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Biography

Karen studied biochemistry at the University of Leeds spending one year as a sandwich student at GlaxoSmithKline (GSK), Essex. At GSK Karen experienced the drug discovery process through performing large-scale purifications of protein drug targets. Developing a strong interest in neurodegeneration Karen joined the lab of Dr Jean-Marc Gallo at the Institute of Psychiatry, King's College London. Her PhD "tau RNA processing in neurodegeneration: *trans*-acting factors regulating alternative splicing and mRNA localisation" was awarded in 2009. As a post-doc in Dr Gallo's lab Karen established proof-of-concept for RNA reprogramming strategies including RNA *trans*-splicing therapies for spinocerebellar ataxia type 1 and the tauopathies. In 2010 Karen successfully translated her RNA expertise to the neuromuscular field and moved to the Dubowitz Neuromuscular Centre, Institute of Child Health, University College London (UCL). Working with Professor Francesco Muntoni, Karen played a key role in developing antisense oligonucleotide-mediated exon skipping as a therapeutic strategy for Duchenne muscular dystrophy (DMD). Her pre-clinical and clinical work in this area culminated in the first FDA-approved drug for DMD. In 2015 Karen attained a lectureship at the University of Northampton where she founded and leads the Molecular Biosciences Research Group. Her laboratory investigates the molecular mechanisms of neurological disorders with a focus on the neuropathophysiology of DMD. Karen also consults for international pharmaceutical and biotechnology companies on methodology for clinical trial biochemical outcome measures and the development of exon skipping therapies.

Research outputs

A multicenter comparison of quantification methods for antisense oligonucleotide-induced DMD exon 51 skipping in Duchenne muscular dystrophy cell cultures
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Tau mRNA is present in axonal RNA granules and is associated with elongation factor 1A
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Biochemical characterization of patients with in-frame or out-of-frame DMD deletions pertinent to Exon 44 or 45 skipping
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