NAA module which started in 2016. Audrey came across a poster advertising GBS along the bridge walkway and decided to sign up out of curiosity. Convincing Brenda to join what turned out to be a challenging module, they were tasked to liaise and communicate with an external business partner and academic mentors (academics from UNMC Business School) to prepare a business case study which was presented at the GBS Challenge. Their presentation ‘Embracing Agile in GBS Industries’ was judged by top global industry figures including Victor Lam (Group Head of Sime Darby Global Services Centre), Jimmy Teh (Finance Director at Xerox) and Yogeswaran Govindarajah from the IBM Global Delivery Centre.

Being the first group to present, the Deputy British High Commissioner to Malaysia, Paul Rennie caught their presentation during his short appearance. Brenda Ngu at the microphone and Audrey Lim and the rest of her team wait for their turns.

Community Services

This module requires students who have performed community service to share their experiences in the form of a video clip. Quoting Brenda, “This is one of the simplest NAA modules to complete considering that it is already mandatory for all students to engage in community service during their time at university. One only needs to document their previously acquired experience on video and have it submitted on CD to the NAA Office.” Speaking more on her community service project, she adds, “My team worked on designing a mural for a kindergarten at SJK(C) Kampung Baru Semenyih. Looking back on it, it was a lot of fun and fulfilling to find that the kids loved the underwater-world theme that we worked on for 3 days straight.”

Audrey realized that NAA modules sharpened her time management skills as she needed to juggle between assignments, studies and these extra tasks. She claims it was not easy and that she complained and whined about it during the ‘ordeal’, but has no regrets now. Taking German language and GBS, she says, “Now I can eavesdrop on German tourists and presenting in front of large audience may not be as terrifying as it once used to be!”

For Brenda, the NAA programme contributed to her holistic learning experience during her time here. She enjoys busying herself with things to do and new things to learn. It can be overwhelming to juggle both academic and non-academic commitments but she believes it is all just one big balancing act and the key is to stay really focused by knowing why you want something and not just what you want. NAA was a good avenue for her to explore other interests and refine her soft-skills. She adds, “Realising that university life was coming to an end and that the real-world beckons, I understood the importance of cultivating all-roundedness and developing social connections that will support me and vice versa post-graduation.”

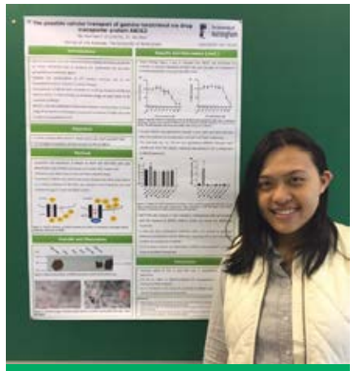
From left Goh Boon Hee, Fong Zhijack, Fam See Yee, Tan Karl Vern, Cheong Wai Kit, Brenda Ngu, Allysha Lim proud of their mural which can be found at the school in Kampung Baru Semenyih.

Student life in the UK

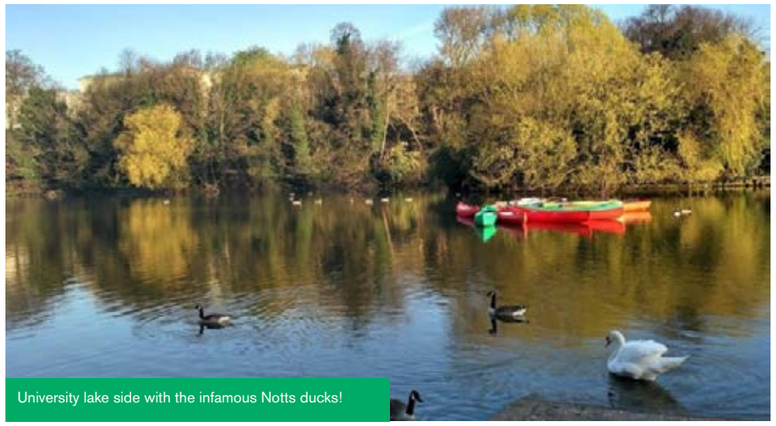
UNMC's Biomedical Sciences programme allows our students to choose to transfer to our main UK campus in their final year or enrol into our inter-campus exchange programme in their final semester. Check out what our students experienced during their exchange/transfer to UNUK.

Exchange student Tan Karl Vern

"UNMC's Biomedical Sciences exchange programme gave me the best opportunity to fulfil my child hood dream of visiting the UK. The rich history of the country and the architecture of the buildings have always caught my attention. I love the architecture of the buildings around the Nottingham city. This is also where we did our grocery shopping every week and to get the delicious chocolates and biscuits! The University Park campus is also beautiful but huge at the same time. Travelling from one end of the campus to the other can take 40 minutes on foot but morning walks along the lakeside with the serene scenery and clean, fresh air is definitely enjoyable. The nearby mountain region of Snowdonia and the Lake District National Park are also ideal areas for long walks and hikes."



Karl Vern presenting her research project on the drug transporter protein ABCG2.



University lake side with the infamous Notts ducks!

Life in the laboratories

As my project is cell culture based, I spent most of my time in the cell culture laboratory to conduct my final year project. With the help from other students, I had the chance to develop a Western blot and captured some really cool fluorescent images for my dissertation using confocal microscopy. I was overjoyed when first saw bands appearing on the films and red fluorescent on the screen, hard work finally pays off!

During our fortnightly meetings with supervisor, lab manager and other postgraduate students, I learnt how opens discussions and exchange of ideas between group members can help to overcome a problem and improve research. The time spent in this lab has given me an insight of how medical scientists work!"

Exchange student Melanie Cheong I-Lyng

"It seemed intimidating to begin and to complete our final year projects here in the UK, where it was all but a new and foreign environment. However, it took us only a short while to settle in and to familiarise to everything in the UK campus with the helpfulness of lecturers, especially Drs Yvonne Mbaki, Vince Wilson and Ian Kerr."

Cost of living and travel

"It can be really expensive to eat out here in the UK so the most economical way would be to cook. It provides an excellent opportunity to polish our cooking and survival skills because we needed to virtually do everything on our own: washing, cooking, cleaning the room and buying groceries. I spent around £15-20 a week for groceries but it could go lower depending on your food choices! Lodging costs about £89/week but it could go as low as £50/a week depending on the accommodation one can find. One of the perks about joining this programme is that you'll get a chance to travel Europe. The flights can go as cheap as €20!

Going on this exchange programme is one of the best decisions I've made thus far! It has greatly enriched the final part of my undergraduate life and has delivered so many invaluable memories! I would not trade anything for this 6-month worth of experience. Studying in BMS has been an amazing experience, made possible with the attentiveness of our respected lecturers on both campuses. Join UNMC Biomedical Sciences and grab your chance to apply for an exchange or transfer programme, this is definitely worth a lifetime experience!"

One polishes their cooking skills when you live in the UK

Button mushrooms, fresh milk and lovely sweet cherry tomatoes are cheap as dirt here

Transfer student Nur Aima Hafiza Shazali

"The University of Nottingham has three campuses; University Park, Jubilee and Sutton Bonington campuses. Biomedical Sciences is under the Medical Faculty here and so most of our lectures are held in the Queen's Medical Centre, right adjacent to the Park Campus."

Halal food

"Living in Nottingham is great. It is a small city where you can reach almost everywhere just by bus or tram. The locals are kind and helpful. For those who are planning to study here, don't worry too much about the food especially for the Muslims. There are several shops that sell halal meat and all the spices that you need. There are also plenty of shops that sell Asian cooking ingredients around here. So chill, you will feel like home as long as you can cook."

Travelling

"The UK is surrounded by beautiful nature. When walking in the park on a sunny or windy day, you will be accompanied by baby rabbits, squirrels, geese and birds. During the 1-year stay in UK, we had short getaways to London, Stonehenge and Lake District. Besides, UK is also a gateway to Europe. I also managed to travel to Paris, Brussels and Amsterdam during Easter break. It was super fun to get to see these other places and to discover their uniqueness. Overall, I would say that this transfer programme was fun and unforgettable. It was not easy but it made me become more independent. To those who has the chance to study here, go for it so that you can experience new things in life, see and learn other cultures."

Aima (left) with another of our transfer students Adibah, walks in the footsteps of the Neolithics at Stonehenge, one of best-known prehistoric monument in Europe.

Picnic at Derwentwater, the largest lake in the Lake District National Park north of Nottingham.

Alumni Profile

Yang Su Lim (graduate of class 2015)

Product Specialist in Novartis Corporation (M) Sdn Bhd

In Novartis, a Swiss multinational pharmaceutical company, Su Lim's role is to build and execute business plans for assigned products in a specific therapeutic area. She is responsible for developing expert knowledge of Novartis products and of a range of therapy areas and leverages this to build professional customer relationships and support clinical discussions with medical experts.

"By achieving my sales goals, I feel that I'd help patients indirectly to get the most preferred treatment choice and make a difference to their life. The theoretical knowledge I gained in my BMS degree helped me to understand better the pathology of diseases and mechanism of drug action, which put me in an upper hand of getting employed. Another important skill that I have developed is communication skills, which happens to be the most important proficiency in the corporate customer-facing role. Until today, I am still grateful to UNMC for providing me with lots of different platforms to brush up my communication skills in an international environment."

Yang Su Lim (standing 4th from left) is thriving in Novartis (Malaysia) and often pops by UNMC to support events.

Jonathan Chooi Mann Seng (graduate of class 2016)

Embryologist in In Vitro Fertilization lab, Alpha Fertility Centre

As an embryologist, Jonathan works alongside a team of dedicated doctors, nurses, and staff in the field of andrology and embryology (the handling of both male and female gametes). These include sperm processing, oocyte pick-ups, intracytoplasmic sperm injection, cryopreservation of semen, oocytes and embryos, embryo checking and grading. Despite the high demand for great focus, care and attention to details in his work, the outcome is always more appealing than the stress that he has to endure "What I find most satisfying about my job lies within the belief that my work contributes to the well-being and happiness of patients who eagerly desire a child."

"My degree has helped me with my job enrolment mainly because of Nottingham's reputation in shaping all rounded-graduates. I am glad to say that studying in UNMC has benefited me greatly knowledge-wise through the interdisciplinary modules taught by experienced lecturers and the well-thought out curriculum. Nottingham has offered me a truly global student experience that I dearly cherish" stated Jonathan.

John conducts a mock ICSI procedure (mock because he doesn't usually smile to the camera during a procedure!) using the closed-system ICSI chamber.

Adel observing his experimental specimen using the microscope.

Seyed Adel Moulana (graduate of class 2016)

MSc in Biomedical Science (Specialisation in Haematology) student in Kingston University, London

Adel is conducting a summer research project currently to test the potential of PARP inhibitors as a form of targeted therapy in Acute Myeloid Leukaemia. As a BMS graduate, he says "Having almost completed my masters here in London, I can say with confidence that Biomedical Sciences at UNMC possesses a very high standard and that is something I really respect and appreciate. I am grateful to be achieving all-round distinctions here because I have already learnt the skills and knowledge on many aspects in the medical field during my undergraduate study - many things a lot of people here haven't even learnt, showing how comprehensive the course is at UNMC".

Adel is completing his MSc study in this September and is planning to work in a hospital laboratory as a Diagonostic Haematopathologist. He is contented that his interest in pathogenesis of diseases can now be applied in the diagnosis of diseases to help more people out there.

Muhammad Shahrizal b. Shaharudin (graduate of class 2016)

Junior Executive Formulator in Chulia Pharma Sdn. Bhd.

Working in the Research & Development department, Shahrizal is involved in reformulation of generic medicine for common ailments. He explains, "Upon learning the mechanism of drug action in pharmacology lectures, I always wondered how a drug can specifically be designed to counteract a disease. Now that I witness the process of drug manufacturing, it felt like putting two pieces of the puzzle together and it all finally makes sense."

Sharizal is also involved in the process validation of new drug formulations and that provides him the opportunity to visit the production line and oversee some of the key manufacturing processes that are tightly regulated by pharmaceutical guidelines. "Applying my theoretical knowledge into practical for the benefit of the community is another reason why I enjoy indulging in this industry. Apart from the skills and knowledge, my degree has helped improved myself in various aspects namely in self-confidence, perseverance, creativity and ingenuity that have all helped me in my career development."

Shahrizal prepares a dissolution test containing several vessels with specific pH buffer that simulates in-vitro gastric environment. The objective is usually to gauge the dissolution profile of a tablet.

Liew Sok Sian (graduate of class 2016)

Junior Associate in Biocon Malaysia Sdn. Bhd.

Sok Sian recently joined Biocon Malaysia and her main responsibility is to execute production operations of recombinant human insulin in accordance with Good Manufacturing Practice. Having exposed to the biological importance and chemistry of insulin during her undergraduate study, Sok Sian admits that her laboratory experience in UNMC has greatly aided her career development.

Ensuring the compliance of each procedure to the regulations in a non-stop production operation is not an easy job but Sok Sian enjoys the learning process. She says that, "the multicultural experience in UNMC helps me adapt well to working in a multinational company. " Despite moving towards a production industry, Sok Sian preservers in her passion to make a difference via biomedical sciences, "we put continuous effort in our work and it is most satisfying when patients receive safe medication made by us."

Llew Sok Sian has supportive colleagues at Biocon, the fourth largest insulin producer in the world.

Outreach activities

Microscopes allows one to examine slides of tissue and cells, and how these look once they are diseased.

The Royal Microscopial Society's 'Promoting science using microscopes'

The Royal Microscopial Society (RMS) UK loaned 16 microscopes to BMS at UNMC with the hope of sparking interest in science amongst young children in Malaysia. Prof Ting Kang Nee, who leads the project voiced her concerns regarding the reduction of entries for science-based education: "We see an alarming reduction in the number of children picking science as their main subject during Form 5, we also saw a great decline in applications for science-based courses at higher education level."

On 20 June 2017, BMS invited children aged between 9 to 16 from Sunway Mentari Learning Centre and IDEAS Academy to explore science and university facilities. Salai Lin Lin, the president of Sunway Mentari Learning Centre, appreciates that the children experienced a proper class setting in a university environment and hopes to draw increased interest of science-based subjects in the children. Barthi Jain, a volunteer teacher from IDEAS Academy was happy that the children had the opportunity to explore and experience the different research projects UNMC had to offer. "These students have not even touched a microscope; this is a good opportunity to bring them here". Professor Ting also enthused that: "We intend to continue these activities on campus, where we can invite children from local national primary schools to come and experience the microscope kit activities with us, or we can continue to invite students from learning centres that lack lab facilities."

Fun at the Primary School Science Fair in Seremban

The Science Fair hosted by SK St. Paul was aimed at fostering and exploiting children's interest in science. The event that took place on 13th May 2017 saw participation from 100 students from selected primary schools in Seremban. Academics and post graduate students from BMS took part in the event by conducting two hands-on experiments.

At the banana DNA extraction station, the children found out the definition, function and importance of DNA in living organisms. They also had the opportunity to extract DNA for the first time in their life. At the Royal Microscopy Society's Microscopy station, students learnt the principles of magnification and microscopy. Observing objects they use everyday but under high magnification, the children were thrilled by the 'great power' of microscopes.

Our PG students felt that the kids were obviously enthusiastic and rendered the work carefully. They say that, "We honestly admire their energy, curiosity and enthusiasm to learn new things. It was a meaningful and fulfilling day as we planted new knowledge and inspired young students with science".

These primary school children seem absolutely engrossed with extracting DNA from a banana.

Internship

Industrial training in Cancer Research Malaysia

Lim Pei Tee, our Year 2 undergraduate student, was privileged to participate in industrial training program offered by Cancer Research Malaysia (CRM) during the summer break. She joined the Head and Neck Cancer research group led by Prof Cheong Sok Ching and learnt various techniques to develop vaccine such as to confirm the expression of the overexpressed antigens and some immune cells. “After adequate training provided by my supervisors, I am able to carry out procedures for protein extraction, western blotting and immunohistochemistry. This could be the most fruitful experience I have gained.”

She adds “CRM is a very well-organized research based organisation and this can be observed from their practice of conducting weekly staff meetings. Suggestions and issues raised by other researchers during the meetings is of no doubt a key to continuous improvement and the achievement of CRM today. If you are interested in being a researcher or lab technician in future, the industrial training program offered by CRM is strongly recommended. You get to learn a handful of laboratory skills as well as the techniques on results and data presentation in a proper scientific way. I feel lucky to be able to get myself exposed in the daily routine of a researcher and gain real life working experience before I further my studies into a higher academic degree.”

Pei Tee worked in the oral cancer team under Prof Cheong Sok Ching.

Contact us

The Department of Biomedical Sciences
The University of Nottingham Malaysia Campus
Jalan Broga, 43500 Semenyih
Selangor Darul Ehsan, Malaysia

t: +6 03 8924 8000
w: www.nottingham.edu.my/make-an-enquiry
www.nottingham.edu.my/biomedicalsciences

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t: +44 (0)115 951 5559 | e: alternativeformats@nottingham.ac.uk