

Background: OKL-1111 is a small molecule universal anticoagulant and platelet inhibitor reversal agent and is being developed to significantly shorten the time to treatment of intracranial haemorrhage associated with anticoagulant and platelet inhibitor use.

Objectives: The objective of this study was to evaluate the safety, tolerability and pharmacokinetics (PK) of OKL-1111 after single intravenous dosing in healthy male subjects. In addition, the pharmacodynamic (PD) response of OKL-1111 in the presence and absence of dabigatran and apixaban was assessed ex vivo. Part B evaluated the safety, PK and PD of OKL-1111 after a single dose of 220mg dabigatran.

Design: A single-centre, randomized, placebo-controlled, double-blind, single-ascending dose, alternating-group, partial crossover trial in healthy adult men (N=24).

Results: OKL-1111 was well tolerated up to a single intravenous administration of 1000 mg. No discernible difference from placebo or dose-relationship in the number or severity of reported adverse events were observed, nor were there any treatment related effects on any of the safety assessments. No Serious Adverse Events were reported, and there were no indications of thrombosis. PK showed clear dose proportionality as expected for a mainly renally cleared compound and was not affected when combined with dabigatran. OKL-1111 at a single dose of 1000mg reduced the dabigatran-induced lagtime increase.

Discussion: OKL-1111 can be safely administered to volunteers up to 1000mg, with an indication of target engagement at the highest dose tested.