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**Table S1:** Comparison of EC concentrations (pg/mL) of plasma and serum samples after total processing times of 10 and 30 minutes. Values depicted as mean  $\pm$  SD (range).

Analyte	Plasma (10 min)	Plasma (30 min)	Serum (30 min)
AEA	286.9 $\pm$ 131.6 (343.7)	422.4 $\pm$ 165.6 (460.6)	432.0 $\pm$ 123.2 (306.5)
2-AG	755.9 $\pm$ 317.5 (982.4)	1058.5 $\pm$ 368.0 ( <u>1098.1</u> )	1547.2 $\pm$ 857.4 ( <u>2736.4</u> )
1-AG	228.6 $\pm$ 62.9 (213.2)	316.4 $\pm$ 101.5 ( <u>275.1</u> )	724.9 $\pm$ 379.1 ( <u>1247.2</u> )
DHEA	264.9 $\pm$ 89.7 (272.1)	308.5 $\pm$ 110.6 (347.9)	300.7 $\pm$ 93.8 (304.2)
PEA	2099.7 $\pm$ 565.2 (1771.4)	2562.0 $\pm$ 596.0 (1854.7)	2410.0 $\pm$ 582.8 (1775.9)

**Healthy volunteers**

#	Sex	Age
1	F	30
2	M	50
3	F	31
4	F	27
5	F	45
6	M	32
7	F	28
8	M	27
9	F	26
	Mean	32.9
	SD	8.6

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**Processing time**

Matrix	Methods	Label	Conditions (+ 10 min centrifugation)	Participant									Mean	SD
				1	2	3	4	5	6	7	8	9		
Serum	Serum Reference	Ref.	20 min coag. + 0 min storage	27	31	29	30	34	34	31	31	32	31	2.2
Serum	Additional storage after cent.	2a/3a	20 min coag. + 20 min storage, RT&FT	51	52	48	47	49	48	50	50	52	50	1.8
Serum	Additional storage after cent.	2b/3b	20 min coag. + 40 min storage, RT&FT	72	71	68	67	69	68	71	71	72	70	1.9
Serum	Prolonged storage of WB	1a	40 min coag. + 0 min storage	50	50	52	54	54	55	54	53	54	53	1.8
Serum	Prolonged storage of WB	1b	60 min coag. + 0 min storage	71	70	75	75	76	72	76	75	73	74	2.2
Plasma	Plasma Reference	Ref.	No storage before & after cent., FT	16	13	12	12	14	11	10	11	11	12	1.9
Plasma	Additional storage after cent.	5a	No storage before & 20 min after cent., FT	38	34	30	34	34	31	30	33	32	33	2.5
Plasma	Additional storage after cent.	5b	No storage before & 40 min after cent., FT	58	56	50	54	55	52	50	53	53	53	2.7
Plasma	Prolonged storage of WB	4a	20 min storage before & no storage after cent., FT	32	32	35	30	31	30	32	30	31	31	1.6
Plasma	Prolonged storage of WB	4b	40 min storage before & no storage after cent., FT	52	52	55	50	51	50	53	50	50	51	1.7
Plasma	Prolonged storage of WB	4c	60 min storage before & no storage after cent., FT	79	76	76	75	75	72	74	74	73	75	2.0

Abbreviations

- coag. coagulation time
- RT room temperature
- FT chilled conditions (storage on ice), Plasma also centrifuged at 4 °C
- cent. centrifugation
- WB whole blood

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**Standards and quality controls (STDs, QCs)**

	Concentration of STD/QC working solution [ng/mL]					V working solution [ $\mu$ L]	V PBS [ $\mu$ L]	Concentration related to sample [ng/mL]				
	AEA	2-AG	1-AG	DHEA	PEA			AEA	2-AG	1-AG	DHEA	PEA
STD1	0.125	0.3125	0.3125	0.625	0.625	20	200	0.0125	0.03125	0.03125	0.0625	0.0625
STD2	0.25	0.625	0.625	1.25	1.25	20	200	0.025	0.0625	0.0625	0.125	0.125
STD3	0.5	1.25	1.25	2.5	2.5	20	200	0.05	0.125	0.125	0.25	0.25
STD4	0.75	1.875	1.875	3.75	3.75	20	200	0.075	0.1875	0.1875	0.375	0.375
STD5	1	2.5	2.5	5	5	20	200	0.1	0.25	0.25	0.5	0.5
STD6	2	5	5	10	10	20	200	0.2	0.5	0.5	1	1
STD7	4	10	10	20	20	20	200	0.4	1	1	2	2
STD8	6	15	15	30	30	20	200	0.6	1.5	1.5	3	3
STD9	8	20	20	40	40	20	200	0.8	2	2	4	4
STD10	10	25	25	50	50	20	200	1	2.5	2.5	5	5
LQC	1.5	3.75	3.75	7.5	7.5	20	200	0.15	0.375	0.375	0.75	0.75
MQC	3	7.5	7.5	15	15	20	200	0.3	0.75	0.75	1.5	1.5
HQC	7.5	18.75	18.75	37.5	37.5	20	200	0.75	1.875	1.875	3.75	3.75

**Internal Standard**

	Concentration of STD/QC working solution [ng/mL]					V working solution [ $\mu$ L]	V PBS [ $\mu$ L]	Concentration related to sample [ng/mL]				
	AEA-d8	2-AG-d5	1-AG-d5	DHEA-d4	PEA-d4			AEA-d8	2-AG-d5	1-AG-d5	DHEA-d4	PEA-d4
IS	20	20	20	20	20	20	200	2	2	2	2	2

**Liquid chromatography parameters****Solvents**

A	Water + 0.0025% formic acid
B	Acetonitrile + 0.0025% formic acid

**Gradient Elution**

Time [min]	A [%]	B [%]	Flowrate [mL/min]
0.00	80.00	20.00	0.4
0.80	80.00	20.00	0.4
1.00	35.00	65.00	0.4
5.00	5.00	95.00	0.4
6.00	5.00	95.00	0.4
6.01	80.00	20.00	0.4
8.00	80.00	20.00	0.4

**Mass spectrometry parameters**

Parameters	Value
Temperature (TEM)	400 °C
Curtain Gas (CUR)	45 psi
Collision Gas (CAD)	Medium
IonSpray Voltage (ISV)	4500 V
Ion Source Gas 1 (GS1)	40 psi
Ion Source Gas 2 (GS2)	60 psi

**Settings for multiple reaction monitoring (MRM)**

Analyte	Q1	Q3	Dwell time	DP	EP	CXP	CE
	[m/z]	[m/z]	[ms]	[V]	[V]	[V]	[V]
AEA	348.3	287.3	5	45	10	23	18
AEA	348.3	62.2	5	45	10	11	30
AEA-d8	356.2	295.2	5	45	10	16	16
AEA-d8	356.2	62.2	5	45	10	30	30
1/2-AG	379.2	287.3	5	81	10	18	19
1/2-AG	379.2	269.2	5	81	10	18	21
1/2-AG-d5	384.2	287.3	5	81	10	21	21
1/2-AG-d5	384.2	269.2	5	81	10	21	21
PEA	300.2	62.2	5	116	10	10	17
PEA	300.2	283.2	5	116	10	20	19
PEA-d4	304.2	62.2	5	116	10	10	17
PEA-d4	304.2	287.2	5	116	10	20	19
DHEA	372.1	62	5	56	10	8	11
DHEA	372.1	60.9	5	56	10	10	61
DHEA-d4	376.1	66	5	63	10	8	13
DHEA-d4	376.1	90.9	5	63	10	12	71

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## Quantified data

Volunteer	Method	Analyte (Concentration in pg/mL)				
		AEA	1-AG	2-AG	PEA	DHEA
1	Plasma Ref.	244.4	214.1	631.5	1686.4	239.1
	5a	216	216.9	812.6	1675.7	249.3
	5b	192.4	273.8	520	1684.5	237.5
	4a	276	261.3	991	1988.7	278.6
	4b	371.7	361.2	738.8	2482.5	327.2
	4c	414.5	291.2	697.8	2619.2	359.5
	Serum Ref.	314.4	457.6	956.2	1883.3	251.3
	2a	267.9	1267.2	1456.9	1874	253.7
	3a	359.4	432.2	998.2	2005.9	283.6
	2b	359.5	2170.1	1583	1868.5	269.3
	3b	321.9	598.7	551	2018.7	265.1
	1a	506.8	909.8	1194.2	2547.9	289.3
	1b	602.5	889.4	1447.2	2683.1	369.2
	2	Plasma Ref.	158.6	162.2	665.5	1909.7
5a		211.7	272.7	638.2	1959.1	190.6
5b		200.5	338	634.3	1987.6	211.9
4a		296.4	282.8	854	2454.9	246.8
4b		388.9	303.2	719.6	2609.4	268.5
4c		488	300.6	789.7	2761.5	302.2
Serum Ref.		291.5	638.1	1594.8	1887.9	231.3
2a		337.7	1833.4	2017.7	2165.8	234.6
3a		308.8	565.2	1593.1	2080.4	224.6
2b		273.5	2438.9	2488	2251.9	206.2
3b		360.2	650.1	1366.7	2151.1	238.5
1a		426.6	994	1707	2445.2	288.4
1b		526.8	1410.4	2130.7	2640	285.3
3		Plasma Ref.	273.3	149.3	503.8	2205.9
	5a	313.9	121.5	517.3	2341	287.5
	5b	297	171.7	464.6	2192.4	264.2
	4a	361.2	194.6	671.3	2587.3	270.7
	4b	446.1	229.8	902.9	2851.7	335
	4c	499.7	214.1	724.6	3127.2	365.6
	Serum Ref.	344	278.3	645.6	2547.4	285
	2a	398.1	696.3	1106.6	2564.5	316.4
	3a	401.7	290.5	619.9	2496.7	314.8
	2b	405.9	1151	1036.1	2303.1	302.7
	3b	383.5	299.7	713.3	2624.7	292.2
	1a	558.3	570.8	994.9	2901.8	361.3
	1b	760.3	763	1191.6	3421.8	406.9
	4	Plasma Ref.	478	196.7	712.9	2870.4
5a		473.9	238.3	711.5	3101.7	360.5
5b		571.4	278.2	806.8	3233	389.1
4a		733.8	261.3	813.9	3380.7	403
4b		172.1	175.1	885.5	1664.9	255.6
4c		818.9	266.2	960.7	4176.5	466.4
Serum Ref.		495.6	617.7	1371.4	2839.2	363.2

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	2a	540.5	1726.3	2318.6	3086.5	392.2
	3a	586.3	808	1651.4	3396.1	438
	2b	611.3			3114.6	405.2
	3b	626.4	959.5	1714.7	3577.7	448.7
	1a	726.9	1241.3	1963.9	3729.2	476.6
	1b	920.6	1980.5	2331.5	3900.4	462.7
	Plasma Ref.	205.3	219.3	491.1	1919.4	214.3
	5a	236.7	226.1	760.6	1871.4	212.8
	5b	230.2	323.1	581.9	1885.6	211.1
	4a	347	242.5	902.1	2318.5	262.3
	4b	344.5	330.3	1073.7	2369.5	274.2
	4c	489.2	431.2	873.8	2640	308.8
5	Serum Ref.	377.9	710.8	1354.5	2342.8	268.5
	2a	373.8	1308.9	1991.1	2387	271.3
	3a	425.9	807.3	1431.9	2385.5	271.5
	2b	428.8	2205.3	2196.5	2256.1	273.9
	3b	415.5	801	1704.6	2432	279.4
	1a	547.1	1401	2122.8	2602.4	283
	1b	567.7	2030.7	1974.7	2775.1	285.2
	Plasma Ref.	417.7	362.5	1473.5	2583.8	376
	6a	474	415.2	1368.9	2560.3	351.1
	6b	423.1	388.1	1460	2398.6	360.3
	5a	605.3	469.7	1769.4	3055.5	384.4
	5b	650.5	587	1969.1	3041.9	377.4
	5c	658.5	486.3	2080.8	3278	404.6
6	Serum Ref.	598	1525.5	3382	3300.9	389.7
	2a	788	2275.5		3204.6	434
	3a	756.5	1351.5	3108	3149.5	395.9
	2b	624.8			2819.1	390.6
	3b	586.4	1403	3432	2939	413.2
	1a	794.1	2100.5	4234	3291.3	435.4
	1b	865.4	3642	4972	3730.2	405.9
	Plasma Ref.	208.9	262.4	1061.4	1872.2	401.9
	5a	222.7	326.9	1033	1876.7	430
	5b	185.6	353.4	904	1797	397.4
	4a	359.9	451.4	1588.8	2512.3	533.1
	4b	377.4	438.9	1405.4	2499.5	496.6
	4c	560.3	623.5	1943.2	3109.4	592.5
7	Serum Ref.	543.1	1092.8	2252.4	2338.7	482.7
	2a	582.2	3060	3770	2855.9	563.3
	3a	439.7	1615	2724	2486.8	478.1
	2b	454	5998	4562	2417.8	500
	3b	410.9	1546.5	2414.5	2502.8	513.3
	1a	595.9	2588	3294	2781.6	563.5
	1b	787.4	3820	3974	3054.7	561.1
	Plasma Ref.	134.3	244	567	1099	129.8
	5a	172.4	282.3	594.7	957.3	131.4
	5b	117.4	250.7	504	1043.7	128.5
	4a	273.1	419.2	964.6	1526	185.2
	4b	347.1	493.8	961.3	1797.8	196.6

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8	4c	454.6	452.9	933.5	1971.9	223
	Serum Ref.	336.6	439.4	673.4	1525	178.5
	2a	356.1	1012.9	970.5	1611.9	174.2
	3a	352	612.1	797	1662.6	181.8
	2b	355.1	1649.3	1061.8	1541	178
	3b	318.4	661.8	738.8	1586.1	187
	1a	499	701.9	861.1	2055.5	225.7
	1b	586.2	1083.1	1048.2	2251.5	235.2
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9	Plasma Ref.	461.4	246.8	696.2	2750.7	209.2
	5a	506.5	206.2	763	2702.6	212.2
	5b	457.9	236	820.5	2753	215.4
	4a	548.8	265.1	971.5	3234.4	212.7
	4b	742	391	1166.3	3554.6	232.8
	4c	741.5	436.6	1097	3606.2	240.2
	Serum Ref.	587.3	763.9	1694.6	3024.6	255.7
	2a	605.2	2287.5	2778	3266.7	240.8
	3a	714	888.5	1857.4	3361.7	214.6
	2b	598.6	3472	2906	2900.2	189.9
	3b	546.7	983.7	1687.4	3218.4	227.5
	1a	639.9	1541.2	2223.8	3365.5	262.1
	1b	733.9	2478.2	2425.8	3496.9	264.8



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Accuracy & Precision

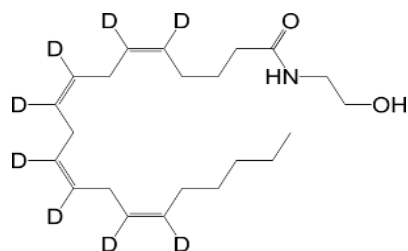
Analyte	Sample	Analyte [pg]	Measurements	Mean	SD	Accuracy	Precision	Relative error	
AEA	LQC	30	30.41	29.18 ±	5.43	97% ±	19%	-3%	
			29.42						
			25.78						
			24.73						
			25.52						
	MQC	60	39.24	59.97	54.06 ±	5.84	90% ±	11%	-10%
			48.79						
			56.00						
			48.63						
			49.56						
	HQC	150	61.42	167.95	147.41 ±	11.34	98% ±	8%	-2%
			139.33						
			150.48						
			140.58						
			137.50						
148.60									
AEA	overall					95% ±	12%	-5%	
1-AG	LQC	75	71.16	75.73 ±	4	101% ±	5%	1%	
			70.22						
			76.86						
			78.00						
			79.17						
	MQC	150	78.96	155.49	154.30 ±	6.72	103% ±	4%	3%
			141.52						
			160.90						
			155.11						
			158.40						
	HQC	375	154.40	406.60	403.90 ±	19.5	108% ±	5%	8%
			427.81						
			386.71						
			376.57						
			420.60						
405.10									
1-AG	overall					104% ±	5%	4%	
2-AG	LQC	75	58.24	65.97 ±	4.32	88% ±	7%	-12%	
			64.53						
			68.43						
			66.19						
			70.71						
	MQC	150	67.70	128.40	132.98 ±	12.69	89% ±	10%	-11%
			151.12						

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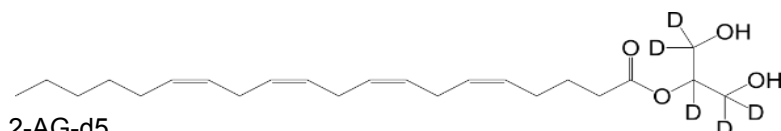
			131.87					
			116.09					
			144.10					
			126.30					
	HQC	375	334.09	355.30 ± 28.16	95% ± 8%			-5%
			362.71					
			405.70					
			333.19					
			335.30					
			360.80					
2-AG	overall				90% ± 8%			-10%
PEA	LQC	150	169.09	150.42 ± 12.26	100% ± 8%			0%
			143.48					
			160.68					
			137.88					
			150.60					
			140.80					
	MQC	300	304.14	288.32 ± 20.4	96% ± 7%			-4%
			272.75					
			319.18					
			264.02					
			288.20					
			281.60					
	HQC	750	740.72	716.72 ± 34.26	96% ± 5%			-4%
			690.35					
			763.63					
			673.90					
			732.60					
			699.10					
PEA	overall				97% ± 7%			-3%
DHEA	LQC	150	144.13	153.17 ± 6.93	102% ± 5%			2%
			152.49					
			155.78					
			148.62					
			164.60					
			153.40					
	MQC	300	306.95	311.53 ± 10.97	104% ± 4%			4%
			320.05					
			313.25					
			300.51					
			300.60					
			327.80					
	HQC	750	759.10	760.85 ± 21.01	101% ± 3%			1%
			727.97					
			761.63					
			750.21					
			780.00					
			786.20					
DHEA	overall				102% ± 4%			2%

## Analytes

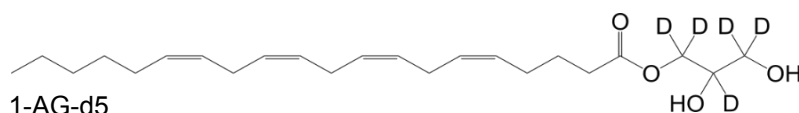
### Structures of deuterated internal standards



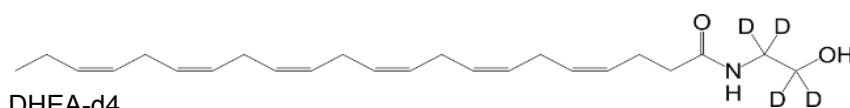
AEA-d8



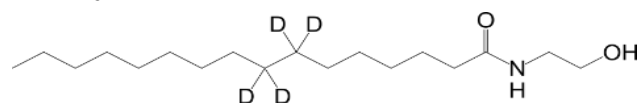
2-AG-d5



1-AG-d5



DHEA-d4



PEA-d4

### Specifications

Analyte	Molecular formula	CAS number	Chemical purity*	Deuteration
AEA	C22H37NO2	94421-68-8	99.5% (HPLC) –	
AEA-d8	C22H29D8NO2	924894-98-4	100.0% (HPLC) ≥ 99% deuterated forms (d1-d8)	
2-AG**	C23H38O4	53847-30-6	97.2% (HPLC) –	
2-AG-d5	C23H33D5O4	ns	95.7% (HPLC) ≥ 99% deuterated forms (d1-d5)	
1-AG***	C23H38O4	35474-99-8	97.4% (HPLC) –	
1-AG-d5	C23H33D5O4	ns	98.9% (HPLC) ≥ 99% deuterated forms (d1-d5)	
DHEA	C24H37NO2	162758-94-3	100.0% (HPLC) –	
DHEA-d4	C24H33D4NO2	946524-43-2	98.1% (HPLC) ≥ 99% deuterated forms (d1-d4)	
PEA	C18H37NO2	544-31-0	100.0% (HPLC) –	
PEA-d4	C18H33D4NO2	1159908-45-8	100.0% (HPLC) ≥ 99% deuterated forms (d1-d4)	

\*extracted from certificate of analysis (Cayman Chemical)

\*\*as a 9:1 mixture of 2-AG and 1-AG

\*\*\*as a 9:1 mixture of 1-AG and 2-AG

**Table S2:** Reported concentrations of AEA, 2-AG, 1-AG, DHEA, and PEA (in ng/mL) in human blood samples from healthy volunteers or control cohorts by independent research groups. Data as mean  $\pm$  SD if not stated otherwise. ns: not specified, na: not applicable, sum: summarized reporting of 2-AG and 1-AG concentrations, separate: specified separate reporting of 2-AG concentrations without 1-AG, #concentration extracted from graphical data, †median, anticoagulants: <sup>1</sup>potassium EDTA, <sup>2</sup>lithium heparin, <sup>3</sup>sodium fluoride/citrate, <sup>4</sup>sodium citrate, <sup>5</sup>sodium fluoride, <sup>ns</sup>not specified. Excluded were children, non-healthy and pregnant control cohorts as well as studies, that did not clearly specify the used matrix, sample size, or concentrations (or units thereof). Reported concentrations of subpopulations were combined, if sample size and mean were stated.

First author	Year	N (m/f)	Age	Population	Matrix	AEA	2-AG (1-AG)	DHEA	PEA	Instrumentation
Bashashati [1]	2021	18 (8/10)	53.1	Healthy controls	Plasma <sup>ns</sup>	0.84 <sup>#</sup>	3.54 <sup>#</sup> (ns)	na	16.54 <sup>#</sup>	HPLC-ESI-MS/MS
McGurk [2]	2021	999 (470/529)	49 $\pm$ 15	Study participants	Plasma <sup>1</sup>	ns	na	0.35	1.88	UHPLC-ESI-MS/MS
Ney [3]	2021	32 (32/0)	25.7 $\pm$ 5.1	Healthy subjects (placebo, baseline)	Plasma <sup>ns</sup>	0.32 <sup>#</sup>	1.42 <sup>#</sup> (sum)	na	na	UHPLC-ESI-MS/MS
Pedersen [4]	2021	230 (53/77)	60–90	Elderly subjects	Serum	0.35	31.80 (sum)	0.37	na	UHPLC-ESI-MS/MS
Pedersen [4]	2021	131 (36/98)	45–90	Elderly subjects	Plasma <sup>1</sup>	0.7	na	0.37	na	UHPLC-ESI-MS/MS
Pedersen [4]	2021	281 (ns)	ns	Elderly subjects	Plasma <sup>1</sup>	na	9.46 (sum)	na	na	UHPLC-ESI-MS/MS
Castonguay-Paradis [5]	2020	195 (93/102)	41 $\pm$ 18	Healthy subjects	Plasma <sup>ns</sup>	0.31	2.44 (sum)	0.4	2.08	HPLC-ESI-MS/MS
Correia-Sá [6]	2020	40 (0/40)	43 $\pm$ 11	Patients (normal healing process)	Plasma <sup>1</sup>	0.95	3.76 (ns)	na	2.84	HPLC-ESI-MS/MS
Forte [7]	2020	10 (5/5)	59 <sup>†</sup> (31–73)	Healthy controls	Plasma <sup>1</sup>	0.44 <sup>#†</sup>	3.61 <sup>#†</sup> (sum)	na	6.30 <sup>#†</sup>	HPLC-APCI-MS/MS
Hahnefeld [8]	2020	10 (4/6)	34.6 $\pm$ 9.5	Healthy volunteers	Plasma <sup>3</sup>	0.13	0.30 (0.07)	na	1.52	UHPLC-ESI-MS/MS
Hahnefeld [8]	2020	10 (4/6)	34.6 $\pm$ 9.5	Healthy volunteers	Plasma <sup>1</sup>	0.19	0.35 (0.17)	na	1.82	UHPLC-ESI-MS/MS
Harfmann [9]	2020	17 (3/14)	71.4 $\pm$ 7.9	Healthy comparison	Serum	0.43 <sup>#†</sup>	10.35 <sup>#†</sup> (sum)	na	na	HPLC-ESI-MS/MS
Marchioni [10]	2020	20 (6/14)	63 <sup>†</sup> (61–67)	Healthy controls	Plasma <sup>1</sup>	0.19 <sup>†</sup>	0.57 <sup>†</sup> (sum)	na	na	UHPLC-ESI-MS/MS
Monteleone [11]	2020	15 (0/15)	22.9 $\pm$ 3.8	Healthy controls	Plasma <sup>1</sup>	0.88 <sup>#</sup>	0.39 <sup>#</sup> (ns)	na	na	HPLC-APCI-MS
Ney [12]	2020	121 (73/48)	26.8 (18–58)	Healthy participants	Plasma <sup>2</sup>	0.09	5.38 (sum)	na	na	UHPLC-ESI-MS/MS
Potvin [13]	2020	38 (21/17)	30.0 $\pm$ 7.3	Healthy controls	Plasma <sup>ns</sup>	0.47	na	na	na	HPLC-ESI-MS/MS
Zajkowska [14]	2020	41 (28/13)	42.6 (21–67)	Healthy subjects	Serum	0.41 <sup>#</sup>	2.39 <sup>#</sup> (ns)	na	na	HPLC-ESI-MS/MS
Zufferey [15]	2020	200 (200/0)	18–22	Healthy volunteers	Serum	0.17	13.9 (sum)	na	2.5	HPLC-ESI-MS/MS
Dong [16]	2019	39 (ns)	ns	Alcohol-negative subjects	Whole blood <sup>ns</sup>	21	5.12 (2.83)	na	na	UHPLC-ESI-MS/MS
Grill [17]	2019	19 (6/13)	34.6 $\pm$ 15.1	Control subjects	Plasma <sup>1</sup>	0.53 <sup>#</sup>	0.68 (ns, separate)	na	2.63 <sup>#</sup>	UHPLC-ESI-MS/MS
Röhrig [18]	2019	6 (ns)	ns	Healthy volunteers	Plasma <sup>1</sup>	0.17	0.63 (0.09)	0.26	2.51	UHPLC-ESI-MS/MS
Agrawel [19]	2018	11 (11/0)	20–40	Healthy subjects	Plasma <sup>1</sup>	0.20 <sup>#</sup>	na	na	na	UHPLC-ESI-MS/MS
Barry [20]	2018	8 (0/8)	52.3	Healthy subjects	Plasma <sup>ns</sup>	0.32	2.10 (ns)	na	3.16	HPLC-ESI-MS/MS
Gouveia-Figueira [21]	2018	14 (7/7)	27 <sup>†</sup> (19–36)	Volunteers (baseline, air exposure)	Plasma <sup>1</sup>	0.03 <sup>†</sup>	0.20 <sup>†</sup> (ns, separate)	0.01 <sup>†</sup>	0.03 <sup>†</sup>	UHPLC-ESI-MS/MS
La Frano [22]	2018	18 (0/18)	21–45	Healthy volunteers	Serum	0.09	2.48 (2.30)	0.14	1.14	UHPLC-ESI-MS/MS
Little [23]	2018	20 (10/10)	28 $\pm$ 2	Lean participants	Plasma <sup>1</sup>	1.00 <sup>#</sup>	1.66 <sup>#</sup> (sum)	na	na	UHPLC-ESI-MS/MS
Luque-Córdoba [24]	2018	5 (ns)	ns	Volunteers	Serum	0.18	0.14 (ns)	0.28	0.38	HPLC-ESI-MS/MS
Navarini [25]	2018	20 (0/20)	31–42	Healthy subjects	Plasma <sup>ns</sup>	0.97 <sup>#†</sup>	1.14 <sup>†</sup> (ns)	na	7.32 <sup>#†</sup>	HPLC-APCI-MS
Ding [26]	2017	53 (0/53)	32.2 $\pm$ 5.2	Healthy controls	Serum	0.72	6.94 (sum)	na	5.76	UHPLC-ESI-MS/MS
Fanelli [27]	2017	61 (61/0)	45.2 $\pm$ 15.4	Males with normal weight	Plasma <sup>1</sup>	na	0.79 (0.28 <sup>#</sup> )	na	na	2D-HPLC-APCI-MS/MS

Fanelli [27]	2017	89 (0/89)	46.0 ± 13.3	Females with normal weight (pre- & postmenopausal)	Plasma <sup>1</sup>	na	0.64 (0.22 <sup>#</sup> )	na	na	2D-HPLC-APCI-MS/MS
Felton [28]	2017	16 (6/10)	23–59	Healthy volunteers	Serum	0.32 <sup>†</sup>	1.02 <sup>†</sup> (ns)	0.66 <sup>#†</sup>	2.82	UHPLC-ESI-MS/MS
Quercioli [29]	2017	30 (ns)	ns	Normal weight subjects	Plasma <sup>ns</sup>	na	na	na	2.62 <sup>†</sup>	HPLC-ESI-MS/MS
Reuter [30]	2017	81 (44/37)	27.3 ± 5.9	Healthy controls	Serum	0.15	na	na	na	HPLC-ESI-MS
Zelber-Sagi [31]	2017	58 (27/31)	58.9 ± 10.9	Control group (normal liver)	Serum	0.59	12.68 (ns)	na	na	HPLC-ESI-MS/MS
Hellström [32]	2016	15 (0/15)	52 <sup>†</sup> (25–61)	Healthy controls (morning sampling)	Plasma <sup>2</sup>	0.06	2.04 (ns)	na	0.58	UHPLC-ESI-MS/MS
Watkins [33]	2016	20 (0/20)	75 ± 6	Postmenopausal women (baseline)	Serum	0.88	4.58 (4.32)	0.18	2.41	UHPLC-ESI-MS/MS
Yi [34]	2016	6 (6/0)	33 ± 6	Healthy volunteers (baseline)	Plasma <sup>1</sup>	0.25 <sup>#</sup>	4.61 <sup>#</sup> (ns)	na	na	HPLC-ESI-MS/MS
Bilgin [35]	2015	5 (ns)	ns	Anonymous volunteers	Plasma <sup>1</sup>	5.07 <sup>#</sup>	4.47 <sup>#</sup> (21.20 <sup>#</sup> )	2.74 <sup>#</sup>	61.66 <sup>#</sup>	μLC-ESI-MS/MS
Gachet [36]	2015	32 (32/0)	ns	Healthy volunteers	Plasma <sup>1</sup>	0.59	6.25 (sum)	12.25	6.89	HPLC-ESI-MS/MS
Martins [37]	2015	100 (50/50)	32.4 ± 9.8	Eutrophics	Plasma <sup>1</sup>	0.72 <sup>†</sup>	2.22 <sup>†</sup> (ns)	na	69.82 <sup>†</sup>	HPLC-APCI-MS
Patsenker [38]	2015	25 (10/15)	44.2 ± 11.4	Healthy controls	Plasma <sup>1</sup>	0.46 <sup>#†</sup>	1.21 <sup>#†</sup> (ns)	na	na	GC-MS
Engeli [39]	2014	17 (ns)	18–60	Normal-weight subjects	Plasma <sup>ns</sup>	9.60 <sup>#</sup>	0.44 <sup>#</sup> (sum)	na	na	UHPLC-ESI-MS/MS
Muhl [40]	2014	15 (ns)	20–41	Healthy subjects	Serum	0.31 <sup>#</sup>	na	na	5.51	HPLC-ESI-MS/MS
Otria [41]	2014	10 (ns)	ns	Healthy volunteers	Plasma <sup>1</sup>	0.23	na	na	6.16	UHPLC-ESI-QTOF-MS
Schaefer [42]	2014	30 (3/27)	31.5 ± 10.6	Healthy volunteers	Serum	0.74	4.74 (ns)	na	6.58	HPLC-ESI-MS/MS
Thieme [43]	2014	25 (11/14)	23.5 ± 3.6	Healthy volunteers (baseline)	Plasma <sup>1</sup>	0.58	4.11 <sup>#</sup> (sum)	na	na	HPLC-ESI-MS/MS
Thieme [43]	2014	25 (11/14)	23.5 ± 3.6	Healthy volunteers (baseline)	Plasma <sup>2</sup>	0.59	7.74 <sup>#</sup> (sum)	na	na	HPLC-ESI-MS/MS
Balvers [44]	2013	10 (ns)	ns	Healthy volunteers	Plasma <sup>ns</sup>	0.37	ns	0.41	1.46	UHPLC-ESI-MS/MS
Pavón [45]	2013	46 (40/6)	37.3 ± 7.4	Healthy controls	Plasma <sup>1</sup>	0.45	6.36 (ns)	0.58	1.75	UHPLC-ESI-MS/MS
Desfossés [46]	2012	27 (16/11)	37.1 ± 12.5	Healthy controls	Plasma <sup>2</sup>	1.1	na	na	na	HPLC-ESI-MS/MS
Fanelli [47]	2012	76 (0/76)	44.5 <sup>†</sup> (35.0–52.0)	Healthy subjects	Plasma <sup>1</sup>	0.34 <sup>†</sup>	0.54 <sup>†</sup> (0.19 <sup>†</sup> )	na	4.30 <sup>†</sup>	2D-HPLC-APCI-MS/MS
Fanelli [47]	2012	45 (45/0)	43.0 <sup>†</sup> (30.5–52.5)	Healthy subjects	Plasma <sup>1</sup>	0.34 <sup>†</sup>	0.65 <sup>†</sup> (0.22 <sup>†</sup> )	na	4.55 <sup>†</sup>	2D-HPLC-APCI-MS/MS
Gatta-Cherifi [48]	2012	12 (2/10)	39.1 ± 3.7	Normal-weight subjects	Plasma <sup>2</sup>	0.16 <sup>#</sup>	1.06 <sup>#</sup> (ns)	na	na	HPLC-APCI-MS/MS
Heyman [49]	2012	11 (11/0)	23.3 ± 5.1	Subjects (resting)	Plasma <sup>1</sup>	0.49 <sup>#</sup>	0.95 <sup>#</sup> (ns)	na	1.86 <sup>#</sup>	HPLC-APCI-MS
Lin [50]	2012	5 (ns)	ns	Humans	Plasma <sup>2</sup>	0.9	na	0.8	2.4	UHPLC-ESI-MS/MS
Matias [51]	2012	12 (2/10)	39.1 ± 3.7	Normal weight subjects	Plasma <sup>2</sup>	0.16 <sup>#</sup>	0.98 <sup>#</sup> (ns)	na	7.38 <sup>#</sup>	HPLC-APCI-MS/MS
Psychogios [52]	2011	70 (33/37)	49 ± 7	Healthy adults	Plasma <sup>1</sup>	1.08	2.95 (1.78)	0.15	7.52	UHPLC-ESI-MS/MS
Quercioli [53]	2011	21 (10/11)	40 <sup>†</sup> (34–47)	Normal weight subjects	Plasma <sup>ns</sup>	0.56 <sup>†</sup>	2.0 <sup>†</sup> (sum)	na	na	HPLC-ESI-MS/MS
Balvers [54]	2010	3 (ns)	ns	Healthy volunteers	Plasma <sup>1</sup>	na	na	0.17	na	HPLC-ESI-MS/MS
Caraceni [55]	2010	14 (11/3)	49.5 ± 11.4	Healthy controls	Plasma <sup>ns</sup>	1.77	0.62 <sup>#</sup> (ns)	na	37.72	HPLC-APCI-MS
Jian [56]	2010	6 (ns)	ns	Healthy donors	Plasma <sup>1</sup>	0.25 <sup>#</sup>	na	na	2.72 <sup>#</sup>	HPLC-ESI-MS/MS
Jumpertz [57]	2010	57 (28/29)	56.3 ± 1.9	Volunteers	Plasma <sup>1</sup>	0.71 <sup>#</sup>	10.62 <sup>#</sup> (ns)	na	na	HPLC-APCI-MS
Lam [58]	2010	9 (ns)	ns	Volunteers	Plasma <sup>1</sup>	0.25	na	na	5.06	UHPLC-ESI-MS/MS
Lam [58]	2010	7 (ns)	ns	Volunteers	Serum	0.35	na	na	4.87	UHPLC-ESI-MS/MS

Sipe [59]	2010	48 (17/31)	66.4 ± 6.7	Normal-weight subjects	Plasma <sup>1</sup>	4.45	2.12 (ns)	3.42	63.88	HPLC-ESI-MS/MS
Balvers [60]	2009	23 (0/23)	ns	Healthy volunteers	Plasma <sup>1</sup>	0.24	7.09 (sum)	na	1.39	HPLC-ESI-MS/MS
Di Marzo [61]	2009	10 (6/4)	44 ± 2	Normoweight volunteers	Plasma <sup>2</sup>	1.56 <sup>#</sup>	1.26 <sup>#</sup> (sum)	na	na	HPLC-APCI-MS
Hill [62]	2009	14 (0/14)	25.9 ± 6	Matched control subjects	Serum	0.92 <sup>#</sup>	149.24 <sup>#</sup> (sum)	na	3.78 <sup>#</sup>	HPLC-APCI-MS
Jean-Gilles [63]	2009	17 (7/10)	43 (22–62)	Healthy controls	Plasma <sup>2</sup>	0.29 <sup>#</sup>	7.19 (sum)	na	2.68 <sup>#</sup>	HPLC-ESI-MS/MS
Kaufmann [64]	2009	10 (3/7)	41.9 ± 7.3	Healthy individuals	Plasma <sup>ns</sup>	1.44	na	na	na	HPLC-ESI-MS/MS
Koppel [65]	2009	12 (5/7)	73.4 ± ns	Eldery controls	Plasma <sup>ns</sup>	0.65	4.16 (ns)	na	na	HPLC-ESI-MS/MS
Marczylo [66]	2009	20 (0/20)	ns	Adult women	Plasma <sup>1</sup>	0.22	na	na	na	UHPLC-ESI-MS/MS
Marczylo [66]	2009	20 (0/20)	ns	Adult women	Serum	0.24	na	na	na	UHPLC-ESI-MS/MS
Ozalp & Barroso [67]	2009	2 (1/1)	ns	Donors	Plasma <sup>1</sup>	0.25	na	na	1.77	UHPLC-ESI-MS/MS
Ozalp & Barroso [67]	2009	2 (1/1)	ns	Donors	Plasma <sup>2</sup>	0.26	na	na	1.95	UHPLC-ESI-MS/MS
Ozalp & Barroso [67]	2009	2 (1/1)	ns	Donors	Plasma <sup>5</sup>	0.3	na	na	1.47	UHPLC-ESI-MS/MS
Ozalp & Barroso [67]	2009	2 (1/1)	ns	Donors	Plasma <sup>4</sup>	0.19	na	na	1.36	UHPLC-ESI-MS/MS
Schroeder [68]	2009	23 (12/11)	29 ± 9.6	Healthy volunteers (supine position)	Plasma <sup>ns</sup>	0.68 <sup>#</sup>	2.97 <sup>#</sup> (sum)	na	na	HPLC-ESI-MS/MS
Sugamura [69]	2009	20 (11/9)	61.7 ± 14.9	Healthy controls	Blood <sup>ns</sup>	0.19 <sup>†</sup>	2.90 <sup>†</sup> (ns)	na	na	LC-MS
Zoerner [70]	2009	16 (7/9)	39 ± 8.2	Healthy individuals	Plasma <sup>1</sup>	0.47	na	na	ns	GC-MS/MS
Hill [71]	2008	11 (0/11)	30.2 ± 6.9	Matched control subjects (minor depression)	Serum	0.21	6.88 (sum)	na	na	HPLC-APCI-MS
Hill [71]	2008	16 (0/16)	27.9 ± 9.2	Matched control subjects (major depression)	Serum	0.25	7.42 (sum)	na	na	HPLC-APCI-MS
Lam [72]	2008	13 (0/13)	ns	Postmenopausal women	Plasma <sup>1</sup>	0.33	na	na	na	UHPLC-ESI-MS/MS
Potvin [73]	2008	17 (14/3)	26.9 ± 6.0	Healthy volunteers	Plasma <sup>2</sup>	0.36	4.26 (ns)	na	0.85	HPLC-ESI-MS
Wood [74]	2008	9 (0/9)	18–35	Healthy women	Plasma <sup>1</sup>	0.22 <sup>#</sup>	ns	0.30 <sup>#</sup>	1.94 <sup>#</sup>	HPLC-APCI-MS/MS
Côté [75]	2007	28 (28/0)	ns	Non-obese men	Serum	1.03 <sup>#</sup>	0.34 <sup>#</sup> (ns)	ns	ns	HPLC-APCI-MS
Schreiber [76]	2007	8 (4/4)	ns	Healthy volunteers	Serum	0.32	na	na	8.52	HPLC-ESI-MS/MS
Blüher [77]	2006	10 (10/0)	48 ± 13	Lean subjects	Plasma <sup>ns</sup>	0.73 <sup>#</sup>	1.94 <sup>#</sup> (ns)	na	na	HPLC-APCI-MS
Blüher [77]	2006	10 (0/10)	43 ± 14	Lean subjects	Plasma <sup>ns</sup>	0.94 <sup>#</sup>	1.94 <sup>#</sup> (ns)	na	na	HPLC-APCI-MS
Matias [78]	2006	8 (5/3)	62.3 ± 7.6	Healthy volunteers	Serum	0.61 <sup>#</sup>	0.28 <sup>#</sup> (ns)	na	na	HPLC-APCI-MS
Vogeser [79]	2006	12 (ns)	ns	Healthy volunteers	Plasma <sup>1</sup>	1.3	na	na	na	HPLC-ESI-MS/MS
Vogeser [79]	2006	5 (ns)	ns	Healthy volunteers	Plasma <sup>2</sup>	1.65 <sup>#</sup>	na	na	na	HPLC-ESI-MS/MS
Engeli [80]	2005	20 (0/20)	57 ± 4.5	Lean women	Blood <sup>ns</sup>	0.73 <sup>#</sup>	6.07 <sup>#</sup> (sum)	na	na	HPLC-ESI-MS/MS
Fernández-Rodríguez [81]	2004	8 (5/3)	52 ± 6	Healthy subjects	Plasma <sup>ns</sup>	0.13 <sup>#†</sup>	na	na	na	HPLC-ESI-MS/MS
Habayeb [82]	2004	8 (0/8)	57.7 ± 2.0	Postmenopausal women	Plasma <sup>1</sup>	0.23	na	na	na	HPLC-ESI-MS
De Marchi [83]	2003	20 (ns)	ns	Healthy volunteers	Plasma <sup>1</sup>	0.9	na	na	na	HPLC-APCI-MS
Obata [84]	2003	11 (ns)	ns	Human subjects	Plasma <sup>4</sup>	0.24	1.85 (ns)	na	na	GC-MS
Sparling [85]	2003	8 (8/0)	23.7 ± 9.4	Sedentary controls (pre-exercise)	Plasma <sup>ns</sup>	0.70 <sup>#</sup>	ns	na	na	HPLC-ESI-MS

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