SUPPORTING INFORMATION

Title: Aminobenzocoumarinylmethyl esters as photoactive precursors for the release of butyric acid

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TABLE OF CONTENTS

1. Absorption for compounds 2, 3a, b and 4a, b, EEM and decay associated spectra for compound 2 in MeOH/HEPES (80:20) and difference between frontier orbitals for compounds 3a, b and 4a, b page 2

2. H and 13C NMR spectra of compounds 1, 2, 3a, b and 4a, b page 4

3. UV/Vis absorption and fluorescence spectra for compounds 1, 2, 3a, b and 4a, b in ethanol page 10

4. HPLC chromatograms for the photolysis of compounds 2, 3a, b and 4a, b page 11
1. Absorption for compounds 2, 3a,b and 4a,b, EEM and decay associated spectra for compound 2 in MeOH/HEPES (80:20) and difference between frontier orbitals for compounds 3a,b and 4a,b

**Figure S1.** Absorption spectra (measured using a Shimadzu UV-1800) for compounds 2-4 in MeOH/HEPES (80:20) (left) and EEM for 2 in same solvent mixture (recorded using a FluoroLog 3) (right).

**Figure S2.** Decay associated spectra for compound 2 in MeOH/HEPES (80:20). The shorter-lifetime component (associated with Raman scattering at 445 nm) is omitted in calculation of the “sum” spectrum. Measured using a DeltaFlex fluorescence lifetime system with excitation at 392 nm.
Figure S3. Difference between frontier orbitals (HOMO and LUMO; blue – positive, red – negative) for compounds 3a,b and 4a,b. Calculated using ArgusLab 4.0.1 software (Mark Thompson & Planaria Software LLC).
2. $^1$H and $^{13}$C NMR spectra of compounds 1, 2, 3a,b and 4a,b
[Chemical structure and NMR spectrum diagram]
3. UV/Vis absorption and fluorescence spectra for compounds 1, 2, 3a-b and 4a-b in ethanol
4. HPLC chromatograms for the photolysis of compounds 2, 3a,b and 4a,b

HPLC chromatogram of the photolysis of conjugate 2 (retention time 4.4 min) with eluent ACN/H$_2$O (75:25) at a flow rate of 0.8 mL/min, $\lambda_{\text{det}} = 293$ nm.

HPLC chromatogram of the photolysis of conjugate 3a (retention time 6.3 min) with eluent ACN/H$_2$O (75:25) at a flow rate of 0.8 mL/min, $\lambda_{\text{det}} = 291$ nm.
HPLC chromatogram of the photolysis of conjugate 3b (retention time 13.7 min) with eluent ACN/H₂O (75:25) at a flow rate of 0.8 mL/min, λ_{det} = 290 nm.

HPLC chromatogram of the photolysis of conjugate 4a (retention time 7.9 min) with eluent ACN/H₂O (75:25) at a flow rate of 0.8 mL/min, λ_{det} = 298 nm.
HPLC chromatogram of the photolysis of conjugate 4b (retention time 13.4 min) with eluent ACN/H$_2$O (75:25) at a flow rate of 1.0 mL/min, $\lambda_{det} = 295$ nm.