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New drug candidate developed against NF1 cancers tumours

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Bath researchers have worked with colleagues from the University of Michigan to design a promising new anticancer drug candidate. This new drug would be used in the fight against Neurofibromatosis (NF1). The work, from Professor Barry Potter's group, was published last week in the *Nature* journal *British Journal of Cancer*.

NF1 is amongst the most frequently inherited genetic cancer predispositions in humans. However, few treatments are available; surgery can damage nerves and few drugs affect tumour growth. This new work presents the first studies indicating that designed derivatives related to a natural steroid, through application of medicinal chemistry, could provide an avenue for treating NF1 tumours.

STX3451, a molecule related to a naturally-occurring metabolite of the sex steroid 17β-estradiol, was evaluated against NF1 human tumour cells. It arrested the growth of the benign cells, but selectively killed the malignant cells. A key feature in this optimised drug candidate was a molecular motif that has evolved from long term work in anticancer drug design initiated at the University of Bath.

Professor Potter said: "This latest progress, made possible through our international collaboration with Professor Kate Barald and colleagues in the USA further broadens the powerful utility of our approach. Because we have been successful in the past with advancing our drugs into human clinical trials we hope with more studies that that we might soon put this new drug candidate on the route to a clinical trial for these difficult

tumours in the longer term."

Provided by University of Bath