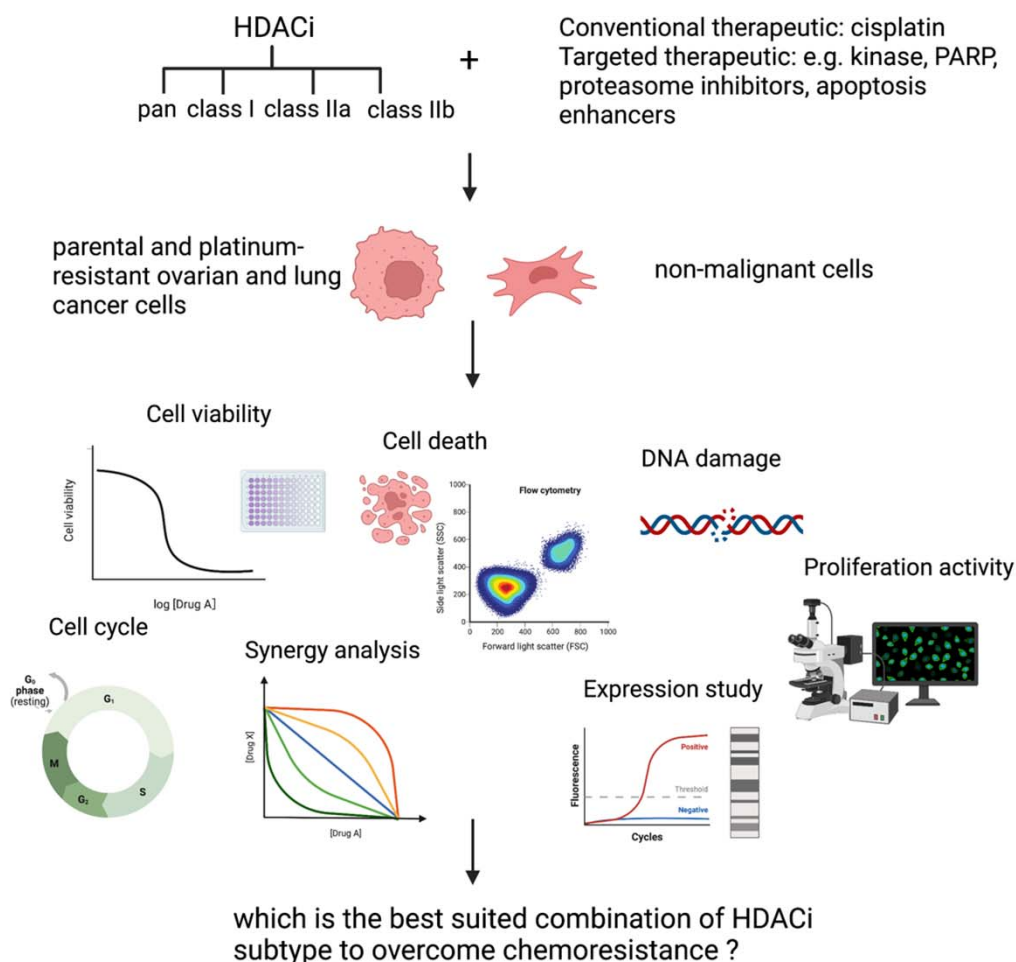


Anticancer efficacy of combinations of histone deacetylase inhibitors and conventional and targeted anticancer therapeutics



*Figure created by BioRender.com

Despite many improvements in cancer therapy, the development of drug resistance remains a major obstacle which often leads to therapeutic failure. Drug resistance is a multifactorial process in which epigenetic modulations can be involved. Histone deacetylases (HDACs) are possible therapeutic targets. HDAC inhibitors (HDACi) have shown antitumor effects and can overcome chemoresistance in combination with chemotherapeutic agents. In this project, the effects of HDACi (pan-, class I-, class IIa-, class IIb HDACi) in combination with conventional and targeted therapies (like kinase, PARP, proteasome inhibitors and apoptosis enhancers) will be extensively analyzed in platinum-sensitive and -resistant ovarian and lung cancer cell lines and in a time- and dose-dependent manner. Furthermore, the adverse effects of promising combinations in non-malignant cells will be analyzed.