

Job description

Post title and post number	Research Associate - 54387
Organisation advertising Description	School of Clinical and Experimental Medicine College of Medical and Dental Sciences
Post number	54387
Full-time/Part-time	Full time
Duration of post	Fixed term for 14 months
Post is open to:	Internal and external candidates
Grade	6
Salary	Starting salary £25,513 a year in the range of £25,513 to £27,864 a year. (Potential progression on performance once in post to £31,342 a year).
Terms and conditions	Research and Analogous
Closing date	21 November 2014

Job summary

To assist in research to create knowledge through providing research support for projects and research groups.

To provide support in research on a grant from the Technology Strategy Board "Accelerating paediatric formulation development through smart design and predictive science".

The post holder will be involved in activities relating to assessment of acceptability testing of medicines in children. The post holder will be involved in a range of activities associated with this project.

He/she will be required to undertake a systematic review on the current methodology used to assess patient acceptability of paediatric dosage forms

This will require a research associate who is interested in clinical research, has an interest in paediatric medicines and is confident in working with children within a clinical environment. This appointment is subject to a satisfactory disclosure clearance from the Criminal record Bureau.

The ideal candidate will be expected and encouraged to develop his/her research profile through joint research activities and will have an excellent opportunity to develop his/her career potential in academia and in conjunction with pharmaceutical industry.

Main duties

- Collect research data; this may be through a variety of research methods, such as scientific experimentation, literature reviews, and research interviews
- Analyse research data as directed and present this in an appropriate manner to other project partners.
- Present research outputs, including drafting academic publications or parts thereof, for example at seminars and as posters
- Develop or adapt techniques, models and methods - He/she will be required to propose up to 3 suitable methodologies to use in measurement of the acceptability of existing licensed and prototype medicines (manufactured to GMP standards)
- He/she will be required to complete an IRAS ethical approval document for proposed acceptability testing of existing licensed and prototype medicines (manufactured to GMP standards)
- He/she will be required to undertake the acceptability testing of up to 5 existing licensed and prototype medicines (manufactured to GMP standards) with paediatric patients ranging from 2- 18 years of age
- Provide guidance as required to support staff and any students who may be assisting with research
- Deal with problems that may affect the achievement of research objectives and deadlines
- Carry out administrative tasks related directly to the delivery of the research

Scope of the Role

- Work within specified research grants and/or projects
- Operate within area of specialism
- Contribute to publications

Person specification

- Degree or equivalent in relevant subject area
- Practical experience of applying the relevant skills and techniques
- Ability to analyse information and communicate effectively
- Ability to access and organise resources successfully

Planning and Organising

- Work to agreed specifications, time and quality standards
- Undertake those management/administration tasks that are related directly to the delivery of the research
- Deal with problems that may affect the achievement of research objectives and deadlines

Decision Making

- Plan work to agreed specifications, time and quality standards
- Attend and contribute to subject group meetings
- Deal with problems that may affect the achievement of research objectives and deadlines

Internal and external Relationships

- Liaise with colleagues and students
- Participate in internal networks for the exchange of information
- Maintain contact with (including membership of) appropriate professional bodies
- Liaise with the relevant external research community via seminars and conferences

The organisation

The University of Birmingham is a thriving and dynamic institution that combines over a century of heritage with one of the most compelling and ambitious agendas in higher education. Ranked amongst the world's top 100 institutions, the University is structured to promote faster decision making and to enable it to capitalise on its academic range and financial strength. The University is organised into five academic colleges, with a University Executive Board, led by our Vice-Chancellor, Professor David Eastwood.

Central to our agenda is the development of the University's five-year strategic plan 'Shaping Our Future: Birmingham 2015', that builds upon an existing and ambitious programme of change, 'Sustainable Excellence', developed to establish Birmingham as a leading global university.

The strategic plan is based around five mutually supportive goals: enhancing research power; providing students with a distinctive, high-quality experience; sustaining and utilising financial strength; enhancing performance as an engaged university; and becoming the destination of choice amongst our peers. The confidence of the University's ambition is, in part, underpinned by one of the strongest financial positions in the UK HE sector. The University is currently forecasting a turnover of £460 million for the financial year 2011/2012 and carries significant cash surpluses with no borrowings. This is enabling it to invest in high-quality research and to enhance still further the educational experience for its students, as well as to continue to improve its estate and infrastructure, despite the prevailing economic conditions.

Over 90% of Birmingham's research was rated as world leading or of international quality in the 2008 UK Research Assessment Exercise (RAE). With world-leading activity across a range of subjects, it remains one of the UK's most broadly-based research-led universities.

The University's cultural and intellectual assets include the Shakespeare Institute at Stratford-upon-Avon, the Barber Institute of Fine Arts on campus and the Ironbridge Institute in Shropshire. The University also boasts the internationally renowned Lapworth Museum of Geology and Winterbourne House and Garden, a unique Edwardian heritage attraction that is home to over 6,000 plant species from around the world. In total the University's economic value to its region is £780 million.

Founded in 1900 and believed to be the UK's first redbrick university, Birmingham established a new model for higher education, breaking away from the Oxbridge tradition. Through the foresight of our founders we have inherited one of our greatest assets – our beautiful parkland campus, which is currently undergoing a £175 million enhancement programme that includes the new Bramall Music Building, a new sports centre containing the city's first 50m swimming pool and a proposed library

development to provide outstanding facilities for students and researchers alongside an open access cultural hub with facilities available to the public.

The University was founded through philanthropy and fundraising. This is just as important today. Birmingham's 'Circles of Influence' campaign has raised over £60 million since its launch in 2009 and continues to provide funding for five priority areas – Health and Lifestyle; Children and Young People; Heritage, Culture and Sport; Student Support; and Innovation and Immediate Impact.

With 28,000 students from 150 countries, the quality of the student experience offered at the University of Birmingham remains of paramount importance. The University is one of the leading members of the Russell Group in terms of the size of its graduate school and the quality of its student experience as shown by the National Student Survey. As well as high-quality teaching, students also enjoy an enriched experience through other activities such as sport, for which Birmingham is ranked second in the UK.

As Birmingham seeks to extend its global footprint further it is investing in its international strategy, having established overseas offices in India, China and Brussels. These new offices are developing existing contacts and forging new partnerships with academic colleagues and businesses across the Asia Pacific Region and into Australasia. Birmingham is also building strategic partnerships in North America (notably Chicago) and through its membership of Universitas 21.

The city of Birmingham

Birmingham is a major European centre and the second city of the United Kingdom. It is a city of business and ballet, canals and world-class concerts, jewellery and jazz, historical interest and cosmopolitan atmosphere. Birmingham is also the ideal base for exploring one of Britain's most fascinating regions for tourism, being within an hour's drive of Stratford-upon-Avon, Warwick, the Potteries, and the Cotswolds.

The new heart of Birmingham is symbolised by Symphony Hall, considered one of the greatest concert venues in the world. Symphony Hall forms part of the impressive International Convention Centre, which overlooks attractive canals at the hub of the UK's canal network. This setting is a very suitable venue for the CBSO, the globally respected symphony orchestra. At the magnificent Hippodrome Theatre is the internationally renowned Birmingham Royal Ballet, adding further cultural depth to the city. Apart from London's West End, Birmingham boasts the highest concentration of live theatre in the UK, including regular tours by the major opera companies.

The City Museum and Art Gallery houses the world's finest collection of Pre-Raphaelite paintings, alongside a major collection of Old Masters, Modern and Contemporary pictures. The Barber Institute of Fine Arts houses one of the best UK university collections of Impressionist and Renaissance art. The restored Gas Hall

Gallery has international touring exhibitions, while the Halcyon and Ikon galleries feature innovative contemporary works. National landmark sites abound, including the National Indoor Arena, the National Exhibition Centre, National Motorcycle Museum, National Car Heritage Museum and the National Sealife Centre.

The iconic Bullring Centre is the largest dedicated shopping facility in Europe. Sports and recreation are well served; the city offers international Test cricket, top-flight football, International Championship golf and top-class rugby. The International Convention Centre and National Indoor Arena have spawned a whole new Downtown area at the centre of the city. The National Exhibition Centre, on the outskirts to the city, remains one of the largest exhibition facilities in Europe.

Birmingham is at the crossroads of the UK's motorways. From Birmingham International Airport, more than a dozen different airlines operate scheduled services to 60 destinations worldwide. The University is the only mainland UK university to have its own railway station, while 50 million passengers a year use Birmingham New Street Station, which will be at the centre of the proposed high speed rail network. London is 90 minutes away by shuttle service, with trains every 20 minutes until the evening. There is a high standard of all types of private accommodation, with high-quality affordable family housing in several attractive residential suburbs. Public parks and large domestic gardens are a special feature of this greenest of European cities. Quality public and private schools are widely available, with several consistently rated in the top 10 on examination performance in annual league tables of England and Wales.

The College of Medical and Dental Sciences

The University's structure is one of Colleges and Schools, and the College of Medical and Dental Sciences contains five Schools that cover the whole range of pre-clinical and clinical disciplines:

- School of Cancer Sciences
- School of Clinical and Experimental Medicine
- School of Dentistry
- School of Health and Population Sciences
- School of Immunity and Infection

The principal base of the College lies immediately between the main campus of the University and the new Queen Elizabeth Hospital, University Hospitals Birmingham NHS Foundation Trust. Other key NHS Trust buildings on the same campus include Birmingham Women's NHS Foundation Trust and the Birmingham and Solihull Mental Health NHS Foundation Trust's Barberry Hospital which is part of the National Centre for Mental Health – Birmingham.

Research

The College of Medical and Dental Sciences is the largest of the University's five Colleges and, with over 800 researchers and in excess of £66M research funding per year, it represents a major international centre for biomedical research.

Our overall research objective is to develop and promote excellence in basic and clinical science with an ultimate goal of delivering improvements in human health. We take pride in a truly translational pipeline, delivering cutting edge clinical trials and patient studies, underpinned by cell and molecular biology research on both model organisms and humans.

Strategically, our research encompasses seven major internationally-renowned research domains:

- Cancer
- Genetics and Development
- Health and Population Sciences
- Cardiovascular, Respiratory and Neurological Sciences
- Endocrinology and Metabolism
- Dentistry
- Immunity and Infection

Importantly, each domain is allied to a range of clinical specialties through which the College links its basic research to translational endpoints.

We have great pride in our interactions with local NHS environment, most obviously exemplified through '[Birmingham Health Partners](#)', an exciting collaborative platform between the University, Birmingham Children's Hospital and University Hospitals Birmingham NHS Foundation Trust (UHBFT) that will enable rapid movement from laboratory discovery to patient benefit, fostering new therapeutic and healthcare innovations by creating a truly integrated environment for researchers and clinicians.

Education

Each year the College trains 374 medical students including the Graduate Entry course (105 medical students are able to intercalate on a choice of programmes after the second, third or fourth year of their course), 75 dental students, 21 biomedical materials science students, 96 medical science students and 104 nursing students.

2013 also sees the introduction of a new undergraduate Pharmacy programme that will initially recruit 70 students per year. Medical student teaching takes place at all hospitals in Birmingham, but has recently expanded into many of the hospitals in the Black Country.

There are also approximately 475 postgraduate taught students and 382 research students in the College, managed by a cross-College Graduate School. The College

has excellent library and reference facilities including the newly refurbished Barnes library and Doug Ellis Learning Hub.

Programmes and Facilities

The College has encompassed some major developments, expansion and improvement to its facilities, education delivery and research activity in recent years.

This includes a £35m Institute of Biomedical Research, a state-of-the-art £11.8m [Wolfson Centre for Medical Education](#) and a prosectorium facility for anatomy teaching incorporating 10 ventilated tables and high tech AV teaching aids. The College has also created a new £1m phantom head teaching laboratory facility within the School of Dentistry.

Among the most recent investments is refurbishment of the Medical School building foyer and Barnes library providing impressive visitor and student services facilities. To further our research strengths the College developed the state-of-the-art Advanced Therapies Facility which includes a new purpose built HTA-compliant biorepository (Human Biomaterials Resource Centre), Cell and Gene Therapy Pharmacy, and commercial spin out laboratory. Alongside these developments, the [NIHR/Wellcome Trust Clinical Research Facility \(CRF\)](#) received the largest award renewal in the UK of £12.8 million from the National Institute for Health Research (NIHR) to support its activity and to strengthen its current expansion. The College also launched the Health Research Bus, a mobile clinical research facility funded via Birmingham Science City. This was the first of its kind and a great development for clinical research in the College.

The collaboratively-funded [NIHR Institute for Health Research Surgical Reconstruction and Microbiology Research Centre](#) was developed in 2011, which combines clinical practice in the battlefield and innovation in medical research to benefit all trauma patients.

In 2012, the College secured high quality laboratory and clinical research facilities within the new University Hospitals Birmingham NHS Foundation Trust (UHBFT) Queen Elizabeth Hospital, through our **Centre for Translational Inflammation**. It houses a number of national and international centres including the [MRC-ARUK Centre for Musculoskeletal Ageing](#), **ARUK Centre for Experimental Medicine** (BEAT RA), the **NIHR Translational Research Partnership** in Joint and Related Inflammatory Diseases and the **Healing Foundation Burns Research Centre**.

In 2012 government funding was also announced for the development of a £24m Institute of Translational Medicine in Birmingham in collaboration with UHBFT, bringing Birmingham into the forefront of international translational medicine research. The institute will help progress the very latest scientific research findings

from the University into enhanced treatments for patients across a range of major health issues including cancer and liver disease.

School of Clinical and Experimental Medicine

The School of Clinical & Experimental Medicine brings together expertise in wide-ranging fields of medical sciences, to develop an integrated clinical and basic science portfolio, associating excellence in research, education and clinical leadership. The School plays a major role in the wider portfolio of research and teaching carried out by the College of Medical & Dental Sciences. Visit our website for full information <http://www.birmingham.ac.uk/schools/cem/index.aspx>

A diverse but highly collaborative and interdisciplinary grouping, the School of Clinical & Experimental Medicine has well over 200 research-active staff who together hold around a quarter of the College's total live external funding (and around an eighth of total University research funding). There are also over 500 honorary staff and 60 support staff embedded within the School. These staff are grouped into six major academic Sections, each encompassing education and research in a particular theme:

Cardiovascular & Respiratory Science: Encompassing disciplines including Cardiology, Cardiothoracic Surgery and Cardiovascular Sciences, as well as Respiratory Medicine, this Section focuses research on myocardial diseases, vascular biology, and lung injury and immunobiology. In myocardial diseases, key areas of study are the pathophysiology of heart failure, novel techniques for cardio-protection during surgery and following ischaemic reperfusion injury, the role of thrombosis and haemostasis in atrial fibrillation, new approaches to understanding and management of life-threatening cardiac arrhythmias, and the link between chronic kidney and cardiovascular diseases. Vascular research centres on vascular control of blood flow, and vascular inflammation, thrombosis and angiogenesis. Studies of signalling by receptors in platelets are allied with analysis of the roles of haemostatic, thrombotic and inflammatory processes in vascular diseases. In the field of respiratory science, research centres on inflammatory mechanisms underlying lung injury and fibrosis in disorders including chronic obstructive pulmonary disease, vasculitis and interstitial lung disease. With 70 staff (both clinical and basic scientists) and live funding of £11 million, translational, therapeutic and basic scientific studies in all of the above areas are funded by the British Heart Foundation, Wellcome Trust, MRC, BBSRC, NIHR and the pharmaceutical industry.

Endocrinology, Diabetes & Metabolism: With around 50 researchers who together hold more than £20 million in live funding, together with Reproduction, Genes & Development researchers in this Section were the major contributors to achievement of our ranking 4th nationally in the 2008 RAE ("hospital based clinical subjects") (75% research rated world or internationally leading), with a strong portfolio of translational research underpinned by large clinical datasets. Current initiatives are supported by major awards from MRC, the Wellcome Trust and the European Commission to study a range of topics including glucocorticoid, gonadal steroid and thyroid hormone actions and pre-receptor regulation, as well as pathogenesis of endocrine autoimmune diseases and endocrine cancers. A range of programme grant funded research is being undertaken in diabetes, obesity and metabolism; fetal and reproductive endocrinology; thyroid tumourigenesis and molecular investigations of endocrine and hormone-dependent cancer predisposition and pathology.

Neurobiology: Encompassing neurology, neuropharmacology, psychiatry and neurosciences, research within this Section of the School brings together expertise covering aspects of neuroscience ranging from cellular and molecular, to the whole brain, through to the extensive network of neuronal connections across the body, and how these biological

underpinnings interact with psychological and social factors to cause neurological and psychiatric disease. The new Queen Elizabeth Hospital and National Centre for Mental Health that adjoin the Medical School are facilitating our focus on translational neuroscience so that we can apply insights gained through fundamental research on brain structure and function to develop novel pharmacological and cellular therapies for neural damage and psychiatric disease, with a clear goal to promote continuous interaction amongst fundamental and clinical neuroscientists to rapidly translate research from bench to bedside. With around 50 research-active staff, major research teams are neuropharmacology; neurodegeneration and repair; neuronal networks; and psychiatry.

Reproduction, Genes & Development: Covering obstetrics, gynaecology and paediatrics as well as a significant portfolio of clinical genetics, activity in this Section reflects three broad areas of research, education and clinical activity: Obstetrics and Gynaecology; Paediatrics and Child Health; and Medical and Molecular Genetics. The complementary interests of each of these areas enable the theme to make a unique contribution through its research and teaching, to the healthcare of mothers and children in the whole of the West Midlands region. Multidisciplinary reviews and trials on numerous aspects of care (both diagnostic and therapeutic) have been undertaken in aspects of Reproduction, Genes & Development. The School is home to the WHO Collaborating Centre for Reproductive Health, the only centre of its kind in the UK. In addition, translational research is performed within the Wellcome-funded Clinical Research Facility within the University Hospitals Birmingham NHS Foundation Trust and the Paediatric Clinical Research Facility within the Birmingham Children's Hospital, the first of its kind in the UK. With around 60 staff and over £12 million of live funding, particular highlights of activity include critical appraisal of the evidence and the initiation of clinical trials in areas as diverse as dysfunctional uterine bleeding, the detection of Group B streptococcus in pregnancy, the management of intractable pelvic pain in women, diagnostic tests in predicting hypertensive disease of pregnancy and intrauterine growth restriction and in-utero fetal therapy.

Pharmacy and Therapeutics: The Pharmacy and Therapeutics Section fulfils major roles in research, education and clinical activity within the School of Clinical and Experimental Medicine. Offering a lively and stimulating [academic environment](#) in which researchers, health professionals and students interact; all are connected by an interest in medicines - their discovery and development, their precise mechanism of action and their use to prevent and treat disease. Particularly relevant to this Section is our wide ranging expertise (research and education) in Pharmacology and Therapeutics and a new flagship investment by the University of Birmingham into Pharmacy, which includes expertise in novel drug delivery systems and medicine formulations that augment clinical pharmacology and translational research activities across the College and University. New Pharmacy education programmes include a [DPharm](#) for registered pharmacists and an [MPharm](#) course which started in 2013. Our major research groups are: Clinical Pharmacy and Pharmaceutics, , Clinical Pharmacology and Therapeutics.

Medical Science & Education: Home to research within anaesthetics and intensive care medicine, clinical simulation, interprofessional learning, this Section plays a major role in both the research and teaching carried out within the School. Research in basic and clinical sciences is integrated, along with expertise in clinical trials, to advance the understanding and treatment of a spectrum of human disorders. Teaching takes advantage of state-of-the-art research expertise in these areas to deliver the highest standard of instruction. Particularly relevant to this theme is our wide ranging expertise (education and research) leading in areas of pedagogic research to enhance programme development and design and medical education itself.

School Infrastructure: Research in basic and clinical sciences in these areas is fully integrated in the School, which offers training in state-of-the-art facilities, including the Institute of Biomedical Research (IBR) and the Wellcome Trust Clinical Research Facility (WTCRF). The IBR is a £30m JIF-funded facility, the largest of its kind in the UK. In addition to extensive tissue culture and biochemistry laboratories, the IBR includes resources for proteomics and genomics together with containment facilities for work with micro organisms up to category 3. It also provides support for such key technologies as flow cytometry, Mo Flo cell sorting, confocal microscopy, laser capture dissection, sequencing and construct production, GC/MS platforms, array technology and real time qPCR, as well as extensive modern facilities for *in vivo* animal work and mouse breeding and an in-house service for embryonic stem cell work and the production of genetically modified mice. The WTCRF (www.crf.bham.ac.uk) is a flagship facility and one of five originally established in the UK, funded by a Wellcome Trust Millennial grant of £3.2 million in 2001. It was further awarded approximately £10m to extend its facilities to include gene therapy/pharmacy facilities, cardiovascular and metabolic research suites and to create the only dedicated children's WTCRF in the UK at Birmingham Children's Hospital. The School also has significant links with major NHS Trusts in the region including University Hospitals Birmingham NHS Foundation Trust (with the new Queen Elizabeth Hospital opened in June 2010 adjacent to the College, a 1200 bed, £50+ million initiative, representing a major opportunity for clinical translation of basic science research), and within a number of other NHS Trusts, including Birmingham Women's and Children's Hospitals, as well as Heart of England, Sandwell and West Birmingham and Birmingham and Solihull Mental Health NHS Trusts, ensuring that our research, practice and strategy are well linked in with all of our neighbouring NHS Trusts.

Teaching takes advantage of the range of research expertise available to deliver the highest standard of instruction to both undergraduates and to postgraduates. Birmingham academic staff work closely with honorary staff with NHS appointments to contribute to undergraduate teaching across the MBChB and BMedSc programmes, as well as postgraduate programmes. Postgraduate qualifications are available in the form of a DPharm, MPhil / PhD by research, MD by research and taught Masters (MSc/PgD/PgC).