



## Publications and Patents- Dr Simon E Hufton

Sandra Prior, Simon E. Hufton, Bernard Fox, Thomas Dougall, Peter Rigsby, Adrian Bristow and Participants of the collaborative study , International Standards for Monoclonal Antibodies to support pre- and post-marketing product consistency: Evaluation of a candidate International Standard for the bioactivities of Rituximab. *MAbs.* (2017) 6:1-14. doi: 10.1080/19420862.2017.1386824. [Epub ahead of print]

Gurjar SA, Derrick JP, Dearman RJ, Thorpe R, Hufton S, Kimber I, Wadhwa M. Surrogate CD16-expressing effector cell lines for determining the bioactivity of therapeutic monoclonal antibodies. *J Pharm Biomed Anal.* (2017);143:188-198. doi: 10.1016/j.jpba.2017.06.004. Epub 2017 Jun 9.

Gaiotto T and Hufton S.E. Cross-neutralising nanobodies bind to a conserved pocket in the hemagglutinin stem region identified using yeast display and deep mutational scanning. *PLoS One.*11(10):e0164296. doi: 10.1371/journal.pone. (2016)

Hufton SE, Risley P, Ball C, Major D, Engelhardt OG and Poole S. The breadth of cross sub-type neutralisation activity of a single domain antibody to influenza hemagglutinin can be increased by antibody valency. *PLoS One.*9(8):e103294. doi: 10.1371/journal.pone. (2014)

Ball C, Fox B, Hufton S, Sharp G, Poole S, Stebbings R, Eastwood D, Findlay L, Parren PW, Thorpe R, Bristow A and Thorpe SJ. Antibody C region influences TGN1412-like functional activity in vitro. *J Immunol* doi:10.4049/jimmunol.1201795 (2012).

Hufton S.E. Affinity maturation and functional dissection of a humanised anti-RAGE monoclonal antibody by ribosome display. *Methods Mol Biol.* (2012); 805:403-22.

Fennell, B. J., Darmanin-Sheehan, A., Hufton, S. E., Calabro, V., Wu, L., Müller, M. R., Cao, W., Gill, D., Cunningham, O., & Finlay, W. J. J., "Dissection of the IgNAR V domain: molecular scanning and orthologue database mining define novel IgNAR hallmarks and affinity maturation mechanisms", *Journal of Molecular Biology*, (2010) vol. 400, no. 2, pp. 155-170.

William Finlay, Orla Cunningham, Matthew Lambert, Alfredo Sheehan, Xuemei Germaine, Ciara Mahon, Jason Wade, Nicole Piche, Sreekumar Kodangatil, Lioudmila Tchistiakov, Davinder Gill, Simon E. Hufton. Affinity maturation of a humanized rat antibody for anti-RAGE therapy: comprehensive mutagenesis reveals a high level of mutational plasticity both inside and outside the complementarity-determining regions. *J. Molecular Biology* (2009), 388 (3) 541-58

Santegoets, S.J., Schreurs, M.W., Reurs, A.W., Lindenberg, J.J., van den Eertwegh, A.J., Hooijberg, E., Brandwijk, R.J., Hufton, S.E., Hoogenboom, H.R., Scheper, R.J., Somers, V.A., de Gruijl, T.D. Identification and characterisation of ErbB-3-binding protein-1 as a target for immunotherapy. (2007) *J. Immunology*, 179(3), 2005-12

René Michael Hoet, Edward H. Cohen, Rachel Baribault Kent, Kristin Rookey, Sonia Schoonbroodt, Shannon Hogan, Louise Rem, Nicolas Frans, Marc Daukandt, Henk Pieters, Rob van Hegelsom, Nicole Coolen-van Neer, Horacio G. Nastri, Isaac J. Rondon, Jennifer A. Leeds, Simon E. Hufton, Andrew E. Nixon, Dan Sexton, Hennie R. Hoogenboom, and Robert Charles Ladner. High-Affinity Human Antibodies from Combined Synthetic and Donor-Derived Diversity. (2005) *Nature Biotechnology*, 23, 244-248

Blaise, L., Wehnert, A., Steukers, M., van den Beucken, T., Hoogenboom, H and Hufton, S.E. Construction and diversification of yeast cell surface displayed libraries by yeast mating : application to the affinity maturation of Fab antibody fragments (2004) *Gene*, 242, 211-218

van den Beucken, T., Pieters, H., Steukers, M., van der Vaart, M., Ladner, B., Hoogenboom, H and Hufton, S.E. Functional display and affinity maturation of human Fab antibodies by fluorescent activated cell sorting of yeast displayed repertoires. (2003) *FEBS Letts*, 546, 288-294

Somers, V.A.MC., Brandwijk, R., Huijbers, D., de Bruïne, A.P., Arends, J.-W., Scheper, R., Hoogenboom, H.R. and Hufton, S.E. A panel of candidate tumor antigens in colorectal cancer revealed by serological selection of a phage displayed cDNA expression library. (2002) *J. Immunology* 169(5) 2772-80

Bijnum, J., Moerkerk, P., de Bruine A., Arends, J.W. Hoogenboom, H and Hufton, S.E. Target validation for genomics using peptide specific phage antibodies: a study of five gene products overexpressed in colorectal cancer. (2002) *Int. J.Cancer* 101(2) 118-27

van den Beucken, T., van Neer, N., Desmet, J., Sablon, E., Hoogenboom, HR. and Hufton, S.E. Human single VL domain repertoires : Isolation and affinity maturation of specific binding ligands to CD80 and CD86. (2001) *J. Molecular Biology* 310(3), 591-601

Hufton S.E. Single domain human Ig fold based biomolecules. (2000) *Disease markers* (16) 1-2

Patrick Chames, Simon E. Hufton, Pierre G. Coulie, Barbara Uchanska-Ziegler, Hennie R. Hoogenboom. (2000). Direct selection of a human antibody fragment binding to the tumor T cell epitope HLA-A1/MAGE-A1 from a non immunized phage-Fab library. *Proc.Natl.Acad.Sci.* 97(14). 7969-74

Hufton, S.E., van Neer, N., van den Beucken, T., Desmet, J., Sablon, E. and Hoogenboom, H.R.-Development of CTLA-4 as a protein scaffold for the generation of novel binding ligands. (2000). *FEBS letters*. 475(3), 225-31

Hufton, S.E., Moerkerk, P., Brandwijk,R., de Bruïne, A.P., Arends, J.W. and Hoogenboom, H. (1999) A profile of differentially expressed genes in primary colorectal cancer using suppression subtractive hybridisation. *FEBS letters* 463, 77-82

Hufton, S.E., Moerkerk, P., de Bruïne, A.P., Arends, J.W. and Hoogenboom, HR. (1999) Phage display of cDNA repertoires : The pVI display system and its applications for the selection of immunogenic ligands. *J. Immunol Methods* 231, 39-51.

de Haard, H., van Neer, N., Reurs, A., Hufton, S.E., Roovers, R.C., Henderikx, P., Arends, J.W. and Hoogenboom, H.R. (1999) A large non-immunized human Fab fragment phage library that permits rapid isolation and kinetic-analysis of high affinity antibodies. *J. Biol. Chem* 274:18218-30.

Nuttall, S.D., Rousch, M.T, Irving, R.A., Hufton, S.E., Hoogenboom, H.R. and Hudson, P.J. (1999) Design and Expression of Soluble CTLA-4 Variable Domain as a Scaffold for the Display of Functional Polypeptides. *Proteins, Structure Function Genetics* 36, 217-227.

Bradbury, A., Sblattero, D., Hoogenboom, R R. and Hufton, S. (1999) Making phage antibody libraries. In *Combinatorial Chemistry and Technology, Principles, Methods and applications*, Eds. Miertus, S. and Fassina, G. Marcel Dekker Inc., NY/Basel, p. 323-364.

Hoogenboom, H.R.,de Bruïne, A.P., Hufton,S.E., Hoet,R.M, Arends, J.W. and Roovers, R.C. (1998) Antibody phage display technology and its applications. *Immunotechnol.* 4, 1-20.

Hufton, S.E., Moerkerk, P., de Bruine, A.P, Arends, J.W. and Hoogenboom, H.R. (1998). Serological antigen selection of phage displayed colorectal tumour cDNA libraries. *Biochem. Soc. Trans.* 26,11-13.

Hufton S.E., Jennings, I. J. and Cotton, R.G.H. (1998). Structure/Function analysis of the domains required for the multimerisation of phenylalanine hydroxylase. *Biochim et Biophys Acta* 1382, 295-304

Hufton S.E., Jennings, I. J. and Cotton, R, G.H. (1995). The structure and function of the aromatic amino acid hydroxylases. *Biochem. J.* 311, 353-366

Hufton S.E., Ward, R.J., Fletcher, A.J.P., Bunce, N.A.C. and Glass, R.E. (1995). A structure-Function analysis of the vitamin BI2 receptor of *E.coli* by means of informational suppression. *Mol. Microbiol.* 15(2) 381-393.

## Patents

- Hufton S. (2013). "Influenza virus antibody compositions". Patent WO/2013/030604.
- Hufton SE, Finlay WJJ. (2010) "Compatible display vector systems". Patent WO/2010/ 036860.
- Hufton SE, Finlay WJJ, Broadbent ID, Bloom L. (2010)."Single-chain antibody library design". Patent WO/2010/0124764.
- Hufton SE, Finlay WJJ, Cunningham O, Sheehan AD, Germaine X. Lambert M. (2010) "Humanized anti-RAGE antibody". WO/2010/019656.
- Wood CR, Dransfield DT, Pieters H, Hoet R, Hufton SE. (2010). " methods of inhibition of vascular development with an antibody". Patent WO/2010/0196361.
- Pieters H, Hoet R, Dransfield DT, Wood C. Hufton SE (2006)." Tie complex binding proteins". Patent WO/2006/020706.
- Hufton SE. (2003). "Recombination of nucleic acid members". Patent WO/2003/03106639
- Hufton SE, Hoogenboom HRH. (2003). "Multichain eukaryotic display vectors and uses thereof ". Patent WO/2003/029456.
- EP 1163339. (1999) Desmet, J., Hufton, S.E., Hoogenboom, H.R. and Sablon, E. A polypeptide structure for use as a scaffold.
- US 2007 104715. (2007) Christin Anderson, Christer Nordstedt, Tom Goldschmidt, Maria Henderikx, Rene Hoet, Hendricus Hoogenboom, Simon E. Hufton. Antibodies binding to a C-terminal fragment of apolipoprotein E.