

Fig 1: Formation of PMN (CD16⁺)-platelet (CD42a⁺) complexes in whole blood after activation (Act) with 33.5 μ M TRAP-6, as assessed by flow cytometry (A). Anti-CD11b and anti-C3a inhibited conjugate formation (B).

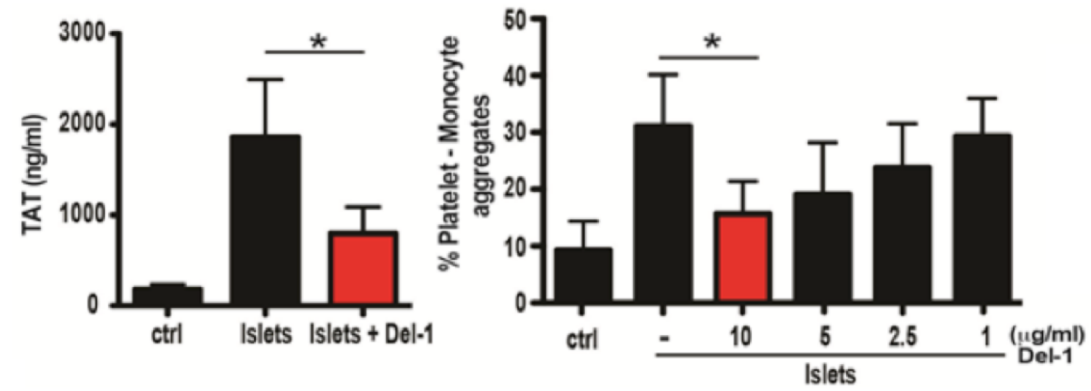


Fig. 2 Del-1 attenuated thrombin-antithrombin (TAT) complex generation and platelet-monocyte aggregation in human whole blood incubated onto porcine islets of Langerhans.

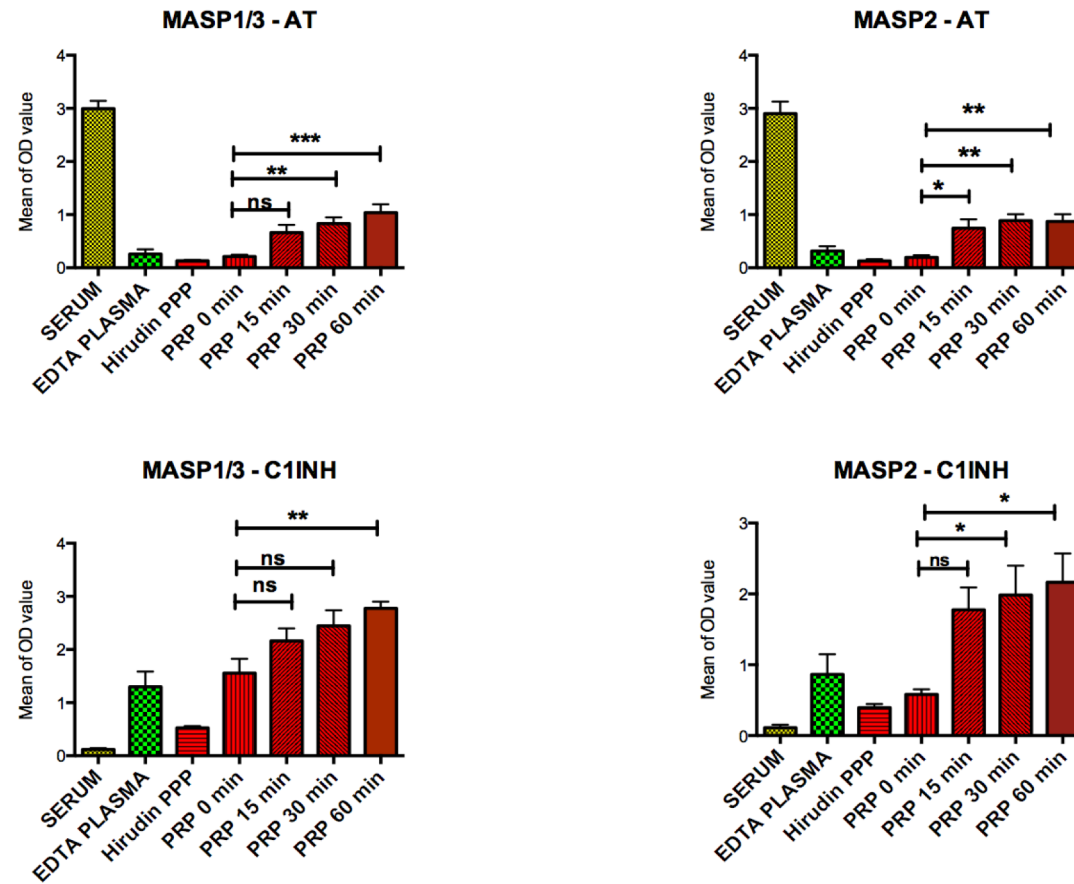


Fig. 3 Panels A–D: formation of MASP-1/C1-INH, MASP-2/C1-INH, MASP-1/AT and MASP-2/AT complexes in serum, EDTA-PPP, lepirudin-PPP and the supernatants of TRAP6-activated lepirudin-PRP from five different donors incubated for 0, 15, 30 or 60 min at 37 °C (*P < 0.05, **P < 0.01, ***P < 0.001). Samples of PPP contained low levels of MASP-1/AT and MASP-2/AT complexes and moderate levels of MASP-1/C1-INH and MASP-2/C1-INH complexes, while the opposite relationship was seen in serum. Activation of PRP induced a time dependent formation of both the MASP-1/C1-INH and MASP-2/C1-INH, and MASP-1/AT and MASP-2/AT, complexes. Panels E–G: formation of MASP complexes detected by SDS-PAGE followed by Western blotting. The complexes were pulled out of serum or plasma obtained from TRAP6-activated PRP using magnetic beads coated with either anti-MASP-1 or anti MASP-2.

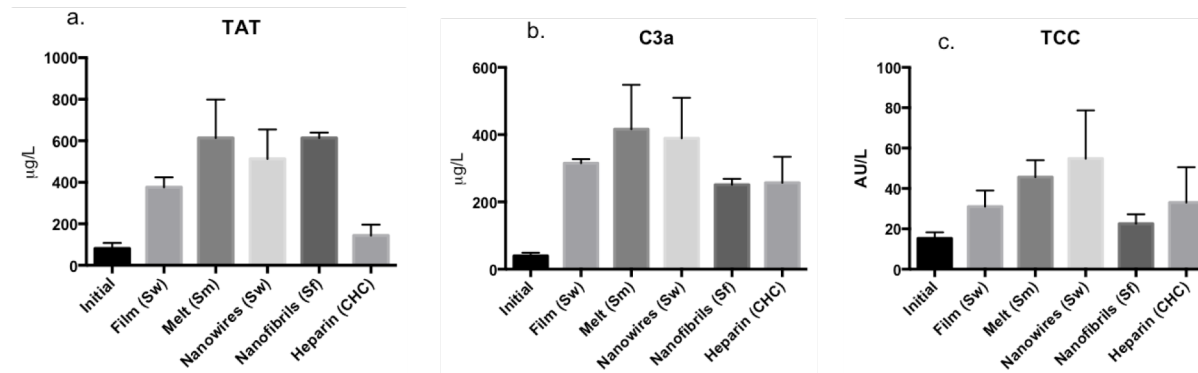


Fig. 4 Results from the TAT (a), C3a (b.) and TCC (c.) ELISAs after the blood chamber experiments using the nanostructures prepared in Task 3b.

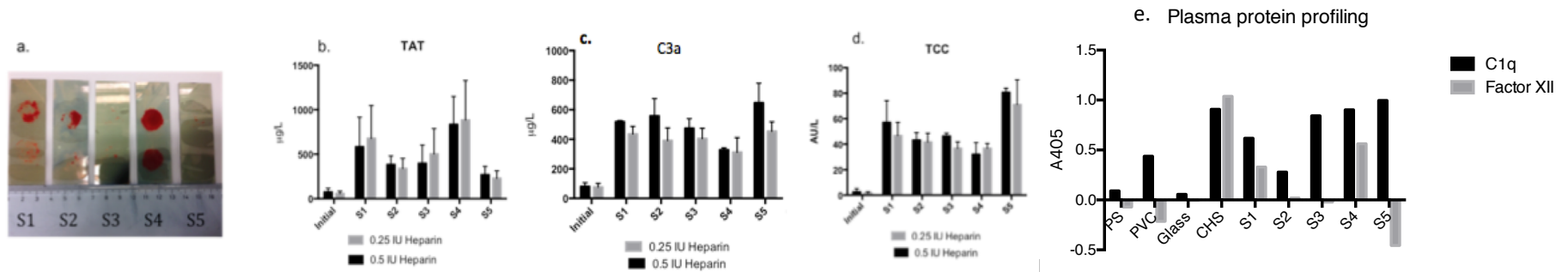


Fig 5 a. Image of the clot formation at the surfaces S1-S5 after incubation in whole blood. b. Result of the TAT ELISA. c. Result from the C3a ELISA. d. Result from the TCC ELISA. e. FXII + C1q

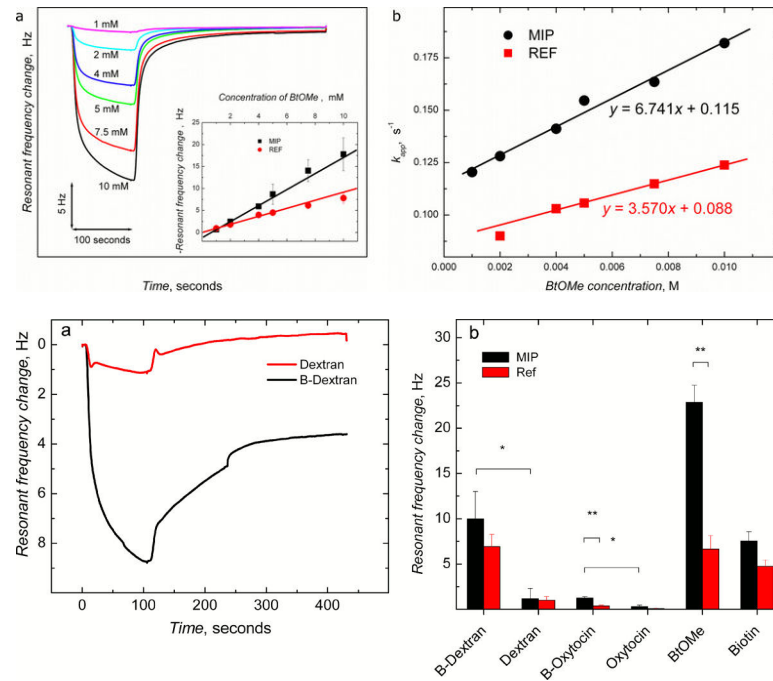


Fig 6 a and b (upper)

Sensitivity and kinetics of polymer-ligand recognition.

(a) Resonant frequency change as a function of BtOMe concentration. Inset is the calibration plot for BtOMe on the MIP ($n = 3$, 6 injections per surface) and REF ($n = 1$, 6 injections) films. **(b)** Variation of observed k_{app} calculated from the associative part of the frequency vs time response curves for BtOMe binding to MIP and REF films.

Fig 6 a and b (lower)

Selectivity of polymer-ligand recognition. (a) Frequency response for dextran and biotinylated dextran (B-Dextran) binding to the MIP film. **(b)** Resonant frequency changes for the binding of different analytes to MIP and REF films. * $p > 0.05$, ** $p < 0.01$, $n = 3-8$, 3–6 injections per surface.

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Heparin-binding peptide-conjugated PEG-lipid (peptide-PEG-lipid)

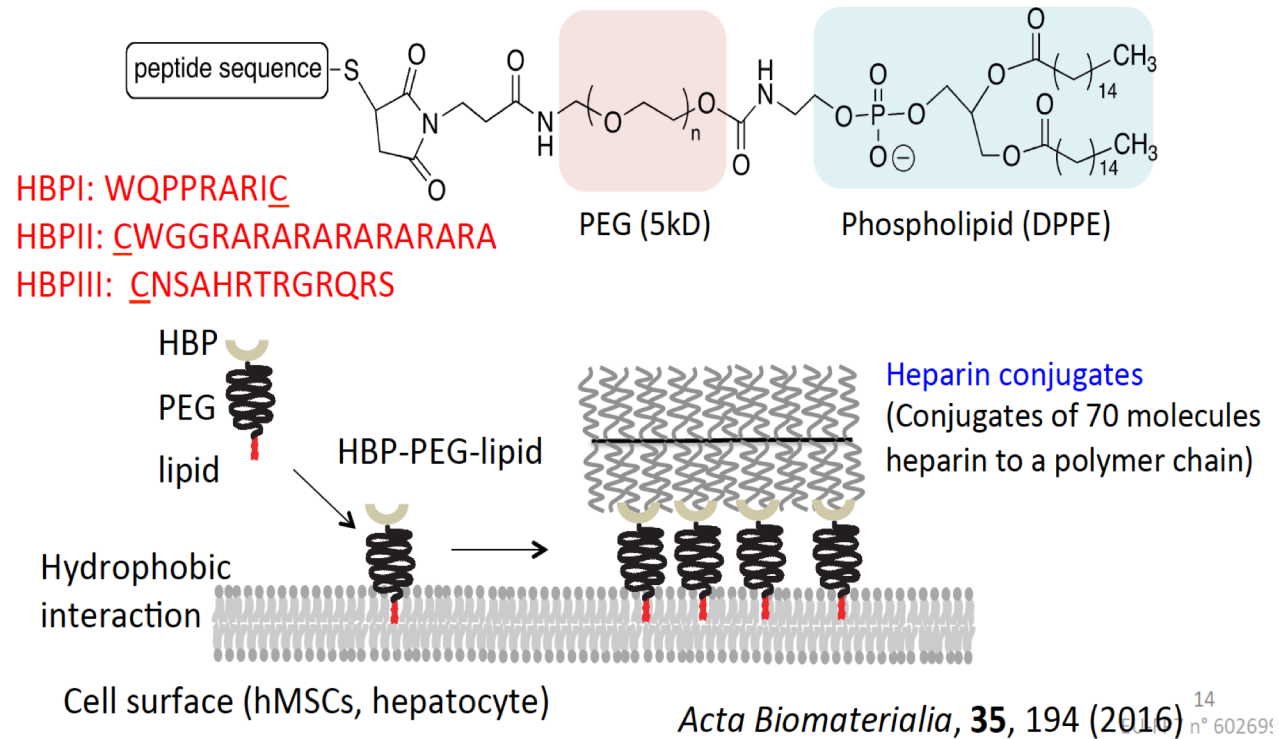


Fig. 7 Surface modification of cell-surface-binding heparin conjugates. Top: chemical structure of heparin-binding peptide-conjugated PEG-lipid for surface modification of cells, and amino acid sequences of heparin-binding peptides either derived from fibronectin (I); positively charged (II); identified by phage display. Bottom: schematic representation of heparin-conjugate immobilization by a cell-surface modification with heparin-binding peptide-PEG-lipid. Each heparin conjugate consisted of a conjugate of approximately 70 heparin molecules to a polymer chain.

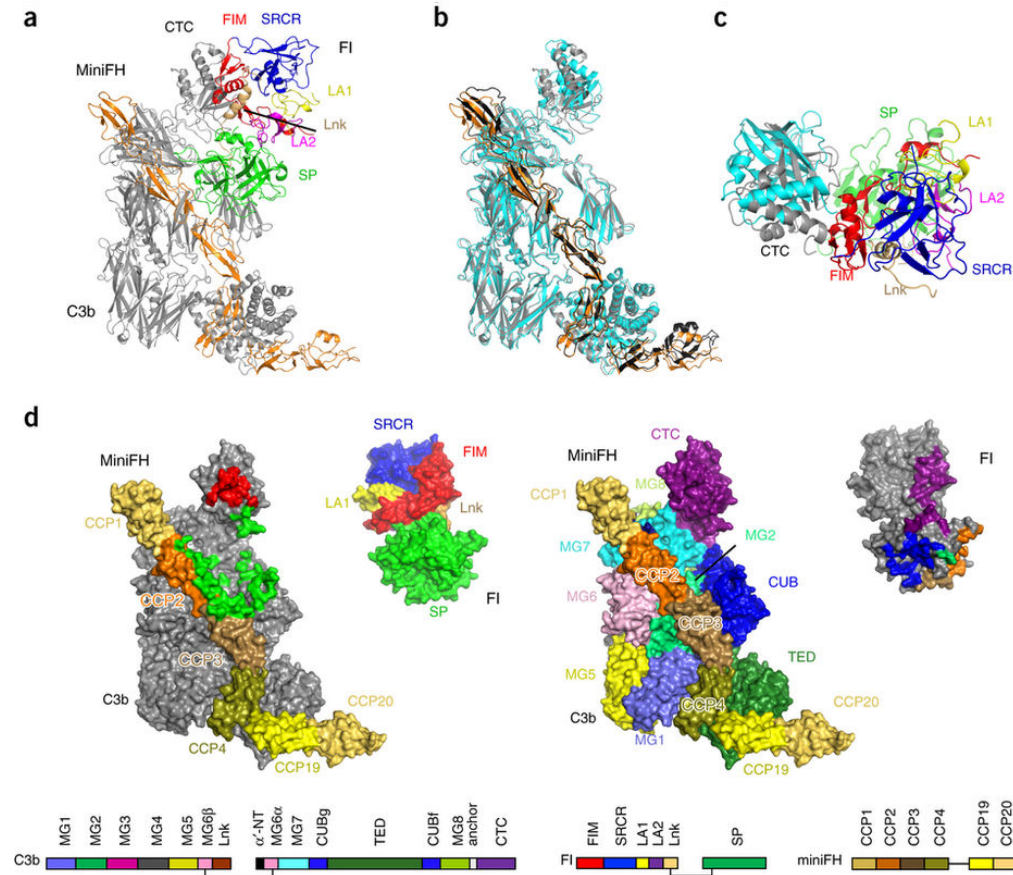


Fig. 8 (a) Structure of C3b–miniFH–FI. C3b, gray; miniFH, orange; FI colored by domain as shown at the bottom of the figure. (b) Superposition of C3b–miniFH (C3b, cyan; miniFH, black) and the corresponding parts from the C3b–miniFH–FI complex (C3b, gray; miniFH, orange). (c) Top view of superposition showing binding of FI (colored by domain as indicated) to CTC domain of C3b (gray); the CTC domain as found in C3b–miniFH is shown (cyan) for reference. (d) Contact regions for FI domains shown as footprints on C3b–miniFH (left) and contact region of C3b–miniFH domains on FI (right); domain coloring as defined by labels and schematic domain compositions of C3b, FI and miniFH as shown at the bottom.

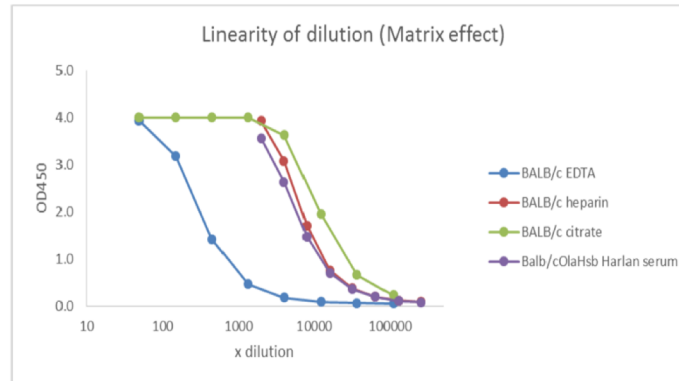
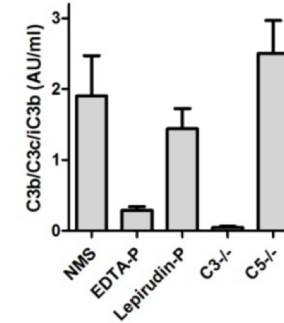


Fig. 9 Detection of mouse C3b-ELISA

Specificity of C3b ELISA



Assay specificity was assessed with 10% C57bl/6 NMS EDTA-, Lepirudin-plasma & C-deficient sera.



Fig. 10 The members of the DIREKT consortium at the Aegean Conference in Chania, Crete, Greece, October 2014.