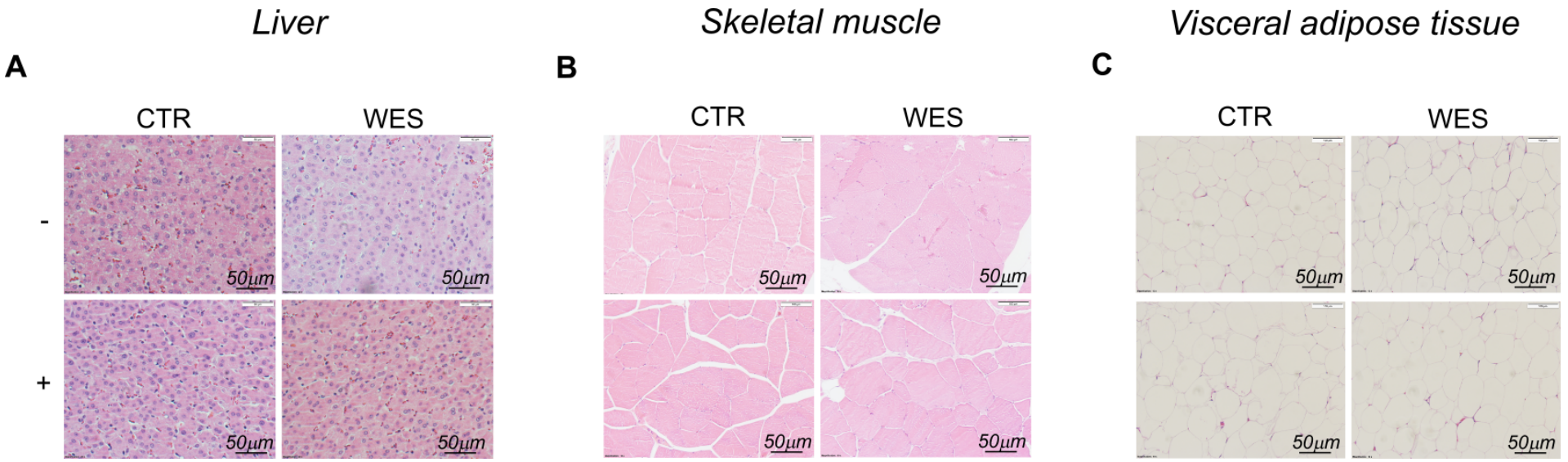


**SUPPLEMENTARY FIGURE S1.** Morphology of liver, skeletal muscle and visceral adipose tissue (VAT) collected at slaughter. Representative images of A) liver, B) skeletal muscle and C) VAT histology.

CTR: Control diet; WES: Western diet; –: non-supplemented; +: spirulina-supplemented.

**SUPPLEMENTARY TABLE S1.**
Effects of Western diet and spirulina supplementation on the FA composition of liver and skeletal muscle of sows (g/100g total FA)[§].

| Diet (D) | | CTR | | WES | | | *Significance* | | |
|---|---|---|---|---|---|---|---|---|---|
| Spirulina (Sp) | | – | + | – | + | SEM | D | Sp | D×Sp |
| | *Tissue* | | | | | | | | |
| C14:0 | Liver | 0.41 | 0.27 | 0.29 | 0.44 | 0.138 | *n.s.* | *n.s.* | # |
| | Muscle | 1.26 | 1.26 | 1.30 | 1.24 | 0.050 | *n.s.* | *n.s.* | *n.s.* |
| C16:0 | Liver | 14.8 | 14.9 | 14.4 | 15.2 | 0.95 | *n.s.* | *n.s.* | *n.s.* |
| | Muscle | 24.6 | 24.0 | 24.3 | 24.3 | 0.59 | *n.s.* | *n.s.* | *n.s.* |
| *iso* C16:0 | Liver | 0.39 | 0.29 | 0.31 | 0.47 | 0.114 | *n.s.* | *n.s.* | # |
| | Muscle | 0.38 | 0.37 | 0.41 | 0.39 | 0.022 | *n.s.* | *n.s.* | *n.s.* |
| C16:1 *n*–7 | Liver | 0.78 | 0.62 | 0.79 | 0.95 | 0.270 | *n.s.* | *n.s.* | *n.s.* |
| | Muscle | 2.67 | 2.75 | 2.69 | 2.83 | 0.256 | *n.s.* | *n.s.* | *n.s.* |
| C17:0 | Liver | 0.54 | 0.45 | 0.54 | 0.23 | 0.096 | *n.s.* | * | *n.s.* |
| | Muscle | 0.14[a] | 0.14[a] | 0.17[b] | 0.13[a] | 0.008 | * | * | ** |
| C18:0 | Liver | 25.1 | 25.1 | 27.4 | 26.3 | 1.61 | *n.s.* | *n.s.* | *n.s.* |
| | Muscle | 14.6 | 13.8 | 16.1 | 14.3 | 0.66 | * | ** | *n.s.* |
| C18:1 *cis*–9 | Liver | 15.4 | 14.1 | 15.0 | 18.1 | 2.77 | *n.s.* | *n.s.* | *n.s.* |
| | Muscle | 39.1 | 39.4 | 37.6 | 40.0 | 1.84 | *n.s.* | *n.s.* | *n.s.* |
| C18:1 *cis*–11 | Liver | n.a | n.a. | n.a. | n.a. | n.a. | *n.a.* | *n.a.* | *n.a.* |
| | Muscle | 3.43 | 3.72 | 3.14 | 3.47 | 0.203 | # | # | *n.s.* |
| C18:2 *n*–6 (LA) | Liver | 15.8 | 15.2 | 13.3 | 12.4 | 0.86 | *** | *n.s.* | *n.s.* |
| | Muscle | 9.76 | 9.84 | 9.46 | 7.75 | 1.620 | # | *n.s.* | *n.s.* |
| C18:3 *n*–6 (GLA) | Liver | 0.26 | 0.34 | 0.24 | 0.36 | 0.059 | *n.s.* | # | *n.s.* |
| | Muscle | 0.04 | 0.04 | 0.05 | 0.05 | 0.008 | *n.s.* | *n.s.* | *n.s.* |
| C18:3 *n*–3 (ALA) | Liver | 0.16 | 0.14 | 0.16 | 0.21 | 0.099 | *n.s.* | *n.s.* | *n.s.* |
| | Muscle | 0.21 | 0.26 | 0.28 | 0.23 | 0.008 | *n.s.* | *n.s.* | * |
| C20:0 | Liver | 0.18 | 0.17 | 0.12 | 0.10 | 0.068 | * | *n.s.* | *n.s.* |
| | Muscle | 0.39 | 0.32 | 0.30 | 0.30 | 0.082 | # | # | *n.s.* |
| C20:1 *n*–9 | Liver | 0.32 | 0.33 | 0.26 | 0.25 | 0.023 | *** | *n.s.* | *n.s.* |
| | Muscle | 0.83 | 0.84 | 0.71 | 0.75 | 0.067 | ** | *n.s.* | *n.s.* |
| C20:2 *n*–6 | Liver | 0.45 | 0.45 | 0.24 | 0.20 | 0.047 | *** | *n.s.* | *n.s.* |
| | Muscle | 0.36 | 0.36 | 0.23 | 0.22 | 0.028 | *** | *n.s.* | *n.s.* |
| C20:3 *n*–6 (DGLA) | Liver | 0.55 | 0.51 | 0.71 | 0.53 | 0.106 | * | * | *n.s.* |
| | Muscle | 0.15 | 0.17 | 0.18 | 0.15 | 0.038 | *n.s* | *n.s.* | *n.s.* |
| C20:4 *n*–6 | Liver | 17.5 | 19.2 | 18.3 | 17.5 | 1.67 | *n.s.* | *n.s.* | *n.s.* |
| | Muscle | 1.27 | 1.47 | 2.23 | 1.60 | 0.681 | *n.s.* | *n.s.* | *n.s.* |
| C20:5 *n*–3 (EPA) | Liver | 0.26 | 0.22 | 0.51 | 0.43 | 0.048 | *** | *n.s.* | *n.s.* |
| | Muscle | 0.11 | 0.11 | 0.16 | 0.12 | 0.098 | *n.s.* | *n.s.* | *n.s.* |
| C22:4 *n*–6 | Liver | 1.27 | 1.43 | 0.97 | 0.83 | 0.115 | *** | *n.s.* | *n.s.* |
| | Muscle | 0.08 | 0.12 | 0.10 | 0.08 | 0.068 | *n.s.* | *n.s.* | *n.s.* |
| C22:5 *n*–3 | Liver | 1.59 | 1.82 | 1.70 | 1.38 | 0.223 | *n.s.* | *n.s.* | *n.s.* |
| | Muscle | 0.14 | 0.15 | 0.21 | 0.16 | 0.055 | *n.s.* | *n.s.* | *n.s.* |
| C22:6 *n*–3 | Liver | 1.47 | 1.36 | 1.45 | 1.45 | 0.394 | *n.s.* | *n.s.* | *n.s.* |
| | Muscle | 0.04 | 0.04 | 0.07 | 0.06 | 0.021 | # | *n.s.* | *n.s.* |
| C22:5 *n*–6 | Liver | 0.38 | 0.28 | 0.32 | 0.21 | 0.130 | *n.s.* | # | *n.s.* |
| | Muscle | n.a. | n.a. | n.a. | n.a. | n.a. | *n.a.* | *n.a.* | *n.a.* |

CTR: Control diet; WES: Western diet; n.a.: not analysed.
Data are presented as least square mean ± standard error of the mean (SEM). Within a row, least squares means without a common superscript differ ($p$ <.05). Statistical significances were set at *$p$ <.05, ** $p$<.01, ***$p$ <.001. Trends were defined as #.05 < $p$ <.10. n.s.: not significant.
[§]Only fatty acids (FA) with a proportion > 0.2 g/100 g total FA in at least one of the groups or tissues are displayed.