

Research in the School



The School of Clinical and Experimental Medicine focuses on a number of research areas, and provides a coherent management and support structure for these which facilitates cross-disciplinary interactions and clinical access and hence translation of basic research findings into the clinical arena.

Research themes in the School

[DNA and Integrated Cardiovascular Sciences \(CICS\) \(/research/activity/mds/domains/cardio-resp-neuro/clinical-integrated-cardiovascular-science/index.aspx\)](/research/activity/mds/domains/cardio-resp-neuro/clinical-integrated-cardiovascular-science/index.aspx)

Description

Cardiovascular Sciences in Birmingham brings together researchers in the School of Clinical and Experimental Medicine with groups in the School of Health and Population Sciences, and in the College of Life Sciences, linked strategically through the Centre for Cardiovascular Sciences. Cellular, molecular and physiological investigations inform translational research on atrial fibrillation, heart failure, thrombosis, inflammatory vascular disease and responses to ischaemia and hypoxia.

[Clinical Respiratory Science \(/research/activity/mds/domains/cardio-resp-neuro/clinical-respiratory-science/index.aspx\)](/research/activity/mds/domains/cardio-resp-neuro/clinical-respiratory-science/index.aspx)

Description

The Clinical Respiratory Research Group investigates mechanisms of disease using state of the art technologies in the field of respiratory disease.

[DNA Damage and Repair \(/research/activity/mds/domains/genetics-development/dna-damage-repair/index.aspx\)](/research/activity/mds/domains/genetics-development/dna-damage-repair/index.aspx)

Description

Research theme page for DNA Damage and Repair at the College of Medical and Dental Sciences at the University of Birmingham. In the last few years Birmingham gained a number of excellent young investigators focusing their efforts on understanding the mechanism of eukaryotic DNA replication, how it is regulated in normal cells, how its misregulation contributes to tumorigenesis and how this misregulation can be exploited in the treatment of cancer.

[DNA Replication \(/research/activity/mds/domains/genetics-development/dna-replication/index.aspx\)](/research/activity/mds/domains/genetics-development/dna-replication/index.aspx)

Description

Information on the research theme of DNA Replication in the College of Medical and Dental Sciences at the University of Birmingham. Researchers in Birmingham have discovered several of the key factors involved in DNA damage detection and repair, using biochemistry, virology and unique cell lines from patients with rare genetic disorders.

[Endocrine & Endocrine-Related Cancer \(/research/activity/mds/domains/hormones-metabolism-reproduction/endocrine-cancer/index.aspx\)](/research/activity/mds/domains/hormones-metabolism-reproduction/endocrine-cancer/index.aspx)

Description

Information on the Endocrine-Related Cancer Research Theme, led by Professor Wiebke Arlt, Section of Endocrinology, Diabetes and Metabolism, School of Clinical and Experimental Medicine, College of Medical and Dental Sciences

[Endocrine Determinants of Adverse Pregnancy Outcome \(/research/activity/mds/domains/hormones-metabolism-reproduction/adverse-pregnancy-outcome/index.aspx\)](/research/activity/mds/domains/hormones-metabolism-reproduction/adverse-pregnancy-outcome/index.aspx)

Description

Our research in this area has yielded significant translational outputs, with investigations around the impact of early pregnancy progesterone on miscarriage and an interventional trial assessing the effect of progesterone supplementation on pregnancy outcome (NIHR-funded PROMISE trial).

[Epigenetics \(/research/activity/mds/domains/genetics-development/epigenetics/index.aspx\)](/research/activity/mds/domains/genetics-development/epigenetics/index.aspx)

Description

Information on the research theme of Epigenetics at the College of MEDical and Dental Sciences, University of Birmingham. Epigenetics is the study of mechanisms by which gene expression patterns are regulated and transmitted from one cell generation to the next.

[Genome Biology \(/research/activity/mds/domains/genetics-development/genome-biology/index.aspx\)](/research/activity/mds/domains/genetics-development/genome-biology/index.aspx)

Description

Research theme information for Genome Biology, part of Genetics and Development at the COLlege of MEDical and Dental Sciences, University of Birmingham.

[Neurodegenerative Diseases \(/research/activity/mds/domains/cardio-resp-neuro/neurodegenerative-diseases/index.aspx\)](/research/activity/mds/domains/cardio-resp-neuro/neurodegenerative-diseases/index.aspx)

Description

Our team works on a wide range of topics relating to acute and chronic neurodegenerative diseases. Current research programmes concern the genetics and cellular pathology of neurodegenerative diseases such as Alzheimer's disease, Parkinson's disease, Motor Neurone Disease, Multiple Sclerosis and Glaucoma.

[Neurotrauma \(/research/activity/mds/domains/cardio-resp-neuro/neurotrauma/index.aspx\)](/research/activity/mds/domains/cardio-resp-neuro/neurotrauma/index.aspx)

Description

The Neurotrauma research group encompasses laboratory scientists, clinicians and biotechnologists who share expertise, knowledge and solutions.

[Obesity, Insulin Resistance and Diabetes \(/research/activity/mds/domains/hormones-metabolism-reproduction/obesity-insulin-diabetes/index.aspx\)](/research/activity/mds/domains/hormones-metabolism-reproduction/obesity-insulin-diabetes/index.aspx)

Description

[Rare Endocrine and Metabolic Diseases \(/research/activity/mds/domains/hormones-metabolism-reproduction/rare-endocrine-metabolic-disease/index.aspx\)](/research/activity/mds/domains/hormones-metabolism-reproduction/rare-endocrine-metabolic-disease/index.aspx)

Description

Birmingham has recently been designated the national lead for the cross cutting paediatrics theme of the NIHR NOCRI Translational Research Collaboration 'Rare Diseases'.

[Stem Cell Biology \(/research/activity/mds/domains/genetics-development/stem-cell-biology/index.aspx\)](/research/activity/mds/domains/genetics-development/stem-cell-biology/index.aspx)

Description

Research theme page for Stem Cell Biology at the College of MEDical and Dental Sciences, University of Birmingham. Stem cell biology research across the University of Birmingham is broad and multidisciplinary, and is brought together through the Birmingham University Stem Cell Centre (BUSCC).

[Steroid Action and Human Disease \(/research/activity/mds/domains/hormones-metabolism-reproduction/steroid-action-human-disease/index.aspx\)](/research/activity/mds/domains/hormones-metabolism-reproduction/steroid-action-human-disease/index.aspx)

Description

Information on the Steroid Metabolism, Human Disease, and Development Research Theme, led by Professor Wiebke Artl, Section of Endocrinology, Diabetes and Metabolism, School of Clinical and Experimental Medicine, College of Medical and Dental Sciences

[Thyroid Disease and Health \(/research/activity/mds/domains/hormones-metabolism-reproduction/thyroid-disease-and-health/index.aspx\)](/research/activity/mds/domains/hormones-metabolism-reproduction/thyroid-disease-and-health/index.aspx)

Description

Thyroid Disease and Health across the ages is an area of research strength across CEDAM that also contributes to the multidisciplinary ageing research community at Birmingham.

