

## 1. Institution

Senior Lecturer, Academic Unit of Reproductive and Developmental Medicine, The University of Sheffield, Level 4, Jessop Wing, Tree Root Walk, Sheffield S10 2SF United Kingdom.

E-mail: A.Fazeli@Sheffield.ac.uk

<http://alirezafazeli.staff.shef.ac.uk/>

## 2. Principal investigator and contact person

Alireza Fazeli (A.Fazeli@Sheffield.ac.uk)

## 3. Key personnel

Wedad Aboussahoud	W.Aboussahoud@sheffield.ac.uk	Genomics, Innate Immunity
Reza Aflatoonian	<a href="mailto:R.Aflatoonian@sheffield.ac.uk">R.Aflatoonian@sheffield.ac.uk</a>	Genomics, Innate Immunity
Ahmed Aldermahi	<a href="mailto:A.Aldermahi@sheffield.ac.uk">A.Aldermahi@sheffield.ac.uk</a>	Proteomics, Maternal interaction with Gametes and Embryos
Chris Bruce	<a href="mailto:C.Bruce@sheffield.ac.uk">C.Bruce@sheffield.ac.uk</a>	Proteomics, Immunohistochemistry
Sara Elliott	<a href="mailto:S.Elliott@sheffield.ac.uk">S.Elliott@sheffield.ac.uk</a>	genomics,
Emma Pewsey	<a href="mailto:mdp05emp@sheffield.ac.uk">mdp05emp@sheffield.ac.uk</a>	Proteomics, Nuclear Reprogramming

## 4. Research profile

The main research interests in my laboratory are understanding Maternal communication with gametes and embryos, regulation of innate immunity in the female reproductive tract particularly understanding the role that Toll like receptors play in this process and understanding the basis of nuclear reprogramming process. We are specialized in using both gel based and non-gel based proteomic technologies. In addition we are well experienced and have developed several technologies for preparation of proteomic samples from cell surface, cytoplasm and nuclear compartments of reproductive tissue, cell lines and primary cultures. We routinely use other technologies such as microarray, QPCR and advanced tissue culture techniques in my laboratory. In our research we work with Human and several animal models such as Pigs, Mice, Sheep and Cattle.

## 5. Key technologies and tools

Proteomics - Transcriptomics – Bioinformatics – Immunohistochemistry – Tissue culture and oviduct epithelial and endometrium cell cultures

## 6. Selected publications (max. 5)

Georgiou AS, Snijders AP, Sostaric E, Aflatoonian R, Vazquez JL, Vazquez JM, Roca J, Martinez EA, Wright PC, Fazeli A. Modulation of the oviductal environment by gametes. *J Proteome Res.* 2007;6:4656-66.

Aflatoonian R, Tuckerman E, Elliott SL, Bruce C, Aflatoonian A, Li TC, Fazeli A. Menstrual cycle-dependent changes of Toll-like receptors in endometrium. *Hum Reprod.* 2007; 22: 586-93.

Sostaric E, Georgiou AS, Wong CH, Watson PF, Holt WV, Fazeli A. Global profiling of surface plasma membrane proteome of oviductal epithelial cells. *J Proteome Res.* 2006; 11:3029-37.

Georgiou AS, Sostaric E, Wong CH, Snijders AP, Wright PC, Moore HD, Fazeli A. Gametes alter the oviductal secretory proteome. *Mol Cell Proteomics.* 2005; 4:1785-96.

Fazeli A, Affara NA, Hubank M, Holt WV. Sperm-induced modification of the oviductal gene expression profile after natural insemination in mice. *Biol Reprod* 2004; 71: 60-65.