SUPPLEMENTARY DATA

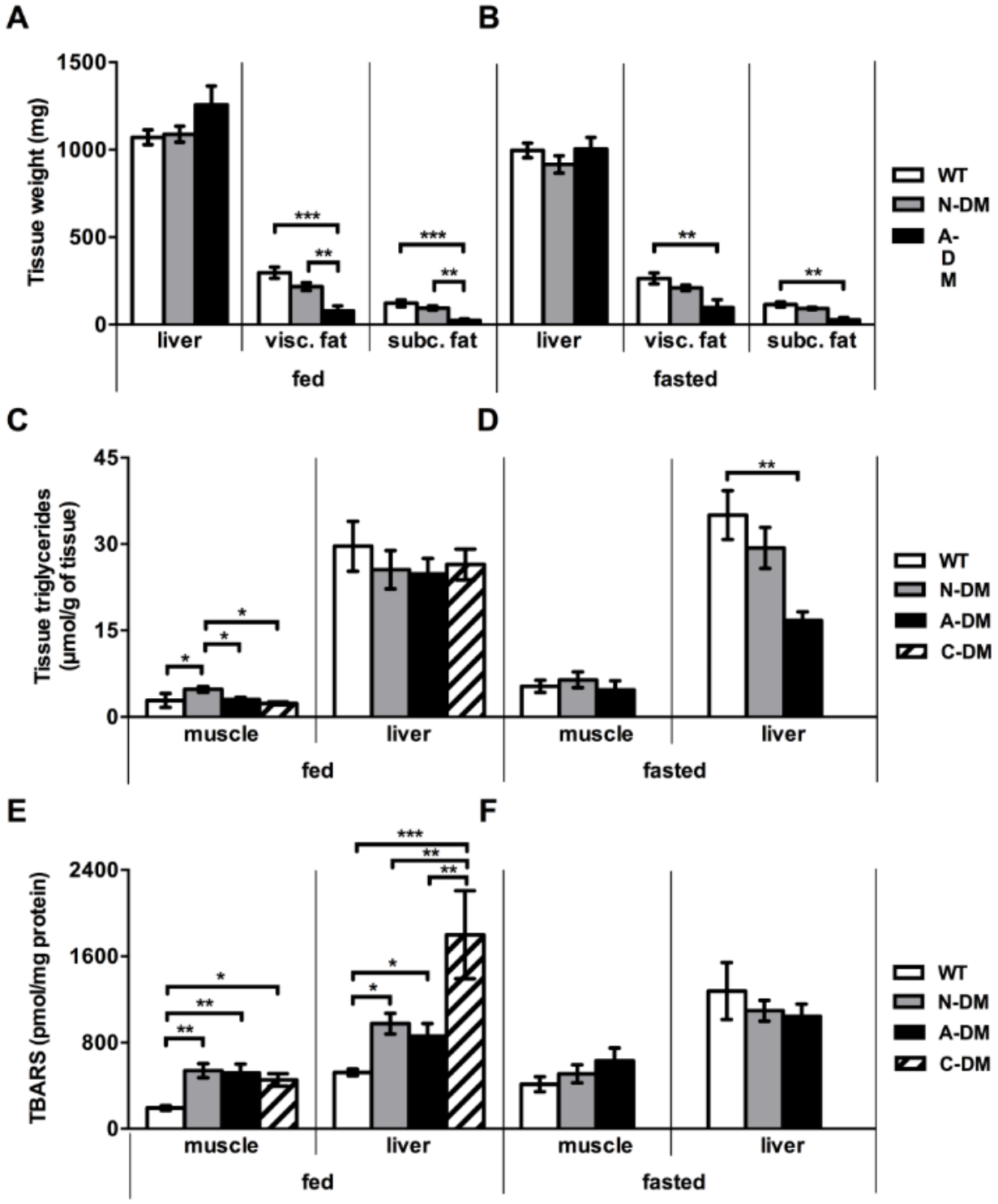
Supplementary Table 1. Glucose and lipid levels in the serum of WT, N-DM, A-DM and C-DM mice in the fed state.

	WT	N-DM	A-DM	C-DM
Glucose [mg/dl]	124±26	131±34	465±59$^{\#\S}$	490±22$^{\#\S}$
Triglyceride [mg/dl]	128±53	139±59	462±278*‡	178±39†
Free fatty acids [mmol/l]	0.87±0.30	0.77±0.40	1.32±0.84	1.07±0.24

All data are represented as means±SD. $^{*}p<0.01$ vs. WT, $^{\#}p<0.001$ vs. WT, $^{\ddagger}p<0.01$ vs. N-DM, $^{\S}p<0.001$ vs. N-DM, $^{\dagger}p<0.05$ vs. A-DM by ANOVA with Bonferroni post hoc analysis or non-parametrical test (Mann-Whitney) with Hochberg post hoc analysis.

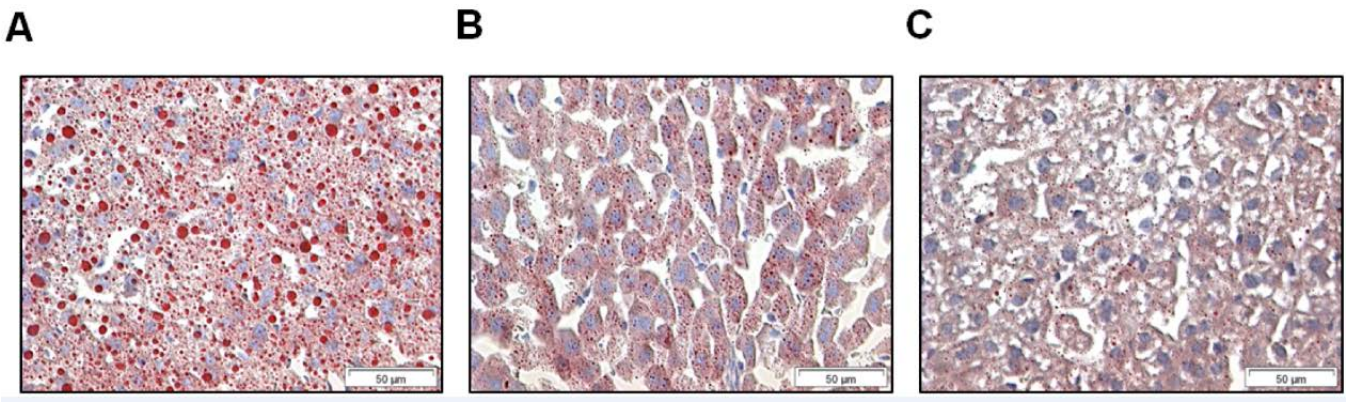
SUPPLEMENTARY DATA

Supplementary Figure 1. Determination of body fat storage and degradation in WT, N-DM, ADM and C-DM mice. (A and B) Total weights of liver, visceral fat and subcutaneous fat under fed (n=10 per group) and fasted (n=5-10 per group) conditions. (C and D) Triglyceride content in gastrocnemius muscle and liver of fed (n=5-12 per group) and fasted (n=5-12 per group) mice. (E and F) TBARS levels in gastrocnemius muscle and liver of fed (n=5- 12 per group) and fasted (n=5 per group) mice. Data are represented as means±SEM. *p<0.05, **p<0.01 and ***p<0.001 by ANOVA with Bonferroni post hoc analysis.



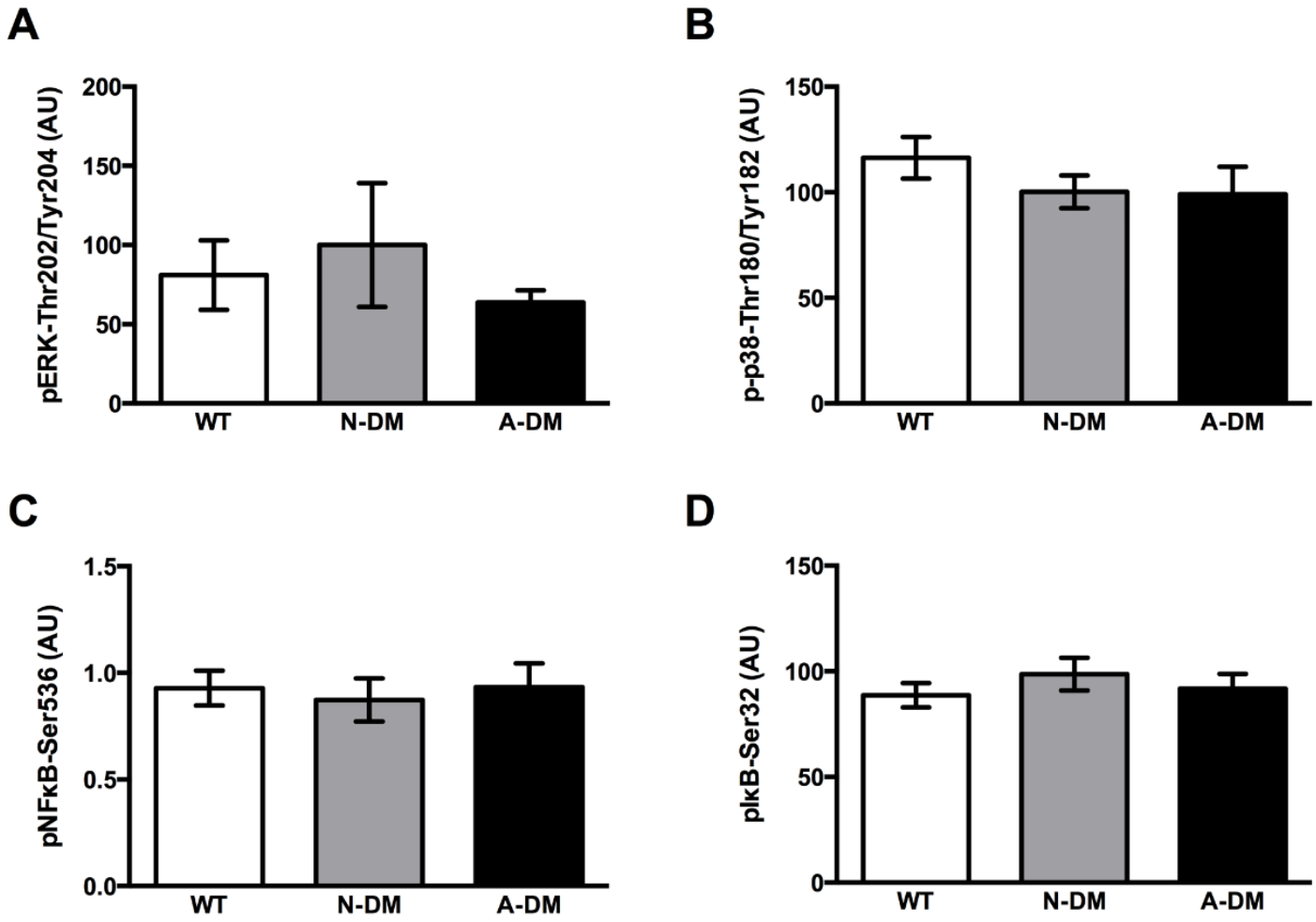
SUPPLEMENTARY DATA

Supplementary Figure 2. Detection of lipid droplets with oil red O (ORO) staining in frozen liver sections. Liver sections of (A) WT, (B) N-DM and (C) A-DM mice at fasted state were stained by ORO for specific detection and quantification of lipids. Thereby, WT mice displayed the highest lipid content with ~30% ORO staining of total tissue area. Compared to this, N-DM showed decreased content with ~15% ORO-stained area. A-DM had the lowest lipid content with ~10% ORO-stained area of total section.



SUPPLEMENTARY DATA

Supplementary Figure 3. Protein levels of cellular inflammatory pathway components in gastrocnemius muscle of WT, N-DM and A-DM mice. Basal (n=6 per group) levels of extracellular-signal regulated kinase phosphorylated at Thr202 and Tyr204 (ERK) (A), p38 mitogen-activated protein kinase phosphorylated at Thr180 and Tyr182 (p38MAPK) (B), nuclear factor 'kappa-lightchain-enhancer' of activated B-cells (NFκB) phosphorylated at Ser536 (C) and inhibitor of kappa B phosphorylated at Ser32 (pIκB) (D). Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) was used as loading control for all proteins. Data are represented as means±SEM and tested by ANOVA with Bonferroni post hoc analysis.



SUPPLEMENTARY DATA

Supplementary Figure 4. Protein levels of cellular inflammatory pathway components in the liver of WT, N-DM and A-DM mice. Basal (n=6 per group) levels of extracellular-signal regulated kinase phosphorylated at Thr202 and Tyr204 (ERK) (A), p38 mitogen-activated protein kinase phosphorylated at Thr180 and Tyr182 (p38MAPK) (B), as well inhibitor of kappa B (IκB) (C) and its phosphorylated form at Ser32 (pIκB) (D). Glyceraldehyde 3- phosphate dehydrogenase (GAPDH) was used as loading control for all proteins. Data are represented as means±SEM and tested by ANOVA with Bonferroni post hoc analysis.