University of Birmingham

Dr Steve Thomas PhD

Lecturer in Cardiovascular Science

Cardiovascular and Respiratory Sciences

Contact details

Telephone +44 (0)121 414 8308 (tel:+44 121 414 8308)

Email s.thomas@bham.ac.uk (mailto:s.thomas@bham.ac.uk)

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

About

Steve Thomas is a British Heart Foundation Research Fellow working with Professor Steve Watson in the Institute of Biomedical Research.

His main research interests centre around the actin cytoskeleton in platelets and megakaryocytes and fluorescence microscopy imaging.

Qualifications

- PhD Biology 2001
- BSc (Hons) Cell and Molecular biology 1997

Biography

Career History

- 1997 BSc (Hons), Biological Sciences, University of Wolverhampton
- 2000 PhD, School of Applied Science, University of Wolverhampton
- 2000 Postdoctoral Research Fellow, Professor Jim Callow, University of Birmingham
- 2002 Postdoctoral Research Fellow, Professor Noni Franklin-Tong, University of Birmingham
- 2006 Postdoctoral Research Fellow, Professors Machesky and Watson, Universith of Birmingham
- 2008 BHF Research Fellow, University of Birmingham
- 2013 Lecturer in Cardiovascular Sciences, University of Birmingham

Teaching

- Deliver lectures on actin binding proteins, cell motility and the cytoskeleton in disease to BMedSci undergraduates
- Tutor on student selected activities (SSA's) to medical students
- Facilitator of Integrated problems sessions to 2nd Medical students
- Supervisor of rotation projects for Physical Sciences of Imaging in the Biomedical Sciences (PSIBS) 3+1PhD students

Research

The overall aim of my research is to investigate actin dynamics and the proteins that regulate these processes, in megakaryocytes and platelets. We use a variety of techniques to tackle these issues, with a focus on high resolution fluorescence microscopy. We are applying widefield, confocal, TIRF (total internal reflection fluorescence) and super-resolution microscopy to enable us to image actin dynamics of megakaryocyte or platelets as they activate and interact with their environment. Visualising the dynamics of proteins in live platelets will help us characterise the cytoskeleton in these cells in more detail. For example, we have recently identified novel structures in platelets called actin nodules and are using super-resolution microscopy to understand their structure and function.

Publications

Schachtner H, Calaminus SD, Thomas SG and Machesky LM (2013) **Podosomes in adhesion, migration, mechanosensing and matrix remodelling** (http://www.ncbi.nlm.nih.gov/pubmed/?term=Podosomes+in+adhesion%2C+migration%2C+mechanosensing+and+matrix+remodelling) . *Cytoskeleton (Hoboken)* 70(10):572-89

Schachtner H, Calaminus SD, Sinclair A, Monypenny J, Blundell MP, Leon C, Holyoake TL, Thrasher AJ, Michie AM, Vukovic M, Gachet C, Jones GE, Thomas SG, Watson SP and Machesky LM (2013) **Megakaryocytes assemble podosomes that degrade matrix and protrude through basement membrane** (http://www.ncbi.nlm.nih.gov/pubmed/?term=egakaryocytes+assemble+podosomes+that+degrade+matrix+and+protrude+through+basement+membrane) . *Blood* 121(13):2542-52

Davies A, Lewis DJ, Watson SP, Thomas SG and Pikramenou Z (2012) **pH-controlled delivery of luminescent europium nanoparticles into platelets** (http://www.ncbi.nlm.nih.gov/pubmed/?term=pH-controlled+delivery+of+luminescent+europium+nanoparticles+into+platelets) . *Proc Natl Acad Sci USA* 109(6):1862-7

Thomas SG, Calaminus SD, Machesky LM, Alberts AS and Watson SP (2011) **G-protein coupled and ITAM receptor regulation of the formin FHOD1 through Rho kinase in platelets (http://www.ncbi.nlm.nih.gov/pubmed/?term=G-protein+copled+and+ITAM+receptor+regulation+of+the+formin+FHOD1+through+Rho+kinase+in+platelets)**. *J Thromb Haemost* 9(8):1648-51

Mazharian A, Thomas SG, Dhanjal TS, Buckley CD and Watson SP (2010) **Critical role of Src-Syk-PLCg2 signalling in megakaryocyte migration and thrombopoiesis (http://www.ncbi.nlm.nih.gov/pubmed/?term=Critical+role+of+Src-Syk-PLCg2+signalling+in+megakaryocyte+migration+and+thrombopoiesis)**. *Blood* 116(5):793-800

Senis YA, Tomlinson MG, Ellison S, Mazharian A, Lim J, Zhao Y, Kornerup KN, Auger JM, Thomas SG, Dhanjal T, Kalia N, Zhu JW, Weiss A and Watson SP (2009) **The tyrosine phosphatase CD148 is an essential positive regulator of platelet activation and thrombosis (http://www.ncbi.nlm.nih.gov/pubmed/?term=The+tyrosine+phosphatase+CD148+is+an+essential+positive+regulator+of+platelet+activation+and+thrombosis)**. *Blood* 113(20):4942-54

Protty MB, Watkins NA, Colombo D, Thomas SG, Heath VL, Herbert J, Bicknell R, Senis YA, Ashman LK, Berditchevski F, Ouwehand WH, Watson SP and Tomlinson MG (2009) **Identification of Tspan9 as a novel platelet tetraspanin (http://www.ncbi.nlm.nih.gov/pubmed/?term=Identification+of+Tspan9+as+a+novel+platelet+tetraspanin)**. *Biochem J* 417(1):391-400

Calaminus SD, Thomas SG, McCarty OJ, Machesky LM and Watson SP (2008) **Identification of a novel, actin-rich structure, the actin nodule, in the early stages of platelet spreading (http://www.ncbi.nlm.nih.gov/pubmed/?term=Identification+of+a+novel%2C+actin-rich+structure%2C+the+actin+nodule%2C+in+the+early+stages+of+platelet+spreading)**. *J Thromb Haemost* 6(11):1944-52

© University of Birmingham 2015