



ANNUAL
REVIEW
2018

THE NORTHERN HEALTH SCIENCE ALLIANCE IS THE NORTH OF ENGLAND'S HEALTH PARTNERSHIP



A Health Partnership for Northern England

OUR VISION

To end Northern inequality through health research and innovation

OUR MISSION

Establishing the North of England as an internationally recognised health research system

OUR WORK

- To grow** visibility of the North's health economy nationally and internationally
- To increase** health research conducted in the North by the private and public sector
- To act** as a conveying body for pan-Northern research collaboration
- To link** Northern IP with investors

OUR MEMBERS

- 8** top research Universities in the North
- 8** top research-intensive NHS teaching Trusts
- 4** Academic Health Science Networks (AHSNs)



THERE ARE OVER 570,000 PEOPLE WORKING IN THE HEALTH SCIENCES SECTOR IN THE NORTH'S UNIVERSITIES, HOSPITALS AND COMPANIES WITH OVER 38,000 OF THOSE JOBS BEING HIGHLY SKILLED PRIVATE-SECTOR POSITIONS¹

FOREWORD

Professor David Burn

Chair of the Northern Health Science Alliance

This has been a fantastic year for the Northern Health Science Alliance and I am proud to have joined as Chair during such a successful and pivotal period for the alliance.

The North of England's reputation as a key player within the life sciences sector is growing, not just on a national level, but internationally. Our achievements in health innovation have been recognised as a national exemplar and this is thanks to the vital work being delivered by the NHSA and all of its member institutions.

There is still a long road ahead before we overcome the persistent health challenges and ongoing disparity in funding between the North and South of England. However, we have enjoyed great success in the last year by taking a collective Northern approach to challenge these disparities.

It has been a busy and rewarding year for the NHSA and our member institutions. To try and capture this energy we have set out some of the key successes in this annual review. We hope you find it useful and welcome feedback and the opportunity to work with new partners in the years ahead.

I would like to thank everyone who has supported the NHSA during the last 12 months. I'm looking forward to the future as we continue to work towards our goal of improving the health and wealth across the North of England.



CONTENTS

2018 HIGHLIGHTS	4
DRIVING FORWARD THE FUTURE OF HEALTH RESEARCH	6
TAKING THE NORTH GLOBAL	7
GETTING OUR COLLECTIVE VOICE HEARD	8
OPENING THE DOOR TO INDUSTRY	10
RESEARCH RICH REGION	12
JOIN US / LOOKING AHEAD	14
THE ALLIANCE	15



HEALTH SCIENCE IS £17.5 BILLION OF THE NORTH'S £304BN OUTPUT AND IS FORECAST TO GROW BY 44.6 % BY 2030



The North of England is a hotbed of dynamic and innovative individuals, organisations and businesses that are already doing amazing things within the health science sector. We have a lot to be proud of, but there's so much more that we can achieve as a region, both in terms of reducing health inequalities in the North and on impacting the research funding gap between the North and other parts of the UK.

Our region is home to first-class research facilities, pioneering researchers and clinicians, world-renowned academics and trailblazing health companies. It's the NHS's responsibility to help all parties from outside of the region realise the North's potential.

Each year we are getting stronger as we develop and nurture new and existing collaborations and partnerships within the region and beyond. Each year awareness of what we have to offer is growing and we are attracting interest and investment on a global scale.

People are starting to take notice and our voice is getting louder – long may it continue.

Dr Hakim Yadi OBE
Chief Executive

To grow visibility of the North's health economy nationally and internationally...

...we've attended three major international conferences, resulting in potential investment opportunities for Northern organisations. This included us taking the largest delegation of UK life sciences experts from the North to Bio US in addition to visits to BioJapan, BIO-Europe and Israel.

...we have been asked to present the Northern story across the globe in Canada, Australia, Singapore and Japan

...we've supported more international corporate visits to the North of England to enable our members to develop relationships with global industry partners

To increase health research conducted in the North by the private and public sector...

...we've handled 35 new enquires from the private sector, which has translated into 31 new projects that are directly benefiting NHS members

...we have processed 24 opportunities with Israeli companies since we signed a memorandum of understanding with the UK Israel Tech Hub in May

To act as a conveying body for pan-Northern research collaboration...

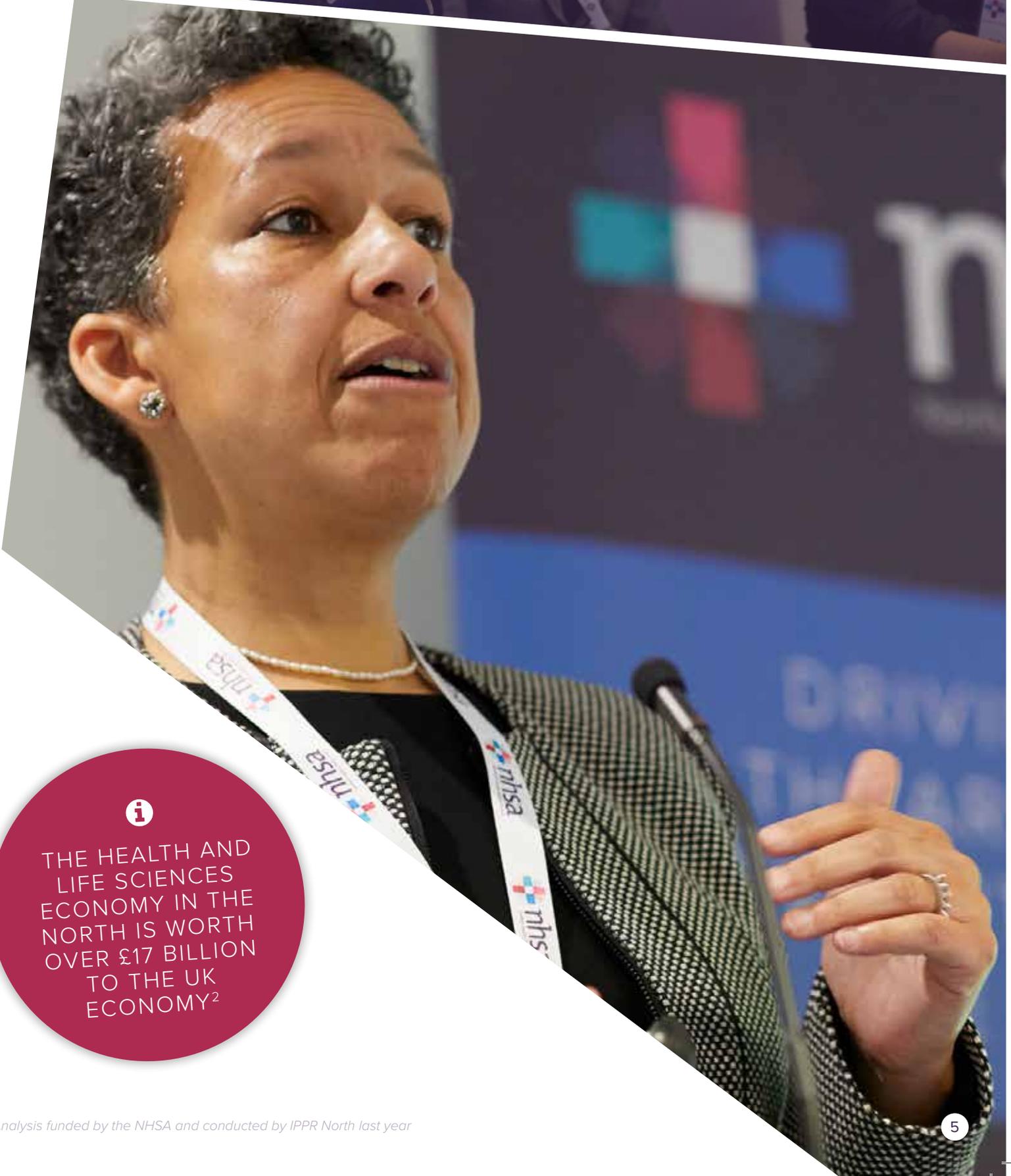
...we've supported more collaborative research proposals than ever before

...the North is collaborating in ways not seen before on ground-breaking trans-regional programmes such as the 'Active and Healthy Ageing North' programme, Health North: Connected Health Cities and the Northern Powerhouse in Health Research (NPIHR) Science Innovation Audit

To link Northern IP with investors...

...we have helped forge greater links between UK venture capital firms and Northern universities

...we're developing ambitious plans to establish a £100m+ Northern Life Sciences Fund to create the North's largest early-stage, life sciences venture fund, focused on starting new life sciences companies



i
THE HEALTH AND
LIFE SCIENCES
ECONOMY IN THE
NORTH IS WORTH
OVER £17 BILLION
TO THE UK
ECONOMY²

²Analysis funded by the NHS and conducted by IPPR North last year

DRIVING FORWARD THE FUTURE OF NORTHERN POWERHOUSE HEALTH RESEARCH

This year, the NHTA has submitted the Northern Powerhouse in Health Research (NPIHR) Science and Innovation Audit (SIA) to UK Government, with the final report due to be published later this year.

Throughout 2017/18, we have been working closely with partners across the North of England to map and understand Northern regional research and innovation strengths, and areas of excellence in health research, with particular focus on precision medicine and health data.

Key highlights include:

-  We led the SIA bid across the whole of the North of England
-  The award recognises the region's excellence in health research and its ability to grow the health and wealth of the region
-  The SIA will help position the North as a globally relevant hub for cutting edge health research, innovation, and improved service delivery, new markets potential and business growth
-  Our ambition is to establish the North of England as the scientific, innovation and global market leader in the use of health data and precision medicine for disease prevention and management through strategic investment in people, skills, infrastructure and programmes



I see the Northern Health Science Alliance as having transformed health research and innovation in the North and we in NHS England have been learning from the model

Professor Sir Malcolm Grant,
Chair, NHS England

TAKING THE NORTH GLOBAL

The NHSA has grown its international presence significantly to draw attention to health science excellence in the North.

During the year, we have showcased the exceptional health science research ecosystem in the North of England and we have continued to forge meaningful partnerships around the world.

We have had a presence at major international conferences, shared the North's health innovation story across the globe, as well as securing strategic deals with countries in a bid to encourage global collaboration and investment in our region.

Key highlights include:

BioJapan - We led a 50-strong delegation of biotech companies and scientists to Japan working in partnership with MedCity.

The five-day trade mission saw delegates from the North, including from the Universities of Manchester and Sheffield, attend the UK Life Sciences symposium and the annual biotech partnering conference, BioJapan.

BIO 2018, USA - We brought together a delegation to showcase the region's excellence in anti-microbial resistance, health research and clinical trials at BIO 2018 International Convention in Boston.

The international audience heard from experts from the AMR Centre in Alderley Park, the Centre of Excellence in Infectious Diseases Research in Liverpool, the National Institute for Health and Care Excellence and leading academics from the University of Manchester and York.

We held the UK's networking breakfast at BIO with UK Trade Minister Baroness Fairhead giving a keynote.

Israel MOU - We signed a memorandum of understanding (MOU) with the UK Israel Tech Hub earlier this year, opening up the North of England to innovative and cutting-edge Israeli health technology.

The MOU, which was signed at MIXiii Biomed 2018 in Tel Aviv, will support Israeli life science and healthcare companies establishing research and a presence in region, with the potential to bring great benefits to the North's hospitals and patient population.

We have already seen significant interest, processing 24 industry enquiries since the signing, and will continue to support Israeli companies access the UK clinical research environment in the North of England.

Canada and Australia MOU - We opened the door to working across the Commonwealth countries by signing an MOU with Life Sciences Queensland Limited in Australia and another MOU with SCAN Health and World Health Innovation in Canada.

These joint working arrangements will open up opportunities for UK companies to expand into Australia which has a £28bn life sciences economy and Canada, which has a £17bn life sciences economy, and for their companies to bring the latest health technology and treatment to the North and vice-versa.

Singapore MOU - We partnered with Zicom MedTacc in Singapore in a strategic deal which will see companies come to the North of England when developing and internationalising new medical technology.

The MOU will provide the North with access to innovative new technologies and treatments from Singapore, in addition providing a launchpad for Northern medtech diagnostic and digital health companies into the Singaporean and wider Asia Pacific markets.



GETTING OUR COLLECTIVE VOICE HEARD

Every year our voice gets louder. Together, we are making our voice heard in the corridors of power and within health science communities across the globe. We are here to ensure the true potential of the North's innovative health sector is realised; for the benefit of our members and the 16m people living across our region.

Throughout the year, we have worked with a select group of stakeholders across the North to prepare the sector's response to the Industrial Strategy in Life Sciences

The North continues to have a seat at the policy table as the NHTA is a partner of the Government's Northern Powerhouse Programme, the Northern Powerhouse All-Party Parliamentary Group and the Personalised Medicine All-Party Parliamentary Group

We have raised the profile of the NHTA and our members at events throughout the year, from UK political party conferences to international health events

Our annual Day of Action saw 200 academics, clinicians, politicians, industry and life sciences leaders come together in November and also included a round-table and debate with Government ministers

We initiated online conversations on key health and innovation issues during the course of the year - this included digital campaigns such as #DataSavesLives and #NorthInnovationWomen

There were 293,385,960 opportunities to see, hear or read about the NHTA this year – a 217% increase from the previous year

Our visibility in the national media was further boosted with coverage in Sky News, Channel 4 News, The Times, The Huffington Post, Financial Times, BBC, The Daily Mail, The Express and The Sun

Regional and trade media coverage also continues to be strong with stories regularly being picked up by the likes of The Journal, Yorkshire Evening Post, BBC Manchester, Times Higher Education, DigitalHealth.net, EPN Magazine, BQ Magazine and many more

Our social media engagement has also increased significantly this year. Views on Twitter have gone up by 72% and followers are up by 53%. On LinkedIn, views went up 114% and followers 106%





CASE STUDY

Science Innovation Audit

Following the NPIHR's successful bid to secure a Northern Powerhouse in Health Research (NPIHR) Science Innovation Audit (SIA), we have been working with Government, our members and pan-Northern experts, research centres and institutions to demonstrate the region's research and innovation strengths to develop the SIA.

Our key focus is to support the development of new economic marketplaces within health through the utilisation of Data for Better Health & Wealth, and the implementation of Precision Medicine (PM) within routine care.

The SIA report has been approved by Government and is expected to be formally published in late 2018.



THE NPIHR HAS BEEN RECOGNISED AS AN 'EXEMPLAR CLUSTER' BY GOVERNMENT



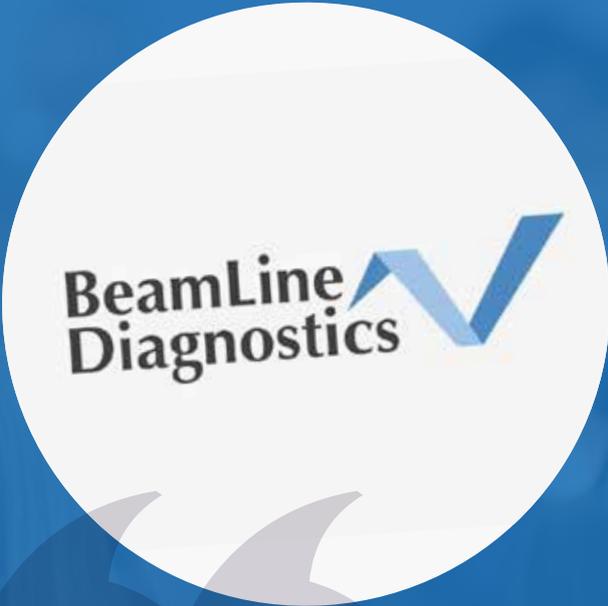
OPENING THE DOOR TO INDUSTRY

We're here to act as a broker between our members and the clinical research industry, to stimulate meaningful relationships that, in turn, increase inward investment and commercialisation of health science IP in the North of England.

- ✿ The NHSA continues to act as a valuable source of industry-led opportunities both from across the UK and from international hot spots in health technology and life sciences
- ✿ We have promoted the North as open for business, research and innovation on a global scale
- ✿ We have undertaken technology scouting on behalf of industry and supported visits and delegation activity for international industry

- ✿ We are supporting a 21-strong delegation from Singapore to the North of England, showcasing medtech expertise across Leeds and Manchester
- ✿ In collaboration with other UK stakeholders, we have coordinated Northern delegations to Japan and the USA
- ✿ We have worked with leading companies including Asahi Kasei, BioEye, Tyto Healthcare and Everest to stimulate interest and investment in the region
- ✿ We have helped to find academic and clinical partners to work with industry, providing administrative and light-touch project management support to get collaborations off the ground
- ✿ We have helped to simplify the set-up of clinical validation studies for industry and brought together consortiums to work with them





BeamLine Diagnostics

We engaged with the NHTA in order to identify potential sites to participate in this 400-patient study. The NHTA facilitated introductions with several centres of excellence for gastroenterology and as a result we have recruited patients at the Manchester Royal Infirmary

Dr. Katherine Willetts,
COO and Co-founder, Beamline Diagnostics

CASE STUDY

Beamline Diagnostics

The NHTA worked with University College London spin-out company, Beamline Diagnostics, to facilitate discussions with a number of clinical trial sites in the North of England.

Beamline Diagnostics is developing a new diagnostic test to determine, in real time, whether a tumour is benign or malignant. A study had begun with King's College, London but the company required additional clinical trial sites and samples for its clinical validation study.

We introduced them to a number of potential sites across the North, which had all expressed an interest in the study, and this moved forward with Manchester Royal Infirmary and recruitment for the trial began here in January 2018.



THERE HAS BEEN
A 15% UPLIFT IN
THE TOTAL VALUE OF
COMMERCIAL FUNDING
RECEIVED BY NHTA
MEMBER ORGANISATIONS
DURING 2017/18 TO
APPROXIMATELY
£1,020,000



Successful clusters are typically backed by a cluster organisation such as MassBio in Boston, MedCity in London, Oxford and Cambridge, and the Northern Health Science Alliance in the North of England. These organisations promote and market the clusters as well as providing brokering and signposting for investment and collaboration³

Life Sciences Industrial Strategy,
A report to the Government from the life sciences sector

³https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/650447/LifeSciencesIndustrialStrategy_acc2.pdf pg 40



Collaboration and partnerships are vital as we work towards building a strong health economy in the North of England. Our role is to bring together researchers, clinicians and industry to stimulate research within our region. Throughout this year we have continued to support the growth of trial activity in the North and have encouraged pan-Northern research collaboration.

✿ Brokering new research partnerships for our members has been a core focus throughout the year and has resulted in collaborations in a range of areas such as head and neck cancer, public health and pain

✿ Through the Northern Biomedical Research Centres Collaborative, we provide a platform for sharing of best practice and exploration of collaboration opportunities between the four Northern BRCs

✿ In March this year, we brought together leading biomedical research experts from universities, NHS trusts, industry and funding bodies when we hosted a BRC Industry Showcase

✿ The number of NHTA-supported collaborative research proposals is rising year-on-year

✿ Our support has helped boost collaboration on ageing focused projects thanks to the pan-Northern Active and Healthy Ageing North (AHA North) network, which we coordinate. We have supported a range of pan-Northern collaboration and international collaboration bids across areas such as falls preventions and reducing the risk of osteoporosis

i
THE NORTH
DELIVERS MORE
CLINICAL TRIALS
THAN LONDON,
OXFORD AND
CAMBRIDGE
COMBINED⁴



⁴Based on NHTA calculation using number of recruiting studies and number of participants data included in the NIHR Research Activity League Table 2017-2018
⁵NIHR Research Activity League Table 2017-2018



We continue to champion the work of the £20m Government-funded Connected Health Cities data project – which we helped secure funding for



The NHTA is committed to supporting the North's NIHR infrastructure including the NIHR Med Tech and In Vitro Diagnostic Cooperatives, BRCs and in time we hope to support the NIHR Applied Research Collaboratives



We remain committed to fostering research collaboration through the CRN North Network Collaborative Framework, which has this year resulted in a more joined up approach between Gastroenterology specialist leads from across the four Northern CRNs – including a potential trial across 17 Northern sites



i
 THE NORTH IS HOME TO THE TOP NHS TRUST NATIONALLY FOR THE NUMBER OF CLINICAL TRIAL STUDIES - THE NEWCASTLE UPON TYNE HOSPITALS NHS FOUNDATION TRUST, AND A FURTHER THREE OF THE TOP FIFTEEN⁵

CASE STUDY

NIHR North Biomedical Research Centre Showcase

The NHTA brought together health science experts and innovators from industry, academia and the NHS at the Northern National Institute for Health Research (NIHR) Biomedical Research Centres (BRCs) showcase earlier this year.

The event, which was sponsored by the NIHR, highlighted the world-leading work of the centres - based at Leeds, Newcastle, Sheffield and Manchester - and gave industry a unique opportunity to speak to the BRCs and leading universities on the different ways they could support translational research.

Representatives from Microsoft, Amgen, Abbvie, Genetech, DebioPharm, GSK, Life Arc, GeneData, SAP, Benevolent AI and Heptares, among others, attended and heard about the range of industry and BRC collaboration opportunities within the region.



JOIN US... LOOKING AHEAD

Working with the NHTSA is simple. We provide one point of access to the health science system across the North of England.

For more information on working with the NHTSA on its projects and collaborations email info@theNHTSA.co.uk or visit our website www.theNHTSA.co.uk

-  By working closely with our members across the region, we are working to secure meaningful dialogue with government, industry and the third sector
-  By leveraging our strengths identified in the Science and Innovation Audit, we will look to develop new ways for the North to maximise its potential
-  We will build awareness of the North's strengths in research by hosting and attending more trade missions, international conferences and events from regional to global level
-  We will continue to support and promote the trailblazing work of Connected Health Cities and engage and initiate debate around data sharing health solutions
-  We will continue to provide a voice for the North's health sciences regionally, nationally and internationally



Hakim Yadi OBE
Chief Executive



Suzanne Ali-Hassan
Head of Corporate Engagement



Hannah Davies
Head of External Affairs



Shirley Hannan
Research Coordination and Funding Development Manager



Nicola Wilson
Chief of Staff

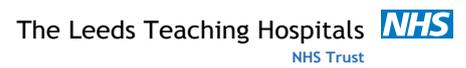


Ben Martyn
Business Development Officer and Analyst



THE ALLIANCE

The NHTA is a health partnership of the leading Northern research-intensive Universities, NHS teaching Trusts and four Northern Academic Health Science Networks. Through these we reach a population of almost 16m.





www.theNHSA.co.uk



@the_NHSA



Northern Health Science Alliance

