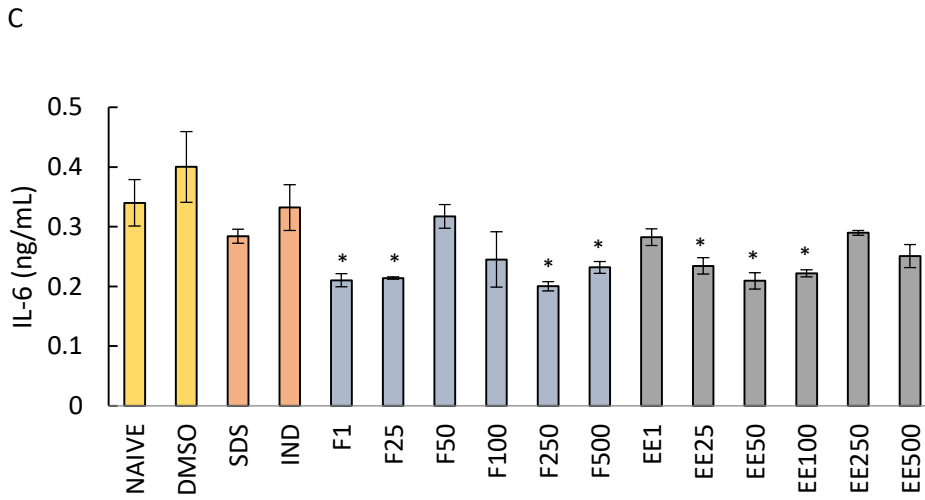
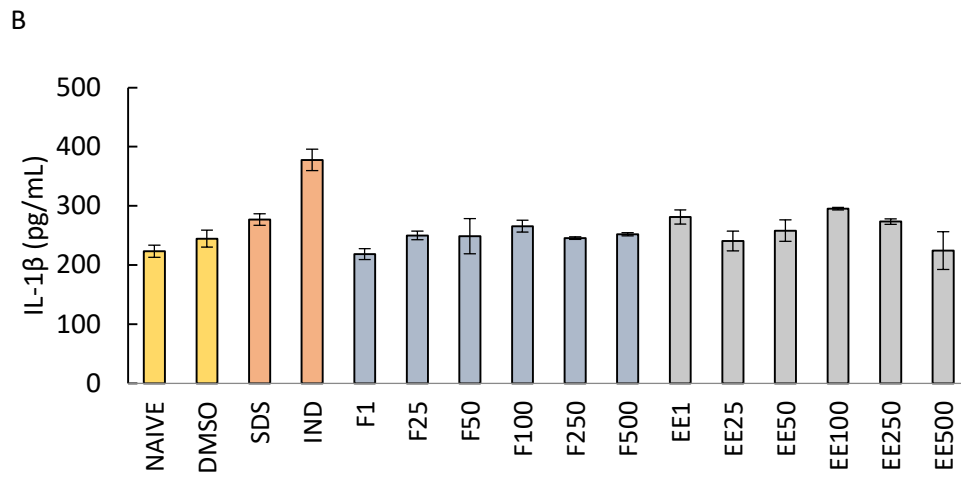
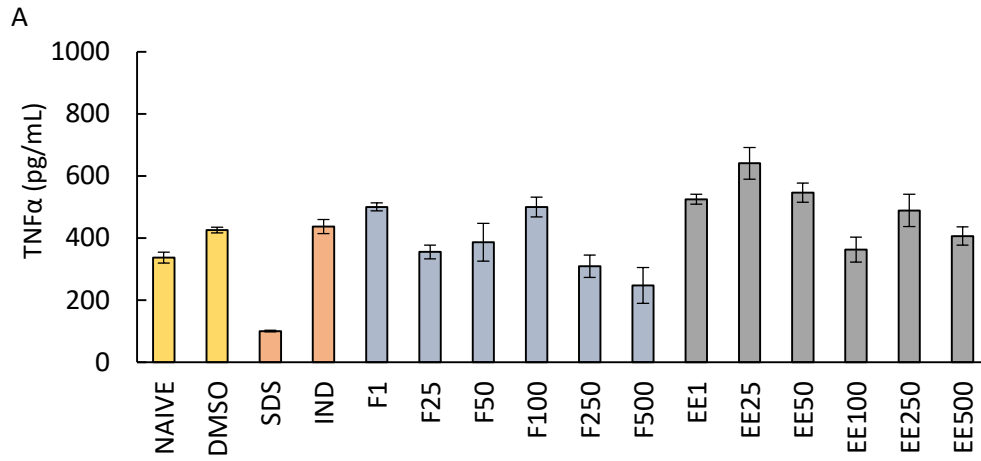
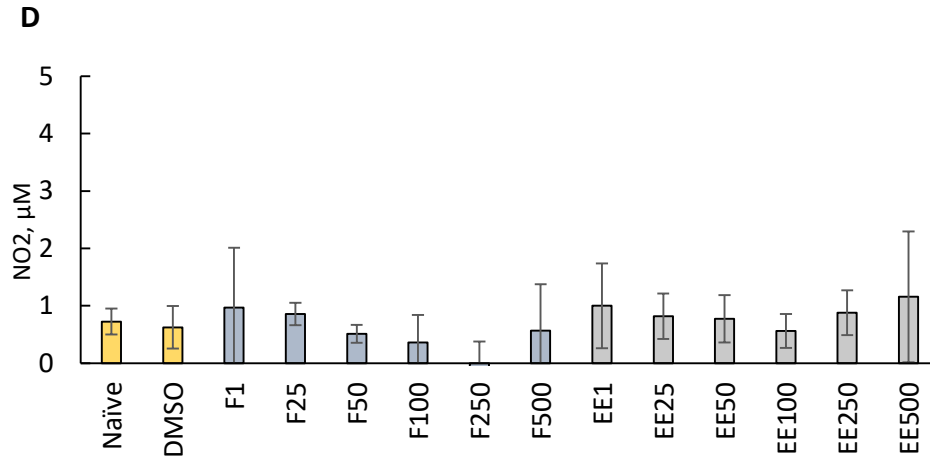


Supplementary material

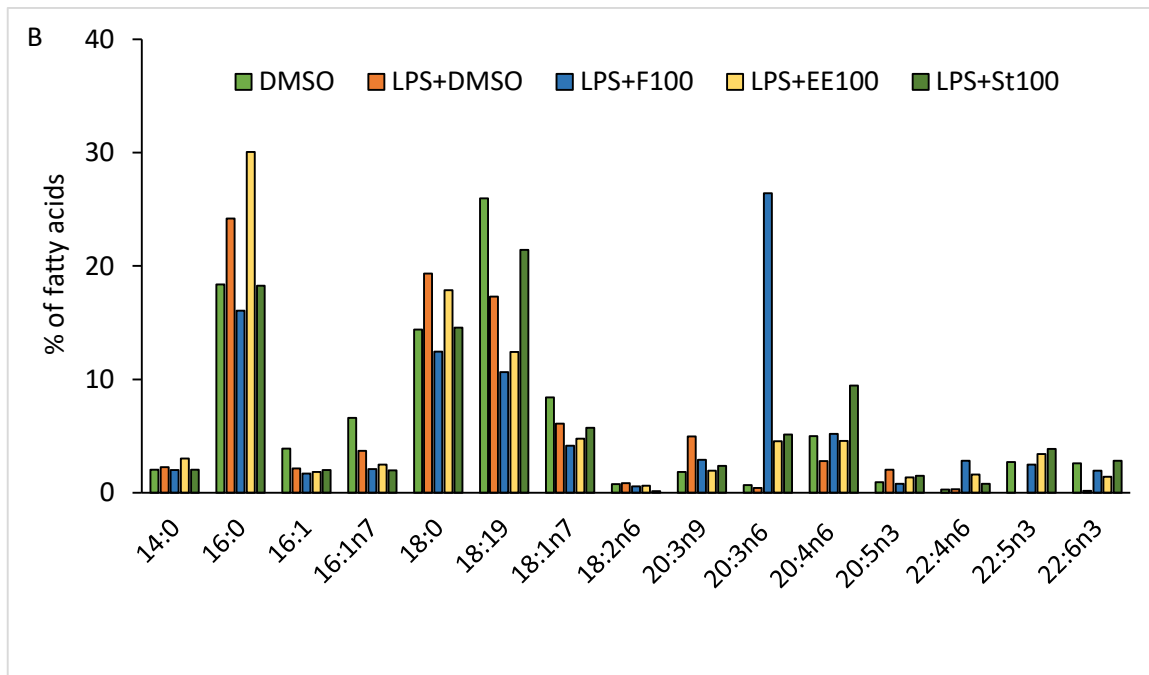
**Table S1:** Primers used in the quantitative real-time PCR

<b>Gene</b>	<b>Sequence 5'-3'</b>	<b>GeneBank Accession no.</b>
Arginase	F-AACACGGCAGTGGCTTTAACC R-GGTTTTTCATCTGGCGCATTC	U51805.1
Cyclooxygenase-2	F-GTGCCTGGTCTGATGATGTATG R-TGAGTCTGCTGGTTTGGGAATAG	NM_011198.4
Fads1Δ5	F-CCAGATTGAACACCACCTCTT R-GACTCATACTTGATGCCGTACTION	XM_006527438.2
Hprt1	F-CAGGGATTTGAATCACGTTTGT R-TCAACAGGACTCCTCGTATTTG	NM_013556.2
iNOS	F-GGAATCTTGGAGCGAGTTGT R-CCTCTTGCTTTGACCCAGTAG	NM_010927.4
Interleukin 6	F-TGGAGTCACAGAAGGAGTGGCTAAG R-TCTGACCACAGTGAGGAATGTCCAC	NM_031168.2
LXRα	F-TCAAGGGAGCACGCTATGTC R-TTCCTCTTCTTGCCGCTTC	NM_013839.4
NF-kB1	F-AGACATCCTTCCGCAAACCTC R-TAGGTCCTTCCTGCCCATAA	XM_006501106.3
PGDS	F-GCAGAACACATGCAAACCTGTAG R-CACTAGGAGCAGTCCCATTTC	NM_019455.4
PGES	F-GCAACGACATGGAGACAATCTA R-TGTGAGGACAACGAGGAAATG	XM_030251932.1
PPARγ	F-GCCATTGAGTGCCGAGTC R-TGTGGATCCGGCAGTTAAG	XM_017321456.2

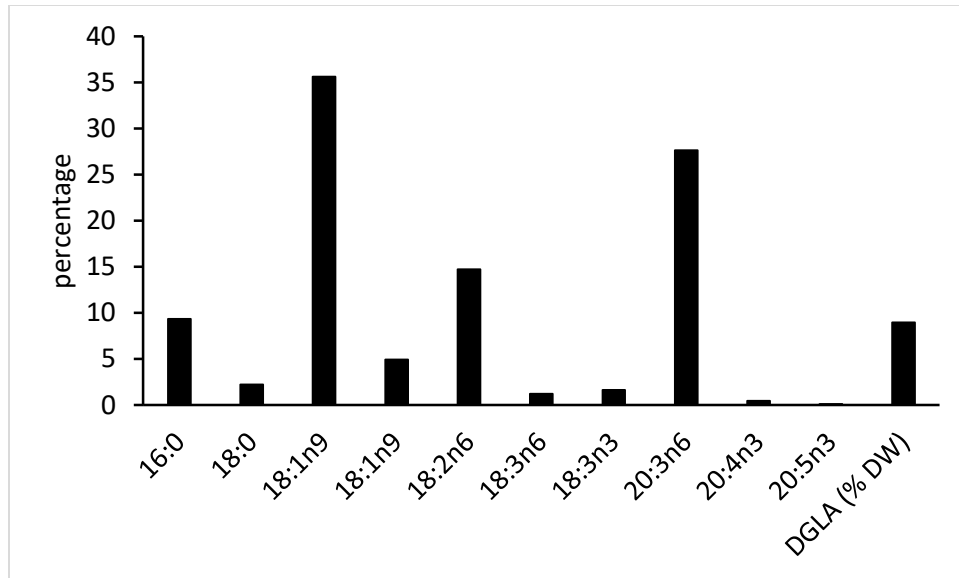




**Figure S1: Basal levels of TNF $\alpha$  (A), IL-1 $\beta$  (B), IL-6 (C) and NO (D) detected in the culture supernatants of unstimulated RAW264.7 macrophages.** The cells were treated with the indicated concentrations (from 1 to 500  $\mu$ M) of DGLA administered as free acid (F) and ethyl ester (EE) forms for 24 h. Then, the spent media was collected, and the levels of cytokines and NO were quantified. \* denotes a significant difference compared to vehicle control (Student's t-test,  $p > 0.05$ ,  $n = 3$ )



**Figure S2: Fatty acid composition of polar lipids of RAW264.7 macrophages under different treatments without (DMSO) or with LPS (100 ng/ml) stimulation.** Total lipids were extracted after 24h of incubation with different DGLA forms (indicated) from approximately  $10^7$  cells; polar lipids were isolated from total lipids on silica-gel cartridges (see Materials and Methods). The fatty acid profile of polar lipids was determined by GC-FID as fatty acid methyl esters. Results from the representative experiment are shown as an average of two determinations.



**Figure S3: Fatty acid composition and DGLA content of *L. incisa* P127 biomass.** The microalga was cultivated under nitrogen starvation conditions to induce DGLA accumulation in triacylglycerols, as indicated in the Methods and Materials section. Fatty acid composition is presented as percentage of total fatty acids, n=2