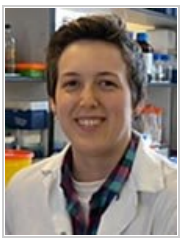
We use cookies to ensure that we deliver the best user experience of our website. If you would like to, you can change your cookie settings at any time. Continue

Leanne Smith

Doctoral researcher

School of Biosciences (/schools/biosciences/index.aspx)

Contact details



Telephone +44 (0)121 414 5561 (tel:+44 121 414 5561)

Email lms617@bham.ac.uk (mailto:lms617@bham.ac.uk)

Twitter @LeanneMSmith1 (http://twitter.com/@LeanneMSmith1)

School of Biosciences
University of Birmingham
Edgbaston
Birmingham
B15 2TT
UK

About

PhD Title: Investigating phagosome maturation dynamics of *Streptococcus agalactiae* and *Cryptococcus neoformans*

Supervisors: Dr Robin C May, Dr Anne-Marie Krachler

I am currently researching Group B *Streptococcus* and *Cryptococcus neoformans* and the mechanisms these pathogens use to persist within macrophages, a key innate immune cell. Group B *Streptococcus* is the main cause of neonatal bacteraemia and meningitis. *Cryptococcus neoformans* causes devastating fungal infections with immuno-compromised individuals. With the use of markers for phagosome maturation, and some fluorescence microscopy, we hope to determine the molecular requirements for intracellular survival in these two pathogens.

Qualifications

MSci (Hons) Biological Sciences

Biography

My time as an undergraduate was spent right here in Birmingham, ending when I graduated in 2010 with an MSci in Biological Sciences. During my Third year I worked with Prof. Charles Penn on the function of the putative flagella biosynthesis gene *flhF* of *Campylobacter jejuni*. It was in my 4th year that I joined Robin's group, in which I am studying the intracellular survival of *Streptococcus agalactiae* in macrophages. After this project I couldn't bear the thought of leaving, so I managed to stay on for my PhD!
I am also a Teaching assistant in the School of Biosciences and organize the optional undergraduate module Biotechnique Masterclasses.

Research

Research group: Molecular Microbiology, May Lab

Research interests: Microbial pathogens, molecular biology, immunology and pathogenesis

Other activities

I am currently a Teaching Assistant for the school of biosciences, so I help a lot in workshops and practical sessions for undergraduates. I have also developed new electronic learning materials for undergraduate microbial modules. This academic year has also seen the launch of a new optional module for 2nd year undergraduates, proposed and organized by myself. This module is taught by postgraduate students and allows undergraduates to gain experience in advanced techniques used in the research laboratories within the school. I am also a language tutor for first year students and the postgraduate Society for General Microbiology representative for the school.
Biosciences Graduate School Committee (BGSC) Co-Chair

Publications

Cumley NJ, **Smith LM**, Anthony M, May RC (2012). The CovS/CovR Acid Response regulator is required for intracellular survival of Group B Streptococcus in macrophages. Infect. Immun. 2012, 80(5):1650.

Smith LM, May RC. (2013) Mechanisms of microbial escape from phagocyte killing. Colworth Medal Lecture. Biochem. Soc. Trans. 41, 475-490

Society of General Microbiology Autumn meeting 2010 Nottingham – Poster presented
Poster Title: The intracellular survival of Group B Streptococcus Clinical Isolates

Society of General Microbiology Spring meeting 2011 Harrogate – Poster presented
Poster Title: Intracellular survival of *Streptococcus agalactiae* in macrophages

6th International Conference on Gram-positive Microorganisms 2011 Italy – Poster Presented
Poster Title: Intracellular survival of *Streptococcus agalactiae* in macrophages

Infection and molecular microbiology symposium 2011 Birmingham – Oral presentation
Talk Title: Intracellular survival of *Streptococcus agalactiae* in macrophages

Teaching in Biology and Psychology in higher education 2012 Keele – HEA event attended

SEB Education Symposium: Researchers-Teachers-Learners. We're all in it together 2012 London – Oral presentation. Talk title: Biotechnique Masterclasses

Biosciences Graduate research symposium 2012 Birmingham – Poster presentation
Poster Title: Intracellular survival of *Streptococcus agalactiae* in macrophages

University of Birmingham Teaching and learning conference 2012 Birmingham – Oral presentation, Talk title: Biotechnique Masterclasses

Institute of microbiology and Infection (IMI) inaugural symposium 2012 Birmingham – Poster presentation. Poster title: *Cryptococcus neoformans* Phagosome Dynamics

HEA STEM Annual Learning and Teaching Conference 2013 Birmingham – Attended on invitation from HEA Biological sciences discipline lead Dr Nathan Pike

U21 Student Summit 2013 University of British Columbia, Canada – Attended as representative for University of Birmingham.

Society of General Microbiology Autumn meeting 2013 Sussex – Poster presented
Poster title: Manipulation of the macrophage phagosome by *Cryptococcus neoformans*

© University of Birmingham 2014