

Dr Sarah J Conner PhD

Lecturer

Reproduction, Genes and Development

Contact details

Telephone **+44 (0)121 414 5867 (tel:+44 121 414 5867)**

Email **s.j.conner@bham.ac.uk (mailto:s.j.conner@bham.ac.uk)**

School of Clinical and Experimental Medicine
College of Medical and Dental Sciences
University of Birmingham
Edgbaston
Birmingham
B15 2TT
UK



About

Sarah Conner is a Lecturer in Reproductive Biology and an Honorary Research Scientist at the Birmingham Women's Fertility Centre.

In addition to her research interests, Sarah is an enthusiastic contributor to and coordinator of Reproduction teaching across a number of undergraduate programmes in the University.

Qualifications

- PhD (Protein biochemistry), 2000
- BSc (Hons) Biochemistry with Biotechnology, 1996

Biography

Sarah graduated from the School of Biochemistry, University of Birmingham with a degree in Biochemistry with Biotechnology in 1996. She went on to study for a BHF-funded PhD in Protein Biochemistry (Structure and function of Human Heart Transhydrogenase) in the School of Biosciences, University of Birmingham (awarded in 2000). Sarah then decided she would like to work on something that people at dinner parties would have heard of and took a post-doctoral position in the Medical School working on protein-protein interactions in human fertilisation. She then spent the next seven years working on a variety of projects within the field of reproduction from male infertility to embryonic stem cell derivation. In 2007, Sarah was appointed as Lecturer in Reproduction.

Teaching

- MBChB – Teaching and Module Lead for RED module (Year 2)
- BMedSc – Teaching and Module Lead for Endocrine & Reproductive Sciences (Year 2) and Reproduction & Development (Year 3) modules
- GEC
- Bio384 (Biosciences)

Postgraduate supervision

Supervisor and Second supervisor for PhD students

Research

Sarah Conner's research interest is the biology of the human gametes (sperm and egg) from formation to implantation. She is particularly interested in the role of the oocyte vestments – the zona pellucida (the extracellular glycoprotein matrix that surrounds all vertebrate oocytes) and the cumulus oophorus layer – before, during and after fertilisation. Sarah is also interested in male factor infertility, particularly the role of sperm DNA damage.

Current Research

- ZP domain structure and role in matrix formation.
- Functional studies of human ZP proteins.
- Role of the oocyte vestments in early implantation (with Dr P Hewett)
- Improved diagnosis and treatment of male infertility (with Dr J Kirkman-Brown and Mr. A Coomarasamy).

Publications

Lefievre L, Chen Y, Conner SJ, Ashton P, Ford WCL and Barratt CLR; Identification of S Nitrosylated proteins in human spermatozoa. **Proteomics**, 2007; 17 3066-3084.

Conner SJ, Lefievre L, Kirkman-Brown J, Michelangeli F, Jimenez-Gonzalez C, Oliveira GM, Pixton KL, Brewis IA, Barratt CLR and Publicover SJ; Understanding the physiology of pre-fertilisation events in the human spermatozoa – a necessary prerequisite to developing rational therapy. In Gamete Biology: Emerging Frontiers in Fertility and Contraceptive Development. **Society for Reproduction and Fertility Supplement** Volume 63, 2007; 237-255. Nottingham University Press, Nottingham UK.

Ellis PJ, Furlong RA, Conner SJ, Kirkman-Brown J, Afnan M, Barratt C, Griffin DK, Affara NA. Coordinated transcriptional regulation patterns associated with infertility phenotypes in men. **J Med Genet** 2007 44 498-508.

Correia JN, Conner SJ, Kirkman-Brown JC. Non-genomic steroid actions in human spermatozoa. "Persistent tickling from a laden environment". **Semin Reprod Med.**, 2007; 25 208-19.

Conner SJ and Barratt CLR; Chapter 3: Genomic and proteomic approaches to defining sperm production and function. In **The Sperm Cell: Production, Maturation, Fertilization, Regeneration** (2006). Cambridge University Press, Cambridge UK.

Conner SJ and Barratt CL. (2006) The human sperm proteome. In **The Genetic basis of male infertility**. Cambridge University Press.

Conner SJ, Lefèvre L, Hughes DC and Barratt CLR; Cracking the egg: increased complexity in the zona pellucida. **Human Reproduction**, 2005; 20 1148-1152.

Lefèvre L*, Conner SJ*, Olufowobi O, Afnan M, Lenton W, Hughes DC, Brewis IA and Barratt CLR; Four zona pellucida glycoproteins are expressed in the human. **Human Reproduction**, 2004; 19 1580-6. * These authors contributed equally to this work.

[Privacy](#) | [Legal](#) | [Cookies and cookie policy](#) | [Accessibility](#) | [Site map](#) | [Website feedback](#) | [Charitable information](#)

© University of Birmingham 2015

