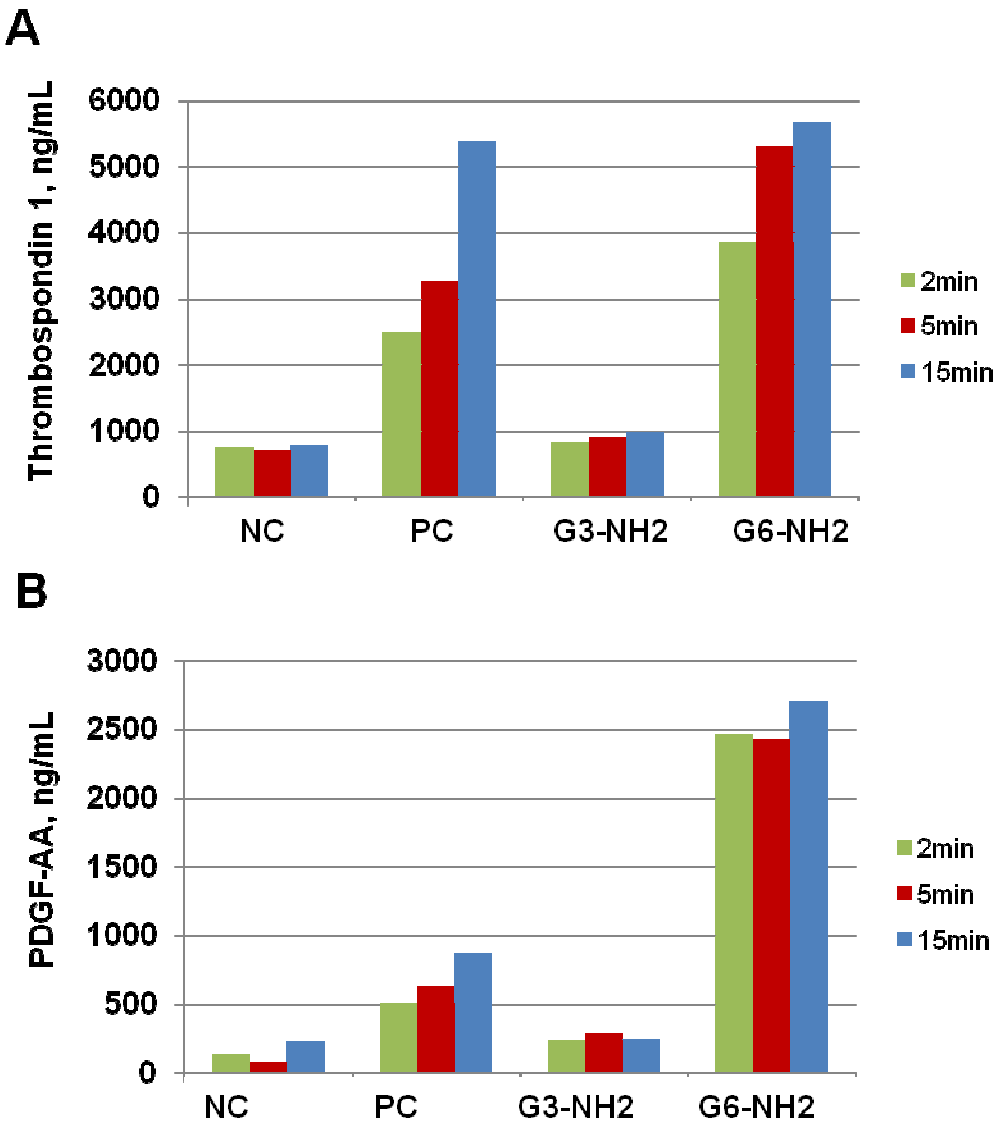
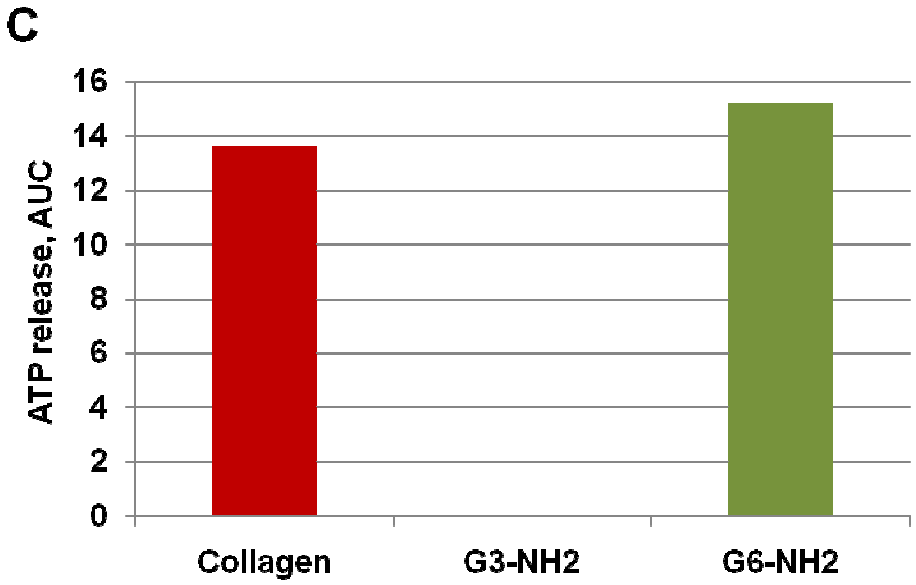
Supplementary Table 1. Inhibitors of platelet activation pathways. Inhibitors summarized in the table represent small molecule chemicals and monoclonal antibody known to inhibit various pathways of platelet activation. BAPTA-AM – 1,2-Bis(2-aminophenoxy)ethane-N,N,N',N'-tetraacetic acid tetrakis(acetoxymethyl ester), membrane permeant intracellular Ca^{2+} chelator; TBHQ – 2,5-di-(tert-butyl)-1,4-hydroquinone, sarco-endoplasmic reticulum Ca2+ ATP-ase type 3 (SERCA3) blocker; 2-APB – 2-aminoethoxydiphenylborate, store operated calcium entry (SOCE) Ca2+ channel blocker; ReoPro – monoclonal antibody neutralizing αIIb/βIIIa integrin ; NF449 – 4,4',4'',4'''-[carbonylbis(imino-5,1,3,-benzentriyl-bis(carbonylimino))]tetrakis-1,3-benzenedisulfonic acid octasodium salt; MRS2500 – (1R,2S,4S,5S)-4-[2=iodo-6-(methylamino)-9H-purin-9-yl]-2-(phosphonooxy)bicycle[3.1.0]hexane-1-methanol dihydrogen phosphate ester tetraammonium salt; Axon1275 – N*3*-cyclopropyl-7-(4-isopropyl-benzyl)-7H-pyrrolo[3,2-f]quinazoline-1,3-diamine dihydrochloride; Go6976 - 12-(2-Cyanoethyl)-6,7,12,13-tetrahydro-13-methyl-5-oxo-5H-indolo(2,3-a)pyrrolo(3,4-c)-carbazole

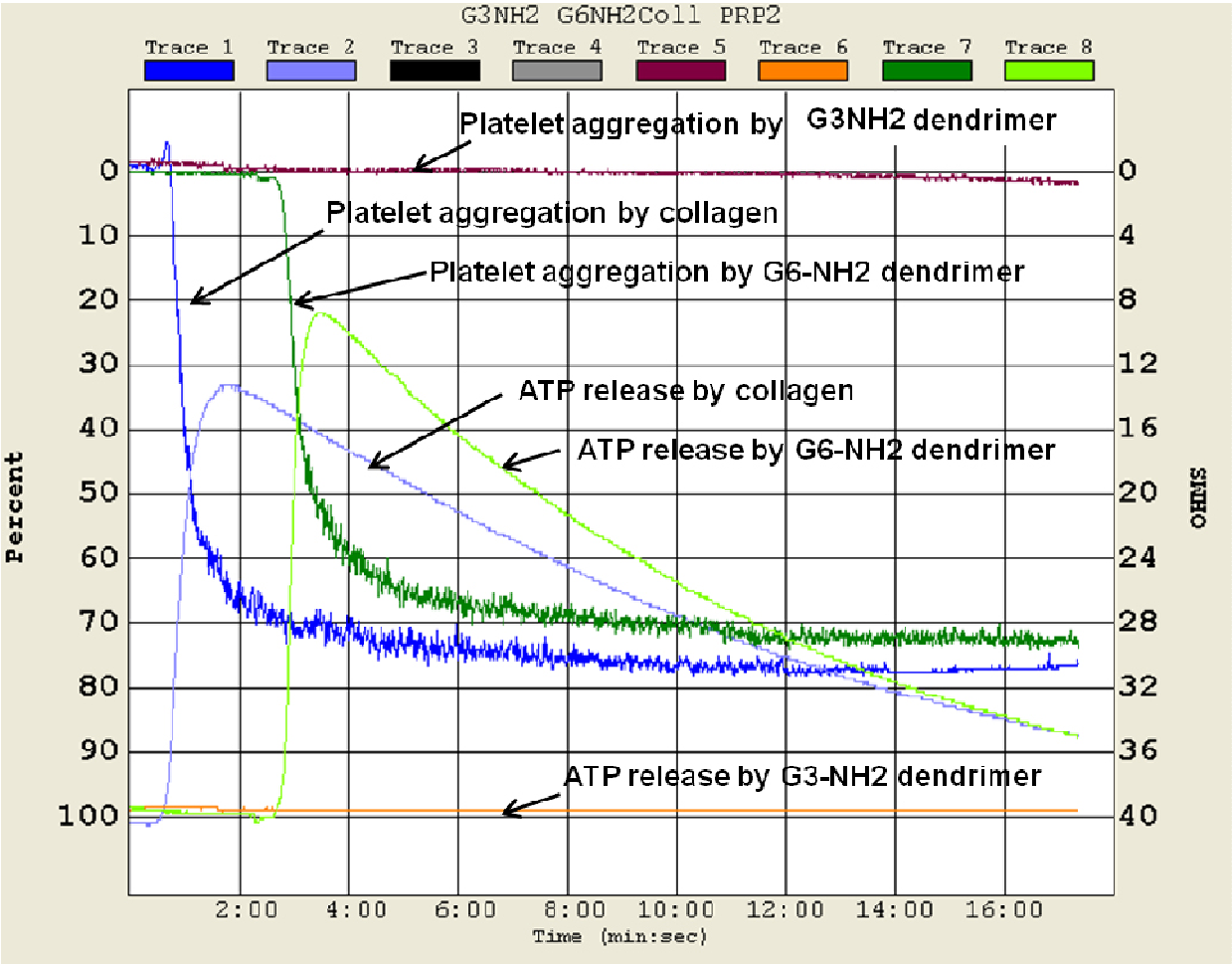
Inhibitor	Function	Reference
DM-BAPTA AM	Intracellular Ca2+ chelator	15
THBQ	SERCA blocker	15
2-APB	Ca2+ channel blocker with proven effects on SOCE	15
SK&F96365	Ca2+ channel blocker with proven effects on SOCE	15
NF449	P2X1 inhibitor	15
MRS2500	P2Y1 inhibitor	16
Aspirin	COX2 inhibitor	16
1,10-phenanthroline	MMP inhibitor	16
Axon 1275	PAR1 inhibitor	16
2-MeSAMP	P2Y12 inhibitor	16
Go6976	PKC inhibitor	16
ReoPro	αII/βIII integrin inhibitor	16



Supplementary figure 1 A and B. Effects of cationic dendrimers on release of intermediate signaling molecules from intracellular storage of human platelets *in vitro*. Platelet aggregation was studied in platelets derived from three individual donors. Platelet reach plasma was treated with negative control, positive control, or amine terminated G3 or G6 PAMAm dendrimers at final concentration of 100 μg/mL. Treatment time was 2, 5 or 15 minutes. Thrombospondin A and PDGF-AA were measured by commercial ELISA kits obtained from R&D Systems according to the manufacturer's instructions. Shown is mean result (N=2) (%CV <20).



Supplementary figure 1C. Effects of cationic dendrimers on release of intermediate signaling molecules from intracellular storage of human platelets *in vitro*. ATP release was studied in platelets derived from three individual donors. After untreated platelet reach plasma (PRP) was used to set up instrument baseline, the PRP was treated with collagen (positive control,) or amine terminated G3 or G6 PAMAM dendrimers at final concentration of 100 μg/mL. ATP release was monitored during 15 minutes after addition of the agonist using ChronoLog Lumiaggregometer. Area under the curve (AUC) was calculated for each sample. Shown is mean result (N=2) (%CV <20)



Supplementary figure 2. Effects of cationic dendrimers on ATP release and aggregation of human platelets *in vitro*. Platelet aggregation and ATP release was studied simulataneously in platelets derived from three individual donors. After untreated platelet reach plasma (PRP) was used to set up instrument baseline, the PRP was treated with collagen (positive control,) or amine terminated G3 or G6 PAMAM dendrimers at final concentration of 100 μg/mL. Platelet aggregation (Traces1, 5 and 7) and release of ATP (Traces 2, 6 and 8) were monitored during 15 minutes after addition of the agonist using ChronoLog Lumiaggregometer.