

Dr Craig Hughes

Research Fellow

Cardiovascular and Respiratory Sciences

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About

Craig is a post-doctoral researcher investigating tyrosine kinase-based signal transduction in platelets. He is also interested in the role of platelets in development and disease.

Qualifications

- PhD Cardiovascular Medicine 2010
- BSc (Hons) Medical Biochemistry 1st Class 2004

Research

Craig's research focuses on the platelet receptor CLEC-2 and the novel signalling motif through which it couples to the platelet signalling machinery. He is comparing the signalling mechanism of this hemITAM motif (CLEC-2) to the more established ITAM pathway (e.g. GPVI/FcR-g chain, FcγRIIA, TCR, BCR) to understand how each receptor type utilise similar signalling pathways.

Craig is also interested in novel ITAM and hemITAM receptors, particularly on platelets, and also in snake venoms which activate platelets either through GPVI or CLEC-2 or through novel receptors

Publications

Hughes CE, Sinha U, Pandey A, Eble JA, O'Callaghan CA, Watson SP (2013) **Critical Role for an Acidic Amino Acid Region in Platelet Signaling by the HemITAM (Hemi-immunoreceptor Tyrosine-based Activation Motif) Containing Receptor CLEC-2 (C-type Lectin Receptor-2).** (<http://www.ncbi.nlm.nih.gov/pubmed/23264619>) J Biol Chem. 2013 Feb 15;288(7):5127-35. doi: 10.1074/jbc.M112.411462. Epub 2012 Dec 21.

Manne BK, Getz TM, Hughes CE, Alshehri O, Dangelmaier C, Naik UP, Watson SP, Kunapuli SP. (2013) **Fucoidan Is a Novel Platelet Agonist for the C-type Lectin-like Receptor 2 (CLEC-2).** (<http://www.ncbi.nlm.nih.gov/pubmed/23341451>) J Biol Chem. 2013 Mar 15;288(11):7717-26. doi: 10.1074/jbc.M112.424473. Epub 2013 Jan 22.

Hughes CE, Radhakrishnan UP, Lordkipanidzé M, Egginton S, Dijkstra JM, Jagadeeswaran P, Watson SP (2012) **G6f-like is an ITAM-containing collagen receptor in thrombocytes.** (<http://www.ncbi.nlm.nih.gov/pubmed/23285115>) PLoS One. 2012;7(12):e52622. doi: 10.1371/journal.pone.0052622. Epub 2012 Dec 21.

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Jarvis GE, Bihan D, Hamaia S, Pugh N, Ghevaert CJ, Pearce AC, Hughes CE, Watson SP, Ware J, Rudd CE, Farndale RW. (2012) **A role for adhesion and degranulation-promoting adapter protein in collagen-induced platelet activation mediated via integrin $\alpha(2)\beta(1)$.** (<http://www.ncbi.nlm.nih.gov/pubmed/22103309>) J Thromb Haemost. 2012 Feb;10(2):268-77. doi: 10.1111/j.1538-7836.2011.04567.x.

Brazón J, Hughes CE, Mori J, Sevcik C, D'suza G, Watson SP. (2011) **Tityus discrepans scorpion venom activates platelets through GPVI and a novel Src-dependent signaling pathway.** (<http://www.ncbi.nlm.nih.gov/pubmed/21322750>) Platelets. 2011;22(3):165-72. doi: 10.3109/09537104.2010.544343. Epub 2011 Feb 15.

Hughes CE, Navarro-Núñez L, Finney BA, Mourão-Sá D, Pollitt AY, Watson SP; (2010) CLEC-2 is not required for platelet aggregation at arteriolar shear. **JTH**; 8(10) 2328-32

Hughes CE, Pollitt AY, Mori J, Eble JA, Tomlinson MG, Hartwig JH, O'Callaghan CA, Fütterer K, Watson SP; (2010) CLEC-2 activates Syk through dimerisation. **Blood**; 115(14) 2947-55

Spalton JC, Mori J, Pollitt AY, Hughes CE, Eble JA, Watson SP; (2009) The novel Syk inhibitor R406 reveals mechanistic differences in the initiation of GPVI and CLEC-2 signalling in platelets. **JTH**; 7(7) 1192-9

Grygielska B, Hughes CE, Watson SP ; (2009) Molecular basis of platelet activation by an $\alpha_{IIb}\beta_3$ -CHAMPS peptide. **JTH**; 7(2) 339-46

Pears C, Thornber K, Auger JM, Hughes CE, Grygielska B, Pearce AC, Watson SP; (2008) Differential roles of the PKC novel isoforms, PKCd and PKCe, in mouse and human platelets. **PLoS ONE**; 3(11) e3793

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Riba R, Hughes CE, Graham A, Watson SP, Naseem KM; (2008) Globular adiponectin induces platelet activation through the collagen receptor GPVI-Fc receptor gamma

