

3.1 Attività/Tasks programmate:

Attività 2.1 Modello animale.

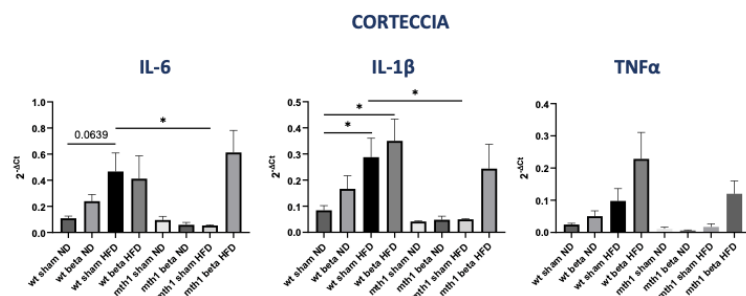
Modello animale sporadico wild-type (wt) e transgenico MTH1

Analisi dell'inflammation e neurodegenerazione

Analisi concentrazione di tre citochine che modulano la risposta infiammatoria nel cervello (corteccia e ippocampo a T2) nel modello murino.

-IL6 corteccia

Inflammation: modello sporadico wt e mth1



HFD → dieta, isolamento sociale, inattività fisica

Table Analyzed

Group E

vs.

Group A

Unpaired t test with Welch's correction

P value

P value summary

Significantly different (P < 0.05)?

One- or two-tailed P value?

Welch-corrected t, df

How large is the effect?

Mean of group A

Mean of group E

Difference between means (E - A) ± SEM

95% confidence interval

R squared (eta squared)

F test to compare variances

F, DFn, Dfd

P value

P value summary

Significantly different (P < 0.05)?

Data analyzed

Sample size, group A

Sample size, group E

IL6 WT

wt sham ND

vs,

wt sham HFD

0,0639

ns

No

Two-tailed

t=2,517, df=4,112

0,4673

0,1089

-0,3585 ± 0,1424

-0,7497 to 0,03275

0,6064

118,3, 4, 2

0,0168

*

Yes

5

3

Table Analyzed

Column C

vs.

Column A

Unpaired t test with Welch's correction

P value

IL6 WT

wt beta HFD

vs,

wt sham HFD

0,8146

P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=0,2446, df=6,217
How large is the effect?	
Mean of column A	0,4673
Mean of column C	0,4123
Difference between means (C - A) ± SEM	-0,05500 ± 0,2248
95% confidence interval	-0,6005 to 0,4905
R squared (eta squared)	0,009536
F test to compare variances	
F, DFn, Dfd	1,222, 3, 4
P value	0,8212
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, column A	5
Sample size, column C	4

Table Analyzed	IL6 WT
Column D	mth1 sham HFD
vs.	vs,
Column A	wt sham HFD
Unpaired t test with Welch's correction	
P value	0,0429
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=2,924, df=4,010
How large is the effect?	
Mean of column A	0,4673
Mean of column D	0,05356
Difference between means (D - A) ± SEM	-0,4138 ± 0,1415
95% confidence interval	-0,8063 to -0,02126
R squared (eta squared)	0,6807
F test to compare variances	
F, DFn, Dfd	1028, 4, 3
P value	<0,0001
P value summary	****
Significantly different (P < 0.05)?	Yes
Data analyzed	
Sample size, column A	5
Sample size, column D	4

-IL1-beta corteccia

Table Analyzed	IL-1b WT
Column E	wt sham ND
vs.	vs,
Column A	wt sham HFD
Unpaired t test with Welch's correction	
P value	0,0474
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=2,713, df=4,474
How large is the effect?	

Mean of column A	0,2875
Mean of column E	0,08420
Difference between means (E - A) $\pm$ SEM	-0,2033 $\pm$ 0,07496
95% confidence interval	-0,4030 to -0,003645
R squared (eta squared)	0,6219
F test to compare variances	
F, DFn, Dfd	27,06, 4, 2
P value	0,0719
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, column A	5
Sample size, column E	3

Table Analyzed	IL-1b WT
Column B	meth1 beta HFD
vs.	vs,
Column A	wt sham HFD
Unpaired t test with Welch's correction	
P value	0,7243
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=0,3694, df=6,102
How large is the effect?	
Mean of column A	0,2875
Mean of column B	0,2440
Difference between means (B - A) $\pm$ SEM	-0,04351 $\pm$ 0,1178
95% confidence interval	-0,3305 to 0,2435
R squared (eta squared)	0,02187
F test to compare variances	
F, DFn, Dfd	1,297, 3, 4
P value	0,7811
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, column A	5
Sample size, column B	4

Table Analyzed	IL-1b WT
Column F	wt beta ND
vs.	vs,
Column C	wt beta HFD
Unpaired t test with Welch's correction	
P value	0,1214
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=1,890, df=4,669
How large is the effect?	
Mean of column C	0,3504
Mean of column F	0,1665
Difference between means (F - C) $\pm$ SEM	-0,1839 $\pm$ 0,09728
95% confidence interval	-0,4394 to 0,07160
R squared (eta squared)	0,4335
F test to compare variances	
F, DFn, Dfd	3,612, 3, 2

P value	0,4487
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, column C	4
Sample size, column F	3

Table Analyzed	IL-1b WT
Group B	mtH1 beta HFD
vs.	vs,
Group A	wt sham HFD
Unpaired t test with Welch's correction	
P value	0,7243
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=0,3694, df=6,102
How large is the effect?	
Mean of group A	0,2875
Mean of group B	0,2440
Difference between means (B - A) ± SEM	-0,04351 ± 0,1178
95% confidence interval	-0,3305 to 0,2435
R squared (eta squared)	0,02187

F test to compare variances	
F, DFn, Dfd	1,297, 3, 4
P value	0,7811
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	5
Sample size, group B	4

Table Analyzed	IL-1b WT
Group E	wt sham ND
vs.	vs,
Group A	wt sham HFD
Unpaired t test with Welch's correction	
P value	0,0474
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=2,713, df=4,474
How large is the effect?	
Mean of group A	0,2875
Mean of group E	0,08420
Difference between means (E - A) ± SEM	-0,2033 ± 0,07496
95% confidence interval	-0,4030 to -0,003645
R squared (eta squared)	0,6219
F test to compare variances	
F, DFn, Dfd	27,06, 4, 2
P value	0,0719
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	5
Sample size, group E	3

Table Analyzed	IL-1b ALL
Group E	wt sham ND
vs.	vs,
Group C	wt beta HFD
Unpaired t test with Welch's correction	
P value	0,0462
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=3,129, df=3,279
How large is the effect?	
Mean of group C	0,3504
Mean of group E	0,08420
Difference between means (E - C) ± SEM	-0,2662 ± 0,08508
95% confidence interval	-0,5244 to -0,007992
R squared (eta squared)	0,7491
F test to compare variances	
F, DF _n , D _{fd}	28,28, 3, 2
P value	0,0687
P value summary	ns
Significantly different (P < 0.05)?	No
Table Analyzed	IL-1b ALL
Group D	mth1 sham HFD
vs.	vs,
Group A	wt sham HFD
Unpaired t test with Welch's correction	
P value	0,0308
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=3,266, df=4,007
How large is the effect?	
Mean of group A	0,2875
Mean of group D	0,04987
Difference between means (D - A) ± SEM	-0,2377 ± 0,07278
95% confidence interval	-0,4396 to -0,03575
R squared (eta squared)	0,7269
F test to compare variances	
F, DF _n , D _{fd}	1390, 4, 3
P value	<0,0001
P value summary	****
Significantly different (P < 0.05)?	Yes
Data analyzed	
Sample size, group A	5
Sample size, group D	4
Table Analyzed	IL-1b ALL
Group C	wt beta HFD
vs.	vs,
Group B	mth1 beta HFD
Unpaired t test with Welch's correction	
P value	0,4260
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=0,8544, df=5,931

How large is the effect?

Mean of group B	0,2440
Mean of group C	0,3504
Difference between means (C - B) $\pm$ SEM	0,1063 $\pm$ 0,1245
95% confidence interval	-0,1991 to 0,4117
R squared (eta squared)	0,1096

F test to compare variances

F, DFn, Dfd	1,241, 3, 3
P value	0,8633
P value summary	ns
Significantly different (P < 0.05)?	No

Data analyzed

Sample size, group B	4
Sample size, group C	4

Table Analyzed IL-1b ALL

Group H mth1 sham ND

vs. vs,

Group B mth1 beta HFD

Unpaired t test with Welch's correction

P value	0,1167
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=2,185, df=3,003

How large is the effect?

Mean of group B	0,2440
Mean of group H	0,04162
Difference between means (H - B) $\pm$ SEM	-0,2024 $\pm$ 0,09264
95% confidence interval	-0,4971 to 0,09223
R squared (eta squared)	0,6138

F test to compare variances

F, DFn, Dfd	3659, 3, 1
P value	0,0243
P value summary	*
Significantly different (P < 0.05)?	Yes

Data analyzed

Sample size, group B	4
Sample size, group H	2

-TNFalfa corteccia

Table Analyzed tnfa WT

Group E wt sham ND

vs. vs,

Group A wt sham HFD

Unpaired t test with Welch's correction

P value	0,1272
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=1,910, df=4,090

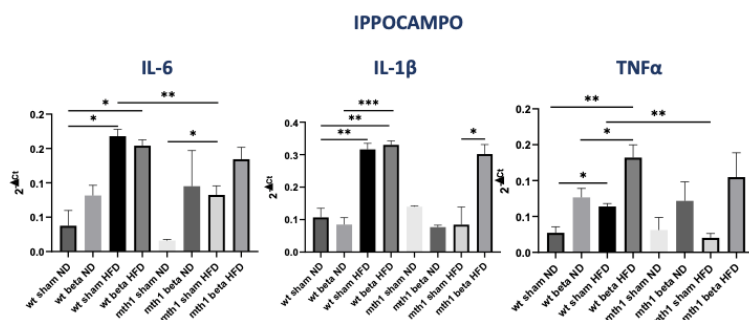
How large is the effect?

Mean of group A	0,09789
Mean of group E	0,02444
Difference between means (E - A) $\pm$ SEM	-0,07346 $\pm$ 0,03846
95% confidence interval	-0,1793 to 0,03241

R squared (eta squared)	0,4714
F test to compare variances	
F, DF _n , Df _d	147,1, 4, 2
P value	0,0135
P value summary	*
Significantly different (P < 0.05)?	Yes
Data analyzed	
Sample size, group A	5
Sample size, group E	3
Table Analyzed	tnfa WT
Group F	wt beta ND
vs.	vs,
Group C	wt beta HFD
Unpaired t test with Welch's correction	
P value	0,1180
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=2,114, df=3,246
How large is the effect?	
Mean of group C	0,2284
Mean of group F	0,05054
Difference between means (F - C) ± SEM	-0,1779 ± 0,08414
95% confidence interval	-0,4345 to 0,07880
R squared (eta squared)	0,5792
F test to compare variances	
F, DF _n , Df _d	32,13, 3, 2
P value	0,0607
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group C	4
Sample size, group F	3
Table Analyzed	tnfa WT
Group E	wt sham ND
vs.	vs,
Group C	wt beta HFD
Unpaired t test with Welch's correction	
P value	0,0896
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=2,471, df=3,015
How large is the effect?	
Mean of group C	0,2284
Mean of group E	0,02444
Difference between means (E - C) ± SEM	-0,2040 ± 0,08255
95% confidence interval	-0,4659 to 0,05802
R squared (eta squared)	0,6694
F test to compare variances	
F, DF _n , Df _d	546,9, 3, 2
P value	0,0037
P value summary	**
Significantly different (P < 0.05)?	Yes
Data analyzed	

Sample size, group C	4
Sample size, group E	3

Table Analyzed	tnfa WT
Group C	wt beta HFD
vs.	vs,
Group B	mn1 beta HFD
Unpaired t test with Welch's correction	
P value	0,2982
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=1,181, df=4,349
How large is the effect?	
Mean of group B	0,1201
Mean of group C	0,2284
Difference between means (C - B) ± SEM	0,1083 ± 0,09172
95% confidence interval	-0,1385 to 0,3551
R squared (eta squared)	0,2428
F test to compare variances	
F, DFn, Dfd	4,211, 3, 3
P value	0,2684
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group B	4
Sample size, group C	4



-IL6 Ippocampo

Table Analyzed

Group E

vs.

Group A

Unpaired t test with Welch's correction

P value

P value summary

Significantly different (P < 0.05)?

One- or two-tailed P value?

Welch-corrected t, df

How large is the effect?

Mean of group A

Mean of group E

Difference between means (E - A) ± SEM

IL6

wt sham ND

vs,

wt sham HFD

0,0145

*

Yes

Two-tailed

t=5,349, df=2,857

0,1679

0,03754

-0,1304 ± 0,02437

95% confidence interval	-0,2102 to -0,05057
R squared (eta squared)	0,9092
F test to compare variances	
F, DF _n , Df _d	2,883, 2, 4
P value	0,3355
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	5
Sample size, group E	3

Table Analyzed	IL6
Group C	wt beta HFD
vs.	vs,
Group A	wt sham HFD
Unpaired t test with Welch's correction	
P value	0,3329
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=1,040, df=6,999
How large is the effect?	
Mean of group A	0,1679
Mean of group C	0,1541
Difference between means (C - A) ± SEM	-0,01385 ± 0,01332
95% confidence interval	-0,04535 to 0,01764
R squared (eta squared)	0,1338
F test to compare variances	
F, DF _n , Df _d	1,704, 4, 3
P value	0,6898
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	5
Sample size, group C	4

Table Analyzed	IL6
Group H	mtH1 sham ND
vs.	vs,
Group D	mtH1 sham HFD
Unpaired t test with Welch's correction	
P value	0,0150
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=4,922, df=3,088
How large is the effect?	
Mean of group D	0,08239
Mean of group H	0,01597
Difference between means (H - D) ± SEM	-0,06642 ± 0,01349
95% confidence interval	-0,1087 to -0,02416
R squared (eta squared)	0,8870
F test to compare variances	
F, DF _n , Df _d	134,4, 3, 1
P value	0,1266

P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group D	4
Sample size, group H	2
Table Analyzed	IL6
Group D	mth1 sham HFD
vs.	vs,
Group A	wt sham HFD
Unpaired t test with Welch's correction	
P value	0,0023
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=5,095, df=5,947
How large is the effect?	
Mean of group A	0,1679
Mean of group D	0,08239
Difference between means (D - A) ± SEM	-0,08552 ± 0,01679
95% confidence interval	-0,1267 to -0,04436
R squared (eta squared)	0,8136
F test to compare variances	
F, DFn, Dfd	1,403, 3, 4
P value	0,7293
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	5
Sample size, group D	4
Table Analyzed	IL6
Group F	wt beta ND
vs.	vs,
Group E	wt sham ND
Unpaired t test with Welch's correction	
P value	0,1804
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=1,648, df=3,704
How large is the effect?	
Mean of group E	0,03754
Mean of group F	0,08153
Difference between means (F - E) ± SEM	0,04400 ± 0,02670
95% confidence interval	-0,03253 to 0,1205
R squared (eta squared)	0,4229
F test to compare variances	
F, DFn, Dfd	1,667, 2, 3
P value	0,6519
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group E	3
Sample size, group F	4
Table Analyzed	IL6

Group H	mth1 sham ND
vs.	vs,
Group D	mth1 sham HFD
Unpaired t test with Welch's correction	
P value	0,0150
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=4,922, df=3,088
How large is the effect?	
Mean of group D	0,08239
Mean of group H	0,01597
Difference between means (H - D) ± SEM	-0,06642 ± 0,01349
95% confidence interval	-0,1087 to -0,02416
R squared (eta squared)	0,8870
F test to compare variances	
F, DFn, Dfd	134,4, 3, 1
P value	0,1266
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group D	4
Sample size, group H	2
Table Analyzed	IL6
Group E	wt sham ND
vs.	vs,
Group C	wt beta HFD
Unpaired t test with Welch's correction	
P value	0,0223
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=4,895, df=2,617
How large is the effect?	
Mean of group C	0,1541
Mean of group E	0,03754
Difference between means (E - C) ± SEM	-0,1165 ± 0,02381
95% confidence interval	-0,1990 to -0,03408
R squared (eta squared)	0,9015
F test to compare variances	
F, DFn, Dfd	4,913, 2, 3
P value	0,2263
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group C	4
Sample size, group E	3
-IL1-beta ippocampo	
Table Analyzed	il1b
Group C	wt beta HFD
vs.	vs,
Group A	wt sham HFD
Unpaired t test with Welch's correction	
P value	0,5589
P value summary	ns

Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=0,6152, df=6,648
How large is the effect?	
Mean of group A	0,3160
Mean of group C	0,3301
Difference between means (C - A) ± SEM	0,01409 ± 0,02291
95% confidence interval	-0,04066 to 0,06885
R squared (eta squared)	0,05387
F test to compare variances	
F, DFn, Dfd	2,723, 4, 3
P value	0,4368
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	5
Sample size, group C	4

Table Analyzed	il1b
Group E	wt sham ND
vs.	vs,
Group A	wt sham HFD
Unpaired t test with Welch's correction	
P value	0,0038
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=6,203, df=3,868
How large is the effect?	
Mean of group A	0,3160
Mean of group E	0,1070
Difference between means (E - A) ± SEM	-0,2090 ± 0,03370
95% confidence interval	-0,3039 to -0,1142
R squared (eta squared)	0,9087
F test to compare variances	
F, DFn, Dfd	1,295, 2, 4
P value	0,7369
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	5
Sample size, group E	3

Table Analyzed	il1b
Group F	wt beta ND
vs.	vs,
Group E	wt sham ND
Unpaired t test with Welch's correction	
P value	0,5581
P value summary	ns
Significantly different (P < 0.05)?	No

One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=0,6373, df=4,066
How large is the effect?	
Mean of group E	0,1070
Mean of group F	0,08468
Difference between means (F - E) $\pm$ SEM	-0,02228 $\pm$ 0,03497
95% confidence interval	-0,1188 to 0,07418
R squared (eta squared)	0,09080
F test to compare variances	
F, DFn, Dfd	1,303, 2, 3
P value	0,7828
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group E	3
Sample size, group F	4
Table Analyzed	il1b
Group F	wt beta ND
vs.	vs,
Group C	wt beta HFD
Unpaired t test with Welch's correction	
P value	0,0002
P value summary	***
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=9,922, df=4,951
How large is the effect?	
Mean of group C	0,3301
Mean of group F	0,08468
Difference between means (F - C) $\pm$ SEM	-0,2454 $\pm$ 0,02473
95% confidence interval	-0,3092 to -0,1816
R squared (eta squared)	0,9521
F test to compare variances	
F, DFn, Dfd	2,705, 3, 3
P value	0,4354
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group C	4
Sample size, group F	4
Table Analyzed	il1b
Group D	mth1 sham HFD
vs.	vs,
Group B	mth1 beta HFD
Unpaired t test with Welch's correction	
P value	0,0192

P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=3,523, df=4,624
How large is the effect?	
Mean of group B	0,3018
Mean of group D	0,08456
Difference between means (D - B) ± SEM	-0,2173 ± 0,06167
95% confidence interval	-0,3797 to -0,05478
R squared (eta squared)	0,7286
F test to compare variances	
F, DF _n , D _{fd}	3,400, 3, 3
P value	0,3417
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group B	4
Sample size, group D	4
Table Analyzed	il1b
Group E	wt sham ND
vs.	vs,
Group C	wt beta HFD
Unpaired t test with Welch's correction	
P value	0,0063
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=7,273, df=2,855
How large is the effect?	
Mean of group C	0,3301
Mean of group E	0,1070
Difference between means (E - C) ± SEM	-0,2231 ± 0,03068
95% confidence interval	-0,3236 to -0,1226
R squared (eta squared)	0,9488
F test to compare variances	
F, DF _n , D _{fd}	3,526, 2, 3
P value	0,3261
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group C	4
Sample size, group E	3
Table Analyzed	il1b
Group E	wt sham ND
vs.	vs,
Group A	wt sham HFD

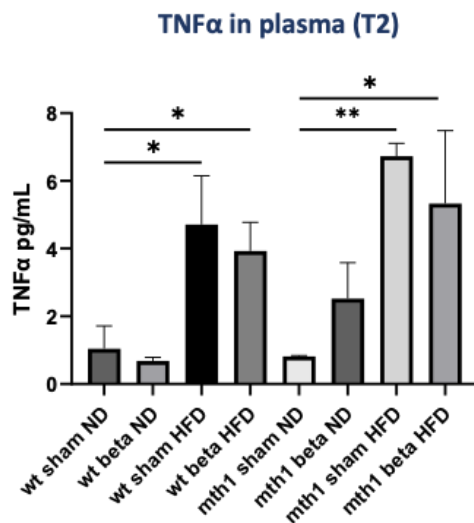
Unpaired t test with Welch's correction	
P value	0,0038
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=6,203, df=3,868
How large is the effect?	
Mean of group A	0,3160
Mean of group E	0,1070
Difference between means (E - A) ± SEM	-0,2090 ± 0,03370
95% confidence interval	-0,3039 to -0,1142
R squared (eta squared)	0,9087
F test to compare variances	
F, DFn, Dfd	1,295, 2, 4
P value	0,7369
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	5
Sample size, group E	3
-TNFalfa ippocampo	
Table Analyzed	tnf
Group D	mtl1 sham HFD
vs.	vs,
Group A	wt sham HFD
Unpaired t test with Welch's correction	
P value	0,0012
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=5,979, df=5,689
How large is the effect?	
Mean of group A	0,06388
Mean of group D	0,02029
Difference between means (D - A) ± SEM	-0,04359 ± 0,007291
95% confidence interval	-0,06167 to -0,02551
R squared (eta squared)	0,8627
F test to compare variances	
F, DFn, Dfd	1,596, 3, 4
P value	0,6465
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	5
Sample size, group D	4
Table Analyzed	tnf

Group F	wt beta ND
vs.	vs,
Group C	wt beta HFD
Unpaired t test with Welch's correction	
P value	0,0480
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=2,547, df=5,393
How large is the effect?	
Mean of group C	0,1320
Mean of group F	0,07652
Difference between means (F - C) ± SEM	-0,05552 ± 0,02179
95% confidence interval	-0,1103 to -0,0007015
R squared (eta squared)	0,5462
F test to compare variances	
F, DF _n , D _{df}	2,010, 3, 3
P value	0,5808
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group C	4
Sample size, group F	4
Table Analyzed	tnf
Group F	wt beta ND
vs.	vs,
Group E	wt sham ND
Unpaired t test with Welch's correction	
P value	0,0238
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=3,241, df=4,868
How large is the effect?	
Mean of group E	0,02717
Mean of group F	0,07652
Difference between means (F - E) ± SEM	0,04935 ± 0,01522
95% confidence interval	0,009890 to 0,08880
R squared (eta squared)	0,6834
F test to compare variances	
F, DF _n , D _{df}	2,842, 3, 2
P value	0,5420
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group E	3
Sample size, group F	4

Table Analyzed	tnf
Group H	mth1 sham ND
vs.	vs,
Group G	mth1 beta ND
Unpaired t test with Welch's correction	
P value	0,3457
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=1,280, df=1,728
How large is the effect?	
Mean of group G	0,07174
Mean of group H	0,03102
Difference between means (H - G) ± SEM	-0,04072 ± 0,03181
95% confidence interval	-0,2005 to 0,1190
R squared (eta squared)	0,4868
F test to compare variances	
F, DF _n , Df _d	2,317, 1, 1
P value	0,7400
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group G	2
Sample size, group H	2

Table Analyzed	tnf
Group E	wt sham ND
vs.	vs,
Group C	wt beta HFD
Unpaired t test with Welch's correction	
P value	0,0052
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Welch-corrected t, df	t=5,302, df=4,219
How large is the effect?	
Mean of group C	0,1320
Mean of group E	0,02717
Difference between means (E - C) ± SEM	-0,1049 ± 0,01978
95% confidence interval	-0,1587 to -0,05106
R squared (eta squared)	0,8695
F test to compare variances	
F, DF _n , Df _d	5,714, 3, 2
P value	0,3051
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group C	4

-Analisi TNFalfa in plasma



Number of families 1

Number of comparisons per family 6

Alpha 0,05

Tukey's multiple comparisons test

Comparison	Mean diff,	95,00% CI of diff,	Below thresh old?	Summary	Adjusted P value
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wt sham HFD vs. wt beta HFD	0,7781	1,684 to 3,241	No	ns	0,7475	A-C
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wt sham HFD vs. wt sham ND	3,667	0,8750 to 6,46	Yes	*	0,0127	A-E
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wt sham HFD vs. wt beta ND	4,029	1,567 to 6,492	Yes	**	0,0035	A-F
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wt beta HFD vs. wt sham ND	2,889	0,05415 to 5,832	No	ns	0,0543	C-E
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wt beta HFD vs. wt beta ND	3,251	0,6184 to 5,884	Yes	*	0,0177	C-F
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wt sham ND vs. wt beta ND	0,3618	2,581 to 3,305	No	ns	0,9779	E-F
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Test details	Mean 1	Mean 2	Mean diff,	SE of diff,	n1	n2	q	D F
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wt sham HFD vs. wt beta HFD	4,710	3,932	0,7781	0,7690	4	3	1,43	8
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wt sham HFD vs. wt sham ND	4,710	1,043	3,667	0,8719	4	2	5,94	8
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wt sham HFD vs. wt beta ND	4,710	0,6807	4,029	0,7690	4	3	7,41	8
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wt beta HFD vs. wt sham ND	3,932	1,043	2,889	0,9191	3	2	4,44	8
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wt beta HFD vs. wt beta ND	3,932	0,6807	3,251	0,8221	3	3	5,59	8
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wt sham ND vs. wt beta ND	1,043	0,6807	0,3618	0,9191	2	3	67	8	0,55
Compact letter display									
wt sham HFD	A								
wt beta HFD	A B								
wt sham ND	B C								
wt beta ND	C								

Number of comparisons per family

6

Alpha

0,05

Tukey's multiple comparison test

Mean diff, 95,00% CI of diff, Below thresh old? Summa ry Adjusted P V alue

mt h1 beta HFD vs. mt h1 sham HFD	-1,403	-5,784 to 2,978	No	ns	0,7225	B-D			
mt h1 beta HFD vs. mt h1 beta ND	2,809	-1,055 to 6,673	No	ns	0,1631	B-G			
mt h1 beta HFD vs. mt h1 sham ND	4,514	0,1322 to 8,895	Yes	*	0,0440	B-H			
mt h1 sham HFD vs. mt h1 beta ND	4,212	0,4065 to 8,830	No	ns	0,0730	D-G			
mt h1 sham HFD vs. mt h1 sham ND	5,917	0,8574 to 10,98	Yes	*	0,0246	D-H			
mt h1 beta ND vs. mt h1 sham ND	1,705	-2,914 to 6,323	No	ns	0,6338	G-H			
Test details	Mean 1	Mean 2	Mean diff,	SE of diff,	n1	n2	q	F	D
mt h1 beta HFD vs. mt h1 sham HFD	5,330	6,733	-1,403	1,324	4	2	9	1,49	7
mt h1 beta HFD vs. mt h1 beta ND	5,330	2,521	2,809	1,167	4	3	3	3,40	7
mt h1 beta HFD vs. mt h1 sham ND	5,330	0,8160	4,514	1,324	4	2	3	4,82	7
mt h1 sham HFD vs. mt h1 beta ND	6,733	2,521	4,212	1,395	2	3	9	4,26	7
mt h1 sham HFD vs. mt h1 sham ND	6,733	0,8160	5,917	1,528	2	2	5	5,47	7
mt h1 beta ND vs. mt h1 sham ND	2,521	0,8160	1,705	1,395	3	2	8	1,72	7
Compact letter display									
mt h1 sham HFD	A								
mt h1 beta HFD	A								
mt h1 beta ND	A B								
mt h1 sham ND	B								

-Analisi del danno ossidativo e disfunzione mitocondriale

-Corteccia (Catalasi e SOD1)

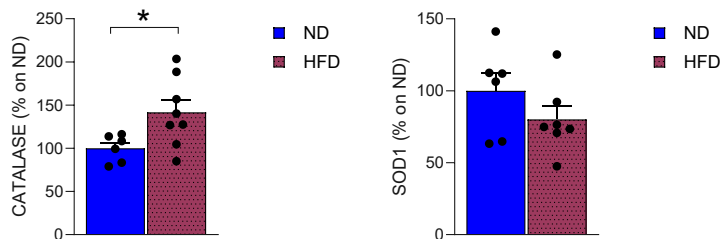
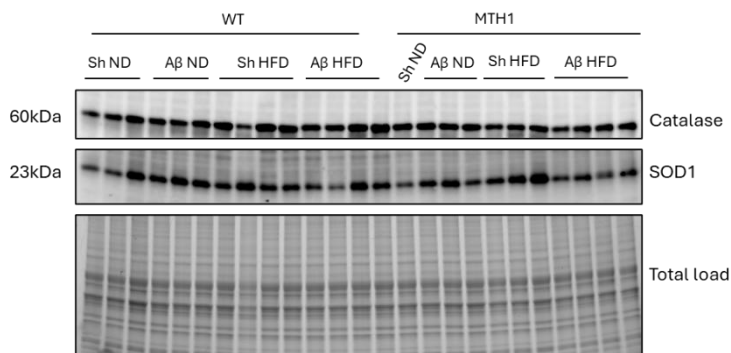


Table Analyzed

Group B

vs.

Group A

Unpaired t test

P value

P value summary

Significantly different ($P < 0.05$)?

One- or two-tailed P value?

t, df

How large is the effect?

Mean of group A

Mean of group B

Difference between means ($B - A$) $\pm$ SEM

95% confidence interval

R squared (eta squared)

F test to compare variances

F, DFn, Dfd

P value

P value summary

Significantly different ($P < 0.05$)?

Data analyzed

Sample size, group A

Sample size, group B

Catalasi Cx

HFD

vs,

ND

0,0340

*

Yes

Two-tailed

$t=2,392$, $df=12$

100,0

141,6

$41,62 \pm 17,40$

3,713 to 79,53

0,3229

6,452, 7, 5

0,0567

ns

No

6

8

Table Analyzed

Group B

vs.

SOD1 Cx

HFD

vs,

Group A	ND
Unpaired t test	
P value	0,2118
P value summary	ns
Significantly different ($P < 0.05$)?	No
One- or two-tailed P value?	Two-tailed
t, df	t=1,326, df=11
How large is the effect?	
Mean of group A	100,0
Mean of group B	80,07
Difference between means (B - A) $\pm$ SEM	-19,93 $\pm$ 15,03
95% confidence interval	-53,02 to 13,16
R squared (eta squared)	0,1378
F test to compare variances	
F, DFn, Dfd	1,625, 5, 6
P value	0,5687
P value summary	ns
Significantly different ($P < 0.05$)?	No
Data analyzed	
Sample size, group A	6
Sample size, group B	7

-Ippocampo (Catalasi e SOD1)

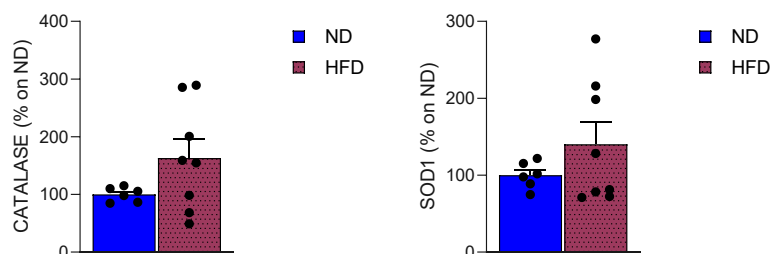
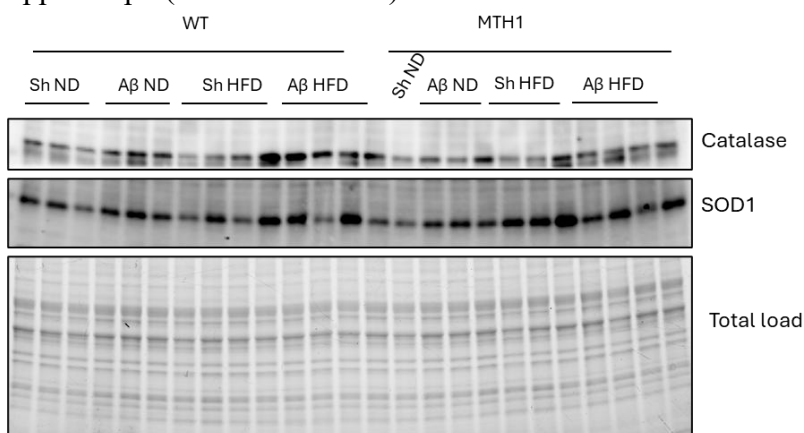


Table Analyzed	Catalasi Hip
Group B	HFD
vs.	vs,
Group A	ND
Unpaired t test	
P value	0,1227

P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
t, df	t=1,661, df=12
How large is the effect?	
Mean of group A	100,0
Mean of group B	163,1
Difference between means (B - A) ± SEM	63,06 ± 37,97
95% confidence interval	-19,67 to 145,8
R squared (eta squared)	0,1869
F test to compare variances	
F, DFn, Dfd	53,99, 7, 5
P value	0,0004
P value summary	***
Significantly different (P < 0.05)?	Yes
Data analyzed	
Sample size, group A	6
Sample size, group B	8
Table Analyzed	SOD1 Hip
Group B	HFD
vs.	vs,
Group A	ND
Unpaired t test	
P value	0,2518
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
t, df	t=1,204, df=12
How large is the effect?	
Mean of group A	100,0
Mean of group B	140,4
Difference between means (B - A) ± SEM	40,37 ± 33,53
95% confidence interval	-32,68 to 113,4
R squared (eta squared)	0,1078
F test to compare variances	
F, DFn, Dfd	21,52, 7, 5
P value	0,0038
P value summary	**
Significantly different (P < 0.05)?	Yes
Data analyzed	
Sample size, group A	6
Sample size, group B	8

-Corteccia (complessi mitocondriali)

-Corteccia modello wt (complessi mitocondriali)

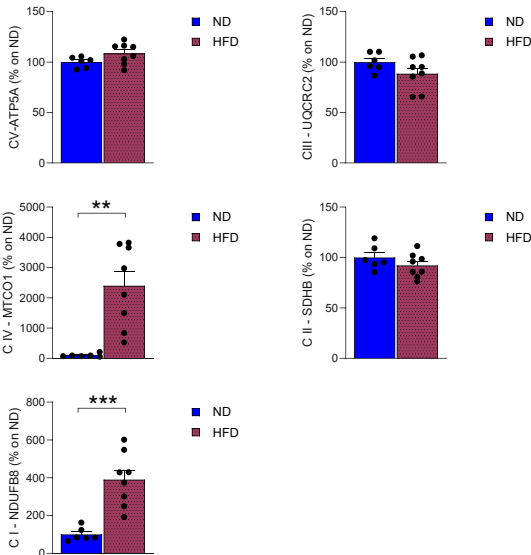
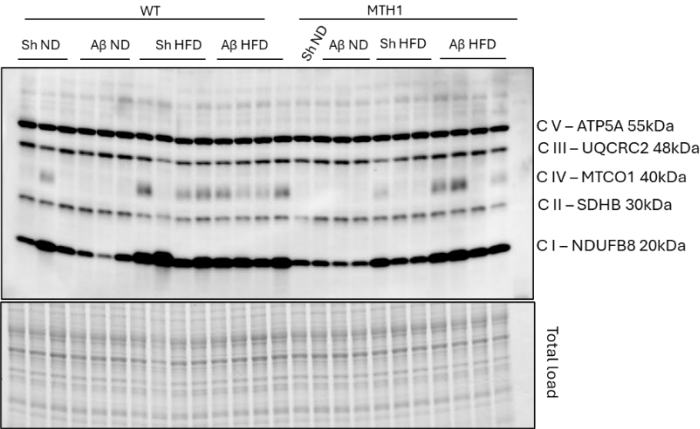


Table Analyzed

Group B

vs.

Group A

Unpaired t test

P value

P value summary

Significantly different (P < 0.05)?

One- or two-tailed P value?

t, df

How large is the effect?

Mean of group A

Mean of group B

Difference between means (B - A) ± SEM

95% confidence interval

R squared (eta squared)

CV- ATP5A Cx

HFD

vs,

ND

0,4818

ns

No

Two-tailed

t=0,7259, df=12

100,0

93,36

-6,635 ± 9,140

-26,55 to 13,28

0,04207

F test to compare variances	
F, DF _n , Df _d	7,271, 7, 5
P value	0,0441
P value summary	*
Significantly different (P < 0.05)?	Yes
Data analyzed	
Sample size, group A	6
Sample size, group B	8

Table Analyzed	CIII - UQCRC2 Cx
Group B	HFD
vs.	vs,
Group A	ND
Unpaired t test	
P value	0,0010
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=4,314, df=12
How large is the effect?	
Mean of group A	100,0
Mean of group B	75,81
Difference between means (B - A) ± SEM	-24,19 ± 5,607
95% confidence interval	-36,40 to -11,97
R squared (eta squared)	0,6080
F test to compare variances	
F, DF _n , Df _d	1,199, 7, 5
P value	0,8716
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	6
Sample size, group B	8

Table Analyzed	C IV - MTCO1 Cx
Group B	HFD
vs.	vs,
Group A	ND
Unpaired t test	
P value	0,0059
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,343, df=12
How large is the effect?	
Mean of group A	100,0
Mean of group B	484,9
Difference between means (B - A) ± SEM	384,9 ± 115,1
95% confidence interval	134,1 to 635,7
R squared (eta squared)	0,4823
F test to compare variances	
F, DF _n , Df _d	3,996, 7, 5
P value	0,1464
P value summary	ns
Significantly different (P < 0.05)?	No

Data analyzed	
Sample size, group A	6
Sample size, group B	8

Table Analyzed	C II - SDHB Cx
Group B	HFD
vs.	vs,
Group A	ND
Unpaired t test	
P value	0,0003
P value summary	***
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=4,981, df=12

How large is the effect?	
Mean of group A	100,0
Mean of group B	69,47
Difference between means (B - A) ± SEM	-30,53 ± 6,130
95% confidence interval	-43,89 to -17,18
R squared (eta squared)	0,6740

F test to compare variances	
F, DFn, Dfd	1,330, 5, 7
P value	0,7046
P value summary	ns
Significantly different (P < 0.05)?	No

Data analyzed	
Sample size, group A	6
Sample size, group B	8

Table Analyzed	C I - NDUFB8 Cx
Group B	HFD
vs.	vs,
Group A	ND
Unpaired t test	
P value	0,0267
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,523, df=12

How large is the effect?	
Mean of group A	100,0
Mean of group B	257,4
Difference between means (B - A) ± SEM	157,4 ± 62,39
95% confidence interval	21,49 to 293,4
R squared (eta squared)	0,3467

F test to compare variances	
F, DFn, Dfd	3,776, 7, 5
P value	0,1627
P value summary	ns
Significantly different (P < 0.05)?	No

Data analyzed	
Sample size, group A	6
Sample size, group B	8

-Ippocampo modello wt (complessi mitocondriali)

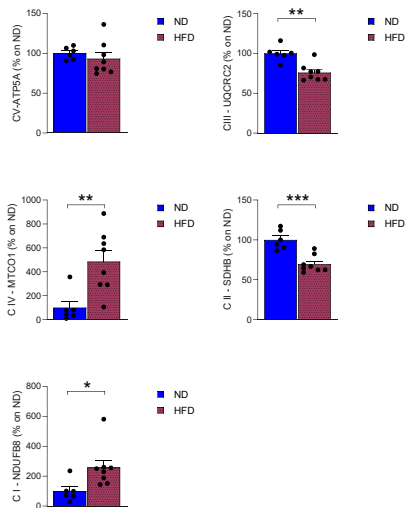
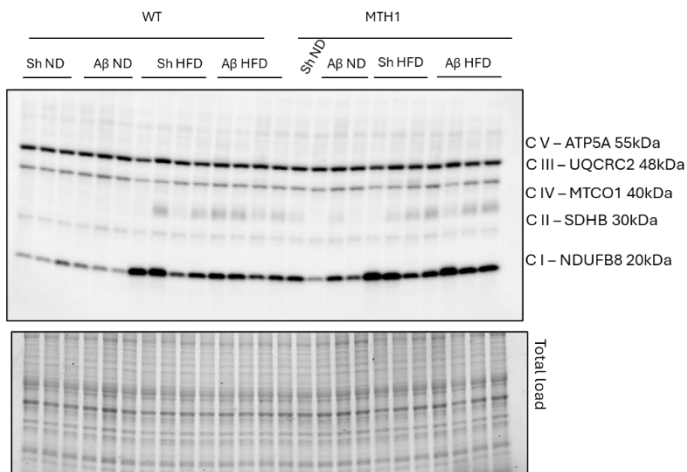


Table Analyzed

Group B

vs.

Group A

Unpaired t test

P value

P value summary

Significantly different (P < 0.05)?

One- or two-tailed P value?

t, df

How large is the effect?

Mean of group A

Mean of group B

Difference between means (B - A) ± SEM 8,607 ± 4,695

95% confidence interval

R squared (eta squared)

F test to compare variances

F, DFn, Dfd

P value

CV- ATP5A Hip

HFD

vs,

ND

0,0917

ns

No

Two-tailed

t=1,833, df=12

100,0

108,6

-1,623 to 18,84

0,2188

3,727, 7, 5

0,1666

P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	6
Sample size, group B	8
Table Analyzed	CIII - UQCRC2 Hip
Group B	HFD
vs.	vs,
Group A	ND
Unpaired t test	
P value	0,1419
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
t, df	t=1,572, df=12
How large is the effect?	
Mean of group A	100,0
Mean of group B	88,54
Difference between means (B - A) ± SEM	-11,46 ± 7,290
95% confidence interval	-27,34 to 4,424
R squared (eta squared)	0,1708
F test to compare variances	
F, DF _n , Df _d	2,924, 7, 5
P value	0,2555
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	6
Sample size, group B	8
Table Analyzed	C IV - MTCO1 Hip
Group B	HFD
vs.	vs,
Group A	ND
Unpaired t test	
P value	0,0014
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=4,137, df=12
How large is the effect?	
Mean of group A	100,0
Mean of group B	2401
Difference between means (B - A) ± SE	
M	2301 ± 556,1
95% confidence interval	1089 to 3513
R squared (eta squared)	0,5879

F test to compare variances	
F, DF _n , Df _d	582,9, 7, 5
P value	<0,0001
P value summary	****
Significantly different (P < 0.05)?	Yes
Data analyzed	
Sample size, group A	6
Sample size, group B	8
Table Analyzed	C II - SDHB Hip
Group B	HFD
vs.	vs,
Group A	ND
Unpaired t test	
P value	0,2439
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
t, df	t=1,226, df=12
How large is the effect?	
Mean of group A	100,0
Mean of group B	92,13
Difference between means (B - A) ± SEM	-7,874 ± 6,425
95% confidence interval	-21,87 to 6,125
R squared (eta squared)	0,1112
F test to compare variances	
F, DF _n , Df _d	1,053, 5, 7
P value	0,9153
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, group A	6
Sample size, group B	8
Table Analyzed	C I - NDUFB8 Hip
Group B	HFD
vs.	vs,
Group A	ND
Unpaired t test	
P value	0,0004
P value summary	***
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=4,869, df=12
How large is the effect?	
Mean of group A	100,0
Mean of group B	390,3
Difference between means (B - A) ± SEM	290,3 ± 59,62

95% confidence interval	160,4 to 420,2
R squared (eta squared)	0,6640
F test to compare variances	
F, DFn, Dfd	15,06, 7, 5
P value	0,0087
P value summary	**
Significantly different (P < 0.05)?	Yes
Data analyzed	
Sample size, group A	6
Sample size, group B	8