C-reactive protein stimulates nicotinic acetylcholine receptors to control ATP-mediated monocytic inflammasome activation

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Supplementary Material includes Figures S1 - S4, Table S1 and Table S2.
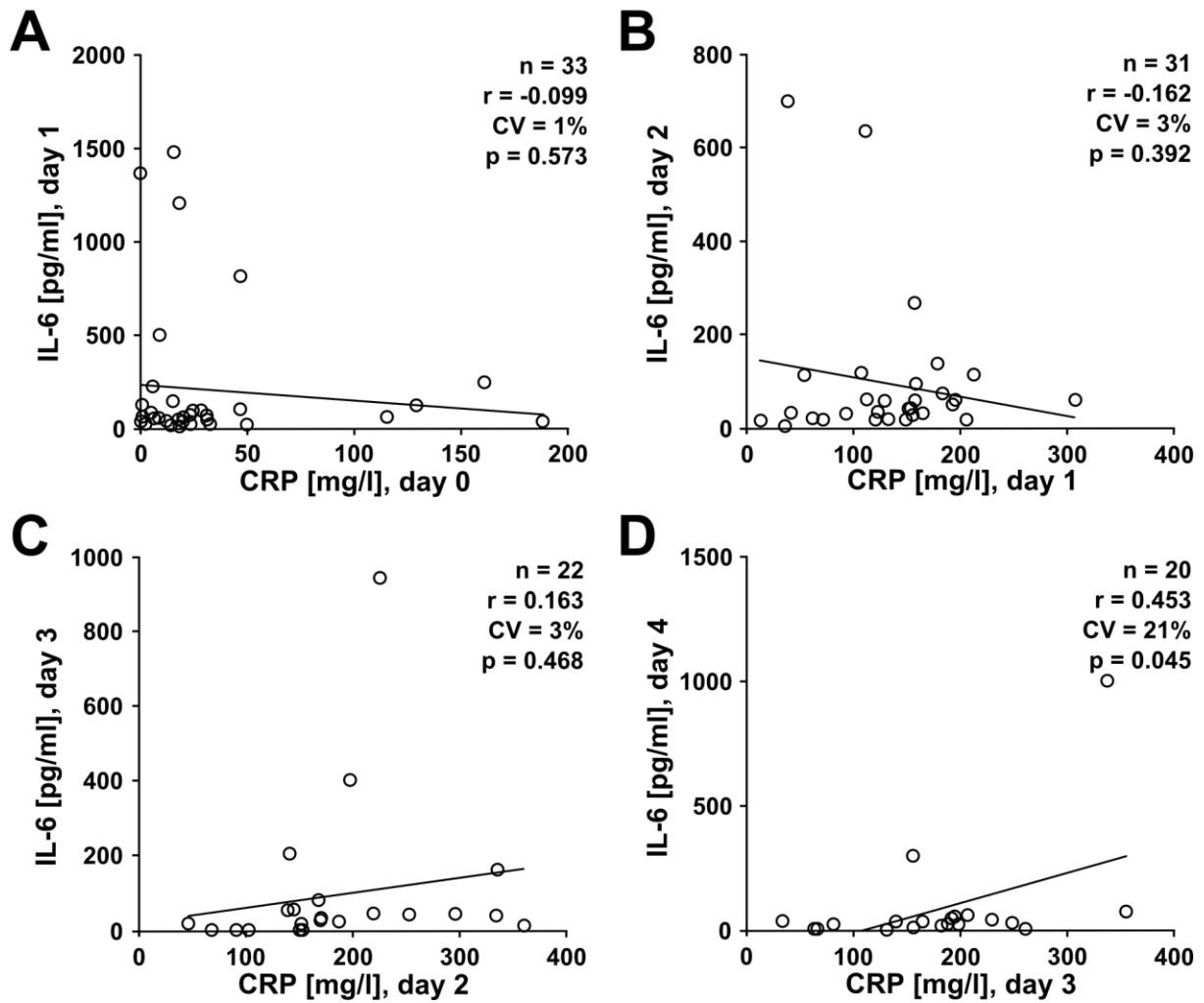
Figure S1

FIGURE S1. Levels of CRP do not negatively correlate with IL-6 levels in trauma patients. A monocentric prospective clinical study was performed on patients suffering from multiple traumata. Plasma levels of IL-6 were measured at daily intervals from the day of admission (day 0) until day 4 after trauma and a correlation analysis was performed with CRP values obtained one day earlier. **(A)** IL-6 at day 1 versus CRP at day 0, **(B)** IL-6 at day 2 versus CRP at day 1, **(C)** IL-6 at day 3 versus CRP at day 2, **(D)** a positive correlation was seen for IL-6 at day 4 versus CRP at day 3. Linear regression analysis, r = correlation coefficient, CV = coefficient of variation.
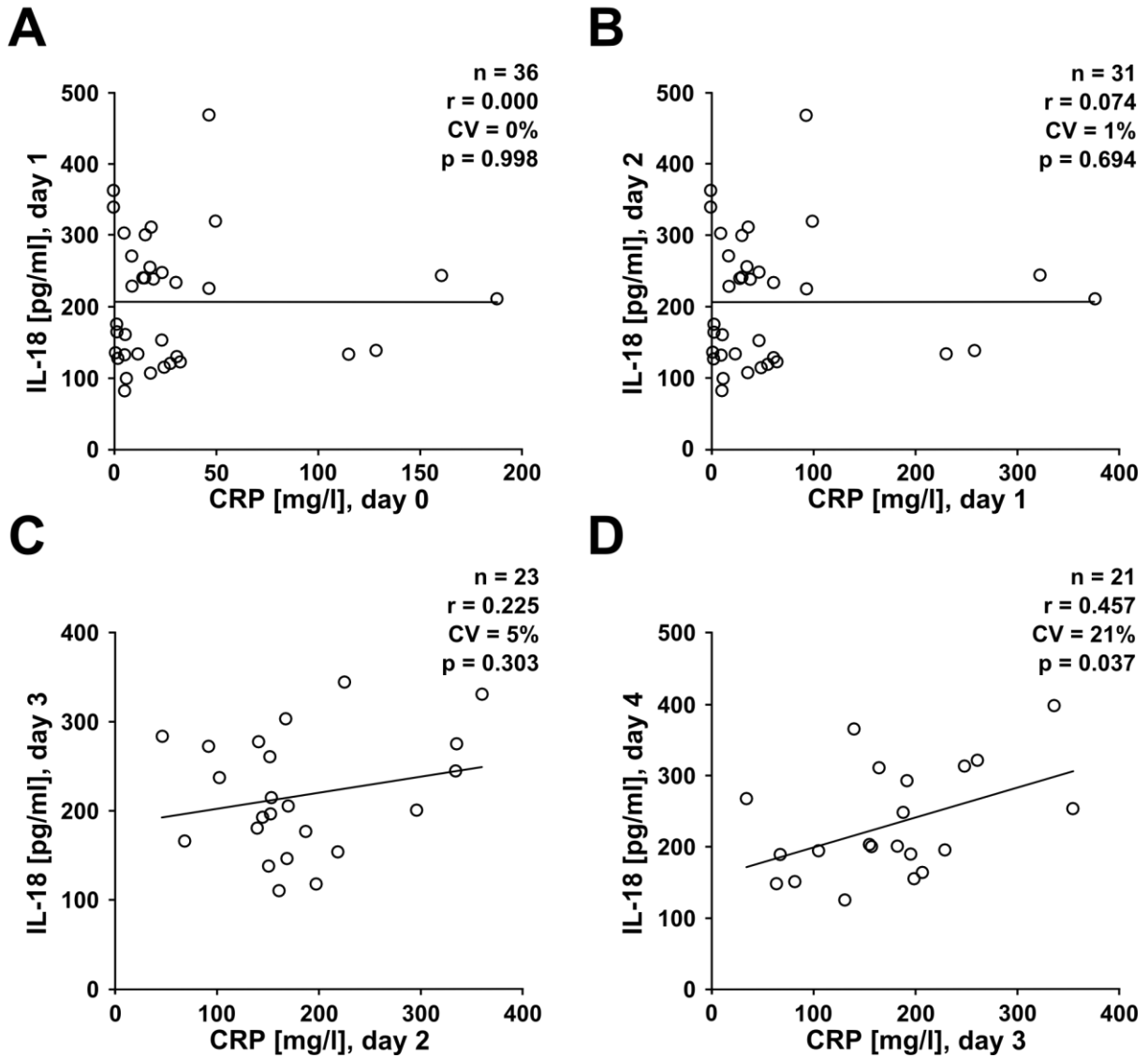
Figure S2

FIGURE S2. Levels of CRP do not negatively correlate with IL-18 levels in trauma patients. A monocentric prospective clinical study was performed on patients suffering from multiple traumata. Plasma levels of IL-18 were measured at daily intervals from the day of admission (day 0) until day 4 after trauma and a correlation analysis was performed with CRP values obtained one day earlier. **(A)** IL-18 at day 1 versus CRP at day 0, **(B)** IL-18 at day 2 versus CRP at day 1, **(C)** IL-18 at day 3 versus CRP at day 2, **(D)** a positive correlation was seen for IL-18 at day 4 versus CRP at day 3. Linear regression analysis, r = correlation coefficient, CV = coefficient of variation.
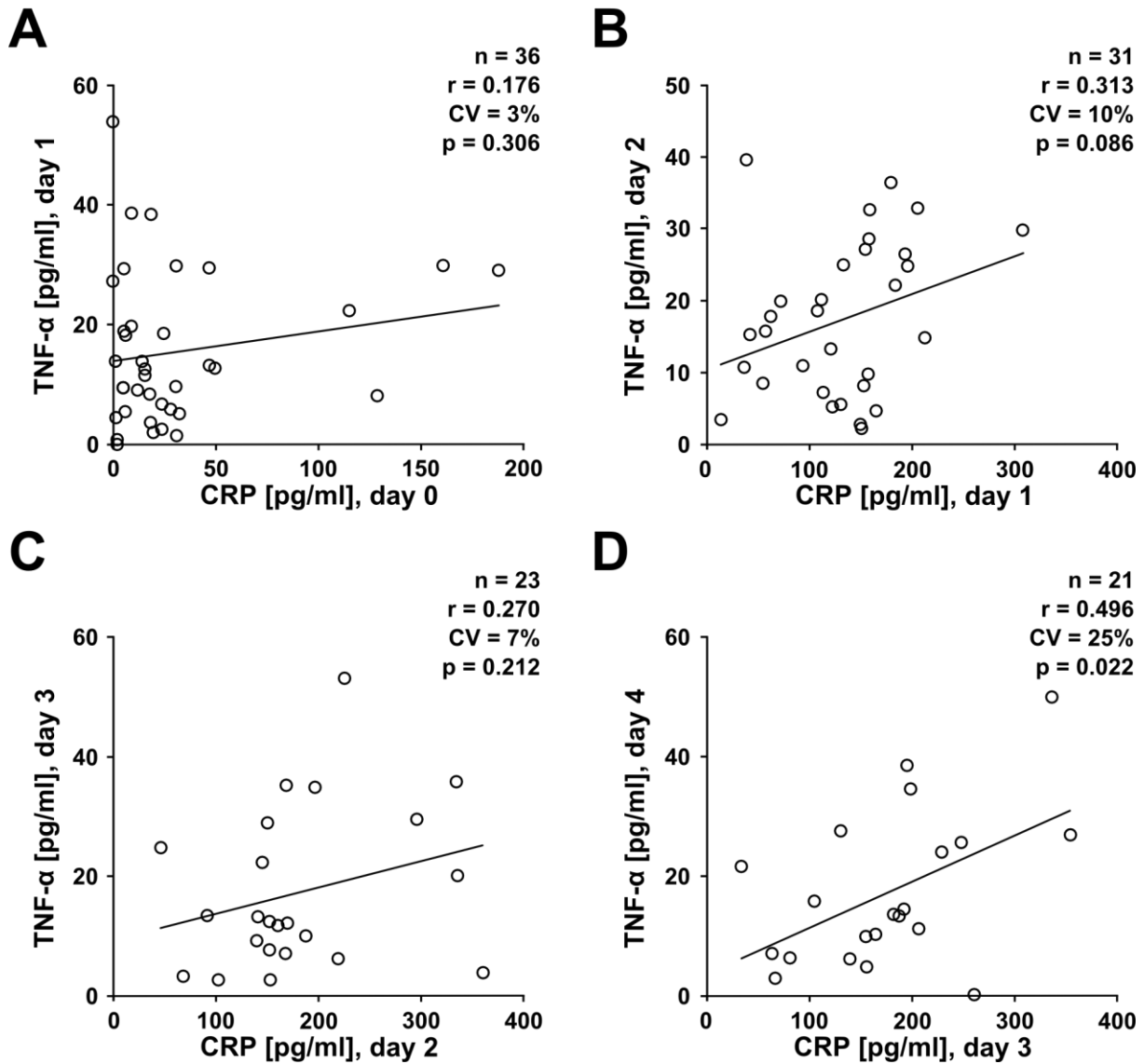
Figure S3

FIGURE S3. Levels of CRP do not negatively correlate with TNF-α levels in trauma patients. A monocentric prospective clinical study was performed on patients suffering from multiple traumata. Plasma levels of TNF-α were measured at daily intervals from the day of admission (day 0) until day 4 after trauma and a correlation analysis was performed with CRP values obtained one day earlier. (**A**) TNF-α at day 1 versus CRP at day 0, (**B**) TNF-α at day 2 versus CRP at day 1, (**C**) TNF-α at day 3 versus CRP at day 2, (**D**) a positive correlation was seen for TNF-α at day 4 versus CRP at day 3. Linear regression analysis, r = correlation coefficient, CV = coefficient of variation.
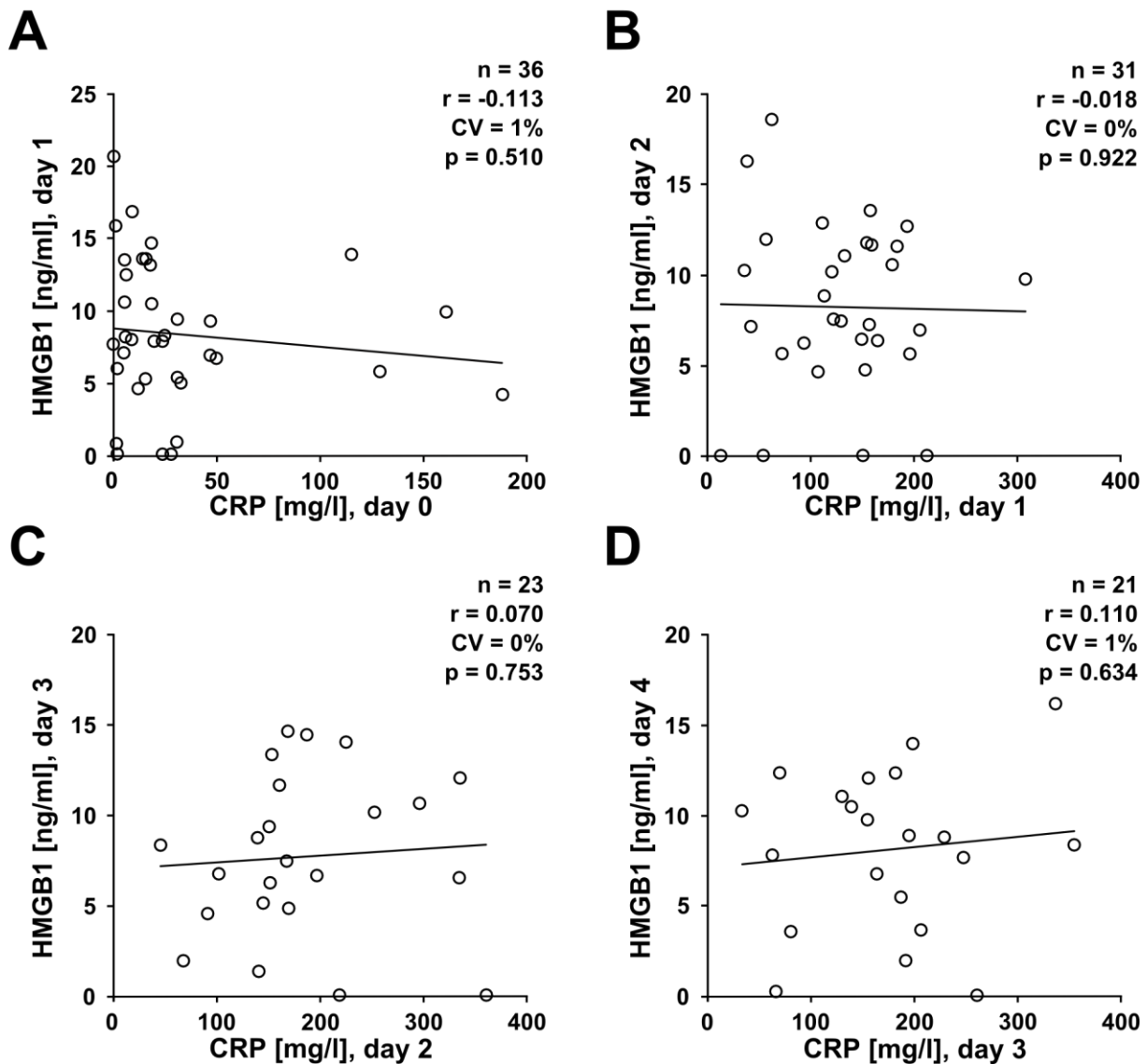
Figure S4

FIGURE S4. Levels of CRP do not negatively correlate with HMGB1 (high mobility group box 1 protein) levels in trauma patients. A monocentric prospective clinical study was performed on patients suffering from multiple traumata. Plasma levels of HMGB1 were measured at daily intervals from the day of admission (day 0) until day 4 after trauma and a correlation analysis was performed with CRP values obtained one day earlier. **(A)** HMGB1 at day 1 versus CRP at day 0, **(B)** HMGB1 at day 2 versus CRP at day 1, **(C)** HMGB1 at day 3 versus CRP at day 2, **(D)** HMGB1 at day 4 versus CRP at day 3. Linear regression analysis, r = correlation coefficient, CV = coefficient of variation.

TABLE S1. Correlation analyses of disease severity scores (day 0) with IL-1β levels (day 0 – day 4).

Variables					
Score	IL-1β	n	r	CV	p
APACHE II	day 0	38	-0.15	2%	0.38
SOFA	day 0	38	-0.23	5%	0.18
APACHE II	day 1	36	0.03	0%	0.86
SOFA	day 1	36	-0.11	1%	0.53
APACHE II	day 2	31	-0.13	2%	0.49
SOFA	day 2	31	-0.24	6%	0.21
APACHE II	day 3	23	-0.49	24%	0.022
SOFA	day 3	23	-0.53	28%	0.011
APACHE II	day 4	21	-0.56	31%	0.01
SOFA	day 4	21	-0.47	22%	0.035

APACHE II, acute physiology and chronic health evaluation score; n, number of patients; p, p-value; r, correlation coefficient; CV, coefficient of variation; SOFA, sequential organ failure assessment score.

TABLE S2. Correlation analyses of disease severity scores (day 0) with CRP levels (day 0 – day 4).

Variables					
Score	CRP	n	r	CV	p
APACHE II	day 0	38	0.035	0%	0.84
SOFA	day 0	38	0.12	1%	0.47
APACHE II	day 1	36	-0.029	0%	0.87
SOFA	day 1	36	0.091	1%	0.6
APACHE II	day 2	31	-0.023	0%	0.9
SOFA	day 2	31	0.026	0%	0.89
APACHE II	day 3	23	0.2	4%	0.38
SOFA	day 3	23	0.23	5%	0.29
APACHE II	day 4	21	0.063	0%	0.79
SOFA	day 4	21	0.08	1%	0.74

APACHE II, acute physiology and chronic health evaluation score; n, number of patients; p, p-value; r, correlation coefficient; CV, coefficient of variation; SOFA, sequential organ failure assessment score.