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S'inscrire / Registration: idigh.ca/webinars/raquel-cuella-martin

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Precision genome editing to study gene function, human genetic variation and drug development

In this talk, I will discuss the use of precision genome editing to advance our study of protein and gene function, alongside its translational application to characterize human genetic variation and to design exosite-directed drugs. In particular, I will present my research on 53BP1-mediated p53 regulation to exemplify how base editing screens increase the resolution and output of phenotype-genotype analyses. Also, I will highlight the current utility and future potential of a versatile precision genome editing platform for high throughput functionalization of variants of uncertain significance associated with human disorders. Finally, I will outline the application of base editing screens to drug development, focusing on the relevance of deep mutagenesis analyses combined with structural data to pinpoint exosites of druggable potential.