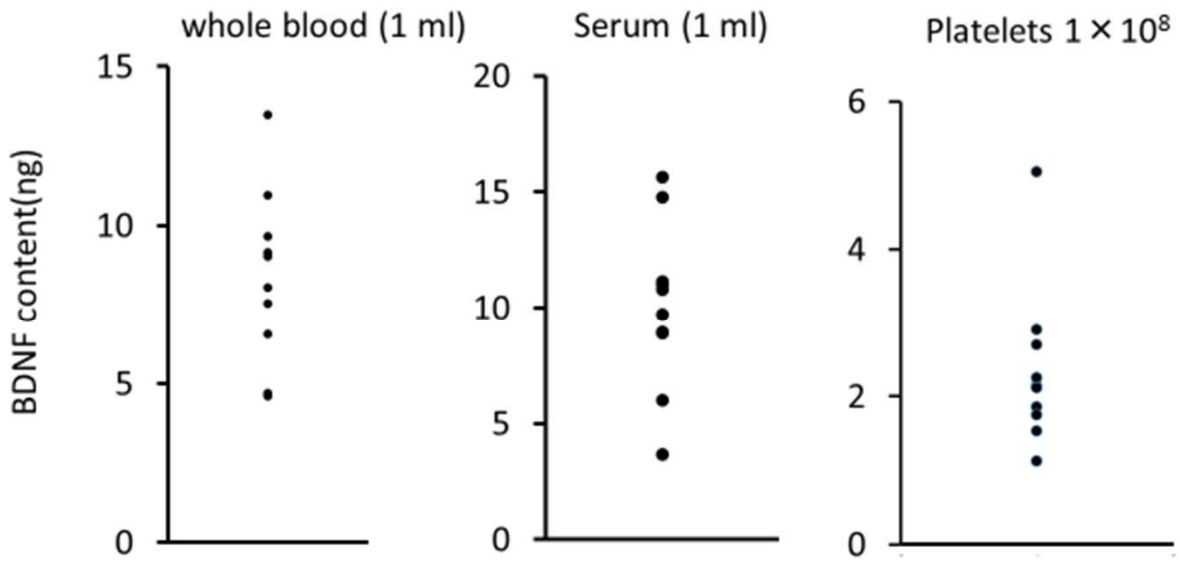


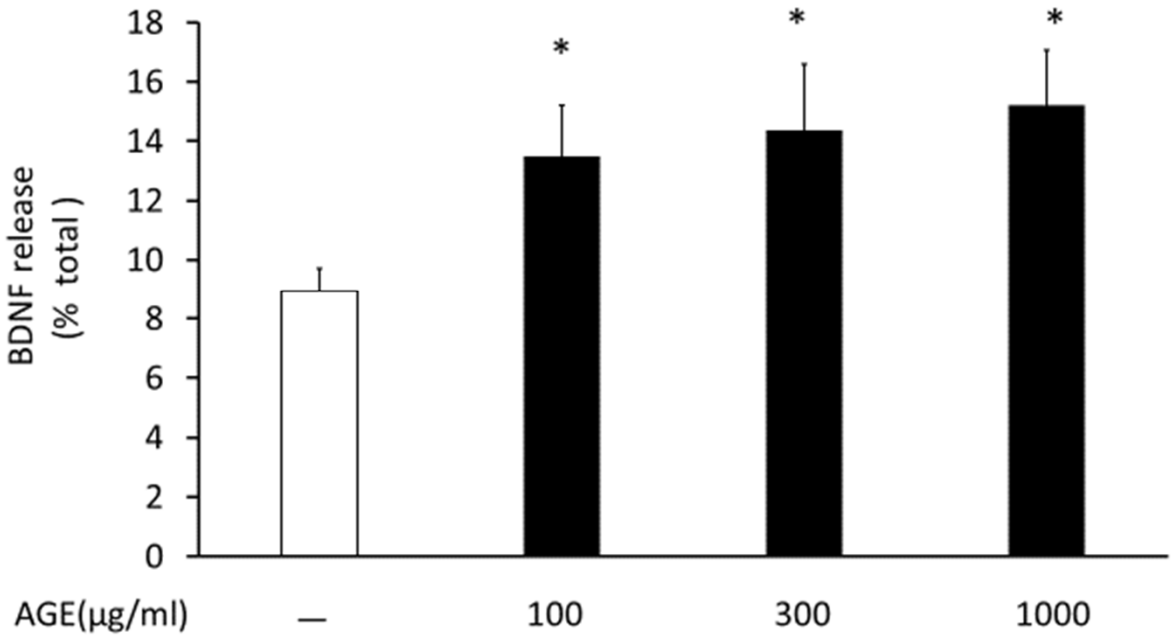
Additional File S1. Scatter plot of BDNF levels in whole blood, serum and platelets (1×10^8) (n=10).

Additional File 1

Additional File S2: The blood information of the volunteers.

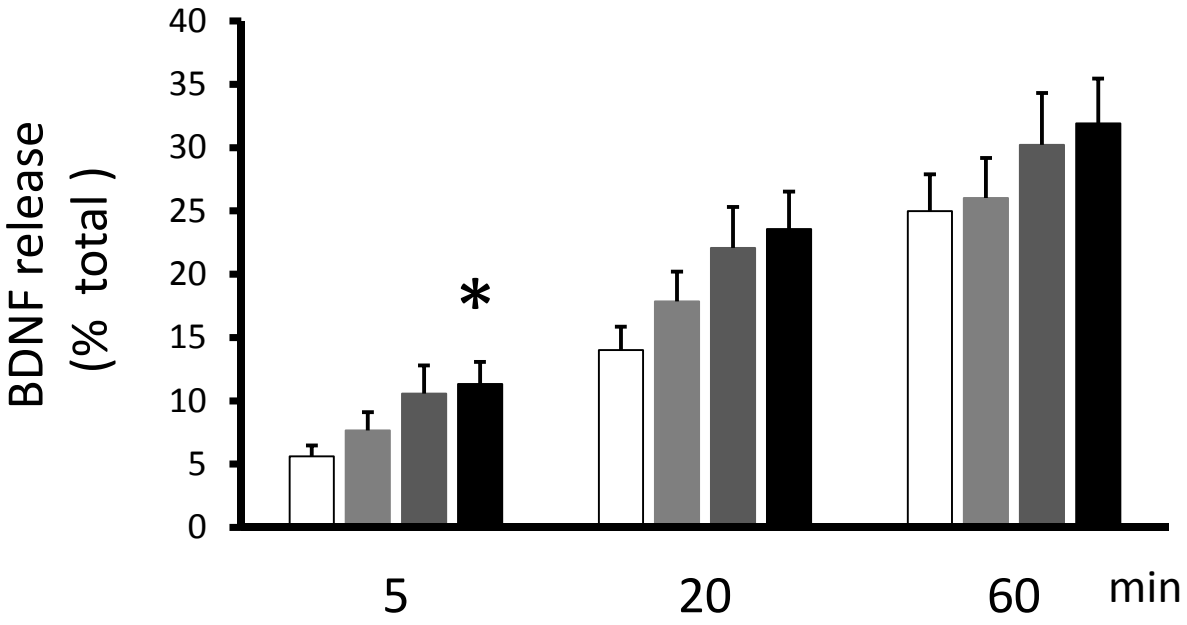
Numbers (M/F)	Age (years)	FPG (mmol/l)	FIRI (mU/l)	HOMA-IR	HbA1c (%)	Platelets ($\times 10^4/\mu l$)
n= 10 (8/2)	38.8 ± 2.4	5.4 ± 0.5	5.4 ± 1.4	1.30 ± 0.36	5.5 ± 0.2	27.8 ± 5.5

The blood samples were sent to SRL Inc, Japan. and fasting plasma glucose (FPG), fasting immunoreactive insulin (FIRI), HbA1c was analyzed at SRL. The homeostasis model assessment of insulin resistance (HOMA-IR) was calculated from FIRI and FPG by the following equation: HOMA-R= FIRI (mU/L) × FPG (mmol/L) / 22.5. Data are means ±SEM



Additional File S3. BDNF release at higher AGE concentrations (100 μg/ml ～1 mg/ml AGE). Data are presented as means ± SEM (n=8). Statistical analyses were performed by SPSS one-way ANOVA. *$p < 0.05$ vs control. Note that 100 mg/ml was the saturation dose.

Additional File 3



Additional File S4. Time course of AGE-induced BDNF release. BDNF release was measeured at 5, 20 and 60 min after AGE stimulation. White bar, control; light grey bar, 25µg/ml AGE; dark grey bar, 50µg/ml AGE; black bar, 100µg/ml AGE(n=8, means ± SEM). Statistical analysis was performed by one-way ANOVA. *$p < 0.05$ vs control. The graph at 5min is same as Figure 2.

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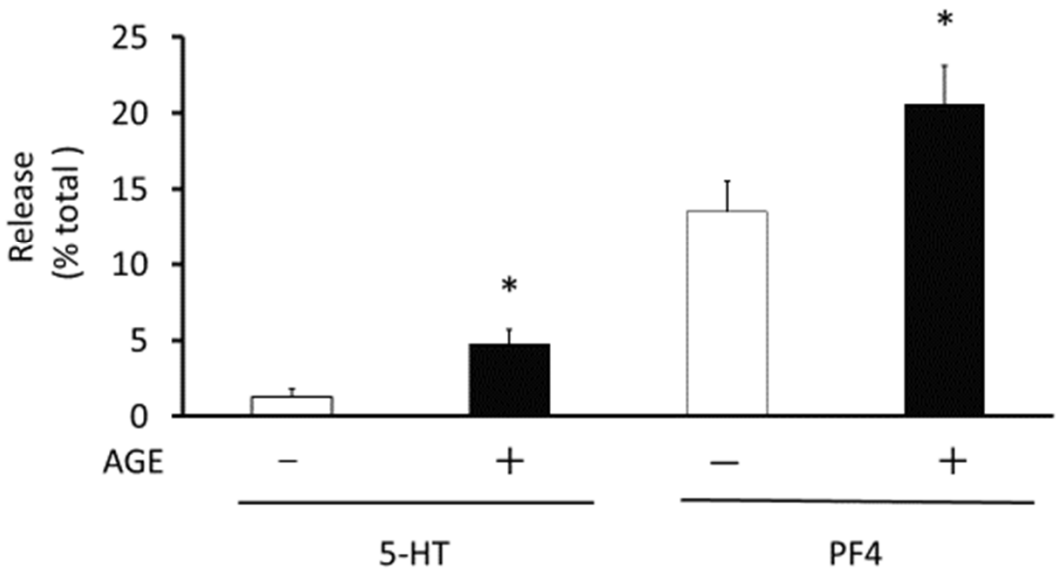
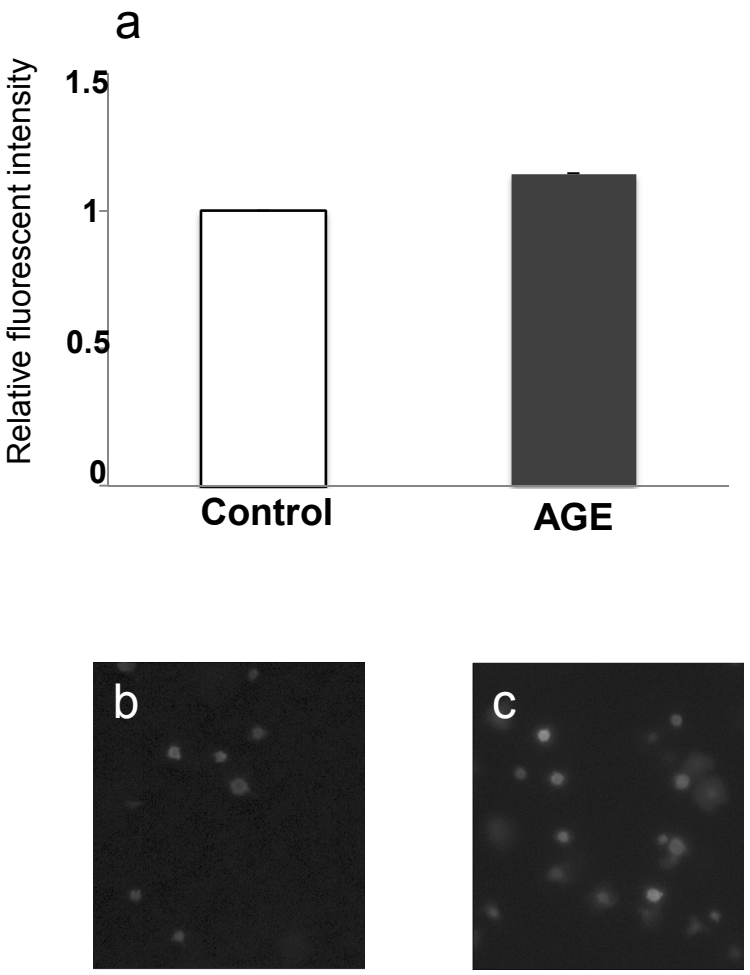


Additional File S5. AGE induced PF4 and 5-HT release from human platelets.

Data were presented as means ± SEM (n=8). Statistical analysis were performed by SPSS paired t-test. White bars, control; black bars, AGE (100μg/ml). *$p < 0.05$ vs control.



Additional File S6: AGE increased intracellular Ca2+ levels in platelets. Platelet was incubated with Oregon Green 488 (2 μM, Thermo Fisher) for 30min and was washed with assay buffer (same as BDNF assay buffer). (a), Fluorescent intensity was measured by fluorescent microplate reader (Ex: 490 nm, EM: 530 nM) 3min after AGE stimulation according to the manufacture's instruction. Data are presented as means ± SEM (n=30 (well)). Typical fluorescent photomicrographs of control (b) and AGE-treated (c) platelets.