

Dr Leyre Navarro-Núñez PhD, BSc

BHF Postdoctoral research fellow

Cardiovascular and Respiratory Sciences

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About

Leyre is a British Heart Foundation Postdoctoral Research Fellow in the Birmingham Platelet Group headed by Professor Steve Watson. Leyre has a strong background in platelet biology, haemostasis and signal transduction. Her current research project is focused on understanding the interaction between cells expressing CLEC-2 and podoplanin and unveiling the signalling and functional consequences of these interactions.

Qualifications

- PhD Biology, University of Murcia 2009
- MSc Haematology, University of Murcia 2006
- BSc Biology and Biotechnology, University of Murcia 2004

Biography

Leyre Navarro-Núñez qualified with a BSc in Biology and Biotechnology from the University of Murcia in 2004. She went on to study for a PhD which investigated the effect of dietary flavonoids on platelet function. During her PhD, Leyre spent research stays in Barcelona, Birmingham and Bordeaux. In 2009, Leyre moved to Birmingham to join Professor Steve Watson's platelet group as a postdoctoral research fellow. She is currently funded by the British Heart Foundation.

Teaching

- Integrated Professional and Academic Skills Facilitator –MBChB Year 1.

Postgraduate supervision

Leyre has contributed to co-supervising projects of PhD, MRes and final year BMedSc students.

Research

Leyre's research focuses on the platelet receptor CLEC-2 and its ligand podoplanin. CLEC-2 is a C-type lectin receptor highly expressed on platelets but also found at low levels on other immune cells. CLEC-2 elicits powerful platelet activation upon engagement by its endogenous ligand podoplanin. Podoplanin is expressed in a variety of tissues including lymphatic endothelial cells, kidney podocytes, type I lung epithelial cells, lymph node stromal cells and the choroid plexus epithelium. Leyre's research is focused on understanding the interaction between cells expressing CLEC-2 and podoplanin and unveiling the signalling and functional consequences of these interactions. Leyre is particularly interested in understanding the mechanisms by which platelets modulate lymphangiogenesis and the maintenance of vascular integrity.

Other activities

- Member of the Physiological Society (PhySoc)
- Member of the British Society for Haemostasis and Thrombosis (BSHT)
- Member of the Spanish Society for Haemostasis and Thrombosis (SETH)
- Member of the Spanish Society for Haematology and Haemotherapy (SEHH)

Publications

- Navarro-Núñez L, Langan SA, Nash GB and Watson SP (2013) The physiological and pathophysiological roles of platelet CLEC-2. *Thromb Haemost* 109:991-8
- Unsworth AJ, Finney BA, Navarro-Nunez L, Severin S, Watson SP and Pears CJ (2012) Protein kinase C ϵ and protein kinase C θ double-deficient mice have a bleeding diathesis. *J Thromb Haemost* 10:1887-94
- Lowe KL, Navarro-Nunez L and Watson SP (2012) Platelet CLEC-2 and podoplanin in cancer metastasis. *Thromb Res* 129 Suppl 1:S30-7
- Kerrigan AM, Navarro-Núñez L, Pyz E, Finney BA, Willment JA, Watson SP and Brown GD (2012) Podoplanin-expressing inflammatory macrophages activate murine platelets via CLEC-2. *J Thromb Haemost* 10:484-6

- Finney BA, Schweighoffer E, Navarro-Núñez L, Bénézech C, Barone F, Hughes CE, Langan SA, Lowe KL, Pollitt AY, Mourao-Sa D, Sheardown S, Nash GB, Smithers N, Reis e Sousa C, Tybulewicz VL and Watson SP (2012) CLEC-2 and Syk in the megakaryocytic/platelet lineage are essential for development. *Blood* 119:1747-56
- Navarro-Núñez L, Teruel R, Antón AI, Nurden P, Martínez-Martínez I, Lozano ML, Rivera J, Corral J, Mezzano D, Vicente V and Martínez C (2011) Rare homozygous status of P43 β 1-tubulin polymorphism causes alterations in platelet ultrastructure. *Thromb Haemost* 2011;105:855-63
- Séverin S, Pollitt AY, Navarro-Nuñez L, Nash CA, Mourão-Sá D, Eble JA, Senis YA and Watson SP (2011) Syk-dependent phosphorylation of CLEC-2: a novel mechanism of hem-immunoreceptor tyrosine-based activation motif signaling. *J Biol Chem* 286:4107-16
- Hughes CE, Navarro-Núñez L, Finney BA, Mourão-Sá D, Pollitt AY and Watson SP (2010) CLEC-2 is not required for platelet aggregation at arteriolar shear. *J Thromb Haemost* 8:2328-32

