UK Research and Innovation

NOTE This is a new website – your **feedback** will help us to improve it.

Innovation Scholars: Data Science Training in Health and Bioscience

Opportunity status:	Open
Funders:	Biotechnology and Biological Sciences Research Council (BBSRC), Economic and Social Research Council (ESRC), Medical Research Council (MRC)
Funding type:	Grant
Publication date:	17 August 2020
Opening date:	17 August 2020
Closing date:	30 September 2020 16:00 UK time

Last updated: 22 September 2020

Start application

You can apply for up to two years of funding to deliver innovative training programmes to upskill health and bioscience researchers in data management and analysis. **Pre-registration** is required.

This is a cross-UKRI call and multidisciplinary applications are encouraged, including those which bridge the social-, bio- and medical sciences.

Training programmes should provide flexible upskilling from different starting levels and career stages or enable researchers to develop skills in new or emerging areas of importance.

Host organisations must be eligible to receive Research Council funding.

Open all

Who can apply

The scheme is open to UK-based researchers and professionals with proven experience in the area of data science and/ or training provision.

The host organisation must be eligible to receive Research Council funding. Collaborations within and across sectors are encouraged. These can include collaborations outside the UK where the lead organisation is eligible.

What we're looking for

Priority areas

Applications should result in training opportunities in data science to upskill health & bioscience researchers, relevant to one or more of the following themes:

- Data stewardship, management & sharing
- Manipulation & analysis of complex large-scale data
- Data modelling skills & training in data exploration/ interpretation/ calibration/ validation
- Integration of different types of data, such as imaging and genomics
- Improving software, computing, infrastructure, architecture & data engineering knowledge contextualised for data-intensive biosciences
- Statistics or mathematics skills contextualised for data-intensive biosciences

Data science training in health and bioscience may be relevant to a number of inter-related areas such as bioinformatics, computational biology, healthcare informatics and systems biology, neuroscience, the social sciences including health economics, computational social science and psychology, in addition to researchers working at the interface of the social and biosciences e.g. biosocial.

Pertinent data and technical challenge areas include (but are not limited to) genomics & gene expression, proteomics & metabolomics, image analysis & phenotyping, digital health data (including new and emerging forms of data), AI & machine learning, data visualisation, modelling, and reproducibility/good research practice (e.g. experimental design, workflows, fostering FAIR data principles) within data-intensive science, the secondary analysis of administrative, cohort and panel studies.

A key objective of this programme is to give researchers the self-confidence and skills to manage and analyse their own data.

Training approaches

Training may be delivered through a range of activities, mechanisms and approaches, within one or more of the following priorities:

- New, improved and expanded content, e.g. new learning materials, trainer resources

- New ways of working, e.g. development of high quality, open peer-learning environments, innovative pedagogy
- Approaches to broaden availability, suitability & usability of training resources for continuing professional development across different career stages, skill levels, and sectors within health & biosciences
- Integration & alignment of training resources to increase coherence and promote skills development pathways
- Intensive face-to-face short-courses & ‘summer schools’ to meet priority skills needs (foundational or accelerator skills within scope)
- Virtual & remote training, including combinations of self-directed & trainer-supported activity
- Train-the-trainers approaches to strengthen capability across the UK to deliver training

Who should training be directed at?

Training should be broadly available to the UK research and innovation community, with a strategy to engage both academic, industry and clinical researchers where relevant. This call will contribute to building digital workforce capacity and skills for data-intensive science in the UK, which are in high demand within the health and biosciences.

Consideration must be given to research culture and ensuring equality and inclusion in delivering the training offering (e.g. outreach to underrepresented groups, flexible access, approaches to selecting course participants). Offers must be outward facing beyond individual research organisations and geographic locations, and must support continuing professional development across career stages. The call is not intended to directly support MSc or PhD programs.

Applications should clearly outline the training need and how they uniquely fit into the wider training landscape, including opportunities for synergy with existing training resources and activities where relevant.

Funding

A total budget of £5m is available through the UKRI Innovation Scholars programme to support 5-10 awards for up to 24 months. Awards should ideally start by 14 February 2021.

We will support projects of a range of scale, but expect programs to be ambitious and deliver at regional/national scale. Direct costs associated with training will be funded at 100% fEC. Staff and Estates/Indirect costs will be funded at 80% fEC. Standard UKRI Grant Terms and Conditions apply.

Please note the following exclusions:

- Full or partial PhD studentships
- Full or partial MSc/MRes studentships: UKRI does not provide funding for stand-alone Masters training grants
- Apprenticeships
- Conference attendance/travel bursaries
- Subscriptions to existing platforms
- Training aimed **primarily** at non-UK based researchers and innovators
- Training aimed **primarily** at individuals undertaking undergraduate or postgraduate study

- Large infrastructure costs. Equipment required to carry out the project will be considered.

How to apply

Pre-registration is required so that we can confirm suitability of the proposal prior to the full application stage. Please register your expression of interest **here** by **30 September 2020**.

We will notify you of approval to submit a full application by the 13 October 2020. Please note, only minimal feedback regarding fit to scope of call will be provided at this stage. Applications that do not receive approval at this stage will not be considered further.

Full applications must be submitted by all organisations via Je-S by 16:00 on 17 November 2020. All applicants should ensure that they allow sufficient time for their application to pass through their organisation's internal and Je-S submission routes prior to the 16:00 deadline.

Applications can include industry partner(s). Applicants with industrial partner(s) will need to include 'DSTICA:' as a prefix to their project title and, if notified of approval to submit a full Je-S application, complete the Project Partner section in Je-S and submit a DST Industry Collaboration Agreement (DSTICA) Form and Heads of Terms.

Required documentation

In addition to completing the Je-S form, the following should be provided:

- Case for support (see template, 6 pages)
- Capability to deliver (see template, 2 pages, please upload to the Je-S form using the 'Supporting Data' attachment type)
- Diagrammatic Workplan (Gantt chart suggested, 1 page)
- Justification of Resources (2 pages)

No additional attachments will be accepted. Letters of Support are not required for this call. Applications that exceed the page limits above will not be taken forward for panel review.

How we will assess your application

Proposals will be evaluated by a panel with broad expertise in data science and/or training delivery. User perspectives will also be included.

Panel assessment criteria will include:

Scientific value and quality of training

- Fit to scope of call

- The opportunity to be addressed, including the scientific focus of the proposal, training need being met, and timeliness
- The nature of the training provision (including targeted **priority areas**) and rationale behind the proposed approaches
- Quality and distinctiveness of the offering, including best practice, innovation in approaches and/ or uniqueness of provision

Strategy

- Planned approach to delivery of the program, including:
  - Clear identification of audiences and appropriateness of targeting and tailoring of training, e.g. for different career stages, skill levels, and sectors
  - Ensuring visibility and access of the training offering at a regional/national level
  - Active approaches to ensure diversity and inclusion within the program
  - Strategy for allocation and prioritisation of resources (e.g. oversubscribed courses)
- Longer-term sustainability and legacy of training resources after the funded period (including enabling re-use of developed resources by others)

Value & impact

- Value for money, including:
  - rationale for the proposed use of resources
  - cost effectiveness considering breadth and context of training offer
- Benefits to be delivered, including:
  - added value over any related existing activities
  - Indicative measures of success

Team & management

- Capability of the team to deliver the programme, including track record
- Plan for project management and governance, including arrangements for stakeholder input

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Contact details

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Additional info

Health and bioscience researchers are now regularly employing computationally-dependent analysis and modelling approaches to process data ‘at scale’ that is advancing the frontiers of discovery, but there remain significant challenges to undertaking this new mode of health & bioscience research. Realising the potential of data-intensive science requires a digitally-skilled scientific workforce with broad data literacy and foundation skills

across the research community, alongside specialised technical roles in data science. This has come into particularly sharp focus through initiatives such as the **Human Cell Atlas** and widespread adoption of single-cell genomic sequencing to investigate evolution and diversity in tumours. The key objective of successful proposals is to give researchers the self-confidence and skills to analyse their own data. Applicants may find it helpful to consider a **recent OECD report**, which provides context relevant to this funding opportunity and the challenges of growing capability in this area.

Supporting documents

To follow.

Timeline

- **17 August 2020**
  Call opens for registration

- **30 September 2020**
  Registration closes

- **13 October 2020**
  Je-S call opens

- **20 October 2020**
  Information webinar

- **17 November 2020**
  Closing date

- **15 December 2020**
  Panel review

- **14 February 2021**
  Award Start Confirmation

Related content

The UK's research and innovation infrastructure: opportunities to grow our capability

Building digital workforce capacity and skills for data-intensive science

Changing the Culture of Data Science

Ten simple rules for making training materials FAIR