Supplementary Materials

**Table S1.** Effect of medium-chain triglyceride (MCT) supplementation on liver fatty acid composition after 4-h LPS challenge in pigs *\(^{\dagger}\).*

<table>
<thead>
<tr>
<th>Item</th>
<th>Saline</th>
<th>LPS</th>
<th>SEM</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control</td>
<td>MCTs</td>
<td>Control</td>
<td>MCTs</td>
</tr>
<tr>
<td>% total fatty acids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C6:0</td>
<td>0.51</td>
<td>0.57</td>
<td>0.47</td>
<td>0.51</td>
</tr>
<tr>
<td>C16:0</td>
<td>25.86</td>
<td>25.67</td>
<td>26.08</td>
<td>25.91</td>
</tr>
<tr>
<td>C16:1</td>
<td>1.07</td>
<td>1.89</td>
<td>1.11</td>
<td>1.74</td>
</tr>
<tr>
<td>C18:0</td>
<td>15.36</td>
<td>15.41</td>
<td>15.68</td>
<td>15.63</td>
</tr>
<tr>
<td>cis C18:1n-9</td>
<td>17.79   (a)</td>
<td>18.85  (b)</td>
<td>17.06  (a)</td>
<td>19.81  (c)</td>
</tr>
<tr>
<td>cis C18:2n-6</td>
<td>17.42</td>
<td>14.10</td>
<td>16.45</td>
<td>13.49</td>
</tr>
<tr>
<td>C18:3n-3</td>
<td>0.25</td>
<td>0.28</td>
<td>0.22</td>
<td>0.25</td>
</tr>
<tr>
<td>C20:4n-6</td>
<td>10.29</td>
<td>10.60</td>
<td>11.14</td>
<td>10.19</td>
</tr>
<tr>
<td>C20:5n-3</td>
<td>0.24  (a)</td>
<td>0.52  (b)</td>
<td>0.31  (a)</td>
<td>0.41  (b)</td>
</tr>
<tr>
<td>C22:6n-3</td>
<td>1.60  (a)</td>
<td>2.07  (b)</td>
<td>1.77  (b)</td>
<td>1.81  (b)</td>
</tr>
<tr>
<td>Total (n-6) PUFAs†</td>
<td>28.99</td>
<td>26.01</td>
<td>28.94</td>
<td>24.98</td>
</tr>
<tr>
<td>Total (n-3) PUFAs†</td>
<td>2.24  (a)</td>
<td>3.03  (c)</td>
<td>2.44  (a)</td>
<td>2.60  (b)</td>
</tr>
<tr>
<td>(n-6)/(n-3)‡</td>
<td>13.00(d)</td>
<td>8.59   (a)</td>
<td>11.29 (c)</td>
<td>9.61  (b)</td>
</tr>
</tbody>
</table>

* Values are mean and pooled SEM, \(n = 6\) (1 pig/pen). Labeled means in a row without a common letter differ, \(P < 0.05\). † The liver fatty acid profiles from C4:0 to C24:1n-9 were analyzed in duplicate. Only the major fatty acids are listed. ‡ Total (n-6) or (n-3) PUFAs corresponded to the sum of all (n-6) or (n-3) PUFAs detected.
Table S2. Ingredient composition of diets (% as-fed basis).

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Nutrient level †</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>56.00</td>
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<tr>
<td>Soyabeans</td>
<td>22.00</td>
</tr>
<tr>
<td>Wheat bran</td>
<td>3.00</td>
</tr>
<tr>
<td>Fish meal</td>
<td>5.50</td>
</tr>
<tr>
<td>Corn oil or Medium-chain triglycerides</td>
<td>5.00</td>
</tr>
<tr>
<td>Soybean protein concentrate</td>
<td>2.50</td>
</tr>
<tr>
<td>Whey powder</td>
<td>3.00</td>
</tr>
<tr>
<td>Limestone</td>
<td>0.70</td>
</tr>
<tr>
<td>Dicalcium phosphate</td>
<td>1.00</td>
</tr>
<tr>
<td>Salt</td>
<td>0.20</td>
</tr>
<tr>
<td>L-Lysine HCl</td>
<td>0.27</td>
</tr>
<tr>
<td>Acidifier</td>
<td>0.20</td>
</tr>
<tr>
<td>Antioxidant</td>
<td>0.05</td>
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<tr>
<td>Preservative</td>
<td>0.05</td>
</tr>
<tr>
<td>Sweeteners</td>
<td>0.03</td>
</tr>
<tr>
<td>Vitamin and mineral premix *</td>
<td>0.50</td>
</tr>
</tbody>
</table>

* Premix supplied per kg diet: retinyl acetate, 5512 IU; cholecalciferol, 2200 IU; DL-α-tocopheryl acetate, 30 IU; menadione sodium bisulfite complex, 4 mg; riboflavin, 5.22 mg; D-calcium-pantothenate, 20 mg; niacin, 26 mg; vitamin B12, 0.01 mg; Mn (MnSO₄·H₂O), 40 mg; Fe (FeSO₄·H₂O), 75 mg; Zn (ZnSO₄·7H₂O), 75 mg; Cu (CuSO₄·5H₂O), 100 mg; I (CaI₂), 0.3 mg; Se (Na₂SeO₃), 0.3 mg. † The nutrients level was analyzed value except digestible energy which is calculated value.
Table S3. Fatty acid profiles of the control and medium-chain triglyceride (MCT)-supplemented diets *

<table>
<thead>
<tr>
<th>Fatty acid</th>
<th>Control diet</th>
<th>MCT-supplemented diet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% total fatty acids</td>
<td></td>
</tr>
<tr>
<td>C6:0</td>
<td>0.01</td>
<td>0.09</td>
</tr>
<tr>
<td>C8:0</td>
<td>0.04</td>
<td>20.22</td>
</tr>
<tr>
<td>C10:0</td>
<td>0.02</td>
<td>17.82</td>
</tr>
<tr>
<td>C16:0</td>
<td>14.32</td>
<td>9.84</td>
</tr>
<tr>
<td>C18:0</td>
<td>2.38</td>
<td>1.82</td>
</tr>
<tr>
<td>cis C18:1n-9</td>
<td>27.34</td>
<td>15.47</td>
</tr>
<tr>
<td>cis C18:2n-6</td>
<td>50.61</td>
<td>29.78</td>
</tr>
<tr>
<td>C18:3n-3</td>
<td>1.39</td>
<td>1.16</td>
</tr>
<tr>
<td>C20:4n-6</td>
<td>0.11</td>
<td>0.12</td>
</tr>
<tr>
<td>C20:5n-3</td>
<td>0.37</td>
<td>0.40</td>
</tr>
<tr>
<td>C22:6n-3</td>
<td>0.86</td>
<td>0.99</td>
</tr>
<tr>
<td>Total (n-6) PUFAs ‡</td>
<td>50.72</td>
<td>29.90</td>
</tr>
<tr>
<td>Total (n-3) PUFAs ‡</td>
<td>1.71</td>
<td>2.55</td>
</tr>
<tr>
<td>(n-6)/(n-3) †</td>
<td>29.66</td>
<td>11.73</td>
</tr>
</tbody>
</table>

* Control diet: 5% corn oil; MCT-supplemented diet: 4% MCTs and 1% corn oil. † The liver fatty acid profiles from C4:0 to C24:1n-9 were analyzed in duplicate. Only the major fatty acids are listed. ‡ Total (n-6) or total (n-3) PUFAs are the sum of all detected (n-3) or (n-6) PUFAs.
<table>
<thead>
<tr>
<th>Gene</th>
<th>Primer sequence (5'-3')</th>
<th>PCR product (bp)</th>
<th>Accession numbers</th>
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<td>R: GTTCATCCTCCACCCAGTCTCTC</td>
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<td>MyD88</td>
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<td>R: AGCTGAGTGTCTCCATCTCAGCAC</td>
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<td>GAPDH</td>
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<td></td>
<td>R: GCCCTCTGACGCCGCTGTA</td>
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</tbody>
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* F, forward; R, reverse. TLR4, toll-like receptor 4; MyD88, myeloid differentiation factor 88; IRAK1, IL-1 receptor-associated kinase 1; TRAF6, TNF-α receptor-associated factor 6; NOD, nucleotide-binding oligomerization domain protein; RIP, receptor-interacting serine/threonine-protein kinase; NF-κB, nuclear factor-κB; MLKL, mixed-lineage kinase domain-like protein; FADD, Fas-associated death domain; PGAM5, phosphoglycerate mutase 5.