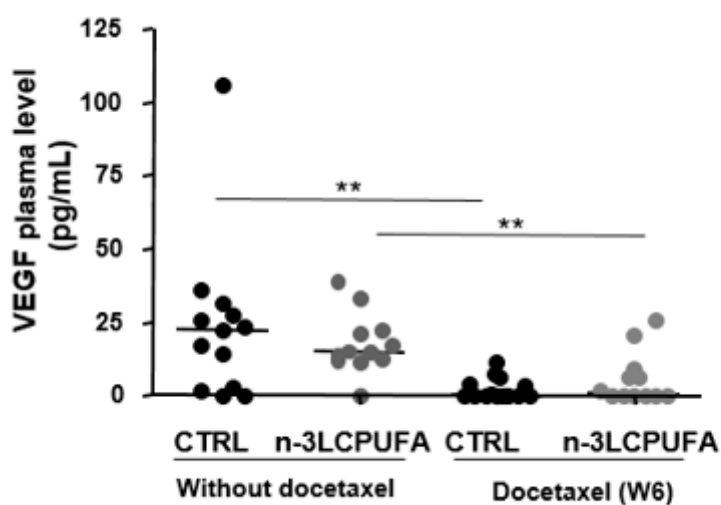
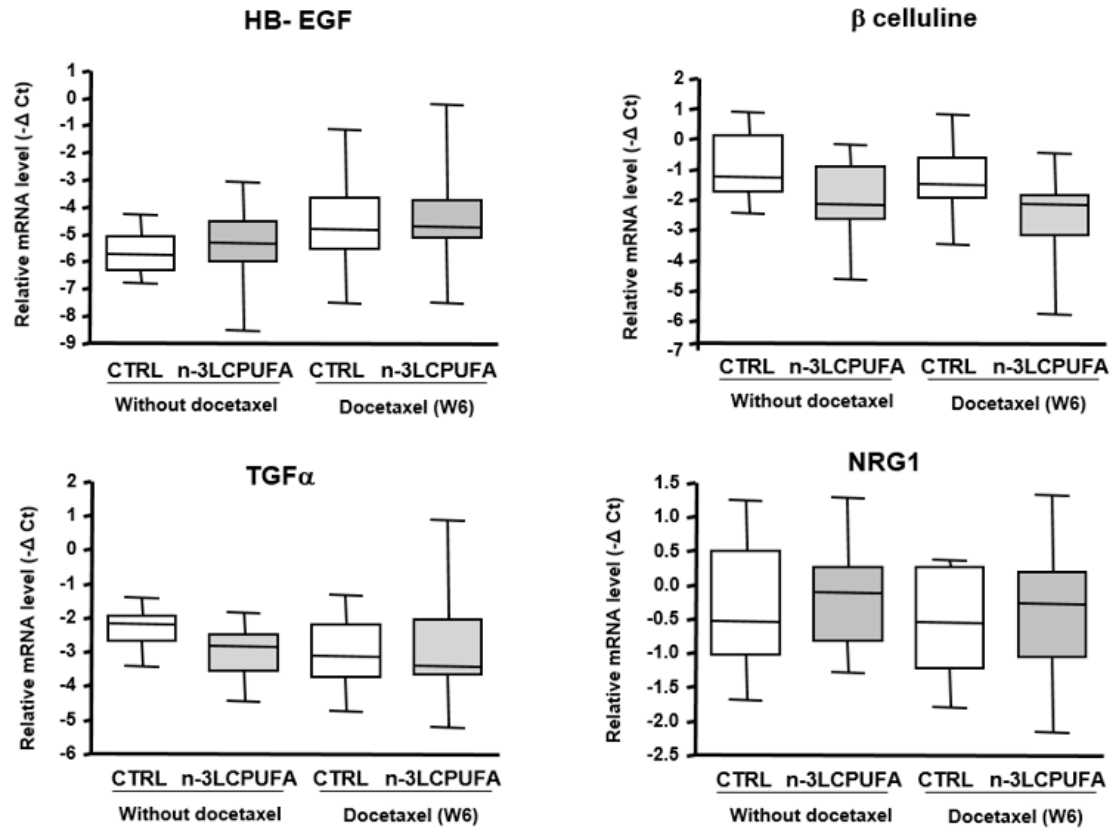


## Supplementary Materials



**Figure S1.** Plasma VEGF-A levels decrease during docetaxel treatment and are unaffected by n-3LCPUFA diet. Plasma VEGF-A levels were determined in rats from the two nutritional groups before (W0) and after docetaxel treatment (W6) ( $12 < n < 14$  per group) using a rat VEGF elisa kit (RayBiotech, Norcross, GA). Points represent individual data \*\*  $p < 0.01$  Mann-Whitney test.



**Figure S2.** Heparin-bound EGF,  $\beta$  cellulin, tumor growth factor  $\alpha$  and neuregulin 1 mRNA are not regulated in tumors by an n-3LCPUFA diet. When tumors reached 2 cm<sup>2</sup>, docetaxel was injected for 6 weeks, and qPCR analyses were performed before (W0) or after 6 weeks (W6) of docetaxel therapy ( $n = 14$ /nutritional group). mRNA levels of heparin-bound EGF (HB-EGF) (A),  $\beta$  cellulin (B), tumor growth factor  $\alpha$  (C) and neuregulin 1 (D) in the two nutritional groups before or after docetaxel treatment (W6). mRNA levels of each gene were expressed relatively to the HPRT1 housekeeping gene ( $-\Delta Ct$ ). Lines as median values and box, interquartile range, 25–75th percentile.

**Table S1.** Gene list of targets analyzed in the angiogenesis PCR arrays and regulation of gene expression in n-3LCPUFA tumors after docetaxel treatment. When tumors reached 2 cm<sup>2</sup>, docetaxel was injected and qPCR analysis was performed after 6 weeks (W6) of docetaxel therapy ( $n = 7$ /nutritional group). cDNA were used for real-time PCR analyses with the Angiogenesis RT<sup>2</sup> ProfilerTM PCR Array (SABiosciences). The 84 genes in this PCR array are involved in the modulation of angiogenesis. A positive fold change indicates up-regulation whereas a negative fold change indicates down-regulation of the corresponding mRNA in n-3LCPUFA tumors compared to control tumors. ( $n = 7$ /group). Genes highlighted in bold correspond to those with mRNA levels showing differences of more than 2-fold change between the 2 nutritional groups (t-test).

| Symbol         | Gene name                                                                      | Fold Up- or Down-Regulation | t-TEST         |
|----------------|--------------------------------------------------------------------------------|-----------------------------|----------------|
|                |                                                                                |                             | <i>p</i> value |
| Angpt2         | Angiopoietin 2                                                                 | 2.16                        | 0.3756         |
| Akt1           | V-akt murine thymoma viral oncogene homolog 1                                  | 1.78                        | 0.0289         |
| Angpt1         | Angiopoietin 1                                                                 | -1.18                       | 0.5561         |
| Anpep          | Alanyl (membrane) aminopeptidase                                               | 1.69                        | 0.5352         |
| Bai1_predicted | Similar to Brain-specific angiogenesis inhibitor 1 precursor (LOC362931), mRNA | 1.90                        | 0.0404         |
| Ccl2           | Chemokine (C-C motif) ligand 2                                                 | -1.02                       | 0.9799         |
| Cdh5_predicted | Cadherin 5 (predicted)                                                         | 1.52                        | 0.4340         |

|                 |                                                                                       |       |        |
|-----------------|---------------------------------------------------------------------------------------|-------|--------|
| Col18a1         | Collagen, type XVIII, alpha 1                                                         | -1.26 | 0.6348 |
| Col4a3          | Collagen, type IV, alpha 3                                                            | -3.53 | 0.0819 |
| Ctgf            | Connective tissue growth factor                                                       | 1.07  | 0.8843 |
| Cxcl1           | Chemokine (C-X-C motif) ligand 1                                                      | -1.24 | 0.7312 |
| Cxcl2           | Chemokine (C-X-C motif) ligand 2                                                      | 1.81  | 0.5694 |
| Cxcl9           | Chemokine (C-X-C motif) ligand 9                                                      | 1.15  | 0.9043 |
| Ecgf1           | Endothelial cell growth factor 1 (platelet-derived)                                   | 1.15  | 0.5416 |
| Edg1            | Endothelial differentiation sphingolipid G-protein-coupled receptor 1                 | 1.40  | 0.4984 |
| Efna1           | Ephrin A1                                                                             | 1.60  | 0.5404 |
| Efna2           | Ephrin A2                                                                             | 1.92  | 0.0646 |
| Efna5           | Ephrin A5                                                                             | 1.30  | 0.3729 |
| Egf             | Epidermal growth factor                                                               | 2.06  | 0.0987 |
| Eng             | Endoglin                                                                              | 1.66  | 0.0944 |
| Epas1           | Endothelial PAS domain protein 1                                                      | 1.80  | 0.1275 |
| Ereg            | Epiregulin                                                                            | -6.18 | 0.0019 |
| F2              | Coagulation factor 2                                                                  | -1.10 | 0.8435 |
| Fgf1            | Fibroblast growth factor 1                                                            | -2.14 | 0.4921 |
| Fgf16           | Fibroblast growth factor 16                                                           | 1.89  | 0.3439 |
| Fgf2            | Fibroblast growth factor 2                                                            | 1.72  | 0.1996 |
| Fgf6            | Fibroblast growth factor 6                                                            | 1.59  | 0.0520 |
| Fgfr3           | Fibroblast growth factor receptor 3                                                   | 1.26  | 0.7778 |
| Figf            | C-fos induced growth factor (vascular endothelial growth factor D)                    | -1.15 | 0.8079 |
| Flt1            | FMS-like tyrosine kinase 1                                                            | 1.22  | 0.8092 |
| Fn1             | Fibronectin 1                                                                         | -1.12 | 0.7910 |
| Fzd5            | Frizzled homolog 5 (Drosophila)                                                       | 1.20  | 0.6217 |
| Hgf             | Hepatocyte growth factor                                                              | 1.00  | 0.9964 |
| Hif1a           | Hypoxia inducible factor 1, alpha subunit                                             | 1.01  | 0.9474 |
| Id1             | Inhibitor of DNA binding 1, helix-loop-helix protein (splice variation)               | -1.06 | 0.9043 |
| Id3             | Inhibitor of DNA binding 3, dominant negative helix-loop-helix protein                | 1.65  | 0.3728 |
| Ifnb1           | Interferon, beta 1                                                                    | 1.59  | 0.0520 |
| Ifng            | Interferon gamma                                                                      | 1.56  | 0.3019 |
| Igf1            | Insulin-like growth factor 1                                                          | 1.01  | 0.9931 |
| Il1b            | Interleukin 1 beta                                                                    | 1.16  | 0.7178 |
| Il6             | Interleukin 6                                                                         | -2.12 | 0.2142 |
| Itga5           | Integrin alpha 5                                                                      | 1.39  | 0.1351 |
| Itgav_predicted | Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51) (predicted) | -1.20 | 0.4721 |
| Itgb3           | Integrin beta 3                                                                       | 1.91  | 0.0933 |
| Jag1            | Jagged 1                                                                              | 1.05  | 0.8681 |
| Kdr             | Kinase insert domain protein receptor                                                 | 1.42  | 0.4083 |
| Lama5           | Laminin, alpha 5                                                                      | 1.19  | 0.7167 |
| Lect1           | Leukocyte cell derived chemotaxin 1                                                   | 1.08  | 0.8598 |
| Lep             | Leptin                                                                                | 1.08  | 0.9388 |
| Mapk14          | Mitogen activated protein kinase 14                                                   | 1.02  | 0.9774 |
| Mdk             | Midkine                                                                               | 1.31  | 0.5223 |
| Mmp19_predicted | Matrix metalloproteinase 19 (predicted)                                               | -1.19 | 0.5645 |
| Mmp2            | Matrix metalloproteinase 2                                                            | -1.00 | 0.9944 |
| Mmp3            | Matrix metalloproteinase 3                                                            | -3.38 | 0.0362 |
| Mmp9            | Matrix metalloproteinase 9                                                            | 2.77  | 0.1003 |
| Npr1            | Natriuretic peptide receptor 1                                                        | 1.28  | 0.4819 |
| Nrp1            | Neuropilin 1                                                                          | 1.18  | 0.6640 |
| Nrp2            | Neuropilin 2                                                                          | 1.72  | 0.1285 |
| Pdgfa           | Platelet derived growth factor, alpha                                                 | 2.02  | 0.0734 |
| Pdgfb           | Platelet derived growth factor, B polypeptide                                         | 1.18  | 0.9176 |

|                |                                                                                        |       |        |
|----------------|----------------------------------------------------------------------------------------|-------|--------|
| Pecam          | Platelet/endothelial cell adhesion molecule                                            | 1.79  | 0.1559 |
| Pgf            | Placental growth factor                                                                | -1.03 | 0.9323 |
| Plau           | Plasminogen activator, urokinase                                                       | 1.18  | 0.7891 |
| Plg            | Plasminogen                                                                            | -1.49 | 0.4100 |
| Ptgs1          | Prostaglandin-endoperoxide synthase 1                                                  | -1.08 | 0.8337 |
| Serpinb5       | Serine (or cysteine) proteinase inhibitor, clade B, member 5                           | -1.63 | 0.2476 |
| Serpinf1       | Serine (or cysteine) proteinase inhibitor, clade F), member 1                          | 1.17  | 0.8138 |
| Sphk1          | Sphingosine kinase 1                                                                   | 2.12  | 0.0582 |
| Tbx4_predicted | T-box 4 (predicted)                                                                    | -1.47 | 0.2583 |
| Tek            | Endothelial-specific receptor tyrosine kinase                                          | 1.60  | 0.3283 |
| Tgfa           | Transforming growth factor alpha                                                       | -1.39 | 0.5544 |
| Tgfb1          | Transforming growth factor, beta 1                                                     | 1.76  | 0.5857 |
| Tgfb2          | Transforming growth factor, beta 2                                                     | 1.76  | 0.0786 |
| Tgfb3          | Transforming growth factor, beta 3                                                     | 1.49  | 0.7266 |
| Tgfbr1         | Transforming growth factor, beta receptor 1                                            | 1.30  | 0.4628 |
| Thbs4          | Thrombospondin 4                                                                       | -2.77 | 0.1172 |
| Timp1          | Tissue inhibitor of metalloproteinase 1                                                | -1.48 | 0.3264 |
| Timp2          | Tissue inhibitor of metalloproteinase 2                                                | 1.39  | 0.7986 |
| Timp3          | Tissue inhibitor of metalloproteinase 3 (Sorsby fundus dystrophy, psuedo inflammatory) | 2.2   | 0.1151 |
| Tnf            | Tumor necrosis factor superfamily, member 2                                            | 3.63  | 0.0330 |
| Vegfa          | Vascular endothelial growth factor A                                                   | 1.59  | 0.2566 |
| Vegfb          | Vascular endothelial growth factor B                                                   | 1.92  | 0.033  |
| Vegfc          | Vascular endothelial growth factor C                                                   | -1.09 | 0.9391 |
| Rplp1          | Ribosomal protein, large, P1                                                           | 1.09  | 0.5500 |
| Hprt           | Hypoxanthine guanine phosphoribosyl transferase                                        | -1.15 | 0.5743 |
| Rpl13a         | Ribosomal protein L13A                                                                 | 1.02  | 0.8920 |
| Ldha           | Lactate dehydrogenase A                                                                | -1.29 | 0.4538 |
| Actb           | Actin, beta                                                                            | 1.51  | 0.0439 |