MRC | Medical Research Council

UK Institute for Health and
Biomedical Informatics Research

Director
Recruitment Pack

CONTENTS

DIRECTOR RECRUITMENT PACK

1. Executive Summary

The UK institute for health and biomedical informatics research[1] will transform the UK medical informatics research landscape. It will be a world leading interdisciplinary research institute, capitalising on the UK's unique research strengths and data assets.

It will be founded on the mission to develop the capacity and methods to accelerate the pace and scale of health and biomedical data science. It will drive discovery research aimed at improving health and care for patients and the public, and grow capability and economic opportunity in the UK. It will be independent, open and inclusive.

To lead the Institute, the Medical Research Council is looking to appoint an outstanding and visionary leader. Building on the unique capabilities already established within the UK, the Director will be responsible for shaping a national health and biomedical informatics research programme, incomparable worldwide.

The ideal candidate will have the ability and experience to develop and lead an internationally renowned institute, which will deliver cutting edge data science to address the most pressing health challenges. With a strong strategic vision you will drive the formation of the Institute, with direct control of a core budget of at least £37.5m over five years and leadership of more than 100 researchers.

An outstanding collaborator, you will have the ability to inspire and influence the research community forging interdisciplinary expertise from across computer science, maths, statistics, biomedical, clinical, public health and social sciences.

Penna recruitment specialists may be contacted for a confidential discussion regarding the role.
For further information and a confidential conversation on the role please contact our retained Penna consultant Roger Russell on 07710 701570.
To apply please [click here](#)

If you have any problems with the above then please submit your application to
Charlotte.Shields@penna.com or send via post to Charlotte Shields, Penna, 5 Fleet Place, London, EC4M 7RD.
The closing date for receipt of applications is 4pm 24th November 2016. The interview date is likely to be the week commencing 6th February and will be held in central London.

[1] Descriptive title of the Institute, with a formal name to be confirmed

2. UK Institute for Health and Biomedical Informatics Research

The UK institute for health and biomedical informatics research will transform the capacity and capability of health and biomedical data science in the UK. The UK has world renowned data resources and research capabilities. The Institute will be in a unique position to capitalise on these strengths and develop synergistic partnerships to revolutionise the use of health and biomedical data to improve the health and care of patients and the public through cutting edge research. No other coordinated research programme, of the same potential, exists worldwide.

Under expert directorship the Institute will provide national leadership, influencing the research community as well as UK scientific and health policy. It will develop the interdisciplinary skills, capacity and infrastructure needed to maximise the use of the wealth of biological, clinical, environmental and social data sources. The defining feature of the Institute's research will be development of cutting-edge analytical tools and methodologies, required to integrate complex and diverse data at an unprecedented depth and scale.

The Institute will deliver a step change in capabilities to enable the application of data science methods to research questions across the broad remit of the MRC and other funders' portfolios within five major themes: discovery science, stratified medicine, public and population health, learning health systems and citizen driven health.

Institute core activities and data driven research challenges:

The Institute will be independent and institutionally agnostic, working to advance capabilities across the UK. The activities supported by the core budget of the Institute will be:

- Delivery of **world-leading research**, driven by cutting-edge data science capabilities, focused on the most pressing health research challenges.
- Provide national **leadership** with a clear vision and ambition to drive the UK research base forward and deliver internationally renowned expertise in health and biomedical informatics.
- Develop **skills and capacity** in the new discipline of medical informatics, training researchers with interdisciplinary skills to operate at the interface between core data science and medical research in a creative and dynamic environment.
- Develop cross cutting analytical **methods, tools** and **standards** needed to link and extract value from increasingly complex, disparate, diverse and numerous data sets.
- Develop **secure interoperable research environments and data flows**, delivering a technology framework to federate existing platforms to connect the UK's diverse health and biomedical data assets.
- **Develop partnerships** with owners and controllers of data, regional and national health and social care partners, academia and industry, to facilitate the rapid application of the Institute's research. Placing public engagement and involvement at the heart of the Institute's research.

The Institute will target its capabilities to the priorities of the Institute's members; ranging from the fight against **infections** and antimicrobial resistance; promotion of **life-long mental health** to personalised **prevention**, incorporating the social and environmental determinants of disease. The Institute's research will accelerate the opportunities for **experimental medicine** and play a key role in developing new therapies through **target discovery and validation.** The Institute will, in the longer term, transform **stratified medicine** and research **partnership with industry.** There will be significant opportunities for the work of the Institute to be augmented with additional partnership programmes.

With a multi-million pound budget and leadership of at least 100 researchers the Director will implement their strategic vision and shape the formation of a world leading Institute. The Director will be responsible for developing a strategic plan and setting research priorities that deliver against both short-term opportunities and longer-term strategic goals. The Director will identify the infrastructure and methodological developments needed to open-up new opportunities and address previously intractable research questions. The work of the Institute will complement and augment the activities of individual institutions, to maximise the potential of the UK's diverse and distributed data assets and multidisciplinary expertise.

Since 2013, the MRC and its partners have invested over £100m in informatics capacity and infrastructure[2]. Building on this, the Medical Research Council is making a further £37.5m investment, over 5 years to establish the Institute as part of a sustainable, long term commitment. The Institute will be delivered in partnership; with the health research departments of England, Scotland and Wales, the Economic and Social Research Council (ESRC) and the Engineering and Physical Sciences Research Council (EPSRC) already committed to working with the MRC to deliver this venture. A number of other charity, government and industry partners have also pledged their support and it is anticipated that additional organisations will participate in this ambitious endeavour.

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[2] *Including £70m of capital investment in cutting-edge data science infrastructure distributed across the UK.*
Plans to refresh and sustain this significant programme of capital investment are also in progress.

3.   Operation and Structure

The UK institute for health and biomedical informatics research will be established as a single legal entity, governed by an Institute Board. Dr Graham Spittle, Chief Technology Officer and Vice President, Software Group, IBM and member of the Prime Minister's Council of Science and Technology has agreed to be the interim Chair.

The Institute will be geographically distributed across a number of centres of excellence throughout the UK. The core budget of at least £37.5m over 5 years and scientific direction will be under the control of the Director. As an independent institution, it is expected that the Director will be directly employed by the Institute, subject to negotiation with individual candidates and their current employers. Accommodation of on-going commitments, such as clinical practice will be considered. The Director will be given freedom to select the location of their UK research base.

The Institute will support at least 100 researchers under the leadership of the Director in a varied programme of interdisciplinary data science research, through a mix of shared academic appointments, secondments and directly employed staff across a number of distributed centres of excellence. This Director-led team will also engage a much larger group of researchers on collaborative programmes that add value to the core-supported work of the Institute.

The Director-controlled budget will implement a novel programme of data science research and capacity building, providing strategic direction and leadership to connect sites around key activities, with staff and resource allocated across sites as necessary. It will include sufficient critical mass to deliver the Director's own research programme as well as a team to support the management and co-ordination of training, research and partnership and public engagement. The Institute's distributed model, illustrated below, demonstrates how the Director-controlled core budget (the pillars) will support cross-cutting research activities in several sites, maximising the UK's existing data assets, interdisciplinary expertise and data science infrastructure.

Institute organisational model:
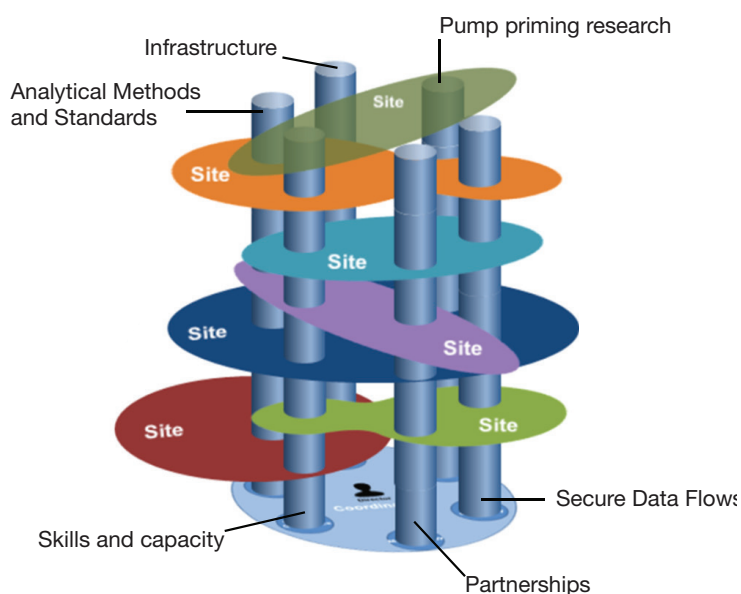
Cross-cutting activities across Institute sites
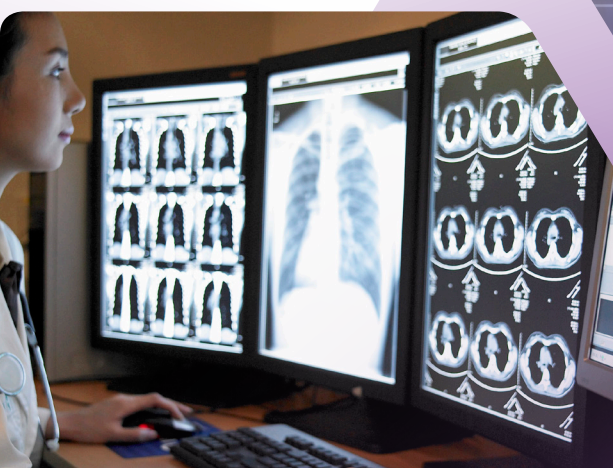
The Institute will capitalise on the momentum created by the existing Farr Institute and MRC Medical Bioinformatics Awards, incorporating the £70m of UK-wide infrastructure established through these awards. Alongside the Director search, the MRC will be inviting statements of interest from UK centres of excellence in health and biomedical informatics research that will become constituent sites of the Institute. Decisions on the locations and funding allocation to sites will be made with the Director following appointment, aligned to the Director's vision and scientific strategy.

Following significant consultation, the vision of the Institute has been designed to complement other UK research strengths such as the European Bioinformatics Institute, Alan Turing Institute, Economic and Social Research Council Big Data Network and complementary investments made by the National Institute of Health Research and the devolved health departments[3]. There will be significant opportunities for mutually beneficial partnerships with these and other investments to further capitalise on the unique strengths of the UK research base. The Institute will proactively seek charity, industry and international partners in delivering its mission.

The Institute will be established as a separate legal entity and the Director will be accountable to the Institute Board. The Board will be a small body responsible for the legal and financial oversight of the Institute; it will be supported by a Partnership Committee with a broad membership of stakeholders to oversee the strategic direction of the Institute and reinforce alignment with other major initiatives and programmes. It is expected the Director will chair a Senior Scientific Executive Committee drawing together the senior scientific leaders from each site.

[3] *Further information on aligned UK research institutes and programmes is available on request.*

4. Person Specification

The Director will have a compelling vision and strategic approach to guide the establishment of an internationally renowned research institute that harnesses the distributed UK strengths in health and biomedical informatics research.

The Director will lead the Institute's development in a way that builds capability across the UK and creates a flourishing and dynamic informatics ecosystem. S/he will have control of the core-budget of at least £37.5m and direction of at least 100 researchers to create an outward looking and open institution that pursues a wide range of UK and international partnerships to deliver its mission.

An outstanding collaborator, you will have the ability to inspire and influence across the research community forging interdisciplinary expertise across the computer science, statistics, biomedical, clinical, public health and social sciences spectrum. You will have an understanding of the diverse fields from bioinformatics to clinical health informatics, and be able to build effective partnerships with a range of stakeholders including owners and controllers of data, regional and national health and social care partners, academia, charities and industry. The role can be fulfilled by either a non-clinical or clinician scientist.

The applicants for the post should demonstrate the following set of skills and experience:

1. A proven track record of international stature, vision and inspiring leadership, and delivery of international quality research in health and biomedical data science/informatics research.
2. The ability to develop and advance an emerging research discipline.
3. The ability to lead collaborative, distributed enterprises and build effective stakeholder relationships.
4. Experience in partnership building, including health and social care, government, industry and third sector organisations at scale.
5. Track record of successful management and delivery in a complex multi-budget environment.
6. The ability to deliver a strategic plan to build on existing data, infrastructure and technology assets.
7. Proven track record of professional leadership and motivation, pursuing staff development, and building and shaping interdisciplinary capacity at all levels.
8. Knowledge of the complexity of health, social and research data environments, and understanding of data security and governance.
9. Experience in knowledge transfer and research translation.
10. Experience in public communication of science and maintaining media relations, especially promotion of public engagement and involvement and leadership around complex issues of sharing and use of health and social data for research.
11. Experience in implementing/operating corporate and institutional governance and administrative issues. This is a senior appointment, to be directly employed by the independent Institute subject to negotiation with individual candidates and management of on-going commitments, such as clinical practice. A competitive salary will be offered, negotiable depending on experience.

5. Key responsibilities of the Director

1. LEADERSHIP

1.1 Develop and deliver the Institute vision, providing strategic and scientific leadership to shape and implement a world leading research organisation.

1.2 Provide leadership, motivation and direction for the scientific programmes (including the Director's own programme) to maximise high-quality scientific delivery, output and outcomes.

1.3 Provide national leadership to shape and influence the research community and lead UK health and biomedical data science research and aligned policies.

1.4 Drive collaborative activities and develop partnerships to deliver the Institute's mission and facilitate the rapid application on the Institute's data science methodological research and expertise, across diverse areas of biomedical, clinical, social and population research.

1.5 Promote the Institute's key role in UK and international informatics research to the general public, to inspire effective engagement and support for the use of health data in research.

1.6 Lead a continual programme to develop and enhance the Institute's strategic and scientific role within the UK and internationally, creating new opportunities to advance the discipline of medical informatics.

1.7 Support and represent the broader corporate interests of the MRC and partner funders, embed core values within the Institute; promoting scientific and methodological excellence, open science and effective public engagement and supporting long-term and interdisciplinary team science.

1.8 Participate fully in strategic and quinquennial scientific review of the Institute and the implementation of outcomes. Ensure the effective resourcing of the research programmes within delegated authority.

2. CAPACITY DEVELOPMENT

2.1 Provide a high quality training and development environment in the Institute, developing a team science approach and implementing a competitive and attractive career pathway for technical and research staff, at all levels.

2.2 Embed a sense of identity and commitment to the aims of the Institute across all levels of staff, throughout the distributed sites.

2.3 Provide an effective and regular process for staff communication and consultation across all levels within the Institute.

2.4 Ensure that Institute Scientific Leaders and other direct reports have a clear understanding of their areas of responsibility and accountability.

2.5 To lead and promote 'Equality and Diversity' activities which will provide a diverse workforce, a commitment to 'Women in Science' and fairness.

3. PARTNER RELATIONSHIPS

3.1 Identify, establish and maintain effective partnerships with data controllers including national data providers, local health and social care communities, partner NHS Trusts and major research data holders.

3.2 Establish and maintain effective relationships with key stakeholders locally, nationally and internationally across a range of disciplines, charities and industry to ensure the rapid translation of the Institute's research.

3.3 Maintain effective relationships with the Institute's distributed sites and other key institutions.

4. RESOURCE MANAGEMENT

4.1 Plan and manage all resources including staff, finance, capital assets and management information systems, in an effective and efficient manner.

4.2 Manage the Institute's budget to ensure that delegated funds deliver value for money.

4.3 Seek opportunities for external funding to advance the Institute's scientific strategy.

4.4 Manage the Institute in accordance with relevant health and safety legislation.

4.5 Take all necessary steps to protect the Institute's intellectual property.

5. GOVERNANCE & RISK MANAGEMENT

5.1 Implement suitable policies and processes to ensure appropriate governance and accountability.

5.2 Ensure compliance with reporting requirements. This includes provision of up-to-date information on current research programmes and on research outputs and achievements.

5.3 Assess, prioritise and manage the risks inherent within the operation of the Institute. Implement appropriate action where weak controls and risks are identified.

6. CORPORATE CITIZENSHIP

6.1 Promote and maintain standards for Institute staff and ensure this is communicated and fully understood.

6.2 Ensure that the Institute's research fully meets current ethical and data security standards, and adheres to guidelines from the MRC and other bodies on ethics and good research practice.

6.3 Identify and manage conflicts of interest which may arise in any aspect of the Institute's activities.

6.   How to apply

An executive search is being undertaken by Penna in parallel with the public advertisement of the post. Penna will support the selection panel in the discharge of its duties, both to assist in the assessment of candidates against the requirements for the role and to identify the widest possible field of qualified candidates.

For further information and a confidential conversation on the role please contact our retained Penna consultant Roger Russell on 07710 701570 or roger.russell@penna.com.

To apply please click here

If you have any problems with the above then please submit your application to Charlotte.Shields@penna.com or send via post to Charlotte Shields, Penna, 5 Fleet Place, London, EC4M 7RD.

The closing date for receipt of applications is 4pm 24th November 2016.

Applications must include:

1. A short covering letter explaining why this appointment interests you and how you meet the essential skills/core criteria as detailed in the person specification.
2. Curriculum vitae with education and professional qualifications and full employment history, giving details where applicable of budgets and numbers of people managed as well as relevant achievements in recent posts and latest remuneration. It is also helpful to have daytime and evening telephone contact numbers and e-mail addresses, which will be used with discretion.

7.   About the Medical Research Council

The Medical Research Council is at the forefront of scientific discovery to improve human health. Founded in 1913 to tackle tuberculosis, the MRC now invests taxpayers' money in some of the best medical research in the world across every area of health. Thirty-one MRC-funded researchers have won Nobel prizes in a wide range of disciplines, and MRC scientists have been behind such diverse discoveries as vitamins, the structure of DNA and the link between smoking and cancer, as well as achievements such as pioneering the use of randomised controlled trials, the invention of MRI scanning, and the development of a group of antibodies used in the making of some of the most successful drugs ever developed. Today, MRC-funded scientists tackle some of the greatest health problems facing humanity in the 21st century, from the rising tide of chronic diseases associated with ageing to the threats posed by rapidly mutating micro-organisms.
www.mrc.ac.uk

8.   About the Partners

The Economic and Social Research Council (ESRC)

The Economic and Social Research Council is the UK's largest funder of research on the social and economic questions facing us today. It supports the development and training of the UK's future social scientists and also funds major studies that provide the infrastructure for research. ESRC-funded research informs policymakers and practitioners and helps make businesses, voluntary bodies and other organisations more effective. The ESRC also works collaboratively with six other UK research councils and Innovate UK to fund cross-disciplinary research and innovation addressing major societal challenges. www.esrc.ac.uk

The Engineering and Physical Sciences Research Council (EPSRC)

As the main funding agency for engineering and physical sciences research, our vision is for the UK to be the best place in the world to Research, Discover and Innovate. By investing £800 million a year in research and postgraduate training, we are building the knowledge and skills base needed to address the scientific and technological challenges facing the nation. Our portfolio covers a vast range of fields from healthcare technologies to structural engineering, manufacturing to mathematics, advanced materials to chemistry. The research we fund has impact across all sectors. It provides a platform for future economic development in the UK and improvements for everyone's health, lifestyle and culture. We work collectively with our partners and other Research Councils on issues of common concern via Research Councils UK. www.epsrc.ac.uk

Chief Scientist Office, Scotland

CSO is part of the Scottish Government Health Directorates. The CSO vision is to support and increase the level of high-quality health research conducted in Scotland. This is for the health and financial benefits of the Scottish population and so that Scotland is recognised globally as a 'come to place' for health science. CSO invests in infrastructure to support applied health research in Scottish Universities and, through NHS Research Scotland, in Scottish Health Boards and runs responsive mode grant funding and clinical academic fellowship schemes.

www.cso.scot.nhs.uk

http://www.nhsresearchscotland.org.uk/

Health and Care Research Wales

Health and Care Research Wales is funded and overseen by the Welsh Government's Division for Social Care and Health Research. Its vision is for Wales to be internationally recognised for its excellent health and social care research that has a positive impact on the health, wellbeing and prosperity of the people in Wales.

It provides an infrastructure to support and increase capacity in research and development (R&D), runs a range of responsive funding schemes and provides strategic direction and support for NHS R&D in Wales.

www.healthandcareresearch.gov.wales

National Institute for Health Research, England

The National Institute for Health Research (NIHR) is funded through the Department of Health to improve the health and wealth of the nation through research. It is a large, multi-faceted and nationally distributed organisation. Together, NIHR people, facilities and systems represent the most integrated clinical research system in the world, driving research from bench to bedside for the benefit of patients and the economy.

Since its establishment, the NIHR has transformed research in the NHS. It has increased the volume of applied health research for the benefit of patients and the public, driven faster translation of basic science discoveries into tangible benefits for patients and the economy, and developed and supported the people who conduct and contribute to applied health research.

www.nihr.ac.uk

Further partnerships are in discussion.