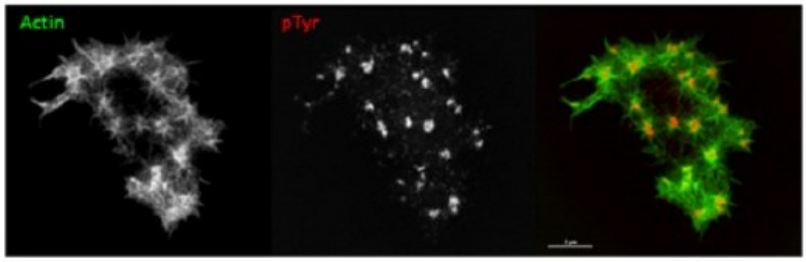
University of Birmingham

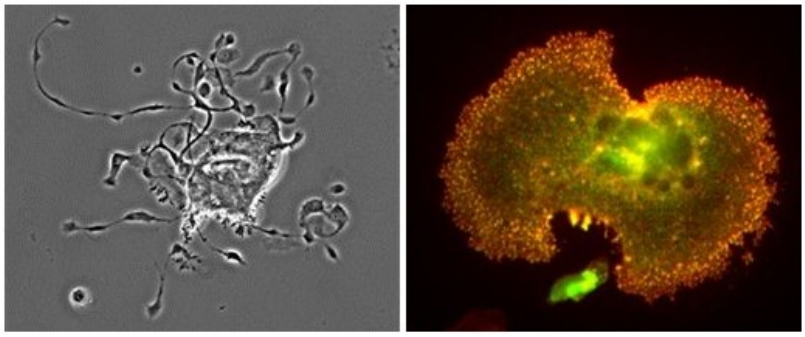
Birmingham Platelet Group



Group leaders: Dr Alexander Brill, Dr Paul Harrison, Dr Neil Morgan, Dr Yotis Senis, Dr Steve Thomas and Prof Steve Watson

Overview

The Birmingham Platelet Group adopts a multidisciplinary approach in the investigation of platelet and megakaryocyte biology, which ranges from cell biology, signal transduction and functional studies through to the use of mouse models and studies on patients.



Open all sections

Current Projects

- Cell surface receptors and their signalling pathways, including ITAM and ITIM receptors, Src and Syk tyrosine kinases, and protein-tyrosine phosphatases
- The genetics of platelet bleeding disorders
- Megakaryocytopoiesis and platelet formation
- Models of venous and arterial thrombosis
- Animal models of cardiovascular diseases
- Actin polymerisation and advanced microscopy
- Platelet function testing
- Granule biogenesis and secretion
- Role of platelets in development and inflammatory processes
- Extracellular vesicles
- Platelet procoagulant activity

Recent Publications

- Watson SP, Lowe G, Lordkipanidze M and Morgan NV (2013) **Genotyping and phenotyping of platelet function disorders**. *J Thromb Haemost*; In press
- Mazharian A, Mori J, Wang YJ, Heising S, Neel BG, Watson SP and Senis YA (2013) **Megakaryocyte-specific deletion of the protein-tyrosine phosphatases Shp1 and Shp2 causes abnormal megakaryocyte development, platelet production and function**. Blood 121:4205-4220
- Schachtner H, Calaminus SDJ, Sinclair A, Moneypenny J, Blundell MP, Leon C, Holyoake TL, Thrasher, AJ, Michie AM, Vukovic M, Gachet C, Jones GE, Thomas SG, Watson SP and Machesky L (2013) **Megakaryocytes assemble podosomes that degrade matrix and protrude through basement membrane**. *Blood* 121:2542-2552
- Finney BA, Schweighoffer E, Navarro-Núñez L, Bénézech C, Barone F, Hughes CE, Langhan S, Lowe KL, Pollitt AY, Mauro-Sa D, Sheardown S, Nash GB, Smither N, Reis e Sousa C, Tybulewicz VLJ and Watson SP (2012) **CLEC-2 and Syk in the megakaryocytic/platelet lineage are essential for development**. *Blood* 119:1747-1756
- Mazharian A, Wang YJ, Mori J, Bem D, Finney B, Heising S, Gissen P, White JG, Berndt MC, Gardiner EE, Nieswandt B, Douglas MR, Campbell RD, Watson SP and Senis YA (2012) **Mice lacking the ITIM-containing receptor G6b-B exhibit macrothrombocytopenia and aberrant platelet function**. *Science Signaling* 5,128-140
- Brill A, Fuchs TA, Chauhan AK, Yang JJ, De Meyer SF, Köllnberger M, Wakefield TW, Lämmle B, Massberg S and Wagner DD (2011)**von Willebrand factor-mediated platelet adhesion is critical for deep vein thrombosis in mouse models**. *Blood* 117:1400-7
- Harrison P, Mackie I, Mumford A Briggs C, Liesner R, Winter M and Machin S (2011) **BCSH guidelines for platelet function testing**. *British Journal of Haematology and BCSH website* 155(1):30-44
- Morgan NV, Goddard S, Cardno TS, McDonald D, Rahman F, Barge D, Ciupek A, Straatman-Iwanowska A, Pasha S, Guckian M, Anderson G, Huissoon A, Cant A, Tate WP, Hambleton S and Maher ER (2011) **Mutation in the TCRa subunit constant gene (*TRAC*) leads to a human immunodeficiency disorder characterized by a lack of TCRab± T cells**. *J Clin Invest* 121:695-702

For full publications lists see:

- **Alexander Brill - publications**
- **Paul Harrison - publications**
- **Neil Morgan - publications**
- **Yotis Senis - publications**
- **Steve Thomas - publications**
- **Steve Watson - publications**

Staff

Principal Investigators
Alexander Brill - School of Clinical and Experimental Medicine
Paul Harrison - School of Immunity and Infection
Neil Morgan - School of Clinical and Experimental Medicine
Yotis Senis - School of Clinical and Experimental Medicine
Steve Thomas - School of Clinical and Experimental Medicine
Steve Watson - School of Clinical and Experimental Medicine

Postdoctoral Researchers
Dr Monica Arman Albert - School of Clinical and Experimental Medicine
Dr Lucia Cardo
Dr Brenda Finney - School of Clinical and Experimental Medicine
Dr Craig Hughes - School of Clinical and Experimental Medicine
Dr Alexandra Mazharian - School of Clinical and Experimental Medicine
Dr Jun Mori - School of Clinical and Experimental Medicine
Dr Leyre Navarro Nuñez
Dr Alyssa Jung Moroi
Dr Alice Pollitt - School of Clinical and Experimental Medicine
Dr Natalie Poulter

PhD/MD Students
Mr Osama Alshehri
Dr Jane Fütterer
Ms Kate Lowe
Dr Gillian Lowe
Miss Samantha Montague

Research Associate
Miss Sian Haines

Research Technicians
Dr Silke Heising
Mrs Louise Tees
Miss Stephanie Watson

Research Administrator
Mrs Gayle Halford

Close ties with other Principal Investigators on platelet related projects
Professor Roy Bicknell - Professor of Functional Genomics
Dr Andrew Blann - Non-clinical Senior Lecturer
Dr Neena Kalia - Senior Lecturer in Cardiovascular Sciences
Professor Gregory Y H Lip - Consultant Cardiologist & Prof of Cardiovascular Medicine
Dr Melanie Madhani - Lecturer in Cardiovascular Medicine
Professor Gerard Nash - Professor of Cardiovascular Rheology
Dr Ed Rainger - Reader in Chronic Inflammation
Dr Michael Tomlinson - British Heart Foundation Senior Research Fellow
Dr Jonathan Wilde - Consultant in Haemostasis and Thrombosis / Hon Senior Lecturer
Dr Mike Williams - Consultant Paediatric Haematologist/Honorary Lecturer

Funding Bodies

- **British Heart Foundation**
- **Engineering and Physical Sciences Research Council (EPSRC)**
- **Healing Foundation**
- **Medical Research Council (MRC)**
- **National Institute for Health Research (NIHR)**
- **Wellcome Trust**

Useful Links

- **NIHR Surgical Reconstruction and Microbiology Research Centre (NIHR SRMRC)**
- **Genotyping and Platelet Phenotyping (The GAPP study)**
- **UK Platelet Group**

- European Platelet Network

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