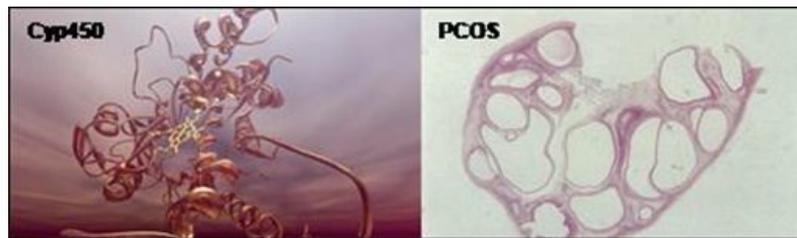


Steroid Metabolism, Development and Human Disease



Steroid hormones are crucial for life and disorders affecting their synthesis or function play a major role in human disease. Steroids are mainly produced by the adrenal (glucocorticoids, mineralocorticoids, sex steroids) and the gonads (sex steroids) but almost all tissues of the human body are capable of generating, activating or inactivating steroid hormones.

Research into steroid hormone action is a flagship area of hormone and metabolism research in Birmingham. Our work has clarified the role of major enzyme systems in the tissue-specific regulation of steroid action, namely of glucocorticoids and sex steroids. We have discovered novel causes of adrenal and gonadal disorders, helping to shed light on very common disorders including obesity, hypertension and polycystic ovary syndrome.

Birmingham research into steroid hormone action is driven by a vibrant mix of basic and clinical scientists with strong interdisciplinary links. We are taking a broad ranging translational approach from *in vitro* systems and *in vivo* animal models to clinical studies, aiming at the discovery of novel therapies.

We have developed a powerful technique, steroidobolomics, i.e. the combination of mass spectrometry-based steroid profiling and machine learning-based computational data analysis. This is supported by our state-of-the-art steroid mass spectrometry facility and has driven the discovery of novel disorders and the development of new diagnostic tools.

We have a strong track record in recruiting, developing and retaining the most promising young basic and clinical scientists and welcome applications from talented researchers from all countries to come and work with us in Birmingham.

Research Groups

- [Adrenal Steroids, Metabolism, and Action Research group \(/research/activity/mds/domains/endocrinology-metabolism/steroid-hormone-action/adrenal-steroids-metabolism-and-action/index.aspx\)](/research/activity/mds/domains/endocrinology-metabolism/steroid-hormone-action/adrenal-steroids-metabolism-and-action/index.aspx) - [Professor Wiebke Arlt \(http://www.birmingham.ac.uk/staff/profiles/cem/EDM/Arlt-Wiebke.aspx\)](http://www.birmingham.ac.uk/staff/profiles/cem/EDM/Arlt-Wiebke.aspx)
- [Endocrine Dysfunction in Pregnancy Research Group \(/research/activity/mds/domains/endocrinology-metabolism/steroid-hormone-action/endocrine-dysfunction-in-pregnancy/index.aspx\)](/research/activity/mds/domains/endocrinology-metabolism/steroid-hormone-action/endocrine-dysfunction-in-pregnancy/index.aspx) - [Dr Shiao Chan \(http://www.birmingham.ac.uk/staff/profiles/cem/RGD/Chan-Shiao-yng.aspx\)](http://www.birmingham.ac.uk/staff/profiles/cem/RGD/Chan-Shiao-yng.aspx)
- [Steroid Sulphation and Drug Metabolism Research Group \(/research/activity/mds/domains/endocrinology-metabolism/steroid-hormone-action/steroid-sulphation-and-drug-metabolism/index.aspx\)](/research/activity/mds/domains/endocrinology-metabolism/steroid-hormone-action/steroid-sulphation-and-drug-metabolism/index.aspx) - [Dr Vivek Dhir \(http://www.birmingham.ac.uk/staff/profiles/cem/EDM/dhir-vivek.aspx\)](http://www.birmingham.ac.uk/staff/profiles/cem/EDM/dhir-vivek.aspx)
- [Steroidogenesis and Congenital Adrenal Hyperplasia Research Group \(/research/activity/mds/domains/endocrinology-metabolism/steroid-hormone-action/steroidogenesis-congenital-adrenal-hyperplasia/index.aspx\)](/research/activity/mds/domains/endocrinology-metabolism/steroid-hormone-action/steroidogenesis-congenital-adrenal-hyperplasia/index.aspx) - [Dr Nils Krone \(http://www.birmingham.ac.uk/staff/profiles/cem/EDM/Krone-Nils.aspx\)](http://www.birmingham.ac.uk/staff/profiles/cem/EDM/Krone-Nils.aspx)
- Maternal and Foetal Medicine Research Group - [Professor Mark Kilby \(http://www.birmingham.ac.uk/staff/profiles/cem/RGD/Kilby-Mark.aspx\)](http://www.birmingham.ac.uk/staff/profiles/cem/RGD/Kilby-Mark.aspx)