The College of Life Sciences & Medicine is recognised internationally for excellence in research and teaching and has long been known for expanding the frontiers of science and building bridges between science and everyday life. With more than 1200 staff and 3,000 undergraduate and postgraduate students from all over the world, the College of Life Sciences and Medicine, provides a dynamic and vibrant environment within which to undertake research.

Home to one of the first-established medical schools in Britain, and situated on the largest medical campus in Europe, research within our Institute of Medical Sciences, Institute of Applied Health Sciences and Rowett Institute of Nutrition & Health adopts a bench-to-bedside approach in applying science to improving healthcare. Our biomedical researchers focus on the human body and attempt to understand how the body functions, how it responds to infection and disease, and how these diseases can be prevented and eradicated.

Our world-leading biological and environmental science research within the Institute of Biological & Environmental Sciences focuses on integrative physiology, ecology and biotic interactions, leading to a cross-disciplinary focus on predicting the biotic impacts of environmental change.

Within the field of Psychology, our researchers use behavioural and neuroimaging techniques to better understand the factors involved in social interactions and decision making, explore the relationship between perception and the physical environment among populations of both clinical and healthy individuals, and explore the processes of attention, language and memory.

The Graduate School was created in 2003 to support the provision of high-quality postgraduate training and to enhance the academic experience of graduate students within the College. We aim to provide high-quality training within a research-intensive environment, to support the academic, professional and personal development all of our students and to promote excellence in supervision and teaching.

We offer the following research degree programmes:
- MSc by Research (one year)
- MPhil (two years)
- PhD (three to four years)
- MD (two years)

Students undertake a research project under the guidance of an academic supervisor and, unlike a postgraduate degree by coursework and dissertation, there are no formal lectures or seminars and work is not formally examined until after the final thesis is submitted. The Graduate School also offers an induction programme and skills training opportunities for all research students to support their studies and to help with career planning.

We encourage prospective PhD students to apply at any time. Research in the College is offered through the following Institutes:
- Institute of Applied Health Sciences: www.abdn.ac.uk/iahs
- Institute of Biological & Environmental Sciences: www.abdn.ac.uk/ibes
- Institute of Medical Sciences: www.abdn.ac.uk/ims
- Rowett Institute of Nutrition & Health: www.abdn.ac.uk/rowett
- School of Psychology: www.abdn.ac.uk/psychology
Institute of Medical Sciences

The Institute of Medical Sciences is home to principal investigators who lead cutting edge molecular and cell biology research in a variety of fields. Current research includes:

Musculoskeletal
The Musculoskeletal programme consists of a team of scientists and clinicians working together to seek a better understanding of bone, cartilage and muscle biology and physiology in health and disease. By combining basic molecular and cell biological research with patient studies they seek to develop new or better ways of diagnosing and treating musculoskeletal disorders, working together with collaborators and using a strong multidisciplinary approach.

Cell, Developmental and Cancer Biology
The Cell and Developmental Research Programme investigates the Molecular Biology, Cell Biology and Cell Physiology that is unique to cells in multicellular organisms. Current research has shown that many of the molecular pathways and mechanisms used during embryonic development are re-deployed in the adult to regulate stem cell maintenance and differentiation in wound healing, regeneration and tissue repair.

Immunity and Disease
The Immunity and Disease Research Programme is a diverse and thriving organisation. Aberdeen University hosts cutting-edge research, which has expanded to develop successful collaborations in the commercial sector.

Microbiology
At Aberdeen, molecular and cell biologists, clinical scientists, epidemiologists and environmental microbiologists are working together to address key questions about the basic biology of micro-organisms, how they interact with the environment and how they interact with human hosts to cause infectious disease.

Translational Neuroscience
The neuroscience programme at the Aberdeen IMS consists of one of the fastest growing neuroscience groups in the UK. The programme places particular emphasis on bridging the gap between the biochemistry of the brain and the behaviour of the brain - how the molecular events that control function of neural cells set up the firing outputs of neuronal networks, reading out as the brains control of behaviour.

Cardiovascular
The main interest of the vascular theme is in the role of cardiac risk assessment and management in healthy volunteers and patients with peripheral vascular, cardiac, and cerebrovascular disease. Our areas of expertise are in the investigation of the role of platelets, coagulation, endothelial function, inflammation and dyslipidaemia in the development and progression of atherosclerosis.
The Institute of Applied Health Sciences

The Institute of Applied Health Sciences pursues an agenda of excellence in health services research, and applies current methodological strength to selected clinical topics. Current areas of methodological strength include cohort studies, large-scale multicentre randomised trials, health economic research, health services research and health technology assessment.

The IAHS has particular strengths in the areas of:

Methodology:
Aberdeen is strong in research methodology and within this area, the principal research strengths are in health services research and health economics and hosts Chief Scientist's Office (CSO) funded units in these areas. The Health Services Research Unit (HSRU) and the Health Economics Research Unit (HERU) are conducting research of the highest standards of excellence focusing on two main areas: evaluation of healthcare interventions and delivery and organisation of care. They were ranked in joint first position in this field in the Research Assessment Exercise 2008.

A further core discipline of strength in Aberdeen is Health Psychology. This group also has formed strong and successful links with the Health Services Research Unit with a research focus particularly around behaviour change.

Clinical Disciplines:
The Health Services Research Unit has strong collaborations locally with urology and reproductive health.

Urology is focused on cancers, benign prostatic disease and pelvic floor dysfunction each using the methodology of systematic review, economic evaluation, trials and high-quality observational studies.

Reproductive Health has research programmes in reproductive medicine, maternal and peri-natal medicine, pre-cancer and benign gynaecology with each focused on evaluation of treatments leading to randomised controlled trials and evaluation of service delivery. These research programmes also benefit from hosting the Aberdeen maternity neonatal databank, a unique database holds information on all the obstetric and fertility-related events occurring to women from a defined population within Aberdeen and the surrounding areas from 1951 to present day.

Epidemiology. This group undertakes studies of the onset and outcome of rheumatic disorders and randomised controlled trials particularly focused in pain. It has established a broad collaboration in which to do so, through the Aberdeen Pain Research Collaboration Pain, and more generally common symptom research, is also one of the areas of strength within Primary care.
The Institute of Biological and Environmental Sciences addresses the fundamental biological consequences of environmental change. The Institute has significant international expertise in understanding and modelling the soil, microbe and plant interface; population and physiological responses of animals and plants from habitats as diverse as the ocean and tropical forests, along with environmental effects on mammalian physiology; the immune functions of fish and fundamental relationships between diseases and their vectors. The Research is grouped within three research themes:

**Integrative Environmental Physiology**
Physiology is the study of the integrative processes and functions of life at all levels of structural complexity between and including the molecular level through to the whole organism. It includes all organisms, and frames function in evolutionary, environmental, ecological and behavioural contexts. It embraces a cross-disciplinary approach to modern science, through which physiologists aim to achieve translation of this knowledge into human health.

We have expertise in: Mammalian Physiology, Fish Immunology & Physiology and Parasite-Host Interactions

**Evolution and Ecology**
Members of the Ecology and Evolution programme study the interactions that determine the distribution and abundance of organisms and seek insights that contribute to the understanding, management and conservation of marine and terrestrial populations and communities. Closely integrated with the BIS programme, we represent one of the largest concentrations of internationally recognised ecologists with expertise ranging from individuals, to populations, communities and global processes. This programme comprises four overlapping research groupings:


**Biological Interactions in Soil**
The Biological Interactions in Soil programme represents a concentration of internationally recognised scientists researching the plant/microbe/soil system primarily aimed at characterising and maximising sustainability and biodiversity. It operates at every biological scale from molecule to globe and use state of the art techniques in analytical chemistry, genomics, biosensors, molecular diversity, bioinformatics and modelling.

The theme has expertise in: Soil Microbial Diversity and Function, Environmental Chemistry and Crop Science.
The Rowett Institute for Nutrition and Health

The Rowett Institute for Nutrition and Health was founded in 1913 and delivery of the Institute’s new strategy will be facilitated by a new building to be opened in 2014 on the University’s Foresterhill campus, adjacent to the Medical School. This facility will not only have a state of the art human nutrition facility, but also will be close to the main health economic and health psychology expertise at the University.

Nutrition is central to many global challenges. These include – obesity, food security, malnutrition, and ageing. Each of these are major policy issues for Government both nationally and internationally and the Rowett Institute breaks down its research into 3 major groups:

Lifelong Health
Over the life course our nutritional needs change, and how we respond to different nutrients is also stage dependent. As result we have discovered that our lifelong health is not only influenced by our early life nutrition, but in some cases by trans-generational effects of nutrition.

The nutritional value of our food starts with the primary produce from agriculture. The journey from farm to fork has considerable influence on the nutritional composition and healthiness of our foods. As we address the food security challenge and reformulate foods to tackle the obesity problem, this relationship needs to be re-examined.

Gut Health
The bacteria which inhabit our guts are not passive passengers, but important players in the metabolism and release of functional food components which affect our nutritional status and health, as well as key regulators of our immune status. Since our diet influences bacterial composition, we require a better understanding of how food influences the host-microbe interaction.

Obesity and metabolic Health
Obesity has a strong genetic determinant, and as a result we are differentially equipped to deal with the modern food environment. Dealing with this problem requires that we overcome the genetic weakness inherent in susceptible people. This requires that we understand and exploit the satiating properties of certain food components better and learn how to influence hardwired behaviours.

From these challenges and insights the Rowett Institute of Nutrition and Health has developed a strategy, which engages some of the contemporary problems in nutrition and which should contribute not only to new scientific knowledge, but also new understanding to underpin Government policies and innovation for industry leading to increased economic growth.
The School of Psychology

The School of Psychology is part of the College of Life Sciences and Medicine and provides an exciting and vibrant research-led learning environment for both undergraduate and postgraduate studies. Our research activity is grouped around three themes: Cognition, Perception and Attention and Social Cognition. Within these themes, specialist groups conduct research funded by research councils, government, charitable groups, and industry on topics ranging from understanding the fundamental processes of the human mind and their link to underlying brain structures to the application of this theoretical knowledge to current societal problems.

Cognition
Research in the Cognition theme explores processes such as attention, language and memory. There is a particular focus on how cognition and emotion are influenced by lifespan development and neuropsychological conditions. Recent projects have been funded by the Economic and Social Research Council (ESRC), National Institutes of Health (NIH) and The Leverhulme Trust.

Perception and Attention
Research in the Perception and Attention theme explores the relationship between perception and physical parameters of the environment in healthy and clinical populations, using a wide range of behavioural and electrophysiological techniques. Our research activities are funded by various Medical Charities and the Biotechnology and Biological Sciences Research Council (BBSRC).

Social Cognition
Research in the Social Cognition theme investigates the factors involved in social interactions and decisions using a wide-range of behavioural and neuroimaging techniques. Recent projects have been funded by the Economic and Social Research Council (ESRC), the Biotechnology and Biological Sciences Research Council (BBSRC) and the European Research Council (ERC).
As a graduate of the University of Aberdeen, you will be valued both within and outside academia. We are committed to providing you with skills that will both support your research as a postgraduate research student (PhD, MD, MPhil and Masters by Research) and will also enhance your employability at the end of your degree.

Researcher Development aims to support you as a researcher and provide a vibrant programme of development opportunities to foster transferrable skills, stimulate enterprise and creativity, encourage self-reflection and empower you to excel in your chosen field, regardless of whether you choose to remain within academia. Should you remain in the academic sector, we continue to value your development and offer a progressive range of activities to support you as your career develops.

The Researcher Development training programme focuses on the skills required to excel as a researcher, for example, the knowledge and intellectual abilities to conduct research, the personal qualities and professional standards required and the skills to demonstrate the impact of your research with the wider community.

Further information about Researcher Development Training please visit: www.abdn.ac.uk/rsd

What Do I Need?

To apply for a Research Degree in the College of Life Sciences & Medicine applicants are expected to have obtained a 2.1 honours degree or above or equivalent in a relevant discipline.

Students whose first language is not English are also expected to meet the University’s Standard English requirements.

Further details on entry requirements are available at www.abdn.ac.uk/clsm/graduate/prospective-students/research-programmes/phd

How to Apply

To apply please visit www.abdn.ac.uk/postgraduate/apply

Complete Application forms must consist of:

A completed Postgraduate Application Form
Academic transcripts and/or degree certificate(s) to date
For international applicants, proof of proficiency in English (English Language Requirements)
Academic References
CV
Research Proposal (not applicable for advertised studentship applications)

If you have any questions about the application process, please contact:

For Schools of Medical Sciences, Medicine & Dentistry and Rowett Institute of Nutrition & Health
Fiona Insch (f.insch@abdn.ac.uk)

For Schools of Biological Sciences and Psychology
Michaela Pignotti/Dana Ho (sbspgadmin@abdn.ac.uk)

Finance and Funding

> Tuition fees will depend on your domiciled status. For up-to-date information on fees visit www.abdn.ac.uk/registry/tuitionfees

> Our Funding Database is the quickest and easiest way to search for any funding sources that may apply to you.

> Graduates of the University of Aberdeen can take advantage of our Alumni Discount Scheme

> Scholarships and bursaries are available from the College of Life Sciences and Medicine Graduate School. For full details visit www.abdn.ac.uk/clsm/graduate

For full information on funding opportunities available at the University visit www.abdn.ac.uk/postgraduate/funding