Abstract

Characterising the biochemical mechanism of action of Polθ inhibitors

DNA polymerase θ (Polθ) is essential for microhomology mediated end-joining (MMEJ) repair of double-strand breaks [1] and has been proposed as an attractive target for the treatment of BRCA deficient and other DNA repair pathway defective cancers. [2]

This poster describes the development of an automated stopped kinetic assay using the Formulatrix Tempest Smart Batch function and its subsequent use, along with biophysical and structural characterisation to elucidate the biochemical mechanism of small molecule Polθ polymerase domain inhibitors. [3]

[1] https://academic.oup.com/nar/article/31/21/6117/1042372

[2]https://www.nature.com/articles/s41580-021-00405-2

[3] https://www.nature.com/articles/s41467-021-23463-8