

Hello!

Welcome to our first issue of the High Force Research Bulletin for 2018!

We may only be a month in, but 2018 is already proving to be a busy year for High Force Research with new collaborations, a packed schedule of events and conferences and plenty of exciting plans in the making!

I hope you enjoy reading our latest issue of the HFR Bulletin and I look forward to speaking and meeting with you soon, whether at one of our three sites around the UK or one of the many events we will be attending.

If I can be of any assistance or if you would like to find out more about High Force Research and our work, please do not hesitate to get in touch.

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Dates for your Diary

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| 23rd February | - 2nd European Chemistry Partnering, Frankfurt | 11th - 13th April | - 34th SCI Process Development Symposium, Cambridge |
| 27th February | - Findacure, Drug Repurposing for Rare Diseases Conference, London | 17th - 19th April | - In-Comestics 2018, Amsterdam |
| 2nd March | - How Precision Medicine Will Transform Healthcare, Manchester | 26th April | - Symposium on Medicinal Chemistry in Eastern England, Hatfield |
| 12th - 15th March | - Global Business Accelerator Programme, Enterprise Europe Network, Switzerland | 3rd May | - Swiss Biotech, Basel |
| 22nd March | - Future of Swedish & Danish Life Sciences, Lund | 14th - 15th May | - Kinase 2018, Cambridge |
| | | 22nd - 23rd May | - BioDundee 2018, Dundee |
| | | 11th - 12th June | - 4th World Congress on RareDiseases and Orphan Drugs, Dublin |
| | | 20th June | - BIONNALE, Berlin |
| | | 20th - 21st June | - ChemSpec, Cologne |



Success Stateside!

High Force Research has been setting its sights stateside as it targets growth across the Atlantic.

After having successfully joined a Department for International Trade (DIT) Life Sciences Trade Mission to Boston in early 2017, High Force Research was back stateside in the autumn as it looks to enter North American markets.

High Force Research's business development team returned to North America for a series of meetings with renowned academic institutions and leading private sector firms based in the east coast's successful pharma, biotech, medical device and digital health sectors.

Head of Business Development, Stella James commented: "The DIT Life Sciences Trade Mission to Boston earlier this year was a great opportunity to extend our network in the US further. From our base in the North of England, we are increasingly working with clients from around the globe and as a major hub of America's Life Science sector, Boston is an important market for us.

"Our latest trip provided opportunities to develop a number of valuable relationships with private sector companies as well as major research institutions and we're already planning our return trip later this year to explore opportunities further."



Caption: High Force Research's Business Development team, Stella James and Jennifer Wallis, ahead of their trip to the US

HFR Celebrates 21 years at Bowburn!

Founded in 1988, High Force Research recently celebrated 21 years at its Bowburn laboratory on the outskirts of Durham!

Originally based at the Mountjoy Research Centre on the Durham University campus, High Force Research relocated to our present location in Bowburn on the outskirts of Durham in 1996.

High Force Research's Dr Roy Valentine said, "We're really proud to be marking such a significant milestone in our company's history. Since we were founded in 1988, High Force Research has grown to become one of the UK's most successful independent chemical research and development companies, and our Bowburn site has been integral to that growth."

To celebrate the milestone, the High Force Research team put their skill for scientific deduction to good use, taking part in a Murder Mystery evening at Lumley Castle.

We thought we'd share a few photos from the evening...!



Watch this space!

2018 will also mark an extra special year for High Force Research. In July of this year, it will be 30 years since our company was first founded. Watch out for the next issue of our Bulletin to find out more about our plans to celebrate the milestone!

Rare Disease Showcase visits Newcastle sponsored by HFR!

On the 31st October, Newcastle's Centre for Life hosted the Findacure Rare Disease Showcase. Sponsored by HFR, the day-long event aimed to celebrate and highlight the rare disease projects and research being undertaken in the city and across the North East of England.

Attended by over 70 delegates from across the UK's rare disease community, the event aimed to provide a friendly forum for patient groups, researchers, clinicians and life science professionals to come together to encourage collaborations and improve the future of rare disease science and healthcare. Delegates included over 27 charities, patient groups & advocates, 22 academics and clinicians, 18 industry representatives and three public sector members.

Findacure CEO, Dr Rick Thompson, opened the event by sharing the reasons we should all care about rare diseases. He highlighted the experiences shared by rare disease patients regardless of the symptoms of their condition: multiple misdiagnoses, isolation, difficulty maintaining employment, and little hope of treatment.

In addition to a networking and lightning talk session, during the course of the day we heard from a number of notable speakers, including:

- Dr Hannah Steele, a Clinical Research Associate working at Newcastle's neuro-genetic clinic, which covers a wide range of neurological rare conditions, and is a registered ataxia clinic. Hannah highlighted how having a specialist neuro-genetic centre in the region can provide both high quality care to patients, and a fantastic hub for research into these poorly understood rare conditions. The Newcastle centre is involved in research projects and collaborations that track the natural history of disease, help to develop accurate diagnostic tests, and provide crucial new biomarkers that can allow the progress of diseases to be monitored much more carefully and potentially allow clinical trials to demonstrate a clinical impact of treatments over a shorter time frame.
- Mike, a Professor of Skeletal Genetics at Newcastle University and an advocate of drug repurposing as a way to deliver new drugs to rare disease patients. Mike shared the story of his work

to develop a drug for the rare bone disease metaphyseal chondrodysplasia type Schmid (MCDS), which has led him to focus on many of the common underlying mechanisms in skeletal diseases. One such mechanism, which is also seen in many other rare conditions, is cell stress. Through understanding how cell stress occurs, Mike and his collaborators were able to identify a 50 year old drug that is able to lower stress and restore normal bone growth in MCDS model mice. This work is now in the process of being moved to a first in-human clinical trial.

- Dr Neil Rajan, a Wellcome Intermediate Clinical Fellow from Newcastle University, shared his journey in repurposing a drug for a rare skin tumour. The condition leads to benign tumours across specific regions of the body, in particular the scalp, and growth can be so extensive that total scalp removal can be the best option for patients. Due to the benign status of the tumour the disease is often considered minor and treatment development a low priority. Neil's work with patient groups and individuals affected quickly convinced him otherwise. Through careful research he has identified a potential repurposed treatment for the condition, and this is currently undergoing clinical trials.
- Victoria Hedley, RD-ACTION Policy Manager at the John Walton Muscular Dystrophy Research centre in Newcastle. This centre, along with others in Newcastle, is a hub for a number of Europe-wide rare disease projects, which cover rare disease research with a particular focus on the neuromuscular, rare disease policy, and the new European Reference Networks. Victoria highlighted the collaborative nature of the rare disease industry and the impressive work coming out of Newcastle in this area.

With our 30 year heritage of providing development and scale up services to the pharmaceutical industry and increasing focus on orphan drug manufacture for the treatment of rare diseases, we're delighted to have been able to support Findacure as sponsors of the Newcastle event and look forward to continuing to work closely with the charity.

To find out more about the charity and its work, please visit <http://www.findacure.org.uk/>



Findacure, Drug Repurposing for Rare Diseases Conference, London!

Taking place on Tuesday 27th February, at the Royal College of Nursing in London, Findacure's annual conference will bring together patient groups, clinicians, researchers, and life science professionals, to discuss the latest developments in drug repurposing, and its role in the future of rare disease treatment.

During the course of the day delegates will hear examples of excellent practice of drug repurposing in rare diseases, and make connections with rare advocates in and outside of their respective fields. The afternoon will include a lightning talk session where delegates will have the opportunity to propose their own five minute talks.

Tickets are now on sale for the event and more information can be found at <http://www.findacure.org.uk/>

Please do let us know if you are hoping to attend the conference and would be interested in arranging a meeting with the High Force Research team. Please contact Dr Jennifer Wallis at jenniferwallis@highforceresearch.com

Durham Collaboration

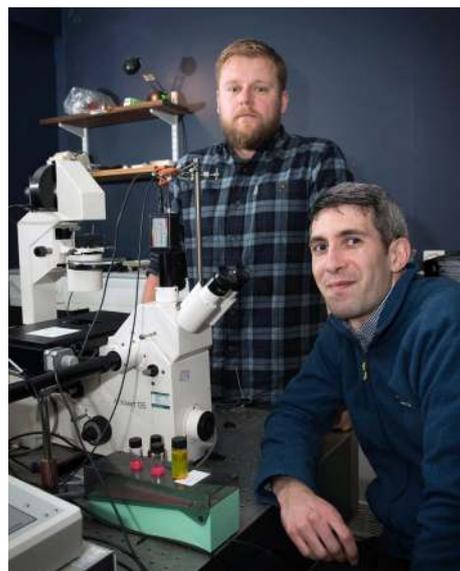
High Force Research is delighted to announce a new collaboration with Durham University!

The initial three-year collaboration with Dr Robert Pal, Assistant Professor in the Department of Chemistry at Durham University, will see High Force Research sponsor MChem Durham University graduate, Kathleen Bowes, as she undertakes her postgraduate studies.

During her PhD, Kathleen will support the research of Dr Pal, whose interests are focused on the development of novel optical and super-resolution microscopy instrumentation and associated imaging agents. In particular, Kathleen's research will focus on Surface-enhanced Raman Spectroscopy (SERS) and the identification of novel probes to support easier detection of diseased states, particularly skin cancer.

Commenting on the collaboration, High Force Research's Dr Neil Sim said: "We're delighted to be able to support Kathleen as she embarks on her postgraduate career. The research undertaken by Robert's team to date has already generated some exciting results and we're looking forward to collaborating with Robert and Kathleen as they look to further the work undertaken to date.

"Kathleen is the ninth student we have supported through undergraduate or postgraduate studies. All of our sponsored students' talents have a direct impact on our sector in the region, with many going on to gain employment with organisations across the North East of England."



Caption: High Force Research's Dr Neil Sim, pictured with Dr Robert Pal, Durham University

HFR Chemist Holds Formula for New Business Success!

High Force Research's Business Development Executive, Jennifer Wallis, is celebrating having successfully completed her chemistry EngD!

Jenny who previously studied a chemistry degree and MPhil at Newcastle University, (and also co-owns The Manor House Inn in Shotley Bridge) completed her EngD after four years studying the synthesis of fluorescent dyes for use as imaging agents. The imaging agents have potential applications in helping to identify cancer cells. Her research, undertaken with EngD supervisor Dr Lee J. Higham of the School of Chemistry, was co-funded through the EPSRC EngD programme and Durham-based High Force Research.

Having joined High Force Research as a Business Development Executive in February 2017, during her first year Jenny has been instrumental in supporting High Force Research to expand its business development efforts, including efforts to



Caption: Dr Jennifer Wallis, Business Development Executive, High Force Research

expand into the North American market and launch new imaging products directly linked to her area of research.

Commenting on the news, Jenny said: "It's been quite a year! I'm delighted to have completed my EngD – it's such a relief after the last few months of juggling work and finalising my thesis. I was very lucky to receive funding from High Force Research

to support my EngD, which they co-funded alongside the EPSRC EngD programme.

"Without their support I would never have been able to complete my research or had the opportunity to join Stella and the team at High Force Research. It's a really exciting time for the firm and having the ability to directly contribute to its business development efforts and sustained business growth is a real thrill."

High Force Research's Head of Business Development, Stella James, said: "We're delighted that Jenny has completed her EngD – it's a true testament to her skill as a chemist and ability to multi-task! Jenny recently joined our Business Development team and has been invaluable in supporting our recent business growth over recent months – not least in helping to drive forwards our new product development."

Congratulations Jenny! We hope the drinks were on the house!



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