

ELECTRONIC SUPPLEMENTARY FILE (ESF)

Methamphetamine (MA) use, MA dependence and MA-induced psychosis are associated with increasing aberrations in the compensatory immunoregulatory system, and interleukin-1 α and CCL5 levels.

(1-3) Rasmon Kalayasiri, (1) Kanokwan Dadwat, (1) Supaksorn Thika, (4) Sunee Sirivichayakul, (1, 5-8) Michael Maes

(1) Centre for Addiction Studies, Department of Psychiatry, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

(2) King Chulalongkorn Memorial Hospital, Thai Red Cross Society, Bangkok, Thailand

(3) Epidemiology of Psychiatric Disorders and Mental Health Research Unit, Department of Psychiatry, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

(4) Division of Allergy and Clinical Immunology, Department of Medicine, Faculty of Medicine, Chulalongkorn University

(5) Cognitive Fitness and Technology Research Unit, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

(6) Department of Psychiatry, Medical University of Plovdiv, Plovdiv, Bulgaria

(7) Research Institute, Medical University Plovdiv, Plovdiv, Bulgaria

(8) IMPACT Strategic Research Center, Barwon Health, Geelong, Australia

(9) Kyung Hee University, 26 Kyungheedaero, Dongdaemun-gu, Seoul 02447, Korea

ESF, Table 1. Overview of the cytokines, chemokines and growth factors measured in the current study

Protein abbreviations	Gene Symbol	> OOR (%)	Protein name / alias
IFN- α 2	IFNA2	42.0%	Interferon- α 2
IFN- γ	IFNG	42.5%	Interferon- γ
IL-1 α	IL1A	100%	Interleukin-1 α
IL-1 β	IL1B	99.4%	Interleukin-1 β
sIL-1RA	IL1RN	100%	Soluble interleukin-1 receptor antagonist
IL-2	IL2	<7%	Interleukin-2
IL-2RA	IL2RA	100%	Soluble interleukin-2 receptor
IL-3	IL3	0%	Interleukin-3
IL-4	IL4	100%	Interleukin-4
IL-5	IL5	<7%	Interleukin-5
IL-6	IL6	8%	Interleukin-6

IL-7	IL7	10.9%	Interleukin-7
IL-9	IL9	100%	Interleukin-9
IL-10	IL10	42%	Interleukin-10
IL-12p70	IL12RB1	47%	Interleukin-12 p70
IL-12p40	IL12RB1	57.5%	Interleukin-12 p40
IL-13	IL13	88.5%	Interleukin-13
IL-15	IL15	<7%	Interleukin-15
IL-16	IL16	100%	Interleukin-16
IL-17	IL17A	8.6%	Interleukin-17
IL-18	IL18	100%	Interleukin-18
TNF-α	TNF	100%	Tumor necrosis factor- α
TNF-β	LTA	100%	Tumor necrosis factor- β or lymphotoxin-alpha (LT- α)
TRAIL	TNFSF10	100%	TNF-related apoptosis-inducing ligand (TRAIL) or tumor necrosis factor ligand superfamily member 10 (TNFSF10)
LIF	LIF	100%	Interleukin inhibitory factor
MIF	MIF	100%	Macrophage migration inhibitory factor-like protein (MIF) or glycosylation-inhibiting factor

G-CSF	CSF3	100%	Granulocyte colony stimulating factor (G-CSF) or colony stimulating factor 3 (CSF3)
M-CSF	CSF1	100%	Macrophage colony-stimulating factor (M-CSF) or colony stimulating factor 1 (CSF1)
GM-CSF	CSF2	<7%	Granulocyte-macrophage colony-stimulating factor (GM-CSF) or colony-stimulating factor 2 (CSF2)
CCL2 or MCP1	CCL2	100%	C-C motif chemokine ligand 2 (CCL2) or monocyte chemoattractant protein 1 (MCP1)
CCL3 or MIP-1α	CCL3	99.4%	C-C motif Chemokine ligand 3 (CCL3) or macrophage inflammatory protein 1-alpha (MIP-1 α)
CCL4 or MIP-1β	CCL4	100%	C-C motif chemokine ligand 4 (CCL4) or macrophage inflammatory protein 1 β (MIP-1 β) or lymphocyte activation gene 1 protein
CCL5 or RANTES	CCL5	71.8%	C-C motif chemokine ligand 5 (CCL5) or regulated upon activation, normally T-expressed, and presumably Secreted (RANTES)
CCL7 or MCP3	CCL7	78.2%	C-C motif chemokine ligand 7 (CCL7) or monocyte-chemotactic protein 3 (MCP3).
CCL11 or Eotaxin	CCL11	100%	C-C motif chemokine ligand 11 (CCL11) or eosinophil chemotactic protein
CCL27 or CTACK	CCL27	100%	C-C motif chemokine ligand 27 (CCL27) or cutaneous T-cell attracting chemokine (CTACK)
CXCL1 or GRO-α	CXCL1	83.9%	C-X-C motif chemokine 1 (CXCL1) or growth-regulated alpha protein (GRO)
CXCL8 or IL-8	CXCL8	99.4%	C-X-C motif chemokine ligand 8 (CXCL8) or interleukin-8 (IL-8)
CXCL9 or MIG	CXCL9	100%	C-X-C motif chemokine ligand 9 (CXCL9) or monokine induced by gamma interferon (MIG)
CXCL10 or IP10	CXCL10	100%	C-X-C motif chemokine ligand 10 (CXCL10) or Interferon gamma-induced protein 10 (IP10)
CXCL12 or SDF-1α	CXCL12	100%	C-X-C motif chemokine 12 (CXCL12) or stromal cell-derived factor 1 (SDF-1 α)

FGF	FGF2	100%	Fibroblast growth factor 2 (FGF) or basic fibroblast growth factor
HGF or SF	HGF	100%	Hepatocyte growth factor (HGF) or scatter factor (SF)
NGF	NGF	<7%	β -nerve growth factor (NGF)
PDGF	PDGFA	99.4%	Platelet derived growth factor (PDGF)
SCF	KITLG	100%	Stem cell factor (SCF) or Kit ligand (KITLG)
SCGF-β or CLEC11A	CLEC11A	100%	Stem cell growth factor (SCGF) or C-type lectin domain family 11 member A (CLEC11A)
VEGF	VEGFA	15.5%	Vascular endothelial growth factor (VEGF)

ESF, Table 2. Composite scores used in the present study

Immune Profiles	Members
M1 macrophage	IL-1 α , IL-1 β , sIL-1RA, IL-6, TNF- α , CXCL8, CXCL10, CCL2, CCL3, CCL4
T helper-1	IL-2, sIL-2R, IFN- α , IFN- γ , IL-12p70, IL12p40, IL-16
T helper-2	IL-4, IL-9, IL-13
IRS	IL-1 α , IL-1 β , IL-6, LIF, IL-7, TNF- α , TNF- β , TRAIL, IFN- α 2, IFN- γ , IL-12p70, IL-16, IL-18, G-CSF, M-CSF, CCL2, CCL3, CCL4, CCL5, CCL7, CC11, CCL, 27, CXCL1, CXCL8, CXCL9, CXCL10, CXCL12
CIRS	IL-4, IL-9, IL-10, sIL-1RA, IL-12p40, sIL-2R
Chemokines	All CCL and all CXCL members
Growth factors	FGF, HGF, PDGF, SCF, SCGF, VEGF

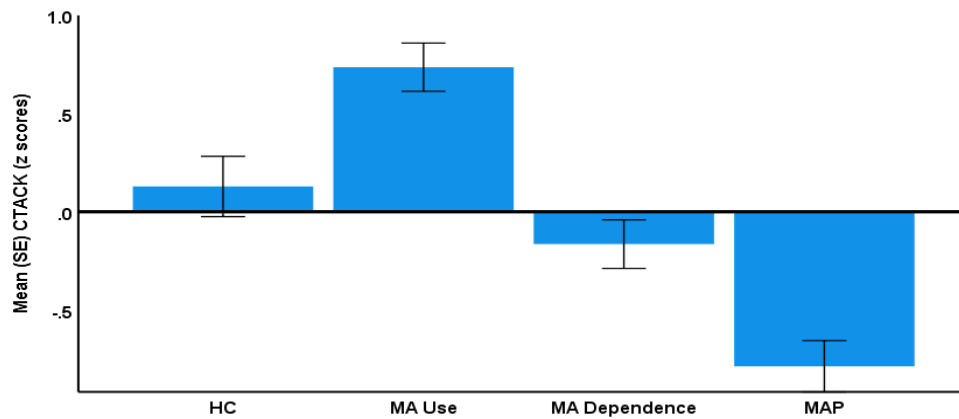


Figure S1. CCL27 or CTACK levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=23.87$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: CTACK

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	-.608*	0.202	0.003	-1.006	-0.209
	2	0.293	0.200	0.145	-0.102	0.688
	3	.915*	0.199	<.001	0.523	1.308
1	0	.608*	0.202	0.003	0.209	1.006
	2	.901*	0.174	<.001	0.557	1.245
	3	1.523*	0.185	<.001	1.158	1.888
2	0	-0.293	0.200	0.145	-0.688	0.102
	1	-.901*	0.174	<.001	-1.245	-0.557
	3	.622*	0.181	<.001	0.265	0.980
3	0	-.915*	0.199	<.001	-1.308	-0.523
	1	-1.523*	0.185	<.001	-1.888	-1.158
	2	-.622*	0.181	<.001	-0.980	-0.265

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

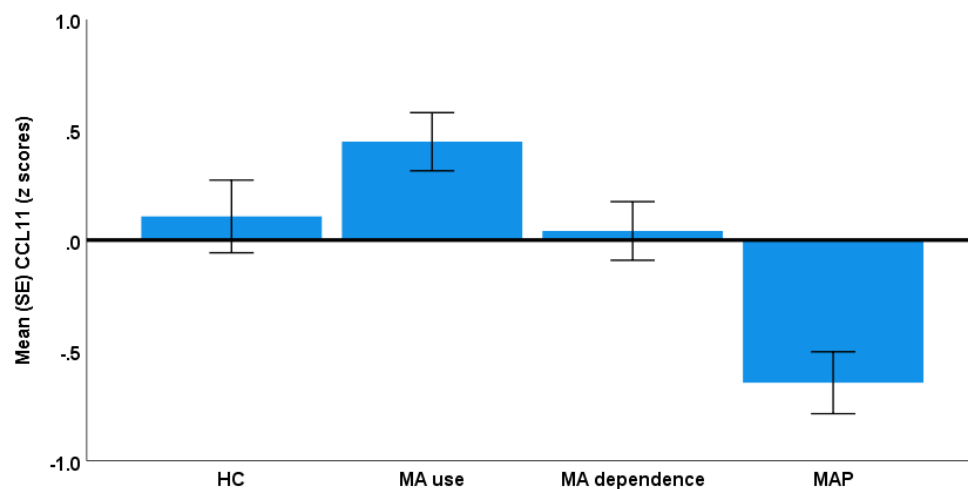


Figure S2. CCL11 levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=10.64$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: CCL11

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	-0.339	0.217	0.120	-0.767	0.089
	2	0.066	0.215	0.760	-0.358	0.489
	3	.754*	0.213	0.001	0.333	1.175
1	0	0.339	0.217	0.120	-0.089	0.767
	2	.404*	0.187	0.032	0.036	0.773
	3	1.092*	0.198	0.000	0.701	1.484
2	0	-0.066	0.215	0.760	-0.489	0.358
	1	-.404*	0.187	0.032	-0.773	-0.036
	3	.688*	0.194	0.001	0.305	1.071
3	0	-.754*	0.213	0.001	-1.175	-0.333
	1	-1.092*	0.198	0.000	-1.484	-0.701
	2	-.688*	0.194	0.001	-1.071	-0.305

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

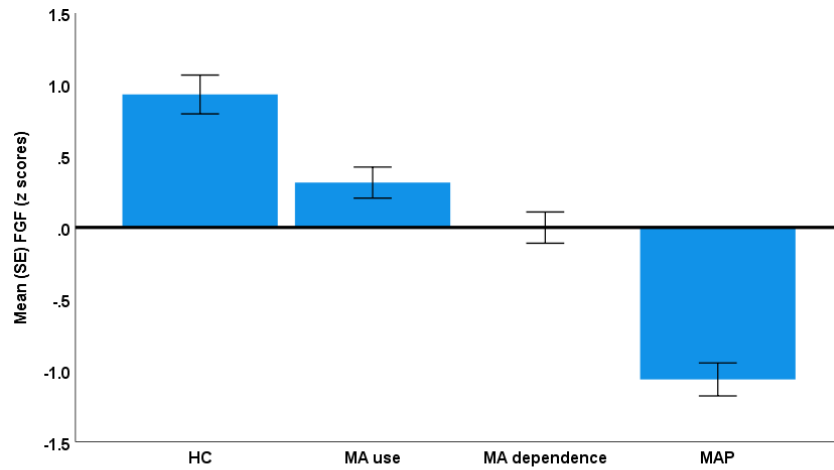


Figure S3. FGF levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=47.71$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: FGF

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	.617*	0.178	0.001	0.264	0.969
	2	.932*	0.177	0.000	0.583	1.280
	3	1.994*	0.176	0.000	1.647	2.341
1	0	-.617*	0.178	0.001	-0.969	-0.264
	2	.315*	0.154	0.042	0.011	0.619
	3	1.377*	0.163	0.000	1.055	1.699
2	0	-.932*	0.177	0.000	-1.280	-0.583
	1	-.315*	0.154	0.042	-0.619	-0.011
	3	1.062*	0.160	0.000	0.747	1.378
3	0	-1.994*	0.176	0.000	-2.341	-1.647
	1	-1.377*	0.163	0.000	-1.699	-1.055
	2	-1.062*	0.160	0.000	-1.378	-0.747

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

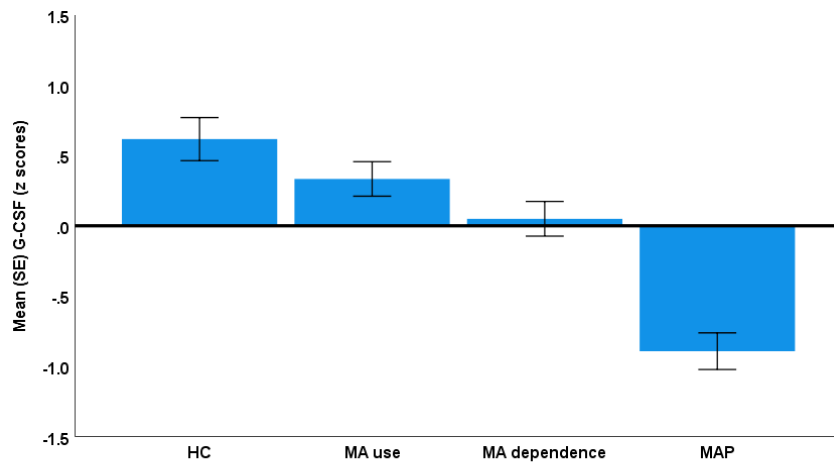


Figure S4. G-CSF levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=23.77$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: G-CSF

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.283	0.202	0.162	-0.115	0.681
	2	.567*	0.200	0.005	0.173	0.961
	3	1.509*	0.198	0.000	1.118	1.901
1	0	-0.283	0.202	0.162	-0.681	0.115
	2	0.284	0.174	0.105	-0.060	0.627
	3	1.226*	0.184	0.000	0.862	1.590
2	0	-.567*	0.200	0.005	-0.961	-0.173
	1	-0.284	0.174	0.105	-0.627	0.060
	3	.942*	0.181	0.000	0.586	1.299
3	0	-1.509*	0.198	0.000	-1.901	-1.118
	1	-1.226*	0.184	0.000	-1.590	-0.862
	2	-.942*	0.181	0.000	-1.299	-0.586

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

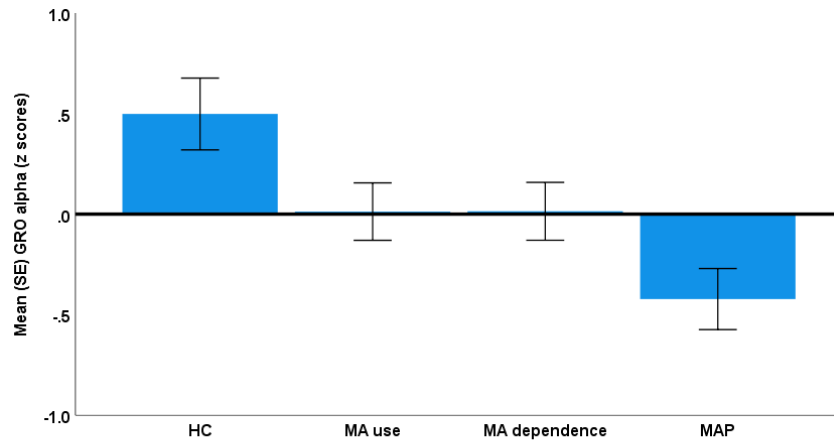


Figure S5. CXCL1 (GRO- α) levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=5.33$, $df=3/164$, $p=0.002$).

Pairwise Comparisons

Dependent Variable: GRO- α

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	.485*	0.235	0.040	0.022	0.949
	2	.484*	0.233	0.039	0.025	0.943
	3	.920*	0.231	0.000	0.464	1.377
1	0	-.485*	0.235	0.040	-0.949	-0.022
	2	-0.002	0.202	0.994	-0.401	0.398
	3	.435*	0.215	0.044	0.011	0.859
2	0	-.484*	0.233	0.039	-0.943	-0.025
	1	0.002	0.202	0.994	-0.398	0.401
	3	.437*	0.210	0.040	0.021	0.852
3	0	-.920*	0.231	0.000	-1.377	-0.464
	1	-.435*	0.215	0.044	-0.859	-0.011
	2	-.437*	0.210	0.040	-0.852	-0.021

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

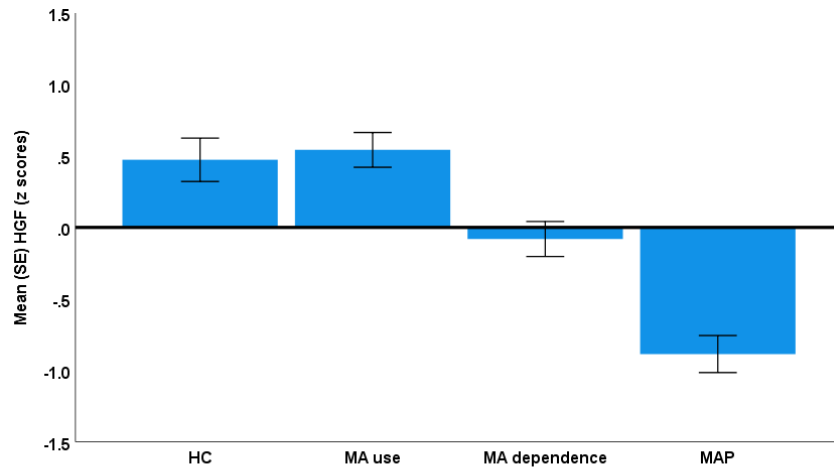


Figure S6. HGF levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=25.43$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: HGF

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	-0.070	0.200	0.728	-0.464	0.325
	2	.554*	0.198	0.006	0.163	0.945
	3	1.359*	0.197	0.000	0.971	1.748
1	0	0.070	0.200	0.728	-0.325	0.464
	2	.624*	0.172	0.000	0.283	0.964
	3	1.429*	0.183	0.000	1.068	1.790
2	0	-.554*	0.198	0.006	-0.945	-0.163
	1	-.624*	0.172	0.000	-0.964	-0.283
	3	.805*	0.179	0.000	0.452	1.159
3	0	-1.359*	0.197	0.000	-1.748	-0.971
	1	-1.429*	0.183	0.000	-1.790	-1.068
	2	-.805*	0.179	0.000	-1.159	-0.452

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

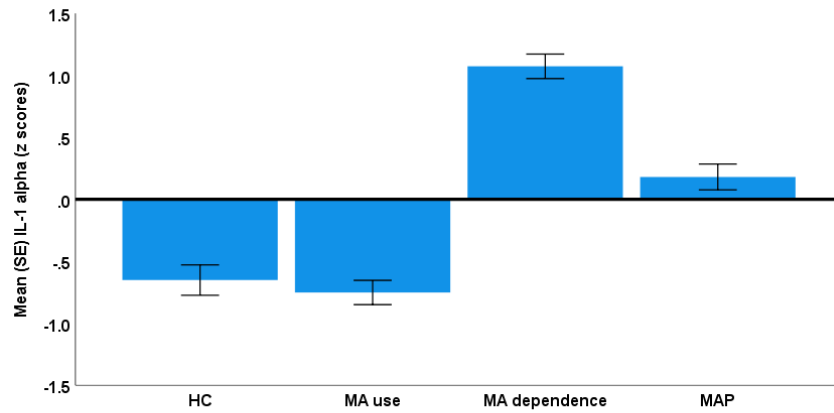


Figure S7. IL-1 α levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=69.76$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: IL-1 α

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.100	0.161	0.534	-0.218	0.419
	2	-1.725*	0.160	0.000	-2.040	-1.410
	3	-.832*	0.159	0.000	-1.145	-0.519
1	0	-0.100	0.161	0.534	-0.419	0.218
	2	-1.825*	0.139	0.000	-2.100	-1.551
	3	-.933*	0.147	0.000	-1.224	-0.642
2	0	1.725*	0.160	0.000	1.410	2.040
	1	1.825*	0.139	0.000	1.551	2.100
	3	.892*	0.144	0.000	0.607	1.178
3	0	.832*	0.159	0.000	0.519	1.145
	1	.933*	0.147	0.000	0.642	1.224
	2	-.892*	0.144	0.000	-1.178	-0.607

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

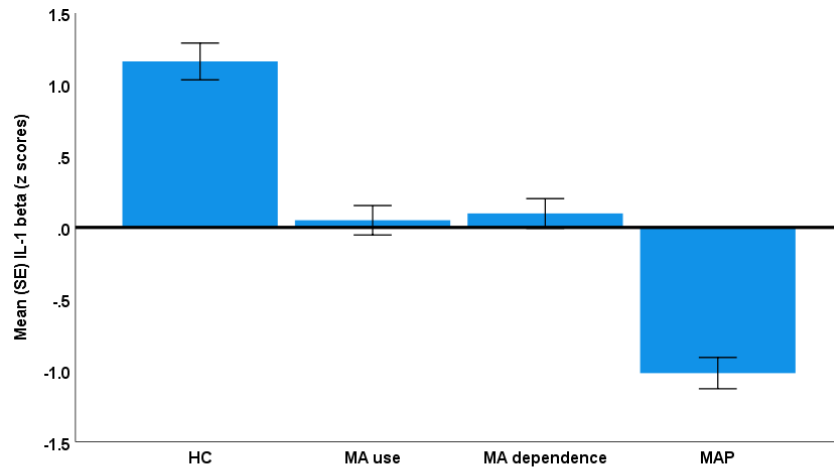


Figure S8. IL-1 β levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=58.11$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: IL-1 β

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	1.111*	0.169	0.000	0.777	1.446
	2	1.064*	0.168	0.000	0.733	1.395
	3	2.181*	0.167	0.000	1.852	2.510
1	0	-1.111*	0.169	0.000	-1.446	-0.777
	2	-0.047	0.146	0.746	-0.336	0.241
	3	1.070*	0.155	0.000	0.764	1.375
2	0	-1.064*	0.168	0.000	-1.395	-0.733
	1	0.047	0.146	0.746	-0.241	0.336
	3	1.117*	0.152	0.000	0.817	1.416
3	0	-2.181*	0.167	0.000	-2.510	-1.852
	1	-1.070*	0.155	0.000	-1.375	-0.764
	2	-1.117*	0.152	0.000	-1.416	-0.817

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

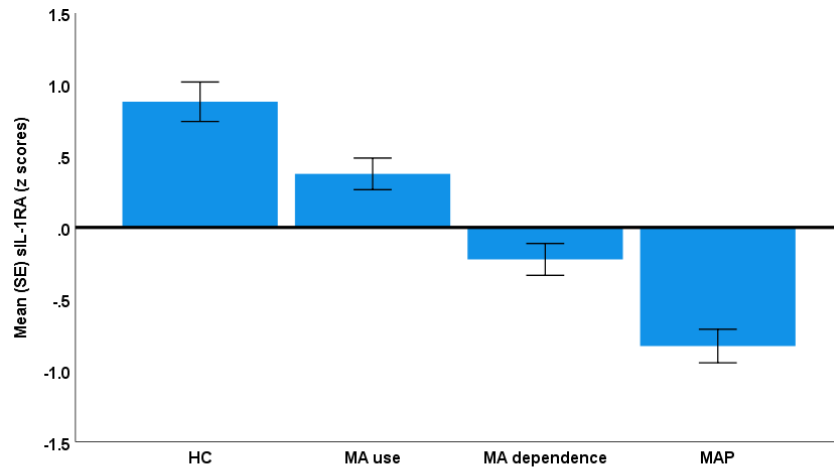


Figure S9. sIL-1RA levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=35.87$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: sIL-1RA

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	.505*	0.182	0.006	0.146	0.864
	2	1.103*	0.180	0.000	0.748	1.459
	3	1.709*	0.179	0.000	1.356	2.062
1	0	-.505*	0.182	0.006	-0.864	-0.146
	2	.598*	0.157	0.000	0.289	0.908
	3	1.204*	0.166	0.000	0.876	1.533
2	0	-1.103*	0.180	0.000	-1.459	-0.748
	1	-.598*	0.157	0.000	-0.908	-0.289
	3	.606*	0.163	0.000	0.284	0.927
3	0	-1.709*	0.179	0.000	-2.062	-1.356
	1	-1.204*	0.166	0.000	-1.533	-0.876
	2	-.606*	0.163	0.000	-0.927	-0.284

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

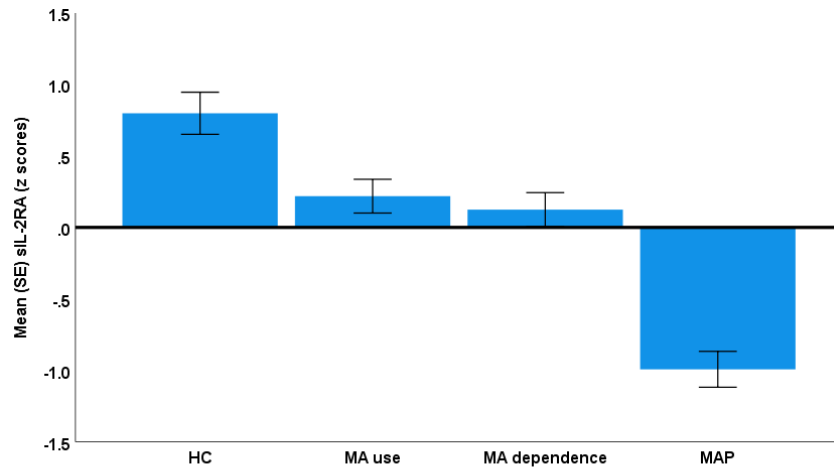


Figure S10. sIL-2RA levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=32.87$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: sIL-2RA

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	.580*	0.194	0.003	0.197	0.963
	2	.674*	0.192	0.001	0.295	1.053
	3	1.792*	0.191	0.000	1.415	2.168
1	0	-.580*	0.194	0.003	-0.963	-0.197
	2	0.094	0.167	0.575	-0.236	0.424
	3	1.211*	0.177	0.000	0.861	1.562
2	0	-.674*	0.192	0.001	-1.053	-0.295
	1	-0.094	0.167	0.575	-0.424	0.236
	3	1.117*	0.174	0.000	0.774	1.460
3	0	-1.792*	0.191	0.000	-2.168	-1.415
	1	-1.211*	0.177	0.000	-1.562	-0.861
	2	-1.117*	0.174	0.000	-1.460	-0.774

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

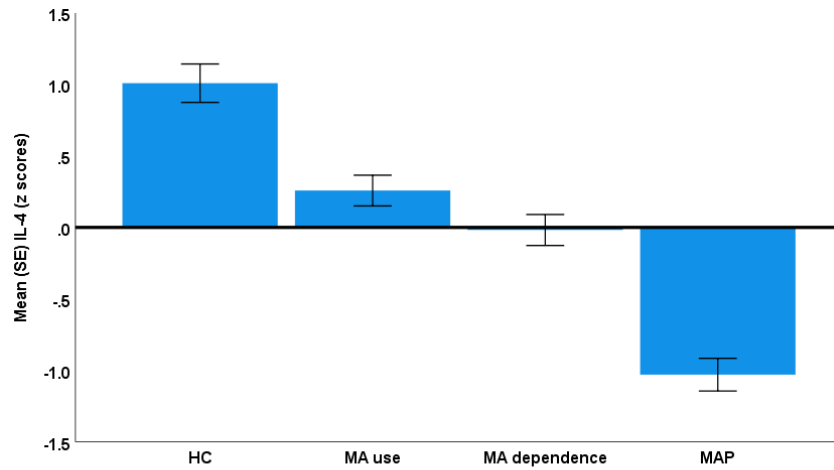


Figure S11. IL-4 levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=48.96$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: IL-4

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	.751*	0.177	0.000	0.402	1.100
	2	1.027*	0.175	0.000	0.682	1.373
	3	2.040*	0.174	0.000	1.696	2.383
1	0	-.751*	0.177	0.000	-1.100	-0.402
	2	0.276	0.152	0.072	-0.025	0.577
	3	1.289*	0.162	0.000	0.969	1.608
2	0	-1.027*	0.175	0.000	-1.373	-0.682
	1	-0.276	0.152	0.072	-0.577	0.025
	3	1.013*	0.158	0.000	0.700	1.325
3	0	-2.040*	0.174	0.000	-2.383	-1.696
	1	-1.289*	0.162	0.000	-1.608	-0.969
	2	-1.013*	0.158	0.000	-1.325	-0.700

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

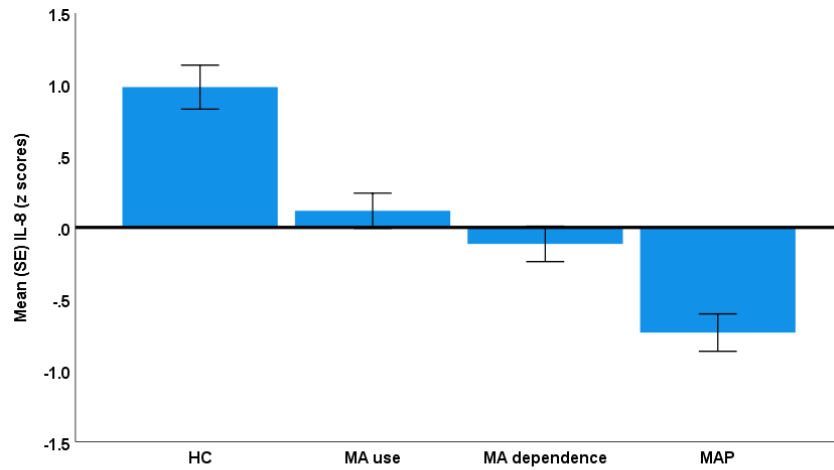


Figure S12.CXCL8 or IL-8 levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=25.29$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: IL-8

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	.865*	0.203	0.000	0.465	1.265
	2	1.097*	0.201	0.000	0.701	1.493
	3	1.717*	0.199	0.000	1.324	2.111
1	0	-.865*	0.203	0.000	-1.265	-0.465
	2	0.232	0.175	0.186	-0.113	0.577
	3	.852*	0.185	0.000	0.487	1.218
2	0	-1.097*	0.201	0.000	-1.493	-0.701
	1	-0.232	0.175	0.186	-0.577	0.113
	3	.621*	0.181	0.001	0.262	0.979
3	0	-1.717*	0.199	0.000	-2.111	-1.324
	1	-.852*	0.185	0.000	-1.218	-0.487
	2	-.621*	0.181	0.001	-0.979	-0.262

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

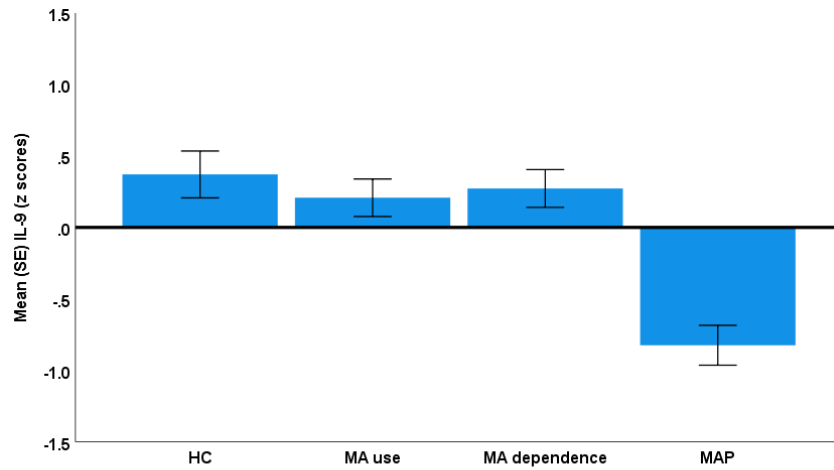


Figure S13. IL-9 levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=15.67$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: IL-9

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.163	0.216	0.451	-0.263	0.589
	2	0.098	0.214	0.646	-0.323	0.520
	3	1.195*	0.212	0.000	0.776	1.614
1	0	-0.163	0.216	0.451	-0.589	0.263
	2	-0.065	0.186	0.728	-0.432	0.302
	3	1.032*	0.197	0.000	0.643	1.422
2	0	-0.098	0.214	0.646	-0.520	0.323
	1	0.065	0.186	0.728	-0.302	0.432
	3	1.097*	0.193	0.000	0.716	1.478
3	0	-1.195*	0.212	0.000	-1.614	-0.776
	1	-1.032*	0.197	0.000	-1.422	-0.643
	2	-1.097*	0.193	0.000	-1.478	-0.716

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

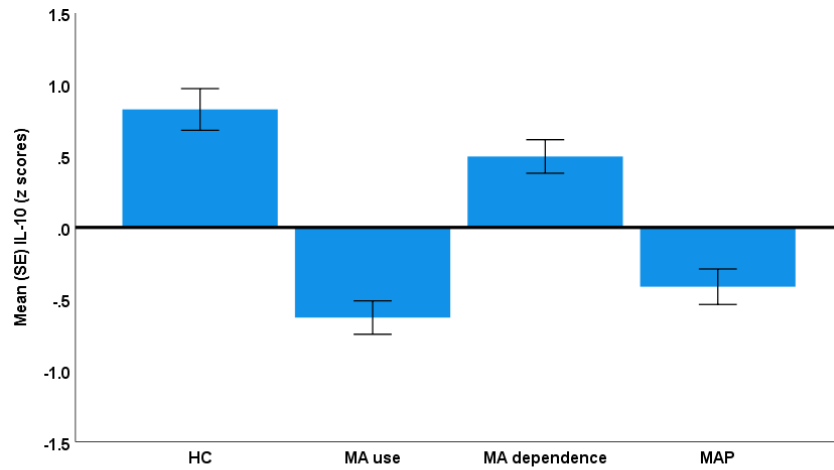


Figure S14. IL-10 levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=30.46$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: IL-10

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	1.456*	0.192	0.000	1.077	1.835
	2	0.329	0.190	0.086	-0.047	0.704
	3	1.240*	0.189	0.000	0.867	1.614
1	0	-1.456*	0.192	0.000	-1.835	-1.077
	2	-1.127*	0.166	0.000	-1.454	-0.800
	3	-0.216	0.176	0.221	-0.562	0.131
2	0	-0.329	0.190	0.086	-0.704	0.047
	1	1.127*	0.166	0.000	0.800	1.454
	3	.912*	0.172	0.000	0.572	1.251
3	0	-1.240*	0.189	0.000	-1.614	-0.867
	1	0.216	0.176	0.221	-0.131	0.562
	2	-.912*	0.172	0.000	-1.251	-0.572

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

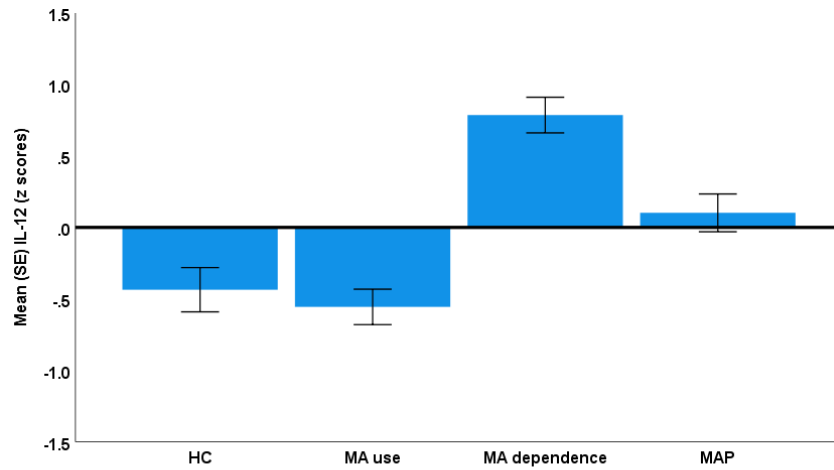


Figure S15. IL-12 p70 levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=22.87$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: IL-12p70

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.120	0.204	0.556	-0.282	0.523
	2	-1.222*	0.202	0.000	-1.621	-0.823
	3	-.538*	0.201	0.008	-0.934	-0.142
1	0	-0.120	0.204	0.556	-0.523	0.282
	2	-1.343*	0.176	0.000	-1.690	-0.995
	3	-.658*	0.186	0.001	-1.026	-0.290
2	0	1.222*	0.202	0.000	0.823	1.621
	1	1.343*	0.176	0.000	0.995	1.690
	3	.684*	0.183	0.000	0.324	1.045
3	0	.538*	0.201	0.008	0.142	0.934
	1	.658*	0.186	0.001	0.290	1.026
	2	-.684*	0.183	0.000	-1.045	-0.324

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

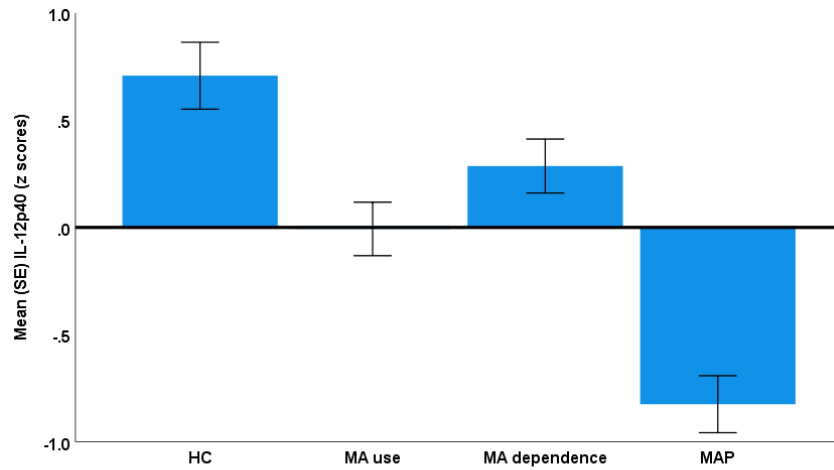


Figure S16. IL-12p40 levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=22.09$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: IL-12p40

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	.715*	0.205	0.001	0.309	1.120
	2	.421*	0.203	0.040	0.020	0.823
	3	1.533*	0.202	0.000	1.133	1.932
1	0	-.715*	0.205	0.001	-1.120	-0.309
	2	-.293	0.177	0.100	-0.643	0.056
	3	.818*	0.188	0.000	0.447	1.189
2	0	-.421*	0.203	0.040	-0.823	-0.020
	1	0.293	0.177	0.100	-0.056	0.643
	3	1.111*	0.184	0.000	0.748	1.475
3	0	-1.533*	0.202	0.000	-1.932	-1.133
	1	-.818*	0.188	0.000	-1.189	-0.447
	2	-1.111*	0.184	0.000	-1.475	-0.748

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

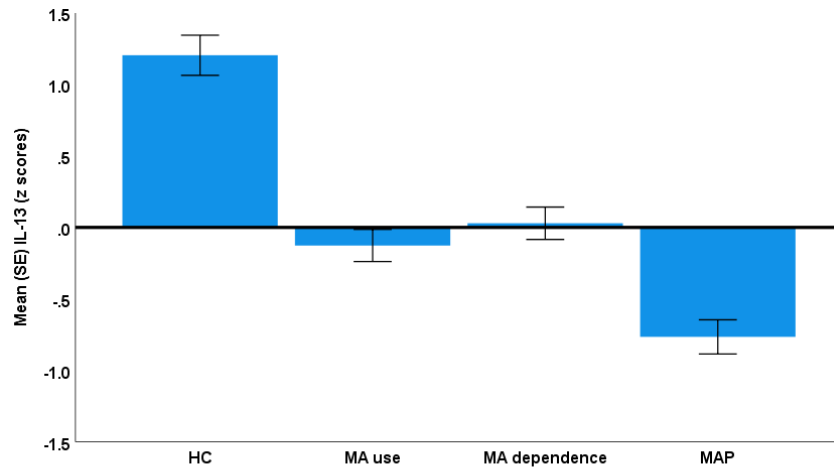


Figure S17. IL-13 levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=39.64$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: IL-13

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	1.331*	0.185	0.000	0.966	1.696
	2	1.175*	0.183	0.000	0.814	1.537
	3	1.970*	0.182	0.000	1.611	2.330
1	0	-1.331*	0.185	0.000	-1.696	-0.966
	2	-0.156	0.159	0.331	-0.470	0.159
	3	.640*	0.169	0.000	0.306	0.973
2	0	-1.175*	0.183	0.000	-1.537	-0.814
	1	0.156	0.159	0.331	-0.159	0.470
	3	.795*	0.166	0.000	0.468	1.122
3	0	-1.970*	0.182	0.000	-2.330	-1.611
	1	-.640*	0.169	0.000	-0.973	-0.306
	2	-.795*	0.166	0.000	-1.122	-0.468

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

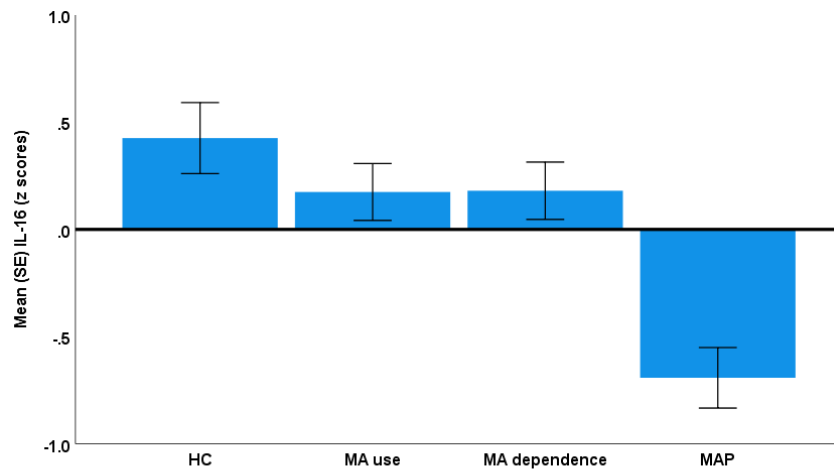


Figure S18. IL-16 levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=11.56$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: IL-16

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.251	0.218	0.251	-0.179	0.682
	2	0.245	0.216	0.257	-0.181	0.672
	3	1.118*	0.215	0.000	0.694	1.542
1	0	-0.251	0.218	0.251	-0.682	0.179
	2	-0.006	0.188	0.975	-0.377	0.365
	3	.867*	0.199	0.000	0.473	1.260
2	0	-0.245	0.216	0.257	-0.672	0.181
	1	0.006	0.188	0.975	-0.365	0.377
	3	.873*	0.195	0.000	0.487	1.258
3	0	-1.118*	0.215	0.000	-1.542	-0.694
	1	-.867*	0.199	0.000	-1.260	-0.473
	2	-.873*	0.195	0.000	-1.258	-0.487

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

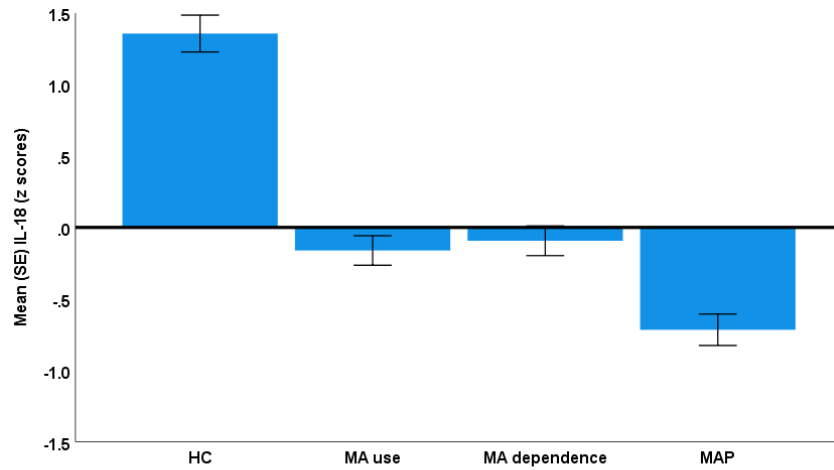


Figure S19. IL-18 levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=53.10$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: IL-18

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	1.518*	0.170	0.000	1.183	1.853
	2	1.450*	0.168	0.000	1.118	1.782
	3	2.073*	0.167	0.000	1.743	2.403
1	0	-1.518*	0.170	0.000	-1.853	-1.183
	2	-0.068	0.146	0.643	-0.357	0.221
	3	.555*	0.155	0.000	0.248	0.862
2	0	-1.450*	0.168	0.000	-1.782	-1.118
	1	0.068	0.146	0.643	-0.221	0.357
	3	.623*	0.152	0.000	0.323	0.923
3	0	-2.073*	0.167	0.000	-2.403	-1.743
	1	-.555*	0.155	0.000	-0.862	-0.248
	2	-.623*	0.152	0.000	-0.923	-0.323

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

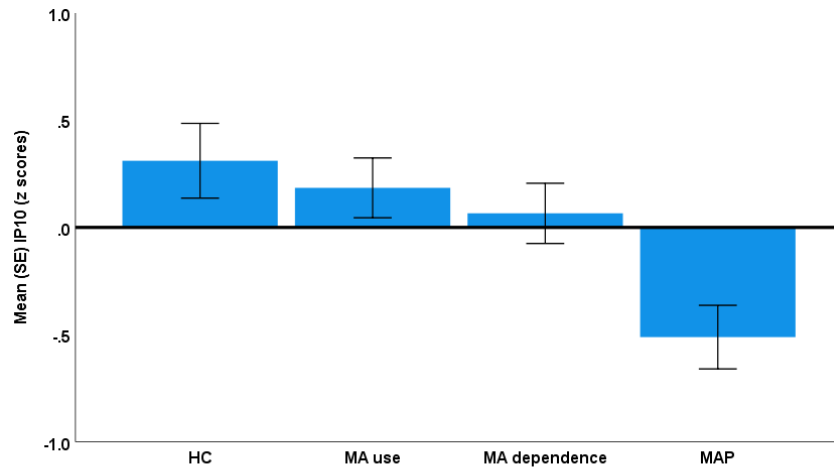


Figure S20. CXCL10 or IP10 levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=5.72$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: IP10

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_De pendence_Psy chosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.127	0.229	0.582	-0.326	0.579
	2	0.246	0.227	0.281	-0.203	0.694
	3	.823*	0.226	0.000	0.377	1.269
1	0	-0.127	0.229	0.582	-0.579	0.326
	2	0.119	0.198	0.549	-0.272	0.509
	3	.696*	0.210	0.001	0.282	1.110
2	0	-0.246	0.227	0.281	-0.694	0.203
	1	-0.119	0.198	0.549	-0.509	0.272
	3	.577*	0.205	0.006	0.172	0.983
3	0	-.823*	0.226	0.000	-1.269	-0.377
	1	-.696*	0.210	0.001	-1.110	-0.282
	2	-.577*	0.205	0.006	-0.983	-0.172

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

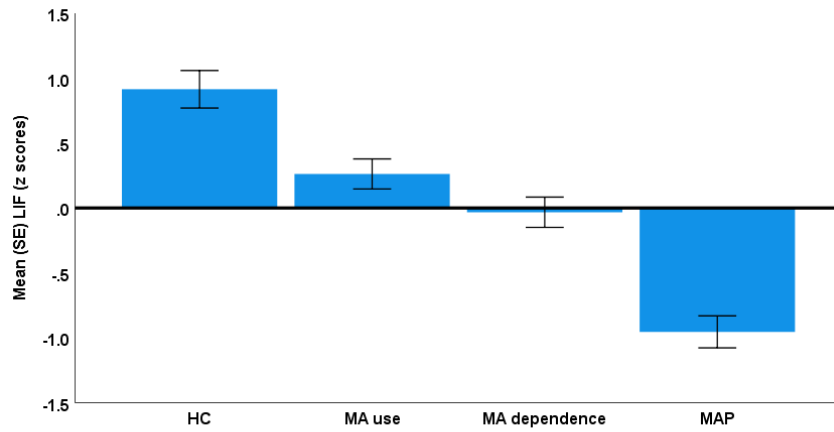


Figure S21. LIF levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=35.84$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: LIF

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	.652*	0.190	0.001	0.276	1.028
	2	.947*	0.189	0.000	0.575	1.320
	3	1.869*	0.187	0.000	1.499	2.239
1	0	-.652*	0.190	0.001	-1.028	-0.276
	2	0.295	0.164	0.074	-0.029	0.619
	3	1.217*	0.174	0.000	0.873	1.560
2	0	-.947*	0.189	0.000	-1.320	-0.575
	1	-0.295	0.164	0.074	-0.619	0.029
	3	.921*	0.171	0.000	0.585	1.258
3	0	-1.869*	0.187	0.000	-2.239	-1.499
	1	-1.217*	0.174	0.000	-1.560	-0.873
	2	-.921*	0.171	0.000	-1.258	-0.585

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

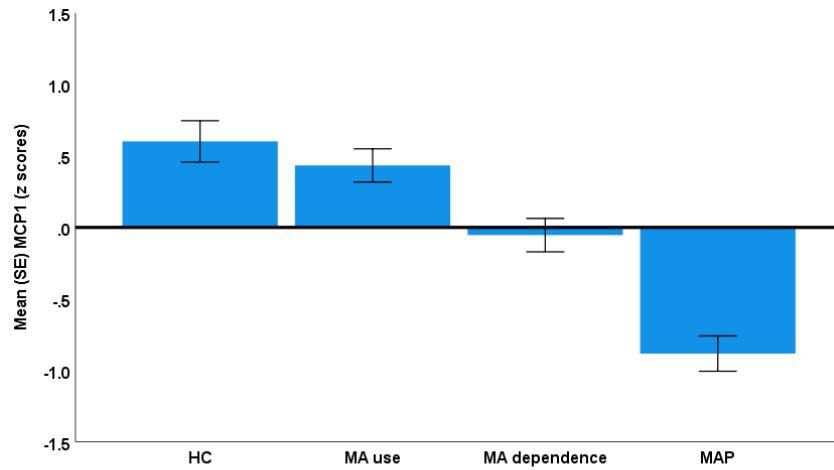


Figure S22. CCL2 (MCP1) levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=27.62$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: MCP1

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.168	0.191	0.381	-0.209	0.545
	2	.656*	0.189	0.001	0.282	1.029
	3	1.485*	0.188	0.000	1.114	1.856
1	0	-0.168	0.191	0.381	-0.545	0.209
	2	.488*	0.165	0.003	0.163	0.813
	3	1.317*	0.175	0.000	0.972	1.662
2	0	-.656*	0.189	0.001	-1.029	-0.282
	1	-.488*	0.165	0.003	-0.813	-0.163
	3	.829*	0.171	0.000	0.491	1.167
3	0	-1.485*	0.188	0.000	-1.856	-1.114
	1	-1.317*	0.175	0.000	-1.662	-0.972
	2	-.829*	0.171	0.000	-1.167	-0.491

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

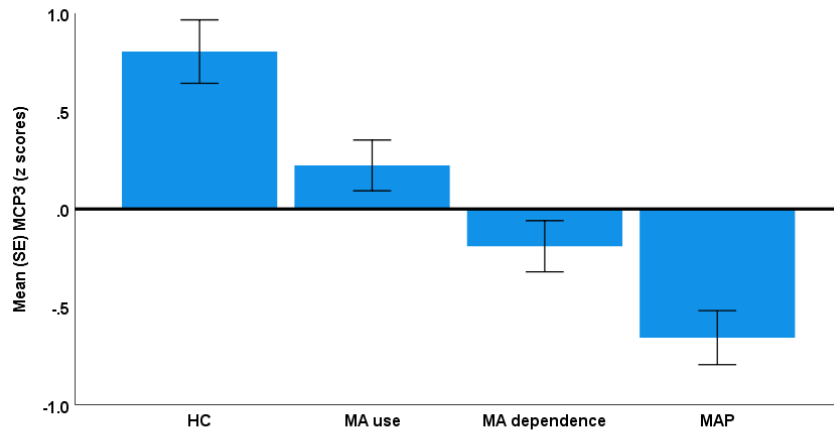


Figure S23. CCL7 (MCP3) levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=17.83$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: MCP3

(I)	(J)	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
HC_Abuse_De pendence_Psy chosis	HC_Abuse_De pendence_Psy chosis				Lower Bound	Upper Bound
0	1	.582*	0.213	0.007	0.160	1.003
	2	.995*	0.211	0.000	0.578	1.412
	3	1.462*	0.210	0.000	1.047	1.876
1	0	-.582*	0.213	0.007	-1.003	-0.160
	2	.413*	0.184	0.026	0.050	0.776
	3	.880*	0.195	0.000	0.495	1.265
2	0	-.995*	0.211	0.000	-1.412	-0.578
	1	-.413*	0.184	0.026	-0.776	-0.050
	3	.467*	0.191	0.016	0.090	0.844
3	0	-1.462*	0.210	0.000	-1.876	-1.047
	1	-.880*	0.195	0.000	-1.265	-0.495
	2	-.467*	0.191	0.016	-0.844	-0.090

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

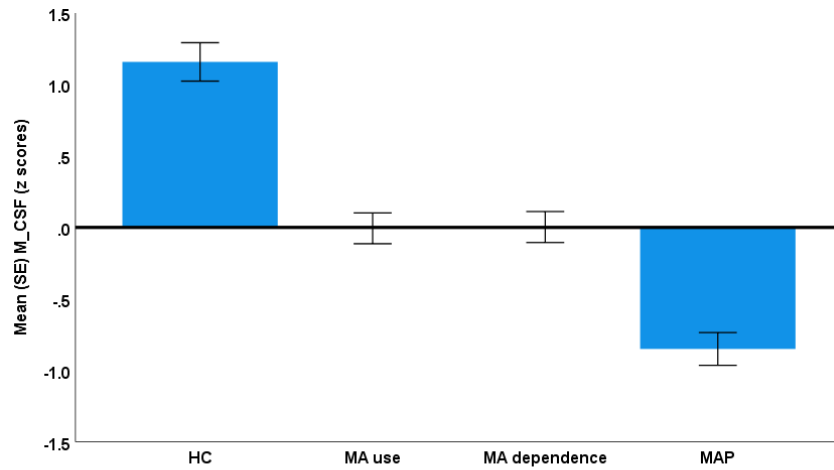


Figure S24. CSF levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=44.36$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: CSF

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	1.164*	0.177	0.000	0.815	1.514
	2	1.156*	0.175	0.000	0.810	1.502
	3	2.009*	0.174	0.000	1.665	2.353
1	0	-1.164*	0.177	0.000	-1.514	-0.815
	2	-0.009	0.153	0.954	-0.310	0.293
	3	.844*	0.162	0.000	0.525	1.164
2	0	-1.156*	0.175	0.000	-1.502	-0.810
	1	0.009	0.153	0.954	-0.293	0.310
	3	.853*	0.159	0.000	0.540	1.166
3	0	-2.009*	0.174	0.000	-2.353	-1.665
	1	-.844*	0.162	0.000	-1.164	-0.525
	2	-.853*	0.159	0.000	-1.166	-0.540

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

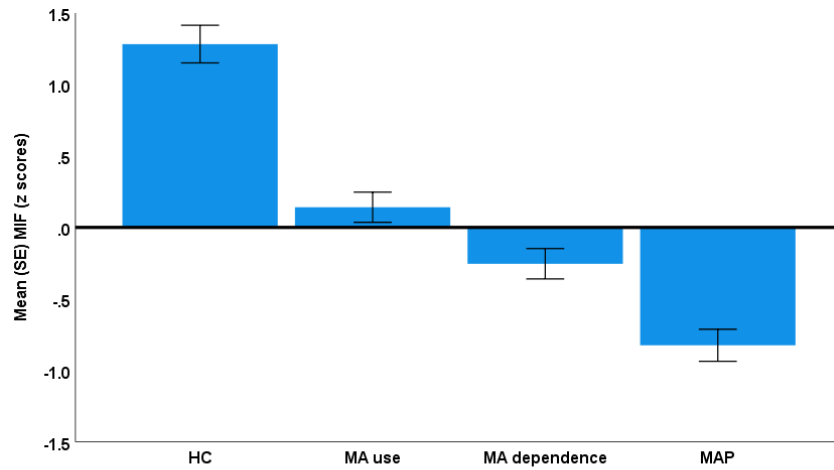


Figure S25. MIF levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=53.30$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: MIF

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	1.141*	0.173	0.000	0.799	1.484
	2	1.537*	0.172	0.000	1.198	1.876
	3	2.107*	0.171	0.000	1.771	2.444
1	0	-1.141*	0.173	0.000	-1.484	-0.799
	2	.396*	0.149	0.009	0.100	0.691
	3	.966*	0.159	0.000	0.653	1.279
2	0	-1.537*	0.172	0.000	-1.876	-1.198
	1	-.396*	0.149	0.009	-0.691	-0.100
	3	.570*	0.155	0.000	0.264	0.877
3	0	-2.107*	0.171	0.000	-2.444	-1.771
	1	-.966*	0.159	0.000	-1.279	-0.653
	2	-.570*	0.155	0.000	-0.877	-0.264

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

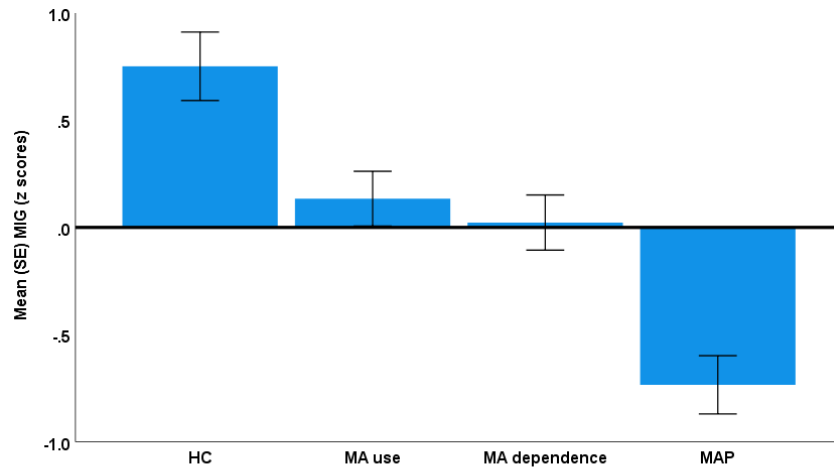


Figure S26. CXCL9 or MIG levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=17.96$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: MIG

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	.618*	0.210	0.004	0.203	1.033
	2	.729*	0.208	0.001	0.318	1.140
	3	1.486*	0.207	0.000	1.078	1.894
1	0	-.618*	0.210	0.004	-1.033	-0.203
	2	0.111	0.181	0.540	-0.246	0.469
	3	.868*	0.192	0.000	0.489	1.247
2	0	-.729*	0.208	0.001	-1.140	-0.318
	1	-0.111	0.181	0.540	-0.469	0.246
	3	.757*	0.188	0.000	0.385	1.128
3	0	-1.486*	0.207	0.000	-1.894	-1.078
	1	-.868*	0.192	0.000	-1.247	-0.489
	2	-.757*	0.188	0.000	-1.128	-0.385

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

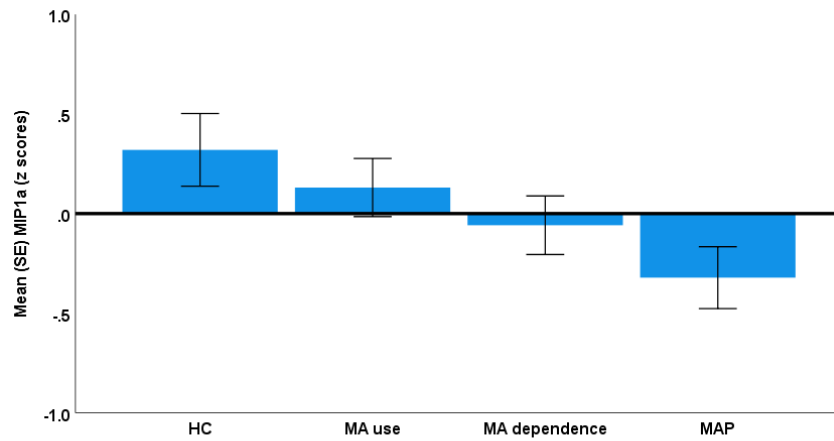


Figure S27. CCL3 or (MIP-1 α) levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=2.83$, $df=3/164$, $p=0.040$).

Pairwise Comparisons

Dependent Variable: MIP-1 α

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.189	0.240	0.431	-0.285	0.663
	2	0.378	0.238	0.113	-0.091	0.848
	3	.642*	0.236	0.007	0.175	1.108
1	0	-0.189	0.240	0.431	-0.663	0.285
	2	0.189	0.207	0.362	-0.220	0.598
	3	.452*	0.219	0.041	0.019	0.886
2	0	-0.378	0.238	0.113	-0.848	0.091
	1	-0.189	0.207	0.362	-0.598	0.220
	3	0.263	0.215	0.222	-0.161	0.688
3	0	-.642*	0.236	0.007	-1.108	-0.175
	1	-.452*	0.219	0.041	-0.886	-0.019
	2	-0.263	0.215	0.222	-0.688	0.161

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

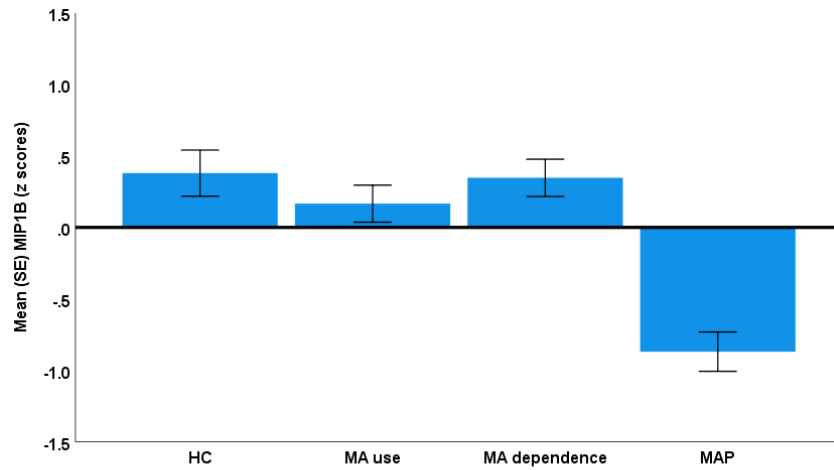


Figure S28. CCL4 or MIP-1 β levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=18.20$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: MIP-1 β

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.213	0.213	0.317	-0.206	0.633
	2	0.033	0.211	0.877	-0.383	0.448
	3	1.249*	0.209	0.000	0.836	1.662
1	0	-0.213	0.213	0.317	-0.633	0.206
	2	-0.181	0.183	0.326	-0.543	0.181
	3	1.036*	0.194	0.000	0.652	1.419
2	0	-0.033	0.211	0.877	-0.448	0.383
	1	0.181	0.183	0.326	-0.181	0.543
	3	1.216*	0.190	0.000	0.840	1.592
3	0	-1.249*	0.209	0.000	-1.662	-0.836
	1	-1.036*	0.194	0.000	-1.419	-0.652
	2	-1.216*	0.190	0.000	-1.592	-0.840

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

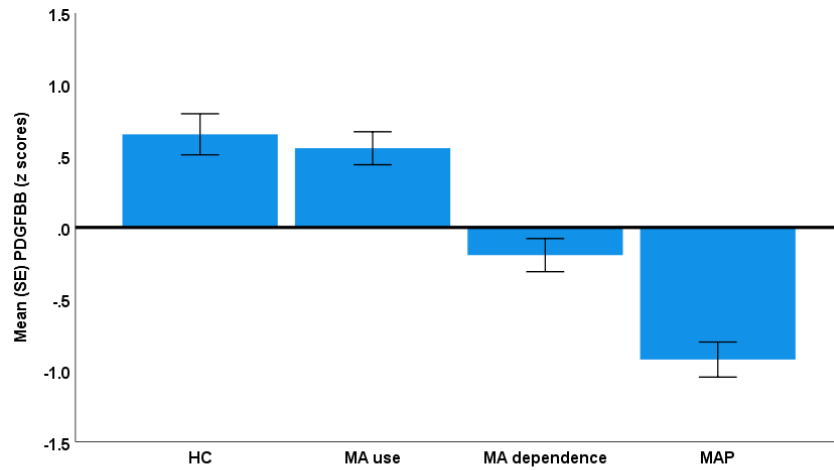


Figure S29. PDGF-BB levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=34.46$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: PDGFBB

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.097	0.189	0.608	-0.277	0.472
	2	.845*	0.188	0.000	0.475	1.216
	3	1.576*	0.186	0.000	1.208	1.944
1	0	-0.097	0.189	0.608	-0.472	0.277
	2	.748*	0.163	0.000	0.425	1.070
	3	1.479*	0.173	0.000	1.137	1.821
2	0	-.845*	0.188	0.000	-1.216	-0.475
	1	-.748*	0.163	0.000	-1.070	-0.425
	3	.731*	0.170	0.000	0.396	1.066
3	0	-1.576*	0.186	0.000	-1.944	-1.208
	1	-1.479*	0.173	0.000	-1.821	-1.137
	2	-.731*	0.170	0.000	-1.066	-0.396

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

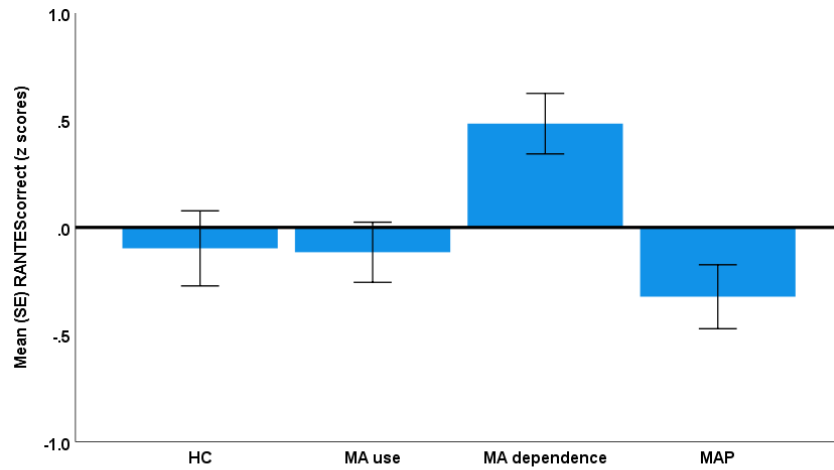


Figure S30. CCL5 or RANTES levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=5.81$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: RANTES

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.018	0.231	0.937	-0.437	0.473
	2	-.582*	0.228	0.012	-1.033	-0.131
	3	0.226	0.227	0.321	-0.222	0.674
1	0	-0.018	0.231	0.937	-0.473	0.437
	2	-.600*	0.199	0.003	-0.993	-0.207
	3	0.207	0.211	0.327	-0.209	0.624
2	0	.582*	0.228	0.012	0.131	1.033
	1	.600*	0.199	0.003	0.207	0.993
	3	.807*	0.207	0.000	0.400	1.215
3	0	-0.226	0.227	0.321	-0.674	0.222
	1	-0.207	0.211	0.327	-0.624	0.209
	2	-.807*	0.207	0.000	-1.215	-0.400

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

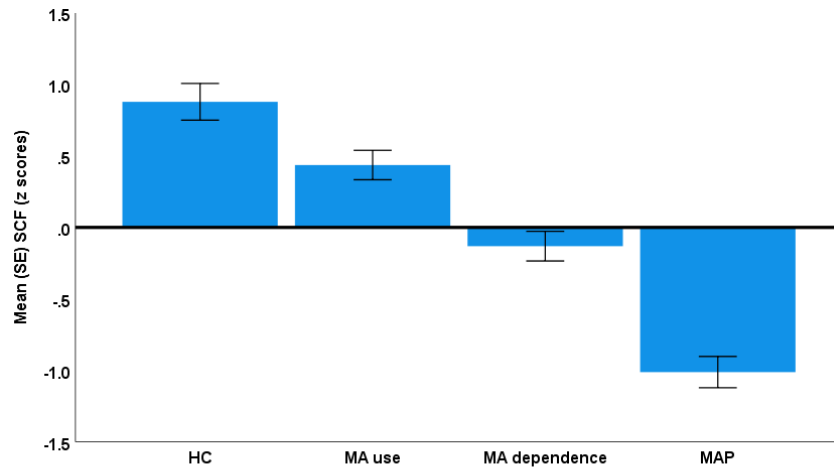


Figure S31. SCF levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=51.39$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: SCF

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	.443*	0.169	0.010	0.109	0.776
	2	1.010*	0.167	0.000	0.679	1.341
	3	1.892*	0.166	0.000	1.563	2.220
1	0	-.443*	0.169	0.010	-0.776	-0.109
	2	.567*	0.146	0.000	0.280	0.855
	3	1.449*	0.155	0.000	1.144	1.754
2	0	-1.010*	0.167	0.000	-1.341	-0.679
	1	-.567*	0.146	0.000	-0.855	-0.280
	3	.882*	0.151	0.000	0.582	1.181
3	0	-1.892*	0.166	0.000	-2.220	-1.563
	1	-1.449*	0.155	0.000	-1.754	-1.144
	2	-.882*	0.151	0.000	-1.181	-0.582

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

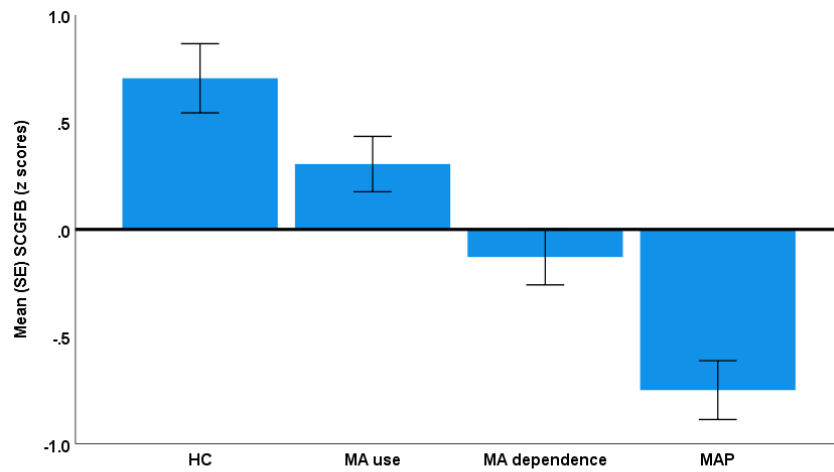


Figure S32. SCGF- β levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=18.79$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: SCGF- β

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.400	0.212	0.061	-0.019	0.819
	2	.834*	0.210	0.000	0.419	1.249
	3	1.454*	0.209	0.000	1.042	1.867
1	0	-0.400	0.212	0.061	-0.819	0.019
	2	.434*	0.183	0.019	0.072	0.795
	3	1.054*	0.194	0.000	0.671	1.437
2	0	-.834*	0.210	0.000	-1.249	-0.419
	1	-.434*	0.183	0.019	-0.795	-0.072
	3	.621*	0.190	0.001	0.245	0.996
3	0	-1.454*	0.209	0.000	-1.867	-1.042
	1	-1.054*	0.194	0.000	-1.437	-0.671
	2	-.621*	0.190	0.001	-0.996	-0.245

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

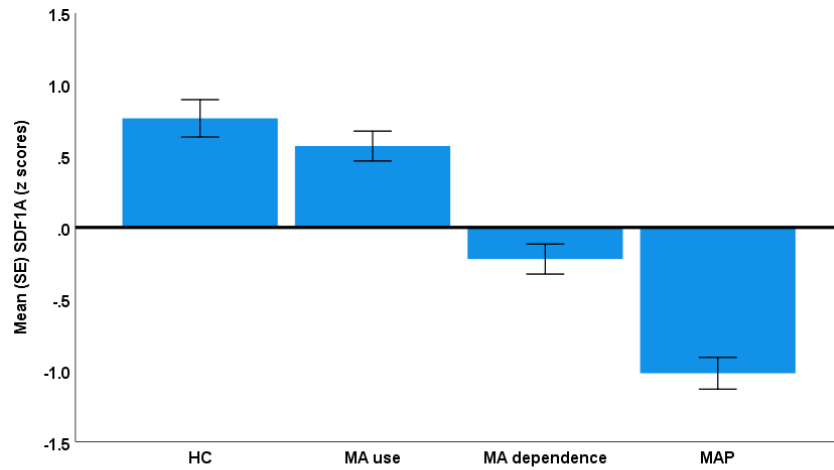


Figure S33. CXCL12 or SDF-1 α levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=50.94$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: SDF-1 α

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.194	0.172	0.260	-0.145	0.534
	2	.985*	0.170	0.000	0.648	1.321
	3	1.784*	0.169	0.000	1.450	2.118
1	0	-0.194	0.172	0.260	-0.534	0.145
	2	.790*	0.148	0.000	0.497	1.083
	3	1.590*	0.157	0.000	1.279	1.900
2	0	-.985*	0.170	0.000	-1.321	-0.648
	1	-.790*	0.148	0.000	-1.083	-0.497
	3	.799*	0.154	0.000	0.495	1.103
3	0	-1.784*	0.169	0.000	-2.118	-1.450
	1	-1.590*	0.157	0.000	-1.900	-1.279
	2	-.799*	0.154	0.000	-1.103	-0.495

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

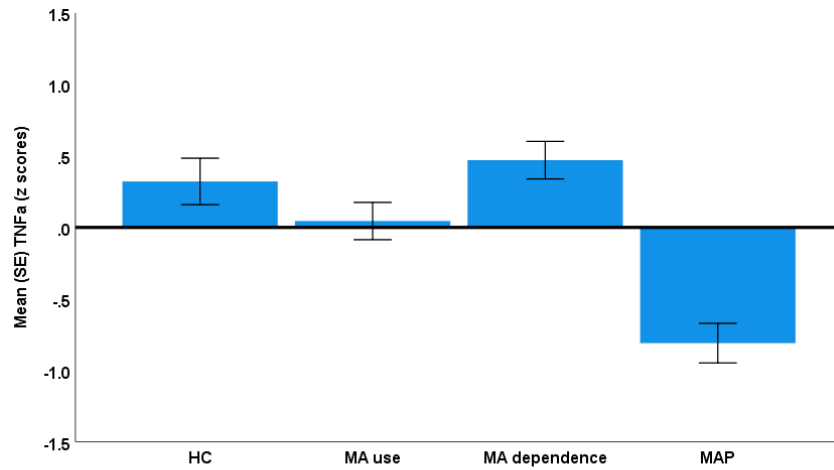


Figure S34. TNF- α levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=17.20$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: TNF- α

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.277	0.214	0.197	-0.146	0.700
	2	-0.149	0.212	0.484	-0.568	0.270
	3	1.131*	0.211	0.000	0.715	1.548
1	0	-0.277	0.214	0.197	-0.700	0.146
	2	-.426*	0.185	0.022	-0.791	-0.061
	3	.854*	0.196	0.000	0.467	1.241
2	0	0.149	0.212	0.484	-0.270	0.568
	1	.426*	0.185	0.022	0.061	0.791
	3	1.280*	0.192	0.000	0.901	1.659
3	0	-1.131*	0.211	0.000	-1.548	-0.715
	1	-.854*	0.196	0.000	-1.241	-0.467
	2	-1.280*	0.192	0.000	-1.659	-0.901

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

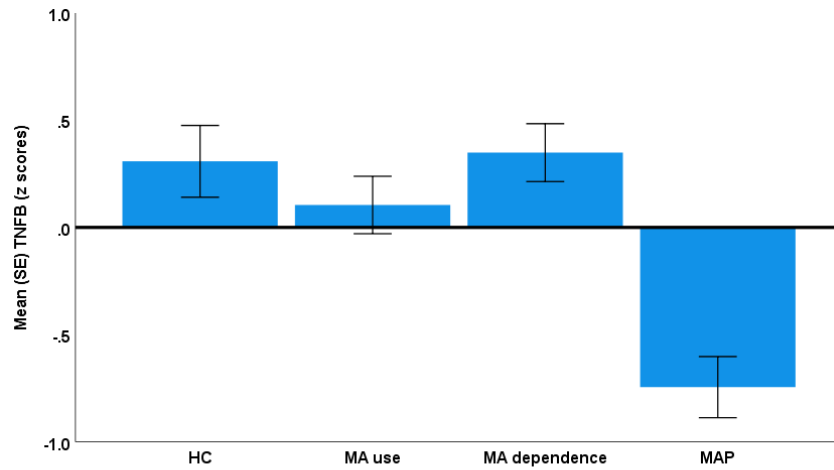


Figure S35. TNF- β levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=12.78$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: TNF- β

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	0.204	0.220	0.357	-0.231	0.639
	2	-0.041	0.218	0.853	-0.471	0.390
	3	1.053*	0.217	0.000	0.626	1.481
1	0	-0.204	0.220	0.357	-0.639	0.231
	2	-0.244	0.190	0.200	-0.619	0.131
	3	.850*	0.201	0.000	0.452	1.248
2	0	0.041	0.218	0.853	-0.390	0.471
	1	0.244	0.190	0.200	-0.131	0.619
	3	1.094*	0.197	0.000	0.704	1.484
3	0	-1.053*	0.217	0.000	-1.481	-0.626
	1	-.850*	0.201	0.000	-1.248	-0.452
	2	-1.094*	0.197	0.000	-1.484	-0.704

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3

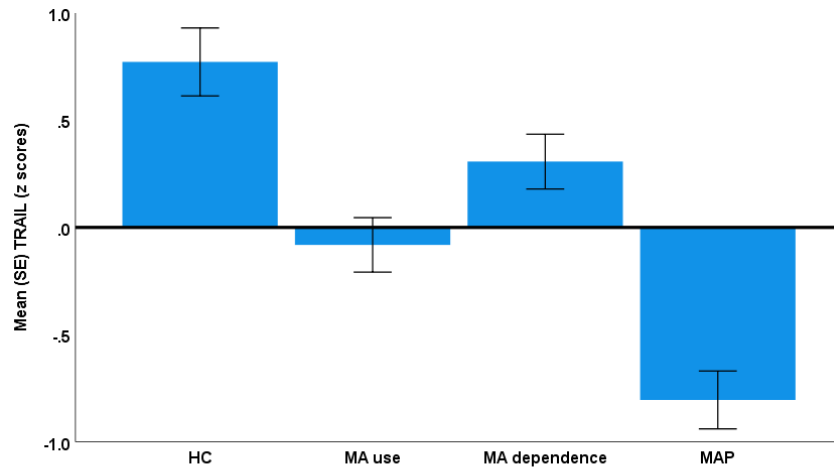


Figure S36. TRAIL levels in healthy controls (HC) and people with methamphetamine (MA) use, MA dependence, and MA-induced psychosis (MAP) ($F=22.53$, $df=3/164$, $p<0.001$).

Pairwise Comparisons

Dependent Variable: TRAIL

(I) HC_Abuse_ Dependence_ Psychosis	(J) HC_Abuse_ Dependence_ Psychosis	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
0	1	.854*	0.209	0.000	0.441	1.266
	2	.465*	0.207	0.026	0.057	0.873
	3	1.577*	0.205	0.000	1.171	1.982
1	0	-.854*	0.209	0.000	-1.266	-0.441
	2	-.389*	0.180	0.032	-0.744	-0.033
	3	.723*	0.191	0.000	0.346	1.100
2	0	-.465*	0.207	0.026	-0.873	-0.057
	1	.389*	0.180	0.032	0.033	0.744
	3	1.112*	0.187	0.000	0.743	1.481
3	0	-1.577*	0.205	0.000	-1.982	-1.171
	1	-.723*	0.191	0.000	-1.100	-0.346
	2	-1.112*	0.187	0.000	-1.481	-0.743

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

HC=0, MA use=1, MA dependence=2, MAP=3