Names (Presenter in bold font)	Elise Kellett
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Title	Exploring TDP-43 phosphorylation through kinases
Abstract (max 300w)	Cytoplasmic aggregation of hyperphosphorylated TDP-43 is a major pathological hallmark of Motor Neuron Disease. However, the role of TDP-43 phosphorylation in disease progression is unclear with conflicting views as to whether it drives or protects against disease. To better understand the role of phosphorylation of TDP-43 in disease, we investigated kinases that directly phosphorylate TDP-43 using in vitro immunochemistry and confocal fluorescence microscopy techniques. We utilised kinase overexpression vectors and different TDP-43 variants to compare the influence of TDP-43 kinases and to test whether increased phosphorylation correlates with increased or reduced pathology. Our results find that CK1δ had the greatest influence on transgenic and endogenous TDP-43 phosphorylation when overexpressed. Additionally, we show that phosphorylation may be protective due to soluble phosphorylated TDP-43 and decreased insoluble total TDP-43. Our study illustrates the importance of investigating TDP-43 phosphorylation and highlights the value of TDP-43 kinase studies.

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