Supplementary Information

Synthesis of 14,15-EET from arachidonic acid using urea-hydrogen peroxide as the
oxidant

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(±)-14,15-Epoxyeicosa-*cis*-5,8,11-trienoic Acid (4).¹ An aqueous solution of NaOH (0.33 N, 5.5 mL, 1.8 mmol) was slowly added to a stirred solution of **5** (60 mg, 0.18 mmol) in MeOH (15 mL) at 0 °C. The reaction mixture was stirred at room temperature for overnight, when it was cooled to 0 °C. Water (15 mL) was added to dilute the reaction mixture and the pH was carefully adjusted to 6-7 with 10% citric acid. The solution was extracted with Et₂O (2 × 30 mL). The combined organic layers were washed with brine (20 mL) and dried over Na₂SO₄. The solvent was removed and the residue was purified by flash column chromatography, eluting with CH₂Cl₂-MeOH (20:1) to give **4** as a colorless oil in quantitative yield: ¹H NMR (400 MHz, CDCl₃) δ 5.55-5.31 (m, 6 H), 3.00-2.92 (m, 2 H), 2.86-2.75 (m, 4 H), 2.46-2.37 (m, 1 H), 2.35 (t, *J* = 7.5 Hz, 2 H), 2.27-2.18 (m, 1 H), 2.12 (q, *J* = 6.6 Hz, 2 H), 1.70 (quintet, *J* = 7.3 Hz, 2 H), 1.58-1.40 (m, 4 H), 1.38-1.26 (m, 4 H), 0.89 (t, *J* = 7.1 Hz, 3 H); ¹³C NMR (100 MHz, CDCl₃) δ 179.21, 130.47, 128.88, 128.85, 128.41, 127.74, 124.38, 57.46, 56.59, 33.31, 31.72, 27.67, 26.44, 26.26, 26.21, 25.82, 25.64, 24.49, 22.60, 14.01.

Figure S1. ^1H - ^1H COSY of 4 in CDCl_3 .

Reference:

- (1) Falck, J. R.; Yadagiri, P.; Capdevila, J. Synthesis of epoxyeicosatrienoic acids and heteroatom analogs. *Methods Enzymol.* **1990**, *187*, 357-64.