Curriculum Vitae: William Wisden, FSB, FMedSci

Chair of Molecular Neuroscience,
Dept of Life Sciences,
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Education:

King's Manor Comprehensive (State) School, Shoreham-By-Sea, W Sussex, 1976-1982.

University of Cambridge, BA, Class I, Zoology, Natural Sciences, 1983-1986.

University of Cambridge & MRC Molecular Neurobiology Unit, 1986- 1989, MRC studentship, PhD, (supervisor: Prof. SP Hunt), awarded 1990.

Employment:

Laboratory technician, Beecham Pharmaceuticals (Smithkline Beecham), Worthing, 1982-1983; and summer 1984.

EMBO Long-term Fellowship, with Prof. PH Seeburg, ZMBH, University of Heidelberg, Germany, 1990-1992.

Group Leader, MRC Laboratory of Molecular Biology, Cambridge, 1993-2001.

Group Leader, IZN, University of Heidelberg, Germany, 2001-2005.

Professor & Chair of Neuroscience, University of Aberdeen, Scotland, 2005-2009.

Chair of Molecular Neuroscience, Imperial College London, 2009-present (HEFC- Non-clinical appointment).

Editorial Boards:

Editorial Board: PeerJ (Sept-2012-present)

Editorial Board: Neuroscience Bulletin (2011-present)

Editorial Board: Frontiers in Molecular Neuroscience (2007- present)

Editorial Board: Neuroscience (1996-2012)

External committees

Spemann Graduate School of Biology and Medicine- Freiburg, Advisory Board

Welcome Trust: Neuroscience & Mental Health Committee (October 2009 – April 2011)

MRC: Neurosciences & Mental Health Board (NMHB) (Jan 2012-present)

Awards

Fellow of the Academy of Medical Sciences (elected April 2014)

Membership of Professional Organizations:

British Neuroscience Association (since 1987; committee member in the mid-90s)

Society for Neuroscience (since 1993)

European Biological Rhythms Society (since 2013)

Fellow of the Society of Biology (elected May 2012)

Recent Research Grants held:

MRC: £535,644 2006-2009 (36 months) "Sleep pathways and general anaesthesia", N Franks (principal applicant), S Brickley, M Maze & W Wisden (G0501584); 2006 – 2009

MRC: £536,371 2007-2010 (36 months) "GABAergic interneurones and schizophrenia", W Wisden (principal applicant) & P Wulff (G0601498)

BBSRC: £605,932 (36 months) "The role of TASK channels in theta oscillations and behaviour", N Franks (principal applicant), S Brickley & W Wisden; Started October 2009

MRC: £877,445 2009-2014 (60 months) "Cerebellar circuitry: from synapse to behaviour", W Wisden (principal applicant), M Bartos & P Wulff (G0800399).

MRC: £ 1,521,862, 2010- 2015. (60 months) "Neuronal pathways of sleep and anaesthesia" N Franks (principal applicant) S. Brickley & W. Wisden (G0901892)

Wellcome Trust: £350, 000, 2011-2015 (36 months). S. Brickley (principal applicant), N. Franks & W. Wisden. Exploring the link between extrasynaptic $GABA_A$ receptors and behaviour.

MRC: (36 months) S. Trapp (principal applicant), W. Wisden, G. Rutter & A.V. Gourine. How the brain controls food intake: the emerging role of the brain GLP-1 system in energy balance and autonomic control. Started Sept 2012

BBSRC: (36 months) S. Schultz (principal applicant), W. Wisden & P. Chadderton. A platform for high throughput two photon-targeted in vivo cellular physiology. Starts Oct 2012.

BBSRC: £99,932, 2011-2015. Training grant/Industrial Case award. NP Franks (principal applicant), K Wafford & W Wisden. "The role of histamine in sleep and arousal".

BBSRC: (36 months) Oct. 2013-2016 W. Wisden (principal applicant), S. Brickley, M. Hastings, N. Franks. "The intersection of circadian rhythms and the sleep-wake cycle"

Current research interests and techniques

Mechanisms of sleep
Genetic manipulations of sleep circuitry

Publications

132 publications, of which 101 are peer-reviewed articles (h index = 50, Thomson ISI; h index = 55, Google Scholar)

Ten key papers:

- **Wisden W**, Errington ML, Williams S, Dunnett SB, Waters C, Hitchcock D, Evan G, Bliss TVP, Hunt SP (1990). Differential expression of immediate early genes in the hippocampus and spinal cord. *Neuron* 4: 603-614. (579 citations)
- Keinänen K, **Wisden W**, Sommer B, Werner P, Herb A, Verdoorn TA, Sakmann B, Seeburg PH (1990). A family of AMPA-selective glutamate receptors. *Science* 249: 556-560. (1197 citations)
- Monyer H, Seeburg PH, **Wisden W** (1991). Glutamate-operated channels: Developmentally early and mature forms arise by alternative splicing. *Neuron* 6: 799-810. (395 citations)
- **Wisden W**, Laurie DJ, Monyer H, Seeburg PH (1992). The distribution of 13 $GABA_A$ receptor subunit mRNAs in the rat brain. I. Telencephalon, diencephalon, mesencephalon. *J Neurosci* 12: 1040-1062. (1210 citations)
- **Wisden W**, Seeburg PH (1993). A complex mosaic of high-affinity kainate receptors in rat brain *J. Neurosci* 13: 3582-3598. (313 citations)
- Jones A, Korpi ER, McKernan RM, Pelz R, Nusser Z, Mäkelä R, Mellor JR, Pollard S, Bahn S, Stephenson FA, Randall AD, Sieghart W, Somogyi P, Smith AJH,

Wisden W (1997). Ligand-gated ion channel subunit partnerships: $GABA_A$ receptor α6 subunit gene inactivation inhibits δ subunit expression. *J. Neurosci*. 17: 1350-1362 (222 citations)

- Brickley SG, Revilla V, Cull-Candy SG, **Wisden W**, Farrant M (2001) Adaptive regulation of neuronal excitability by a voltage-independent K^+ conductance. *Nature* 409: 88-92 (321 citations)
- Wulff P, Goetz T, Leppä E, Linden A-M, Renzi M, Swinny JD, Vekovischeva OY, Sieghart W, Somogyi P, Korpi ER, Farrant M, **Wisden W** (2007). From synapse to behaviour: rapid modulation of defined neuronal types by engineered $GABA_A$ receptors. *Nature Neuroscience* 10: 923-929. (44 citations)
- Wulff P, Ponomarenko AA, Bartos M, Korotkova TM, Fuchs EC, Bahner F, Both M, Tort AB, Kopell NJ*, **Wisden W*,** Monyer H* (2009) Hippocampal theta rhythm and its coupling with gamma oscillations require fast inhibition onto parvalbumin-positive interneurons. *Proc Natl Acad Sci USA* 106:3561-3566. (*KNJ, WW and MH are co-senior authors) (73 citations)
- Murray, A.J., Sauer, J.F., Riedel, G., McClure, C., Ansel, L., Cheyne, L., Bartos, M., **Wisden, W*,** Wulff, P*. (2011) Parvalbumin-positive CA1 interneurons are required for spatial working but not for reference memory. *Nat Neurosci* 14: 297-299. (*WW and PW are co-senior authors) (34 citations)