Quantification and evaluation of the anticoagulant activities of protein S in plasma

Propositions belonging to the thesis entitled

Quantification and evaluation of the anticoagulant activities of protein S in plasma

1. Calibrated automated thrombography can be used to develop functional assays for protein S quantification in plasma. *(this thesis)*

2. The main advantage of the thrombin generation-based APC cofactor activity assay for protein S is its insensitivity to the presence of FV Leiden in plasma. *(this thesis)*

3 Since free and C4BP-bound protein S have different TFPI- and APC cofactor activities, antigen assays for free and total protein S do not reliably reflect the anticoagulant activity of protein S in plasma. *(this thesis)*

4. The thrombin-cleaved form of protein S is inactive as APC cofactor but fully active as TFPI cofactor. *(this thesis)*

5. Protein S and TFPI synergistically influence the regulation of thrombin generation by APC both at low and high coagulation stimuli. *(this thesis)*

6. Because protein S functional assays can detect all three types of protein S deficiency, a reliable functional assay can be used as an initial test for the diagnosis of protein S deficiency. *(Elizabith M et al, 2005)*

7. The protein S-C4BP complex has an active role in the regulation of thrombin formation as APC cofactor. *(Maurissen et al, 2008)*

8. Since both thrombin-cleaved and C4BP-bound protein S express anticoagulant activity, cleavage of protein S and levels of C4BP may be considered regulators of protein S activity.

9. The association between protein S deficiency and decreased TFPI levels in plasma substantially increases (or may substantially increase) the risk of venous thrombosis in protein S-deficient patients. (Castoldi et al, 2010)

10. Faith is knowledge within the heart, beyond the reach of proof. *(Gibran Khalil Gibran)*

Nahla Alshaikh, 28th November 2018