

## ABSTRACT FORM ECAT SYMPOSIUM 15 – 16 SEPTEMBER 2022

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### Title:

**When Haemostasis Assays Mislead**

### Abstract:

Many disorders of haemostasis and thrombosis can be expected to manifest in predictable patterns with panels of laboratory assays and the diagnosis can be relatively straightforward. Some clinical situations and rare sub-types of certain disorders may not conform to standard presentations and can go undiagnosed or incompletely characterised without further tests and informed interpretation.

Routine coagulation screening tests are performed to detect abnormalities in secondary haemostasis, some of which may be clinically silent until challenge, and also to monitor some forms of anticoagulant therapy. Reagents for PT and APTT are formulated to be sensitive to clinically relevant reductions in coagulation factors, typically being elevated if a single factor deficiency is in the region of 30-40% of normal or below. However, between-reagent variation in sensitivity to each deficiency or type of anticoagulant therapy, and even between mutations of a specific coagulation factor, can generate clinically misleading results.

Similar problems can be encountered when performing more specialised assays that seek to isolate specific abnormalities. The principles of many clotting-based assays necessarily assume that all else about the patient's coagulation is normal, and inaccurate results and interpretations can ensue when this is not the case. Co-existence of multiple abnormalities can be a major diagnostic challenge in the clinical laboratory.

A mixture of challenging case studies will be presented to illustrate these types of diagnostic dilemmas.