

Analysis of Coagulation Factors

Project Team

Dr. Gerrit Praefcke
Dr. Andreas Hunfeld
Claudia Grundmann
Stefanie Keitel
Manuela Kusch
Andrea Schroda

Project Summary

Plasma coagulation is a complex and tightly regulated process. For the determination of the potency and activity of coagulation factors in clinical samples as well as during the manufacturing of medicinal products, only distinct parts of the coagulation cascade are tested. The pre-analytical treatment of the samples and the application of different reagents in such tests can result in an elevated variability and in discrepancies between different test laboratories.

We want to understand the molecular mechanisms underlying these differences and to develop novel assays to circumvent them. So far, we have developed test systems for factor VIII, factor II and factor IX. By using specific inhibitors we can switch off interfering side reactions to increase the accuracy of the test. Furthermore, our test systems display reduced differences between plasma-derived and recombinant coagulation factors compared to commercially available systems.

Publications

Kusch, M., Grundmann, C., Keitel, S., König, H. (2014). Factor VIII assay mimicking in vivo coagulation conditions. *Haemophilia*. 20, e164-70.

Contact

Dr. Gerrit Praefcke
Section 7/3
Phone +49 (0) 6103 772720
E-Mail gerrit.praefcke@pei.de
DE-Mail pei@pei.de-mail.de