CGA/19/63 - Identification of combination therapies targeting DNA damage repair signalling pathways in Acute Myeloid Leukaemia stem cells

Acute myeloid leukaemia (AML) is one of the most common blood cancers with a poor survival rate. New targeted therapies are needed to more effectively treat this disease. Previously we established that KDM4A is an essential survival factor for leukaemia stem cells. Pharmacological inhibition of KDM4A induced apoptosis in a broad spectrum of human AML cells while sparing normal bone marrow cells. We aim to evaluate a novel combination treatment using KDM4A inhibitors and inhibitors targeting PARP, a key element in DNA damage repair pathway, in patient blasts and identify biomarkers for future clinical study.