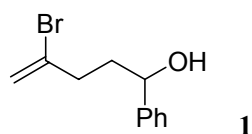
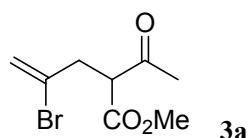


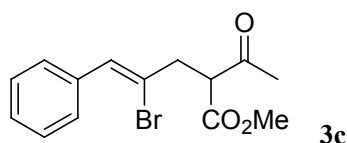
Supporting Information



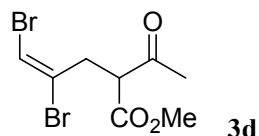
Oil. ^1H NMR (300 MHz, CDCl_3) δ 1.94-2.03 (3H, m), 2.50-2.54 (2H, m), 4.67-4.68 (1H, m), 5.42 (1H, d, $J = 1.8$ Hz), 5.59 (1H, d, $J = 1.8$ Hz), 7.24-7.39 (5H, m). ^{13}C NMR (CDCl_3) δ 37.0, 37.7, 73.0, 116.7, 125.8, 127.7, 128.5, 133.9, 144.1. EIMS: m/z (rel intensity) 223 ($\text{M}^+ - 17$, 17), 143 (72), 120 (22), 107 (84), 91 (16), 79 (100), 51 (20), 43(7). Anal. Calcd for $\text{C}_{11}\text{H}_{13}\text{BrO}$: C, 54.79; H, 5.43. Found: C, 54.71; H, 5.52.



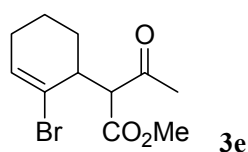
Oil. ^1H NMR (300 MHz, CDCl_3) δ 2.26-2.29 (3H, m), 2.92-2.95 (2H, m), 3.72-3.75 (3H, m), 3.90-3.96 (1H, m), 5.43-5.45 (1H, m), 5.63-5.65 (1H, m). ^{13}C NMR (CDCl_3) δ 29.9, 39.5, 52.7, 57.5, 119.9, 129.6, 168.7, 201.3. EIMS: m/z (rel intensity) 234 (M^+ , 0.4), 155 (75), 127 (6), 123 (23), 113 (12), 95 (15), 81 (22), 43(100). Anal. Calcd for $\text{C}_8\text{H}_{11}\text{BrO}_3$: C, 40.87; H, 4.72. Found: C, 40.71; H, 4.70.



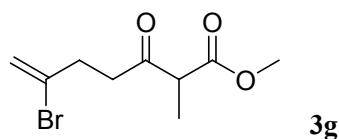
Oil. ^1H NMR (300 MHz, CDCl_3) δ 2.31 (3H, s), 3.13-3.16 (2H, m), 3.76 (3H, s), 4.07-4.12 (1H, m), 6.84 (1H, s), 7.31-7.37 (3H, m), 7.52-7.54 (2H, m). ^{13}C NMR (CDCl_3) δ 30.0, 41.3, 52.6, 57.6, 120.0, 122.2, 127.9, 128.0, 128.1, 128.8, 130.8, 135.3, 168.9, 201.5. EIMS: m/z (rel intensity) 311 ($\text{M}^+ + 1$, 4), 231 (100), 171 (19), 157 (19), 128 (21), 115 (27), 91 (27), 43(51). Anal. Calcd for $\text{C}_{14}\text{H}_{15}\text{BrO}_3$: C, 54.04; H, 4.86. Found: C, 54.43; H, 4.76.



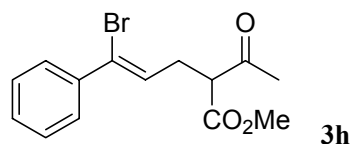
Oil. ^1H NMR (300 MHz, CDCl_3) δ 2.24-2.32 (3H, m), 3.15-3.18 (2H, m), 3.76-3.80 (3H, m), 3.90-3.95 (1H, m), 6.54-6.55 (1H, m). ^{13}C NMR (CDCl_3) δ 19.3, 32.8, 52.8, 56.8, 105.4, 122.1, 168.6, 200.7. EIMS: m/z (rel intensity) 313 ($\text{M}^+ + 1$, 7), 233 (31), 201 (3), 191 (3), 153 (8), 111 (7), 95 (43), 43 (100). Anal. Calcd for $\text{C}_8\text{H}_{10}\text{Br}_2\text{O}_3$: C, 30.60; H, 3.21. Found: C, 30.75; H, 3.21.



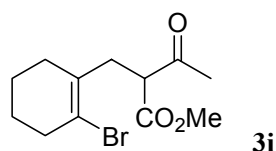
Oil. ^1H NMR (300 MHz, CDCl_3) δ 1.51-1.61 (2H, m), 1.76-1.88 (2H, m), 2.01-2.09 (2H, m), 2.24-2.26 (3H, m), 3.07-3.18 (1H, m), 3.70-3.72 (3H, m), 4.02-4.05, 4.11-4.14 (1H, m), 6.16-6.21 (1H, m). ^{13}C NMR (CDCl_3) δ 19.8/19.9, 26.66/26.70, 27.4/27.51, 29.6/29.7, 41.6/42.5, 52.2/52.4, 60.4/61.7, 123.9/124.0, 132.9/133.2, 169.1/169.6, 202.1/202.6. EIMS: m/z (rel intensity) 275 ($\text{M}^+ + 1$, 4), 195 (100), 158 (4), 153 (11), 117 (12), 91 (19), 79 (31), 43 (65). Anal. Calcd for $\text{C}_{11}\text{H}_{15}\text{BrO}_3$: C, 48.02; H, 5.50. Found: C, 48.35; H, 5.42.



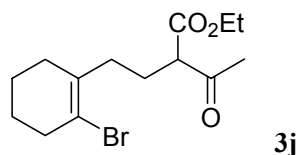
Oil. ^1H NMR (300 MHz, CDCl_3) δ 1.35 (3H, d, $J = 7.2$ Hz), 2.70-2.92 (4H, m), 3.57 (1H, q, $J = 7.2$ Hz), 3.74 (3H, s), 5.42 (1H, d, $J = 1.8$ Hz), 5.64 (1H, d, $J = 1.8$ Hz). ^{13}C NMR (CDCl_3) δ 12.7, 35.2, 39.7, 52.4, 52.6, 117.8, 132.3, 170.7, 203.8. EIMS: m/z (rel intensity) 169 ($\text{M}^+ - 79$, 37), 135 (43), 133 (45), 113 (77), 109 (49), 81 (26), 59 (33), 53 (80). Anal. Calcd for $\text{C}_9\text{H}_{13}\text{BrO}_3$: C, 43.39; H, 5.26. Found: C, 43.57; H, 5.29.



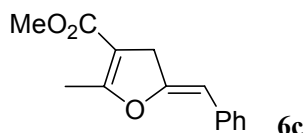
Oil. ^1H NMR (300 MHz, CDCl_3) δ 2.30 (3H, s), 2.90 (2H, t, $J = 6.9$ Hz), 3.71-3.74 (1H, m), 3.72 (3H, s), 6.20 (1H, t, $J = 6.9$ Hz), 7.27-7.35 (2H, m), 7.47-7.51 (3H, m). ^{13}C NMR (CDCl_3) δ 29.1, 30.7, 52.6, 57.9, 126.8, 127.6, 128.1, 128.2, 128.4, 128.7, 139.3, 169.5, 202.1. EIMS: m/z (rel intensity) 310 (M^+ , 0.5), 267 (2), 231 (13), 171 (13), 153 (100), 121 (59), 94 (16), 43 (82). Anal. Calcd for $\text{C}_{14}\text{H}_{15}\text{BrO}_3$: C, 54.04; H, 4.86. Found: C, 54.09; H, 4.94.



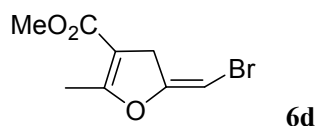
Oil. ^1H NMR (300 MHz, CDCl_3) δ 1.62-1.67 (4H, m), 2.06 (2H, b), 2.27 (3H, s), 2.49-2.50 (2H, m), 2.66-2.82 (2H, m), 3.22 (1H, s), 3.75 (3H, m). ^{13}C NMR (CDCl_3) δ 22.3, 24.4, 29.0, 31.1, 35.1, 36.5, 52.2, 57.1, 121.8, 132.3, 169.7, 202.5. EIMS: m/z (rel intensity) 270 (M^+-18 , 1), 209 (100), 167 (6), 149 (36), 135 (21), 91 (18), 79 (16), 43 (25). Anal. Calcd for $\text{C}_{12}\text{H}_{17}\text{BrO}_3$: C, 49.84; H, 5.93. Found: C, 49.82; H, 5.94.



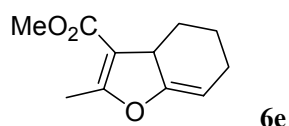
Oil. ^1H NMR (300 MHz, CDCl_3) δ 1.24-1.34 (3H, m), 1.62-1.67 (4H, m), 1.94-2.01 (2H, m), 2.07-2.17 (2H, m), 2.17-2.19 (2H, m), 2.24-2.27 (3H, m), 2.47 (2H, s), 3.43-3.46 (1H, m), 4.17-4.24 (2H, m). ^{13}C NMR (CDCl_3) δ 14.0, 22.5, 24.7, 25.3, 28.9, 30.5, 34.7, 36.5, 59.1, 61.4, 120.2, 134.7, 169.5, 202.9. EIMS: m/z (rel intensity) 298 (M^+-18 , 4), 186 (78), 143 (63), 131 (16), 107 (87), 97 (36), 79 (55), 43 (100). Anal. Calcd for $\text{C}_{14}\text{H}_{21}\text{BrO}_3$: C, 53.01; H, 6.67. Found: C, 53.25; H, 6.64.



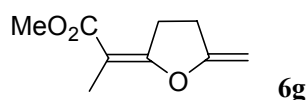
Solid. ^1H NMR (300 MHz, CDCl_3) δ 1.50-1.51 (3H, m), 2.31-2.32 (2H, m), 3.69 (3H, s), 5.50-5.52 (1H, m), 7.10 (1H, t, $J = 7.2$ Hz), 7.20-7.28 (2H, m), 7.45-7.47 (2H, d, $J = 7.2$ Hz). ^{13}C NMR (CDCl_3) δ 13.8, 35.1, 51.2, 102.6, 103.9, 125.9, 127.7, 128.3, 134.9, 153.1, 165.1, 166.0. EIMS: m/z (rel intensity) 230 (M^+ , 100), 199 (20), 171 (78), 155 (45), 128 (35), 115 (43), 77 (35), 43(57). HRMS calcd for $\text{C}_{14}\text{H}_{14}\text{O}_3\text{Na}$: 253.0854, Found: 253.0835.



Solid. ^1H NMR (300 MHz, CDCl_3) δ 2.26-2.28 (3H, m), 3.54-3.56 (2H, m), 3.75 (3H, d, $J = 1.5$ Hz), 5.86-5.87 (1H, m). ^{13}C NMR (CDCl_3) δ 13.9, 23.1, 51.4, 110.5, 114.5, 148.0, 160.2, 163.9. EIMS: m/z (rel intensity) 232 (M^+ , 42), 173 (43), 153 (100), 121 (57), 93 (12), 79 (16), 65 (19), 43(63). HRMS calcd for $\text{C}_8\text{H}_9\text{BrO}_3$: 231.9735, Found: 231.9733.

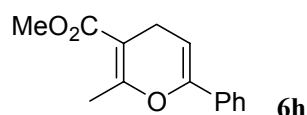


Oil. ^1H NMR (300 MHz, CDCl_3) δ 1.12-1.20 (1H, m), 1.45-1.53 (1H, m), 1.74-1.81 (1H, m), 2.06-2.13 (2H, m), 2.18-2.20 (3H, m), 2.32-2.40 (1H, m), 3.44-3.46 (1H, m), 3.64-3.67 (3H, m), 4.97 (1H, q, $J = 3.6$ Hz). ^{13}C NMR (CDCl_3) δ 13.8, 21.3, 22.2, 27.2, 42.1, 50.8, 97.8, 107.4, 156.6, 165.8, 167.3. EIMS: m/z (rel intensity) 194 (M^+ , 76), 179 (15), 151 (27), 135 (100), 119 (12), 91 (26), 77 (14), 43(62). Anal. Calcd for $\text{C}_{11}\text{H}_{14}\text{O}_3$: C, 68.02; H, 7.27. Found: C, 68.09; H, 7.33.

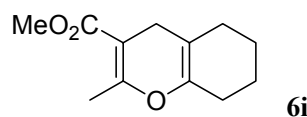


Oil. ^1H NMR (300 MHz, CDCl_3) δ 1.80-1.81 (3H, m), 2.61-2.67 (2H, m), 3.04-3.10

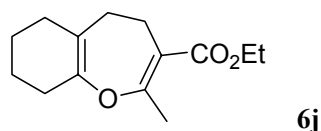
(2H, m), 3.64 (3H, s), 4.10-4.12 (1H, m), 4.52-4.54 (1H, m). ^{13}C NMR (CDCl_3) δ 11.2, 26.3, 29.1, 50.9, 84.6, 99.7, 160.2, 167.6, 169.1. EIMS: m/z (rel intensity) 168 (M^+ , 100), 153 (12), 137 (57), 109 (40), 99 (10), 83 (39), 55 (25), 43 (40). Anal. Calcd for $\text{C}_9\text{H}_{12}\text{O}_3$: C, 64.27; H, 7.19. Found: C, 63.84; H, 7.18. The stereochemistry was confirmed by its NOESY experiment.



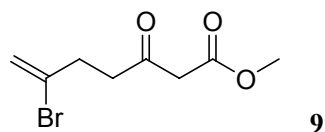
Oil. ^1H NMR (300 MHz, CDCl_3) δ 2.31 (3H, t, $J = 1.2$ Hz), 3.02-3.03 (2H, m), 3.67 (3H, d, $J = 1.8$ Hz), 5.44-5.57 (1H, m), 7.24-7.32 (3H, m), 7.46-7.50 (2H, m). ^{13}C NMR (CDCl_3) δ 19.1, 22.3, 51.3, 98.7, 100.3, 124.1, 128.3, 128.3, 133.2, 147.6, 161.1, 168.3. EIMS: m/z (rel intensity) 230 (M^+ , 15), 215 (100), 197 (12), 169 (19), 141 (10), 115 (12), 77 (33), 43 (52). HRMS calcd for $\text{C}_{14}\text{H}_{14}\text{O}_3$: 230.0943, Found: 230.0939.



Oil. ^1H NMR (300 MHz, CDCl_3) δ 1.52-1.65 (4H, m), 1.79-1.83 (2H, m), 1.93-1.98 (2H, m), 2.16 (3H, q, $J = 1.2$ Hz), 2.66 (2H, q, $J = 1.2$ Hz), 3.63-3.64 (3H, m). ^{13}C NMR (CDCl_3) δ 19.0, 22.3, 22.8, 26.6, 27.7, 27.9, 51.1, 99.9, 106.9, 142.8, 160.9, 168.7. EIMS: m/z (rel intensity) 208 (M^+ , 21), 193 (100), 175 (10), 149 (11), 121 (6), 105 (6), 77 (7), 43(21). HRMS calcd for $\text{C}_{12}\text{H}_{16}\text{O}_3$: 208.1099, Found: 208.1120.



Oil. ^1H NMR (300 MHz, CDCl_3) δ 1.18-1.26 (3H, m), 1.44-1.45 (2H, m), 1.53-1.58 (2H, m), 1.84-1.86 (2H, m), 2.01-2.06 (4H, m), 2.13-2.14 (3H, m), 2.57-2.61 (2H, m), 4.11 (2H, q, $J = 7.2$ Hz) ^{13}C NMR (CDCl_3) δ 14.3, 21.4, 22.3, 23.3, 25.7, 29.7, 30.4, 31.0, 60.2, 116.5, 116.6, 148.1□166.9□168.8. ESI-MS: m/z (rel intensity) 237 (M^++1). HRMS calcd for $\text{C}_{14}\text{H}_{20}\text{O}_3\text{Na}$: 259.1310, Found: 259.1305.



Oil. ^1H NMR (300 MHz, CDCl_3) δ 2.73-2.76 (2H, m), 2.82-2.85 (2H, m), 3.50 (2H, d, $J = 2.4$ Hz), 3.75 (3H, s), 5.43 (1H, d, $J = 1.8$ Hz), 5.65 (1H, d, $J = 1.8$ Hz). ^{13}C NMR (CDCl_3) δ 35.0, 41.3, 49.0, 52.4, 117.9, 132.1, 167.3, 200.7. EIMS: m/z (rel intensity) 234 (M^+ , 0.2), 155 (100), 123 (33), 113 (68), 101 (21), 95 (36), 69 (20), 53 (45). Anal. Calcd for $\text{C}_8\text{H}_{11}\text{BrO}_3$: C, 40.87; H, 4.72. Found: C, 41.20; H, 4.81.

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3b	A. S. Demir, I. M. Akhmedov and O. Sesenoglu, <i>Tetrahedron</i> , 2002, 58 , 9793.
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5	P. V. Murphy, T. J. O'Sullivan, B. D. Kennedy and N. W. A. Geraghty, <i>J. Chem. Soc., Perkin Trans. I.</i> , 2000, 2109.
6a,10	M. Tiecco, L. Testaferri, M. Tingoli and F. Marini, <i>J. Org. Chem.</i> , 1993, 58 , 1349.
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