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Research background

I have worked for more than 15 years in polyglutamine disorder research and in particular Huntington Disease research. In New Zealand, the first part of my career was focused on protein-protein interactions in Huntington's disease using post mortem human brain tissue and *in vitro* models. More recently I moved back to The Netherlands where I work in the department of Human Genetics of the LUMC where my work is mainly focused on gene expression changes in HD models and patient material and the development of novel therapeutic strategies for HD and other polyglutamine disorders.

Expertise

- molecular biology
- experimental therapeutics
- post mortem human brain tissue
- novel genome technologies

Techniques

- antisense oligonucleotides
- next generation sequencing
- ChIPseq
- immunohistochemistry

Selection of 10 most relevant/recent publications

- A.E. Ivliev, P.A.C. 't Hoen, **W.M.C. van Roon-Mom**, D.J. Peters, M.G. Sergeeva. Exploring the transcriptome of ciliated cells using in silico dissection of human tissues. **PlosOne 2012**;7(4):e35618
- E.M. Dumas, M. Versluis, S.J.A. van den Bogaard, M.J.P. van Osch, E.P. 't Hart, **W.M.C. van Roon-Mom**, M.A. van Buchem, A.G. Webb, J. van der Grond, R.A.C. Roos, and the TRACK-HD investigators. Elevated brain iron is predictive of disease state in Huntington's Disease. Epub **Neuroimage** March 28, **2012**
- A. Mastrokolias, J.T. den Dunnen, G.J.B. van Ommen, P.A.C. 't Hoen, **W.M.C. van Roon-Mom**. Globin reduction in RNA from human peripheral blood increases sensitivity of next generation sequencing-based expression profiling. **BMC Genomics** 13(1)(**2012**):28-37.
- M.M. Evers, J.C.T. van Deutekom, A.M. Aartsma-Rus, P. Paganetti, J.T. den Dunnen, G.J.B. van Ommen, and **W.M.C. van Roon-Mom**. Specific reduction of prolonged CAG repeat containing transcripts using antisense oligonucleotides. **PLoS One. 2011**;6(9):e24308. Epub 2011 Sep 1
- I. Zalachorasa, M.M. Evers, **W.M.C. van Roon-Mom**, A.M. Aartsma-Rus, O.C. Meijer. Antisense-mediated RNA targeting: versatile and 1 expedient genetic manipulation in the brain. **Frontiers in Molecular Neuroscience**. (**2011**) Vol 4 article 10
- H.H. van Haagen, P.A.C. 't Hoen, A. de Morrée, **W.M.C. van Roon-Mom**, D.J. Peters, M. Roos, B. Mons, G.J.B. van Ommen, M.J. Schuemie. In silico discovery and experimental validation of new protein-protein interactions. **Proteomics**. **2011** Mar;11(5):843-53.
- N.A. Aziz, C.K. Jurgens, G.B. Landwehrmeyer, EHDN Registry Study Group, **W.M.C. van Roon-Mom**, G.J.B. van Ommen, T. Stijnen, R.A.C. Roos. Normal and Mutant HTT interact to affect clinical severity and progression in Huntington disease. **Neurology** (**2009**) 73(16):1280-5

- B.A. Pepers, M.H. Schut, R.H.A.M. Vossen, G.J.B. van Ommen, J.T. den Dunnen, **W.M.C. van Roon-Mom**. Cost-effective HRMA pre-sequence typing of clone libraries; application to phage display selection. **BMC Biotechnology** (**2009**) 9: 50-56
- **W.M.C. van Roon-Mom**, B.A. Pepers, P.A.C. 't Hoen, C.A.C.M. Verwijmeren, J.T. den Dunnen, J.C. Dorsman, G.J.B. van Ommen. Mutant huntingtin activates Nrf2-responsive genes and impairs dopamine synthesis in a PC12 model of Huntington's disease. **BMC Molecular Biology** (**2008**), 9(1): 84-97
- M.A. Curtis, M. Kam, U. Nannmark, M.F. Anderson, M. Zetterstrom Axell, C. Wikkelso, S. Holtås, **W.M.C. van Roon-Mom**, T. Björk-Eriksson, C. Nordborg, J. Frisén, M. Dragunow, R.L.M. Faull, P.S. Eriksson. Human Neuroblasts Migrate to the Olfactory Bulb via a Lateral Ventricular Extension. **Science** (**2007**) Vol 315, 2 March:1243-1249