

**GOSH BRC Applied Child Health Informatics Theme (Non-Clinical) PhD Studentships - Guidance and Application Form**

Deadline for student applications: **Wednesday 15 May 2024**

**Aim**

The NIHR Great Ormond Street Hospital Biomedical Research Centre (NIHR GOSH BRC) [**Applied Child Health and Informatics**](https://www.gosh.nhs.uk/our-research/our-research-infrastructure/nihr-great-ormond-street-hospital-brc/about-our-biomedical-research-centre/our-research-themes/applied-child-health-informatics/) (ACHI) PhD Studentship Programme aims to fund two highly motivated non-clinical Health Data Science PhD studentships to support the training and development of the next generation of informatics and data science translational researchers. The Programme will support two students, one in the area of health data science/epidemiology/statistics and the other specialising in applied machine learning and informatics. The studentships will be full time and begin on 1 October 2024. They will be based at Great Ormond Street Hospital (GOSH) and the UCL Great Ormond Street Institute of Child Health (ICH), which together form the largest concentration of children's health research in Europe.

**Background**

The NIHR Great Ormond Street Hospital Biomedical Research Centre (NIHR GOSH BRC) is a collaboration between GOSH and ICH. The NIHR GOSH BRC provides cutting-edge facilities and world-leading expertise and access to over 200 rare disease patient populations allowing our staff and NHS, university, and industry collaborators to conduct pioneering translational research into childhood illnesses. We were first awarded BRC status from the NIHR in 2007 and, in 2022, we secured £35 million for our fourth term until March 2028. In this fourth term, as part of a wider national collaboration - a BRC National Paediatric Excellence Initiative has been set up between GOSH BRC and children’s hospitals in Birmingham, Sheffield, and Liverpool.

The GOSH BRC has five main research themes:

* **Gene, Stem and Cellular Therapies** (GSCT) - focuses on innovative gene, stem and cellular therapies that can overcome the limitations of current treatments for a wide range of children with rare inherited and acquired disorders.
* **Genomic Medicine** (GM) - uses cutting-edge genetic technology and novel computational methods of analysing large datasets to improve genetic diagnosis of disease and delivering effective interventions pre and postnatally to reduce the burden of childhood disease.
* **Accelerating Novel Therapies** (ANT) - develops and delivers innovative treatments that will overcome the paucity of precision therapies for rare childhood diseases.
* **Applied Child Health Informatics** (ACHI) - uses advanced data analysis methods, leveraging GOSH’s electronic patient data, to improve the management of children with rare and/or complex disease.
* **Tissue Engineering and Regenerative Medicine** (TERM) – develops pioneering techniques to repair and reconstruct tissues and organs to improve life expectancy and quality of life for children with tissue and organ failure.

These are complemented by the BRC Central Development Hub which provides support for our Career Development Academy, alongside other activities including Patient and Public Involvement and Engagement (PPIE); Equality, Diversity, and Inclusion; the BRC Junior Faculty; and Business Development.

**Call information**

The BRC’s Career Development Academy and the Applied Child Health and Informatics (ACHI) Theme are advertising three-year full time non-clinical BRC PhD Studentships beginning on 1 October 2024. Successful students will be appointed and registered as UCL PhD students and will be based at GOSH and/or ICH. Some projects may have a member of the supervisory team and/or time in the studentship at one of our partner sites within the Paediatric Excellence Initiative (Alder Hey, Birmingham and Sheffield Children’s Hospitals. We have funding for up to two studentships - one in the areas of **health data science/epidemiology/statistics** and the other in the areas of **applied machine learning and informatics.**

Applicants should have or expect to receive a first class or upper second-class degree in a relevant discipline or an overseas qualification of an equivalent standard. Applicants should be able to provide recent evidence that their spoken and written command of the English language is adequate for the studentship for which they have applied, if they are not nationals of a majority English speaking country, in line with UCL PhD entry requirement (see [English language requirements](https://www.ucl.ac.uk/prospective-students/graduate/english-language-requirements) for further information).

The student will receive a starting stipend of £21,181 per annum (includes London weighting) as well as the cost of tuition fees for UK students, and £5,000 contribution towards the running costs of their project. Please note, this studentship covers the cost of tuition fees based on the UK (Home) rate. Non-UK students can apply, but will have to personally fund the difference between the UK (Home) rate and the overseas rate where they are not eligible for UK fee status.

The BRC is committed to high quality postgraduate education with a diverse range of opportunities, and with GOSH and ICH, have a strong track record of training and support for students and supervisors. BRC PhD students will also be provided with excellent training at PhD level as well as a range of wider opportunities, including a training package of transferable skills for researchers, the opportunity to apply for additional consumables funding and an annual PhD prize. Students will also be part of a cohort of BRC supported PhD students as well as the wider group of GOSH/ICH students, offering peer support, collaboration, and networking opportunities.

Applicants are required to apply to undertake a specific project, with students selecting a first and second choice project (in priority order). The table below provides a summary of the projects available, with further details about each of the projects included in the advert as a second attachment. **Applicants are strongly encouraged to contact supervisors** for any projects they are interested in to discuss the project and supervisory arrangements in further detail.

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| --- | --- | --- | --- |
| **Project**  **number** | **Project Title** | **PhD Supervisory Team** | **Contact E-Mail Address** |
| **Health Data Science/Epidemiology/Statistics** | | | |
| **1** | Health and development outcomes and their interaction for children with chronic liver disease: a population-based cohort using novel linkage between health and education records | **Prof Katie Harron**, UCL Great Ormond Street Institute of Child Health (primary)  **Dr Ania Zylbersztejn**, UCL Great Ormond Street Institute of Child Health (subsidiary)  **Dr Marianne Samyn,** King’s College Hospital NHS Foundation Trust (subsidiary) | Katie Harron  [k.harron@ucl.ac.uk](mailto:k.harron@ucl.ac.uk) |
| **2** | Health outcomes of children with rare or complex conditions and their families: a longitudinal cohort study using linked primary and secondary healthcare data in England | **Dr Ania Zylbersztejn,** UCL Great Ormond Street Institute of Child Health  **Dr Joachim Tan,** UCL Great Ormond Street Institute of Child Health  **Prof Mario Cortina-Borja,** UCL Great Ormond Street Institute of Child Health | Joachim Tan [joachim.tan@ucl.ac.uk](mailto:joachim.tan@ucl.ac.uk)  Ania Zylbersztejn [ania.zylbersztejn@ucl.ac.uk](mailto:ania.zylbersztejn@ucl.ac.uk)  Mario Cortina-Borja  [m.cortina@ucl.ac.uk](mailto:m.cortina@ucl.ac.uk) |
| **3** | Harms to children and young people in the UK due to health service delays in management of  eye/vision conditions. | **Prof Jugnoo Rahi,** UCL Great Ormond Street Institute of Child Health (primary)  **Dr Ameenat Lola Solebo**, UCL Great Ormond Street Institute of Child Health (subsidiary) | Jugnoo Rahi  [j.rahi@ucl.ac.uk](mailto:j.rahi@ucl.ac.uk) |
| **4** | Health and education outcomes of children with Sickle Cell Disease in England | **Dr Rachel Knowles,** UCL Great Ormond Street Institute of Child Health (primary)  **Prof Pia Hardelid,** UCL Great Ormond Street Institute of Child Health (subsidiary) | Rachel Knowles [rachel.knowles@ucl.ac.uk](mailto:rachel.knowles@ucl.ac.uk) |
| **5** | Developing statistical approaches to analyse and report reinterventions in children who have heart surgery for national benchmarking and quality improvement. | **Dr Deborah Ridout,** UCL Great Ormond Street Institute of Child Health (primary)  **Prof Katherine Brown,** Great Ormond Street Hospital (subsidiary) | Deborah Ridout [d.ridout@ucl.ac.uk](mailto:d.ridout@ucl.ac.uk)  Katherine Brown [Katherine.brown@gosh.nhs.uk](mailto:Katherine.brown@gosh.nhs.uk) |
| **Applied Machine Learning and Informatics** | | | |
| **6** | Disease modelling to understand long-term progression and treatment response in Spinal Muscular  Atrophy and Duchenne Muscular Dystrophy. | **Prof Giovanni Baranello**, UCL Great Ormond Street Institute of Child Health (primary)  **Dr Deborah Ridout,** UCL Great Ormond Street Institute of Child Health (subsidiary) | Giovani Baranello  [g.baranello@ucl.ac.uk](mailto:g.baranello@ucl.ac.uk)  Deborah Ridout [d.ridout@ucl.ac.uk](mailto:d.ridout@ucl.ac.uk) |
| **7** | Using artificial intelligence and machine learning techniques to improve diagnosis and predict outcomes in children with heart muscle disease. | **Prof Juan Pablo Kaski,** Great Ormond Street Hospital  **Dr Gabrielle Norrish,** Great Ormond Street Hospital | Juan Pablo Kaski  [j.kaski@ucl.ac.uk](mailto:j.kaski@ucl.ac.uk) |
| **8** | Precision Diagnosis for Congenital Anomalies – using AI & leveraging multimodality data to help counsel parents appropriately in rare diseases. | **Dr Susan Shelmerdine**, Great Ormond Street Hospital  **Prof Ivana Drobnjak**, UCL Department of Computer Science  **Prof Owen Arthurs**, UCL Great Ormond Street Institute of Child Health | Susan Shelmerdine  [susan.shelmerdine@gosh.nhs.uk](mailto:susan.shelmerdine@gosh.nhs.uk) |
| **9** | Using big data to better define disease types and predict outcome in childhood myositis. | **Prof Lucy R Wedderburn**, UCL Great Ormond Street Institute of Child Health  **Prof Mario Cortina-Borja**, UCL Great Ormond Street Institute of Child Health  **Dr Merry Wilkinson**, UCL Great Ormond Street Institute of Child Health | Merry Wilkinson [Meredyth.wilkinson.14@ucl.ac.uk](mailto:Meredyth.wilkinson.14@ucl.ac.uk)  Lucy Wedderburn [l.wedderburn@ucl.ac.uk](mailto:l.wedderburn@ucl.ac.uk)  Mario Cortina-Borja  [m.cortina@ucl.ac.uk](mailto:m.cortina@ucl.ac.uk) |
| **10** | Multimodal Artificial Intelligence for the Detection and stratification of Necrotising Enterocolitis in premature born infants (MAIDNEC) | **Prof Simon Eaton**, UCL Great Ormond Street Institute of Child Health (primary)  **Dr Evangelos Mazomenos**, UCL Department of Medical Physics & Biomedical Engineering (subsidiary) | Evangelos Mazomenos [e.mazomenos@ucl.ac.uk](mailto:e.mazomenos@ucl.ac.uk) |

**Application and selection process**

* The deadline for receipt of student applications is **Wednesday 15 May 2024.**
* To submit an application for consideration, please complete the ‘GOSH BRC Applied Child Health Informatics Theme (Non-Clinical) PhD Studentships 2024 - Application Form’, which can be found below, and submit **as a word document** to [brc@gosh.nhs.uk](mailto:brc@gosh.nhs.uk). **Please also include a copy of your CV as part of the submission.**
* You should contact the project supervisors ahead of application submission.
* Separately, you should arrange directly with your two referees to provide a reference once you have submitted your application. Please ask your referees to use the [Reference Form](https://www.gosh.nhs.uk/documents/16034/NIHR_GOSH_BRC_PhD_studentship_reference_form_p45btzc.docx) provided (available via the main advertisement) and to send the reference by email to [BRC@gosh.nhs.uk](mailto:BRC@gosh.nhs.uk) no later than the deadline of **Wednesday 15 May 2024.**
* Please contact [brc@gosh.nhs.uk](mailto:brc@gosh.nhs.uk) if you have any questions.

Following submission of applications, there will be several stages to the process of selecting students:

* After submission, applications will be reviewed by members of the BRC Leadership team, BRC Theme and Deputy Theme Leads, BRC Career Development Academy Leads and BRC Junior Faculty members.
* Shortlisted applicants will be invited to interview, which may involve one or two interview stages, and will involve senior members of the BRC and supervisors of the relevant projects. In the case where a student applies to two PhD projects, they may be selected to interview for one of their two project choices. Interviews are likely to take place in June. Opportunities will be given to shortlisted candidates to tour the institute.
* Successful applicants will then work with the supervisor on a full PhD project proposal which will be submitted for internal peer review, and approval by the UCL/ICH Student's Thesis Committee. Full approval will only be confirmed after this review process has taken place, the relevant paperwork completed, and conditions are met.

**Selection criteria:**

Applications will be reviewed using the following selection criteria:

* Previous research experience and statement of research interest
* Academic excellence and other achievements
* Quality of references
* Quality of written application
* Motivation for pursuing PhD in the chosen field and scientific interests
* Communication skills

**Frequently Asked Questions**

**Can students from outside the UK apply?** Yes, overseas students have previously been accepted into the programme and we welcome this. The PhD Programme will fully fund UK students. Non-UK students receive the normal stipend, and the UK component of their fees is paid, but they must pay the extra overseas fees themselves. Unfortunately, we have no money to pay for overseas students to come to interview. However, we do sometimes interview by Zoom if necessary.

**I have a lower second degree, but I am now doing an MSc. Is this equivalent to an upper second?**

Assuming you passed your MSc with at least a merit, you could be eligible to hold a PhD studentship. Please contact the [brc@gosh.nhs.uk](mailto:brc@gosh.nhs.uk) to discuss.

**I will be away at the time of the interviews are likely to take place in June.** Please let us know any dates you are likely to be unavailable in June and we may be able to work around this. Please note that there may be a second round of interviews for these PhD positions and further information will be provided during the review process.

**I have another PhD offer, which needs a decision before you decide on your studentships.** Ask them to wait (they usually will); if not, contact us.

**Am I applying for a specific project?** Yes, you will need to select one or two projects you are applying for.. Please note that whilst these studentships are hosted at the same institution as the Child Health Research Charitable Incorporated Organisation (CIO) PhD Studentships, you are not applying for the Child Health Research CIO PhD Studentships list of projects - only for the projects listed in the advert. Some of the supervisors for these projects may also have projects on offer through the Child Health Research CIO PhD Studentships scheme, but this PhD studentship call only offers the projects listed with this advert.

**GOSH BRC Applied Child Health Informatics Theme (Non-Clinical) PhD Studentships 2024 - Application Form**

**First Name(s):**

**Surname:**

**Email Address(s):**

**Nationality:**

**2. Project**

Please specify which project you are applying to, including the project number and title.

**First choice project number:**

**First choice project title:**

**Second choice project number:**

**Second choice project title:**

**2. Personal Statement:**

Please summarise your academic background, research interests, any research experience you may have (include project details, technical skills learnt, and any outputs e.g. posters, publications, presentations), and explain why you wish to apply for this GOSH BRC PhD Studentship, including why this project is of interest to you *(maximum one A4 page Ariel font size 11 ):*

**3. Other funding if an Overseas national *(if applicable)*:**

Please provide details of how you would intend to fund the difference between the UK and Overseas tuition fees in the event that your application is successful:

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| --- |
| **4. Education:**   * GCSEs (or equivalent) with Grades (please list): * A Levels (or equivalent) with Grades (please list): * 1st Degree Subject: * University: * Result Obtained *(please provide UK equivalent where applicable, if known)*: * Higher Degree Subject *(if applicable)*: * University: * Result Obtained *(please provide UK equivalent where applicable, if known)*: |
|  |
|  |
| **5. Student start date:** Successful candidates cannot start their project outside of the official UCL programme start date of 1 October 2024. Please confirm that, if successful, you will be able to commence the PhD on 1 October 2024. Please contact us if you have any questions about this or would like to discuss your specific circumstances. |
|  |
| **6. References:** Please provide name/contact details and ask them to send a completed reference form to [brc@gosh.nhs.uk](mailto:brc@gosh.nhs.uk) by the deadline.  Referee 1 name:  Referee 1 contact details:  Referee 2 name:  Referee 2 contact details: |
|  |
| **7. Where did you see the advert? *(Please tick all that apply)***  🞏GOSH BRC website 🞏 Jobs.ac.uk 🞏 ICH Website 🞏 UCL Website  🞏FindAPhD.com 🞏 ICH Open Day 🞏 Other *(please specify):* |

**Submission checklist**

Please ensure you submit the following documents to [brc@gosh.nhs.uk](mailto:brc@gosh.nhs.uk) by the deadline date:

□ Complete application form **as a** **word document**

□ An up-to-date CV

□ Your two referees should separately complete and return their [reference forms](https://www.gosh.nhs.uk/documents/16034/NIHR_GOSH_BRC_PhD_studentship_reference_form_p45btzc.docx)to [brc@gosh.nhs.uk](mailto:brc@gosh.nhs.uk).

**The deadline for receipt of all the documents is Wednesday 15 May 2024**

**Monitoring questions – optional**

The following questions will **not** be used to assess your application and completion is optional. They will only be used for monitoring purposes. Monitoring enables us to see what is happening in practice, to set any targets for improvements, and measure progress.

**Ethnic Group:**

Asian or Asian British

Black, African, Caribbean, or Black British

Mixed or multiple ethnic groups

White

Other ethnic group

Prefer not to say

**Gender:**

Woman

Man

Transgender

Non-binary or non-conforming

**Prefer not to say**

**Disability: Do you consider yourself to have a disability?**

Yes

No

Prefer not to say