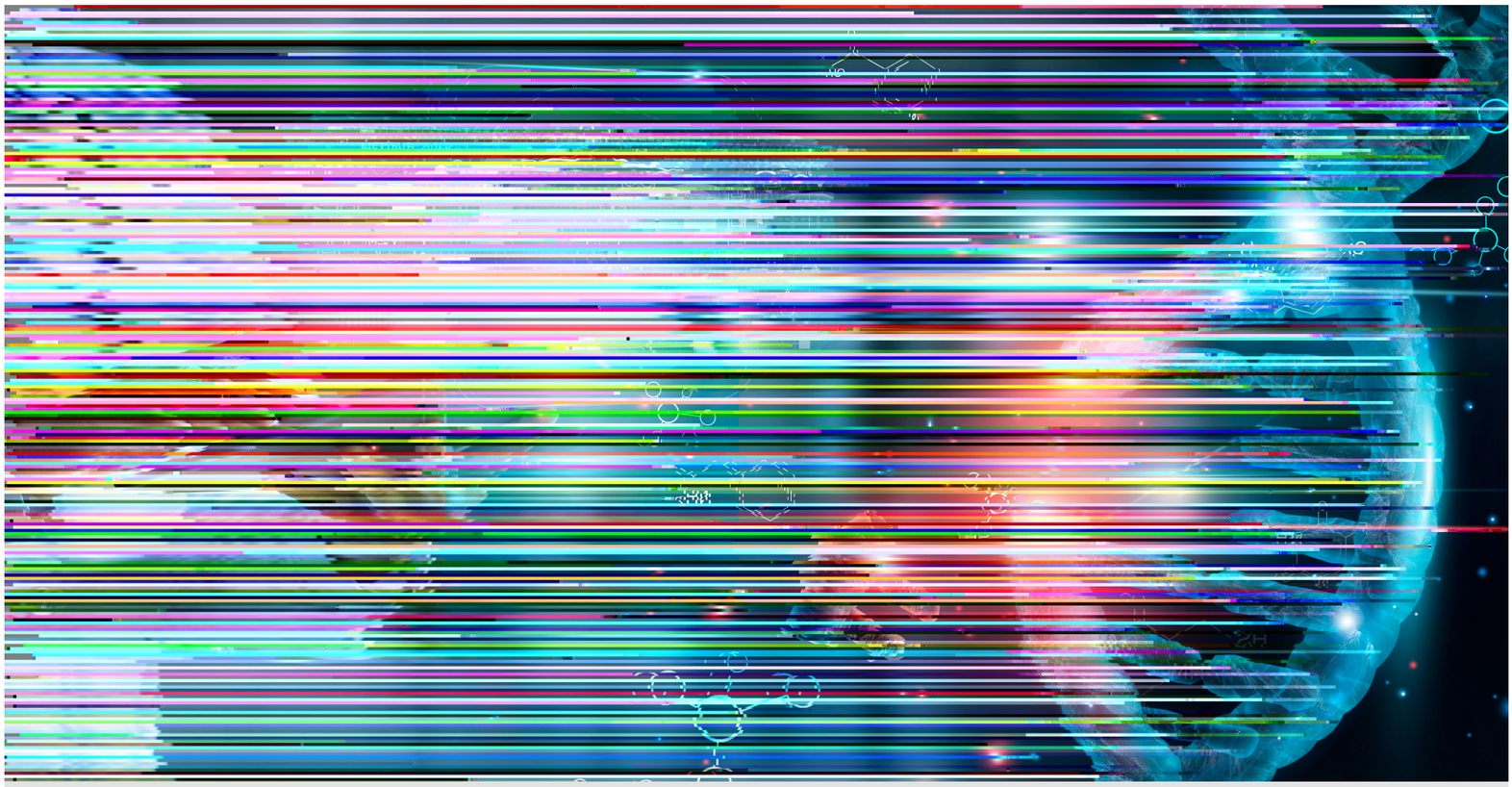

Background

In spite of advances in the delivery of chemoradiotherapy (CRT), its use causes considerable damage to normal (non-tumour) tissue both within and beyond the radiation field. The damage caused by CRT in normal tissue is dose limiting. To overcome radiation resistance and reduce damage to normal tissue, new cancer therapeutics are needed.

Technology

The DNA damage response (DDR) plays a key role in radiosensitisation, with DNA double strand breaks (DSB) mediating the majority of cytotoxic e□ects induced by radiotherapy (RT). DNA-dependent Protein Kinase (DNA-PK) is a key DSB repair enzyme and inhibition of its function results in sensitivity to radiation-induced DSBs.

We have discovered a novel class of potent and very selective DNA-PK inhibitors. We have benchmarked our unoptimised lead candidate SN39536 against the lead competitor product (AZD7648 from AstraZeneca). We