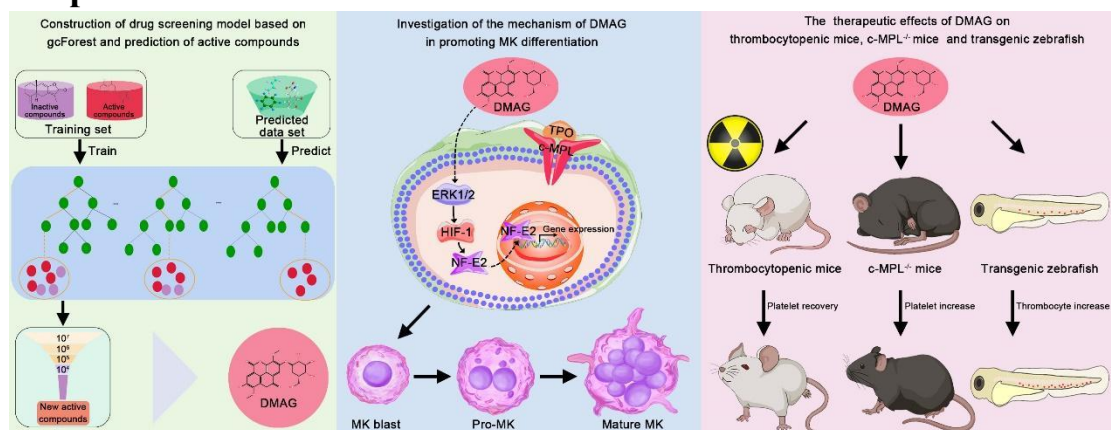


Graphical abstract



A drug screening model in hematopoiesis was developed based on a novel gcForest algorithm, and DMAG was identified as a novel TPO-independent thrombopoiesis inducer, which acted *via* TPO-independent ERK/HIF1/NF-E2 pathway.