

Supplementary Table 1. Changes (folds vs. controls) for inflammatory status, circulating cytokines, and redox status in *MECP2*- and *CDKL5*- mutated Rett patients.

	<i>MECP2</i> -mutated Rett patients	<i>CDKL5</i> -mutated Rett patients
<i>Inflammatory status</i>		
ESR	3.31 ± 1.77	1.52 ± 0.48
<i>Circulating cytokines</i>		
TNF- α	7.51 ± 2.32	4.56 ± 1.73
IFN- γ	0.63 ± 0.22	1.80 ± 1.12
IL-1 β	0.96 ± 0.41	3.41 ± 1.45
IL-12p70	0.00066 ± 0.00037	3.15 ± 0.54
IL-4	3.00 ± 0.38	0.69 ± 0.49
IL-5	1.05 ± 0.09	1.14 ± 0.04
IL-6	2.82 ± 1.00	1.75 ± 1.83
IL-10	0.70 ± 0.95	21.22 ± 2.79
IL-13	1.17 ± 0.79	4.56 ± 1.60
IL-33	6.28 ± 1.94	4.57 ± 1.72
IL-17A	3.00 ± 1.12	0.30 ± 0.25
IL-22	0.46 ± 0.13	1.10 ± 0.16
TGF- β 1	0.94 ± 0.12	1.14 ± 0.03
IL-37	4.25 ± 1.33	3.16 ± 1.61
IL-8	1.63 ± 0.62	1.40 ± 0.72
IP-10	0.69 ± 0.12	0.71 ± 0.12
I-TAC	0.47 ± 0.11	0.40 ± 0.14
RANTES	0.86 ± 0.09	0.95 ± 0.06
<i>Th2/Th1 ratio</i>		
IL-4 / IFN- γ	3.99 ± 2.14	0.60 ± 0.37
IL-5 / IFN- γ	1.79 ± 0.72	0.81 ± 0.50

IL-6 / IFN- γ	4.87 \pm 1.59	1.28 \pm 1.14
IL-10 / IFN- γ	1.10 \pm 1.04	8.13 \pm 5.64
IL-4 / TNF- α	0.26 \pm 1.14	0.27 \pm 0.25
IL-5 / TNF- α	0.14 \pm 0.08	1.17 \pm 1.15
IL-6 / TNF- α	0.10 \pm 0.06	3.17 \pm 3.06
IL-10 / TNF- α	0.12 \pm 0.09	20.96 \pm 6.85
<i>OS markers</i>		
P-NPBI	2.57 \pm 0.69	2.53 \pm 0.31
IE-NPBI	2.08 \pm 0.82	1.89 \pm 0.38
F ₂ -IsoPs	3.58 \pm 0.82	3.44 \pm 0.68
F ₄ -NeuroPs	17.47 \pm 2.12	4.64 \pm 1.02
F ₂ -dihomo-IsoPs	34.67 \pm 3.56	0.73 \pm 0.51
GSH/GSSG ratio	0.051 \pm 0.002	0.070 \pm 0.005

Data are expressed as folds vs. healthy subjects values and indicated as means \pm standard deviations. Value < 1 indicates a decrease in the examined variables (*i.e.*, inflammatory markers, cytokine production, OS markers) whereas value > 1 indicates an increase in the examined variables. Bold characters indicate statistical significance ($P < 0.05$). ESR: erythrocyte sedimentation rate; P-NPBI: plasma non-protein-bound iron; F₂-IsoPs: plasma F₂-isoprostanes; F₂-dihomo-IsoPs: plasma F₂-dihomo-isoprostanes; F₄-NeuroPs: F₄-neuroprostanes; GSH: reduced glutathione; GSSG: oxidized glutathione.

Supplementary Table 2. Changes for clinical severity, inflammatory status, circulating cytokines, and redox status in *MECP2*- and *CDKL5*- mutated Rett patients after ω -3 PUFAs supplementation.

	<i>MECP2</i> -mutated Rett patients	<i>CDKL5</i> -mutated Rett patients
<i>Clinical severity</i>		
CCSS [46]	0.77 ± 0.4	0.63 ± 0.2
<i>Inflammatory status</i>		
ESR	0.57 ± 0.24	0.54 ± 0.39
<i>Circulating cytokines</i>		
TNF- α	0.072 ± 0.12	0.00013 ± 0.00001
IFN- γ	1.81 ± 0.53	0.99 ± 0.30
IL-1 β	1.10 ± 0.55	0.97 ± 0.13
IL-12p70	277 ± 8.58	N.A.
IL-4	0.41 ± 0.08	2.14 ± 0.45
IL-5	1.02 ± 0.05	0.94 ± 0.11
IL-6	1.46 ± 0.75	2.36 ± 0.95
IL-10	3.69 ± 3.0	0.49 ± 0.22
IL-13	2.93 ± 1.87	0.13 ± 0.10
IL-33	1.23 ± 0.63	N.A.
IL-17A	0.39 ± 0.23	0.004 ± 0.009
IL-22	2.19 ± 0.31	N.A.
TGF- β 1	1.01 ± 0.08	1.19 ± 0.01
IL-37	0.60 ± 0.23	1.02 ± 0.01
IL-8	0.64 ± 0.38	0.0037 ± 0.0004
IP-10	1.25 ± 0.36	0.44 ± 0.15
I-TAC	1.93 ± 0.51	2.03 ± 0.94
RANTES	0.94 ± 0.09	1.05 ± 0.02

<i>Th2/Th1 ratio</i>		
IL-4 / IFN- γ	0.27 \pm 0.18	2.16 \pm 1.17
IL-5 / IFN- γ	0.60 \pm 0.40	0.93 \pm 0.62
IL-6 / IFN- γ	0.88 \pm 0.69	1.96 \pm 1.20
IL-10 / IFN- γ	2.15 \pm 2.10	0.43 \pm 0.27
IL-4 / TNF- α	3.12 \pm 2.49	6.0 \pm 1.26
IL-5 / TNF- α	8.23 \pm 3.99	4.65 \pm 0.55
IL-6 / TNF- α	45.73 \pm 11.2	6.32 \pm 2.55
IL-10 / TNF- α	39.39 \pm 11.3	1.83 \pm 0.80
<i>OS markers</i>		
P-NPBI	0.52 \pm 0.08	0.66 \pm 0.01
IE-NPBI	0.54 \pm 0.07	0.47 \pm 0.03
F ₂ -IsoPs	0.51 \pm 0.14	0.45 \pm 0.08
F ₄ -NeuroPs	0.29 \pm 0.08	1.05 \pm 0.06
F ₂ -dihomo-IsoPs	0.13 \pm 0.12	6.62 \pm 3.49
GSH/GSSG ratio	2.17 \pm 0.09	0.86 \pm 0.55

Data are expressed as folds vs. basal levels (*i.e.*, untreated *MECP2*- and *CDKL5*-mutated Rett patients) and indicated as means \pm standard deviations. Value < 1 indicates a decrease in the examined variables (*i.e.*, inflammatory markers, cytokine production, OS markers) whereas value > 1 indicates an increase in the examined variables. Bold characters indicate statistical significance ($P < 0.05$). CCSS: compressed clinical severity score [46]; ESR: erythrocyte sedimentation rate; P-NPBI: plasma non-protein-bound iron; F₂-IsoPs, plasma F₂-isoprostanes; F₂-dihomo-IsoPs: plasma F₂-dihomo-isoprostanes; F₄-NeuroPs: F₄-neuroprostanes; GSH: reduced glutathione; GSSG: oxidized glutathione; N.A.: not applicable.