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## Research outputs

### **New Compounds from the Deep-sea Sponge *Mycale lingua***

Clark, H. P. (Corresponding Author), Horsley, D., Serpell-Stevens, A., Horton, T., Larson, A. I., Oluwabusola, E. T., Ebel, R., De Clippele, L. H. & Jaspars, M. (Corresponding Author), Feb 2026, In: *Chemistry & Biodiversity*. 23, 2, 6 p., e03519.

### **Rescue of synaptosomal glutamate release defects in tau transgenic mice by the tau aggregation inhibitor hydromethylthionine**

Cranston, A., Kraev, I., Stewart, M. G., Horsley, D., Robinson, L., Dreesen, E. S., Armstrong, P., Palliyil, S., Harrington, C., Wischik, C. & Riedel, G. (Corresponding Author), Sept 2024, In: *Cellular Signalling*. 121, 11 p., 111269.

### **LETC inhibits $\alpha$ -Syn aggregation and ameliorates motor deficiencies in the L62 mouse model of synucleinopathy**

Schwab, K. (Corresponding Author), Frahm, S., Magbagbeolu, M., Horsley, D., Goatman, E., Melis, V., Theuring, F., Ishaq, A., Storey, J. M. D., Harrington, C., Wischik, C. & Riedel, G., 5 May 2024, In: *European Journal of Pharmacology*. 970, 50 p., 176505.

### **Assays for the Screening and Characterization of Tau Aggregation Inhibitors**

Horsley, D., Rickard, J. E., Vorley, T., Leeper, M. F., Wischik, C. M. & Harrington, C. R. (Corresponding Author), 24 Mar 2024, *Tau Protein: Methods and Protocols*. 2 ed. Vol. 2754. p. 93-104 12 p. (Methods in molecular biology (Clifton, N.J.); vol. 2754).

### **Alpha-Synuclein transgenic mice, h- $\alpha$ -SynL62, display $\alpha$ -Syn aggregation and a dopaminergic phenotype reminiscent of Parkinson's disease**

Frahm, S., Melis, V., Horsley, D., Rickard, J., Riedel, G., Fadda, P., Scherma, M., Harrington, C., Wischik, C., Theuring, F. & Schwab, K., 26 Feb 2018, In: *Behavioural Brain Research*. 339, p. 153-168 16 p.

### **A Protein Aggregation Inhibitor, Leuco-Methylthioninium Bis(Hydromethanesulfonate), Decreases $\alpha$ -Synuclein Inclusions in a Transgenic Mouse Model of Synucleinopathy**

Schwab, K., Frahm, S., Horsley, D., Rickard, J. E., Melis, V., Goatman, E. A., Magbagbeolu, M., Douglas, M., Leith, M. G., Baddeley, T. C., Storey, J. M. D., Riedel, G., Wischik, C. M., Harrington, C. R. (Corresponding Author) & Theuring, F., 10 Jan 2018, In: *Frontiers in Molecular Neuroscience*. 10, 15 p., 447.

### **Assays for the Screening and Characterization of Tau Aggregation Inhibitors**

Rickard, J. E., Horsley, D., Wischik, C. M. & Harrington, C. R., 15 Dec 2016, *Tau Protein: Methods and Protocols*. Smet-Nocca, C. (ed.). Springer, Vol. 1523. p. 129-140 12 p. (Methods in Molecular Biology; vol. 1523).

### **Different pathways of molecular pathophysiology underlie cognitive and motor tauopathy phenotypes in transgenic models for Alzheimer's disease and frontotemporal lobar degeneration**

Melis, V., Zabke, C., Stamer, K., Magbagbeolu, M., Schwab, K., Marshall, P., Weh, R. W., Bachmann, S., Deiana, S., Moreau, P. H., Davidson, K., Harrington, K. A., Rickard, J. E., Horsley, D., Garman, R., Mazurkiewicz, M., Niewiadomska, G., Wischik, C. M., Harrington, C. R. & Riedel, G. & 1 others, Theuring, F., Jun 2015, In: *Cellular and Molecular Life Sciences*. 72, 11, p. 2199-2222 24 p.

### **Effects of oxidized and reduced forms of methylthioninium in two transgenic mouse tauopathy models**

Melis, V., Magbagbeolu, M., Rickard, J. E., Horsley, D., Davidson, K., Harrington, K. A., Goatman, K., Goatman, E. A., Deiana, S., Close, S. P., Zabke, C., Stamer, K., Dietze, S., Schwab, K., Storey, J. M. D., Harrington, C. R., Wischik, C. M., Theuring, F. & Riedel, G., Jun 2015, In: *Behavioural Pharmacology*. 26, 4, p. 353-368 16 p.

### **Cellular Models of Aggregation-Dependent Template-Directed Proteolysis to Characterize Tau Aggregation Inhibitors for Treatment of Alzheimer's Disease**

Harrington, C. R., Storey, J. M. D., Clunas, S., Harrington, K. A., Horsley, D., Ishaq, A., Kemp, S. J., Larch, C. P., Marshall, C., Nicoll, S. L., Rickard, J. E., Simpson, M., Sinclair, J. P., Storey, L. J. & Wischik, C. M., 24 Apr 2015, In: *The Journal of Biological Chemistry*. 290, 17, p. 10862-10875 14 p.

**Complex Disposition of Methylthioninium Redox Forms Determines Efficacy in Tau Aggregation Inhibitor Therapy for Alzheimer's Disease**

Baddeley, T. C., McCaffrey, J., Storey, J. M. D., Cheung, J. K. S., Melis, V., Horsley, D., Harrington, C. R. & Wischik, C. M., Jan 2015, In: Journal of Pharmacology and Experimental Therapeutics. 352, 1, p. 110-118 9 p.

**New phenothiazine diaminium compounds are tau protein aggregation inhibitors, useful to treat e.g. Alzheimer's disease, Pick's disease, progressive supranuclear palsy, frontotemporal dementia and frontotemporal lobar degeneration syndromes**

Baddeley, T. (Inventor), Clunas, S. (Inventor), Harrington, C. R. (Inventor), Horsley, D. (Inventor), Ishaq, A. (Inventor), Khan, K. (Inventor), Loh, Y. S. (Inventor), Marshall, C. (Inventor), Rickard, J. E. (Inventor), Simpson, M. (Inventor), Sinclair, J. P. (Inventor), Storey, J. M. D. (Inventor), Williamson, C. (Inventor), Wischik, C. M. (Inventor) & Wood, B. A. (Inventor), 16 Aug 2012, Patent No. WO2012107706-A1, Priority date 11 Feb 2011

**3,7-diamino-10H-phenothiazine salts and their use: WO2007110627**

Wischik, C. M. (Inventor), Rickard, J. E. (Inventor), Harrington, C. R. (Inventor), Horsley, D. (Inventor), Storey, J. M. D. (Inventor), Marshall, C. (Inventor), Sinclair, J. P. (Inventor) & Baddeley, T. (Inventor), 15 Feb 2011, Patent No. US7,888,350

**3,6-Disubstituted xanthylium salts**

Clunas, S. (Inventor), Storey, J. M. D. (Inventor), Horsley, D. (Inventor), Rickard, J. E. (Inventor), Harrington, C. R. (Inventor) & Wischik, C. M. (Inventor), 17 Jun 2010, IPC No. WO2010/067078

**Methods of chemical synthesis and purification of diaminophenothiazinium compounds including methylthioninium chloride (MTC): methods of treatment of a tauopathy condition comprising the use of thioninium compounds**

Wischik, C. M. (Inventor), Rickard, J. E. (Inventor), Harrington, C. R. (Inventor), Horsley, D. (Inventor), Storey, J. M. D. (Inventor), Marshall, C. (Inventor) & Sinclair, J. P. (Inventor), 15 Jun 2010, Patent No. US7,737,138

**Ligands for aggregated tau molecules: WO2010034982**

Kemp, S. J. (Inventor), Storey, J. M. D. (Inventor), Rickard, J. E. (Inventor), Harrington, C. R. (Inventor), Horsley, D. (Inventor), Wischik, C. M. (Inventor), Clunas, S. (Inventor) & Heinrich, T. (Inventor), 1 Apr 2010, Patent No. WO2010/034982

**Inhibitors of protein aggregation: WO2007110629**

Wischik, C. M. (Inventor), Rickard, J. E. (Inventor), Horsley, D. (Inventor) & Harrington, C. R. (Inventor), 4 Oct 2007, Patent No. WO2007110629

**Naphthoquinone-type inhibitors of protein aggregation**

Wischik, C. M. (Inventor), Horsley, D. (Inventor), Rickard, J. E. (Inventor) & Harrington, C. R. (Inventor), 2003, Patent No. WO 03/007933; published 30.01.03

**Materials and methods relating to protein aggregation in neurodegenerative disease: WO2002059150**

Wischik, C. M. (Inventor), Rickard, J. E. (Inventor), Horsley, D. (Inventor) & Harrington, C. R. (Inventor), 1 Aug 2002, Patent No. PCT/GB02/00005; published 1.08.02

**Materials and methods relating to protein aggregation in neurodegenerative disease: WO2002055720**

Wischik, C. M. (Inventor), Horsley, D. (Inventor), Rickard, J. E. (Inventor) & Harrington, C. R. (Inventor), 2002, Patent No. PCT/GB02/00153; published 18.07.02

**Neurofibrillary labels**

Wischik, C. M. (Inventor), Harrington, C. R. (Inventor), Rickard, J. E. (Inventor) & Horsley, D. (Inventor), 2002, Patent No. WO 02/075318 A2; published 26.09.02

**Impacts**

**Discovery and commercialisation of an entirely new drug for the treatment of Alzheimer's disease**

Wischik, C. (Participant), Harrington, C. (Participant), Storey, J. (Participant), Rickard, J. (Participant), Horsley, D. (Participant), Baddeley, T. (Participant), Kemp, S. (Participant), Sinclair, J. (Participant), Zabke, C. (Participant), Theuring, F. (Participant), Stamer, F. (Participant) & Marshall, C. (Participant)

**Discovery and development of a new drug for the treatment of dementia**

Wischik, C. (Coordinator), Harrington, C. (Coordinator), Storey, J. (Participant), Rickard, J. (Participant) & Horsley, D. (Participant)