Name: Dr Kate Marks

Connection to the Academy: INSPIRE student representative, Medical student at the University of Leeds

“The most inspiring aspect was being able to listen to different researchers at different career levels and hear about all they had achieved over their careers.”

How and when did you first hear about INSPIRE?
As a 4th year medical student, I became aware of INSPIRE when it first launched in 2014. I was the student representative that helped to apply for round 1 of INSPIRE funding at the University of Leeds. It enabled our undergraduate research societies to become fully established and run a number of events with guest speakers to help medical students get more information about becoming involved in research.

How did INSPIRE support your research interests?
The most inspiring aspect was being able to listen to different researchers at different career levels and hear about all they had achieved over their careers. This included early career researchers through to professors.

I produced a number of publications, posters and conference presentations from my undergraduate research. Since 2017, I have been Trainee Representative for Leeds Histopathology Trainees and since 2019 I have been Trainee Subcommittee Representative for the Pathological Society of Great Britain and Ireland.

I have also attended other Academy events including the mentoring events and I have a mentor through their scheme. In 2018 I won first prize in the Post Doctoral Competition at the Academy of Medical Sciences’ Clinical Academics in Training Conference. In 2019, I won poster prizes at the Pathological Society of Great Britain and Ireland’s Summer Meeting Poster Prize and Health Education England’s ACF presentation day.

What are your future plans?
I am about to undertake a 3 year post doctoral research fellowship funded by the MRC to continue my ongoing research in colorectal cancer (which I started as a medical student when I was first involved in INSPIRE!).
Kate (second from left) winning first prize in the Post Doctoral Competition at the Academy’s Clinical Academics in Training Conference in 2018
Name: Dr Amy Hough

Connection to the Academy: INSPIRE participant; Medical student at University of Exeter

"I think the most important thing INSPIRE does is makes clinical research opportunities accessible to a much wider audience."

What is your current role / stage in training?
I am a first year Foundation Doctor at the Acute Medical Unit of Birmingham City Hospital.

How and when did you first hear about INSPIRE?
I completed my medical degree at Exeter, from where I graduated in July 2019. When I was in my second year of medicine, I attended the INSPIRE showcase, which was led by Professor Tamsin Ford. My interest in research began at this point, stimulated by Professor Ford’s inspiring talk and the enthusiastic students who were presenting their work.

How did INSPIRE support your research interests?
Following the showcase, I took part in research taster days organised by INSPIRE, taking up a summer studentship in Dr David Allard’s lab at the end of my second year. This was a valuable experience, and whilst it made me less inclined to pursue lab-based research, I still had strong interests for a future career in research. For example, I was involved in setting up the INSPIRE Student Health Sciences Research Journal – a collaboration between medical schools at Exeter, Bristol, Plymouth and Cardiff – for which I was Senior Editor. With fellow students, we also set up the Exeter Medical School Research Society and ran a mini lecture series with local researchers showcasing their work and pathway into research.

A significant experience for me was attending the INSPIRE sharing day event at the Academy, where Professor Dame Valerie Beral gave a fascinating talk. This stimulated my interests in epidemiology and was pivotal to me taking a year out after 4th year to complete a Masters in Reproductive and Sexual Health Research at the London School of Hygiene & Tropical Medicine. The INSPIRE experience helped me to prepare a strong application on this competitive course. I think the most important thing INSPIRE does is makes clinical research opportunities accessible to a much wider audience.

What are your future plans?
When I complete Foundation Year training, I plan to pursue research alongside clinical training. I hope to return to the MRC unit in the Gambia, where I went for my medical elective, and to pursue specialty training with a research component, ultimately leading towards a PhD.

Almost everything I’ve done in my later years at medical school and since has been influenced by that first encounter with INSPIRE. If I hadn’t had that initial exposure, I never would have considered research it to be something of interest. I now recognise fully research as being a valuable part of being a
Name: Dr Aditya Borakati  
Connection to the Academy: **INSPIRE** participant; Medical student at University of York

"I was awarded an INSPIRE bursary to conduct a research project in the summer of third year ... I felt like I was making a difference and doing something impactful in the long term."

**What is your current role / stage in training?**
I am an Academic Foundation Doctor at the Royal Free Hospital and University College London. I am conducting research in hepatopancreatobiliary and renal surgery and transplantation. This programme allows me to do basic clinical training as a doctor whilst also conducting research and developing as a researcher.

**How and when did you first hear about INSPIRE?**
INSPIRE was advertised by my medical school and I signed up in my 3rd year of medical school. I was awarded an INSPIRE bursary to conduct a research project in the summer of third year. I did this project on oesophageal cancer staging and identification of prognostic indicators.

**How did INSPIRE support your research interests?**
I first got involved with research during my intercalated degree, where my project was on developing a novel maxillofacial prosthesis, which could chemically bond with facial tissues. I found this fascinating and very rewarding. I felt like I was making a difference and doing something impactful in the long term. I had a great supervisor who was very supportive and gave me a lot of leeway in directing the project.

I’ve been lucky enough to present and travel widely as a result of my research, going all across the UK and to most of Europe to conferences and other meetings. This has been brilliant in terms of meeting many people from all over the world and seeing the cutting edge of medicine and the difference it can make. This has all reinforced my desire to continue with research alongside my medical career.

I authored 6 publications during my time at medical school, of which 2 were related to my INSPIRE project. I had a number of presentations, both oral and poster at medical school and received a prize from my medical school for having one of the best INSPIRE research projects. In addition, I was heavily involved with collaborative surgical research during my undergraduate career and was on the steering committee of a large collaborative group. Consequently, I also published a number of collaborative publications, with some as primary author.

I have continued to carry out research as a doctor and have taken on opportunities in all of my clinical rotations regardless of whether they are directly relevant to my research interests. As a result, I have 3 papers published/ in press in orthopaedics, obstetrics and psychiatry with a number of presentations.

**What are your future plans?**


I will be starting an Academic Clinical Fellowship in General Surgery in London, enabling me to combine clinical training with research. I hope to become an academic surgeon in the future and build on my interests in regenerative medicine, biotechnology and transplantation.

Name: Izabella Smolicz  
Position: MB PhD Student  
Institution: UCL Great Ormond Street Institute of Child Health  
Connection to the Academy: INSPiRE participant (2014-16) and part of The Departure Lounge public engagement project (2019)

“INSPIRE allowed me to experience working in a lab for an extended period of time and learn core skills that I continue to refer to today.”

What first made you interested in INSPiRE?  
A couple of months after commencing my undergraduate studies at the University of Bristol, I attended a showcase where medical students were presenting research from their recent INSPiRE Summer Studentships. I realised it was possible to be involved in research whilst studying medicine and this led me to organise my first research experience in summer 2014.

What did you do with INSPiRE?  
I was an INSPiRE Ambassador at the University of Bristol for two years, promoting research and assembling research resources for medical students. In 2015, I undertook an INSPiRE Summer Studentship in vascular medicine, leading to my first presentation at a national conference. I also collaborated with students from other medical schools in the South West to evaluate the INSPiRE Research Taster Day Scheme for medical, dental and veterinary students. This work was presented as a poster at an international medical education conference highlighting that students are keen to engage with research. Finally, I enjoyed being a senior editor for the INSPiRE Student Health Sciences Research Journal during my intercalated BSc.

What did you learn?  
Through INSPiRE, I gained a true insight into research from multiple angles. The Summer Studentship allowed me to experience working in a lab for an extended period of time and learn core skills that I continue to refer to today. I improved my presentation skills for different audiences and encountered a variety of research projects, allowing me to identify my own research interests further.

How did the Academy’s support help you continue your career?
The experience from the Summer Studentship encouraged me to pursue a lab project during my intercalated BSc. I felt I could integrate and learn new techniques more quickly within the different lab environments and work more independently.

Having enjoyed all the research projects I was involved in during the early years of medical school, I decided to apply for the MB PhD programme at UCL, which enables medical students to integrate a PhD within the medical degree. I transferred to UCL in 2016 and am now entering the final year of my PhD at UCL Great Ormond Street Institute of Child Health. My PhD is investigating the biology of paediatric brain tumours, with a focus on the unique insights that can be gained from clinical and molecular post-mortem investigations. Next year, I return to medical school to complete the final two years of medicine.

More recently, I was one of the Guides in The Departure Lounge at the Academy of Medical Sciences public engagement pop-up, which aimed to encourage members of the public to openly talk about death and dying. This unique experience allowed me to work with researchers, healthcare workers and other professionals with experience of death and dying and to be involved in research that will inform policy in end of life care.

What's your advice to other students thinking about a career in research?

I would recommend attending events such as local INSPIRE Showcases, medical student research evenings and academic seminars. This will allow you to not only hear about the different types of research and latest advancements, but also the experiences of researchers who are at various levels of training.

Also, try to gain some experience in an area that you find genuinely interesting.

Read more about Izabella's experiences on her previous blogs for the University of Bristol Medical School and the Sutton Trust, and find out more about her work on paediatric brain tumours on ResearchGate or by following her on Twitter.
The INSPIRE award has enabled us to offer transformative research experiences for our undergraduates, with a particular focus on enabling those from WP backgrounds to experience and consider careers in research. Throughout the last two years, as part of our ‘Meet the experts’ seminar series, we have hosted four veterinary-qualified research leaders of international standing:

- Rob Franklin, Cambridge.
- Lucy Davison, Oxford.
- Tim Skerry, Sheffield.
- Giovanni Pellegrini, Zurich.

Each evening event was attended by around 50 students and provided them the opportunity to meet with the speakers and hear their career paths and motivations. Additionally, our Research Career event, in which four former PhD students recounted their PhD experiences, providing valuable insights into a research career, was attended by over 100 students. Students found this event extremely valuable, commenting that the event “allowed for a discussion of the various routes into research and the benefits and weaknesses for these.”

What are the main impacts of the INSPIRE programme?
The activities we have implemented have resulted in an unprecedented increase in requests for summer studentships and conference attendance. As a result of this, with INSPIRE funding, three undergraduate students completed laboratory projects in comparative medicine and a further five students were awarded bursaries to present their undergraduate research projects at international conferences. Together with our undergraduate Next Generation Scientist (NGS) society we hosted a local primary school and enabled the children to isolate DNA from strawberries and related this to genetic health. Further to this, the NGS society organised outreach events with the public and secondary school students. Undergraduate students are effective communicators and outstanding ambassadors for research in public engagement events through their knowledge and enthusiasm.

To summarise, we have increased the recognition of the value or research as illustrated by the number of students attending each event, the number of students undertaking intercalated degrees is the highest since the school was
established and we have had the largest number of students involved with public and school outreach/engagement events, all as a result of the INSPIRE programme funding.

It has been a busy and successful past two years and the INSPIRE committee have succeeded in our goal of having an increased presence in the medical school and beyond, no doubt due to the continual dedication of the entire committee to organising high-quality events and activities. Thus, we hope to continually see more students considering academic careers. We have demonstrated the importance of research and teaching to every career in medicine, engaging with students from Southampton and other medical schools at a range of different events. Students really value the opportunity to get involved with the organisation of the INSPIRE scheme as this enables them to develop skills in: leadership, teamwork, communication, time management and it builds their confidence.

The INSPIRE committee organises a portfolio of events and the number of attendees continues to grow. We hold activities such as:

- Research taster sessions are held regularly and are well-received.
- Our popular Journal Club is now student-led, with an experienced academic sitting in for support and to prompt discussion.
- The Annual Conference which continues to attract medical students from across the country with renowned speakers and interactive workshops. This academic year (November 2016), the theme was ‘Medical Interventions of the Future’ and the previous year we organised the National Undergraduate Nutrition Summit.

In order to ensure that there is a large presence throughout the medical school, there must be a large focus on publicity. The use of modern forms of communication, such as social media, to promote INSPIRE and its many activities, has proved very helpful. Additionally, having students co-lead INSPIRE has meant that they can ensure that the activities are appealing and well-suited to the student body and also easily promote activities via announcements before lectures.

**What are the main impacts of the INSPIRE programme?**

We have increased our profile in the medical school through engagement with MedSoc and thereby enabled students to explore what a clinical academic career entails, meet with clinical academics, be mentored by them and attend conferences alongside them in order that individuals might consider this as a future avenue. We have empowered students to become confident teachers, public speakers and communicators by offering lots of opportunities for training in and delivering peer teaching and research presentation. Additionally, we have held regular peer teaching sessions and
talks on intercalation and the Academic Foundation Programme thus encouraging Southampton medical students to engage with research and academia, and giving them opportunities to present their research in the form of oral and poster presentations. Feedback for all of these events has been superb. Peer teaching is warmly received and is very important as it forms an integral part of academia. Students from all year groups are keen to gain teaching experience (and to be taught by their peers) and everybody benefits.

School: School of Medicine, University of Leeds
Connection to the Academy: Received funding from the INSPIRE programme
Year: 2016-17
INSPIRE Lead: Professor Phil Quirke FMedSci

The INSPIRE programme has had a multitude of impacts over the course of the grant with many noticeable effects taking place. Benefitting from a vibrant postgraduate clinical and dental academic training programme, the University of Leeds successfully linked undergraduate societies to the academic foundation programme and the postgraduate academic training programme themes. As a result, there has been enhanced engagement between undergraduate students, student societies early career clinical academic trainees and senior clinical academics.

What are the main learning points taken away from implementing and running the INSPIRE programme?
After identifying that it is important to maintain an active ‘research’ presence at all stages of undergraduate training, the University of Leeds Medical School sought to build on the momentum established through previous INSPIRE awards. It is also essential to establish contact with undergraduate student groups early in the academic year to enable relationships to be built between undergraduates and clinical academic research themes. Maintaining an active research presence was achieved through activities such as:

- A half day research taster visit to the biomedical research campus linked to our major teaching hospital.
- Promotion of clinical academic research events organised by undergraduate student societies.
- Summer schools.

There is significant interest in research opportunities within undergraduate medical and dental cohorts at all stages of their training. An enhanced understanding of academic career paths available to Leeds MBChB students has resulted in increased applications for academic foundation programmes. When undergraduate medical and dental students at
Leeds are given the opportunity to undertake research, it is nationally/internationally competitive. Giving students the opportunity to present their work by providing bursaries of up to £500 to attend events results in valuable external recognition of their work and an enhanced capacity to develop new research collaborations. Reports from students that attended conferences can be found here.

Do you think the INSPIRE programme has had a positive impact?
The INSPIRE programme has had an overwhelmingly positive effect within the Medical School. Feedback from all events illustrates that students have a more thorough understanding of academic pathways which has helped to enthuse and galvanise them. By building on the momentum of previous rounds, the school has raised awareness about the opportunities available to undergraduate students, a vital component in allowing them to turn their initial interest in research into a full career as a clinical academic.

Schools: The University of Exeter Medical School, Plymouth
University Medical School
Connection to the Academy: Received funding from the INSPIRE programme.
Year: 2015-17
INSPIRE Lead: Professor Tamsin Ford

Prior to the INSPIRE scheme very few first year students were aware of and interested in research careers with only a handful knowing that they could get involved in research projects during their degree. To tackle this issue, Exeter Medical School, thanks to INSPIRE funding, gives all first year students one compulsory lecture about clinical research and possible future direction. This one-off lecture allows the school to reach and involve students who are not initially aware of or oriented towards research and lays the groundwork for further INSPIRE activities.

What impacts has the INSPIRE programme had?
A major impact of the scheme is that it has enabled students to become involved in various research activities. To introduce students into the world of research Exeter and Plymouth, in conjunction with Cardiff and Bristol Medical Schools, have held taster days enabling students to visit a research group for a day and gain a more rounded understanding of an Academic Research career. The taster days link in successfully with another INSPIRE activity; studentships. By hosting the taster days students and supervisors could forge links allowing the student to have more success when applying for studentships within their chosen project group. These awards were made on a competitive basis with those who undertook the studentships forming the panel who judge the next round of applications, a useful
learning experience in how to write bids. By working in partnership with Plymouth, Bristol and Cardiff it has enabled close working relationships to be formed between the staff and students of all four institutions thus increasing the support of the scheme overall and broadening the opportunities for the students within.

**What is the best way to engage students?**

Following on from studentships, the students who undertook them were given the opportunity to present their work at an annual conference, held in either Exeter or Plymouth each year, which also featured keynote speakers and provided the opportunity for the medical school to demonstrate what INSPIRE is how and how students can get involved. The conferences were very well attended with roughly 50-70 attendees each year. Students themselves play a big role in engaging their peers. By using student voice, word of mouth and social media to spread awareness, once a few students had become involved and were benefiting from the scheme and enjoying it a snowball effect took place engaging more and more students over time.

Additional activities are wide ranging including:

- A [student-led research journal](#) with contributions from Exeter, Plymouth, Bristol and Cardiff.
- An INSPIRE mentoring scheme where students are able to contact an ambassador for support and information as and when they require.

With commendation of the INSPIRE programme from the GMC in their report after their recent inspection of the new University of Exeter Medical School, the INSPIRE grant has been very successful and allowed us to do a lot with a relatively small pot of money.
School: School of Medicine, University of Leicester
Connection to the Academy: Received funding from the INSPIRE programme
Year: 2015-17
INSPIRE Lead: Professor Bob Norman
Key Projects:
- East Midlands Medical Research Conference
- ‘SPARKS Talks’
- The ‘LINK’ Initiative

The INSPIRE programme at Leicester has facilitated a range of extracurricular, student-led, research-focused activities that have highlighted the importance of medical research and the opportunities afforded by an academic clinical career to large numbers of medical students.

Most important has been the annual INSPIRE East Midlands Medical Research Conference, held over the past five years and hosted, in rotation, by Leicester, Nottingham and Norwich Medical Schools. These student-organised conferences have each brought together up to 150 student delegates from four medical schools to make oral and poster presentations of their research, to develop transferable research skills and to reflect on inspirational careers of senior clinical scientist presenters. These events have underpinned the development of networks that will serve students in their future research careers. Complementing the conferences, opportunities to practise soft research skills, including presentation skills, scientific writing and networking, have been provided through regular ‘SPARKS Talks’ evenings, at which students and established scientists present and discuss their work or published topical research developments in a social setting, and an online ‘SPARKS Bulletin’, highlighting recent exciting developments in medical research. Additional activities include:

- A ‘LINK Scheme’ matches students seeking extracurricular research experience to researchers within the University and local NHS trusts. Student administrators recruit and advertise projects, collate student applications and provide mentorship and support to students during their projects. Projects have ranged from short shadowing placements, vacation scholarship projects, to longer term relationships.
- An annual mini conference gives participating students the chance to present in a friendly environment and receive academic feedback. The student giving the best presentation is invited to represent the Medical School at an international student research conference.
- Support has been given to permit student attendance at INSPIRE workshops and other national and international student conferences and a mock interview event is held annually to prepare those students applying to the Academic Foundation Programme.
The supported enthusiasm of a small team of engaged students has been indispensable in ensuring delivery of these INSPIRE activities. Team members gain committee experience, with attendant delegation and acceptance of responsibilities. Engagement of early years’ students has been most important to ensure continuity of experience and engagement year on year. The INSPIRE Academic Lead mentors the team to maintain impetus and to provide guidance concerning event scheduling, institutional protocols and financial regulations. Through the INSPIRE programme, many students have been stimulated to consider incorporating their research interests into a clinical academic career.

School: School of Medical Sciences, University of Manchester  
Connection to the Academy: Received funding from the INSPIRE programme.  
Year: 2016/17  
INSPIRE Lead: Dr Adam Greenstein  
Projects:  
• Hosted conferences for 200+ students, including inaugural conference on undergraduate medical research  
• Diverse range of events promoting medical research careers, including talks series, mock interviews and information evenings

What are the main impacts of INSPIRE?  
The INSPIRE scheme has been transformational for the Manchester Medical Research Student Society (MMRSSoc), the only student-led organisation with the central aim of fostering a research culture amongst undergraduate medical and dental students at the University of Manchester. It has enabled us to run events and engage students in local and national research at a level unparalleled in the recent history of the Medical School, as well as helping us to inform students of fundamental academic principles like the clinical relevance of research, core academic skills and topical areas within academic medicine. Thanks to INSPIRE funding, we have offered structured support to students interested in academic careers in order to facilitate their contribution to research in the future. Our events have included:

• The Classics series of talks, delivered yearly:
  • ‘An Introduction to Academic Medicine’ – hosted by Professor Tony Freemont, former head of the Manchester Medical School, this guided students through the career options available within the specialty as well as providing key insight and his vision for the future of the field.
  • ‘Intercalation—is it for me?’ - provides guidance on specialist academic pathways and intercalated degrees
• A range of one-off evening events including:
  o ‘The Zika Virus & Microcephaly: The story so far’
  o ‘The Surgeon Scientist—a life as an academic surgeon’—hosted in collaboration with Scalpel, the University of Manchester surgical society

• Academic Foundation Programme event series, including:
  o Information evening—an overview lecture about the academic foundation programme
  o White space questions clinic—an opportunity for students to receive advice and feedback.
  o Mock interviews for 18 students

• The May Measurement Month, a month long international project which MMRSSoc was involved with to raise awareness about hypertension.

• Conferences:
  o We hosted the second MMRSSoc Undergraduate Conference, bringing together over 40 students from a range of disciplines.
  o MMRSSoc was chosen to host the National Student Association of Medical Research Conference 2017 after winning the bid at a previous conference. Attendance was strong at 176 attendees across all undergraduate years with representatives from Sheffield, Manchester, Leeds, Hull/York, Liverpool, Dundee, Nottingham, Birmingham and Keele.

What are the main learning points to take away from the scheme?
As a result of the funding we have learned to use our resources more creatively by offering a variety of activities to engage interest to ensure maximum impact. We found that regular events/activities must be diverse to maintain the interest of students. Consistently providing this variety of activities helps to promote the importance of research, its relevance to current practice and the exciting opportunities available in academic pathways. MMRSSoc has always provided opportunities for members to voice their opinions but we are now widening the scope and diversity of our reach, creating new platforms for students to express their views and collating extensive feedback from every event.
What are the main impacts of INSPIRE?

The funding allowed us to support the national student-led One-Health Conference day in 2016. This was a two day event encompassing a wide range of topics with a range of internationally recognised speakers including Dr Gladys Zikusoka, Professor Nigel Gibbens, Professor Elizabeth Baggs, Professor James Wood and Professor Alain Kohl. The conference brought together around 100 student attendees from a range of courses, including veterinary science, medicine, biomedicine, biology, nursing and agriculture. It created an atmosphere of interdisciplinary awareness and collaboration while exposing undergraduates to groundbreaking research.

We also hosted an Undergraduate Research Symposium, showcasing local research and giving undergraduate and PhD students an opportunity to interact in an informal setting. Talks included:

- Jayne Hope – Inspiring science for animal health
- Andy Hepker – Research? But I’m a vet...
- Heather Bacon – Vets at the front line of animal welfare research, and
- Bruce Whitelaw – The Roslin Institute on your doorstep: what could it offer you?

The symposium also included a PhD exposition, where ten PhD students presented their research to rotating small groups of undergraduates, and a poster session which enabled summer research project students to present posters in a mini-conference setting.

INSPIRE also allowed us to establish a student-led research forum, which has led to a wider awareness of research within the R(D)SVS undergraduate community, and created more opportunities for students to engage with research within the campus.

What are the main learning points to take away from the scheme?

In order for there to be maximum engagement within the undergraduate community there must be dedicated administrative support capable of reaching out to students on a day-to-day basis. Those best placed to provide that support can be found within the teaching organisation.

Undergraduates and postgraduates both benefitted from informal small group sessions whereby postgraduates explained the rationale and early stage results from their research projects. Undergraduates received a way to engage with more experienced students, and postgraduates enjoyed the chance to inspire an enthusiastic audience.
First year students have considerable enthusiasm for research engagement, and building the foundations of research awareness should start at this level.

Do you think the INSPIRE Scheme has been successful?

The funding we received from INSPIRE was fundamental to the success of two of our principal activities.