



Compounds **(1, 5, 6, 7, 8, 10, 12, 14, 16, 18, 24)**.

**7-methoxy-2*H*-chromen-2-one (Herniarin, 1).**  $^1\text{H}$  NMR ( $\text{CDCl}_3$ )  $\delta$  3.87 (*s*, 3H), 6.24 ( $\delta$ , 1H,  $J$  = 9.3 Hz), 6.80 (d, 1H,  $J$  = 2.4 Hz), 6.84 (dd, 1H,  $J$  = 2.4 and 8.4 Hz), 7.37 (d, 1H,  $J$  = 8.4 Hz), 7.97 (d, 1H,  $J$  = 9.3 Hz),  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  55.7, 100.8, 112.4, 113.0, 128.7, 143.3, 155.8, 161.1, 162.7.

**4-methoxy-7*H*-furo[3,2-g]chromen-7-one (Bergapten, 7).**  $^1\text{H}$  NMR ( $\text{CDCl}_3$ )  $\delta$  4.28 (s, 3H), 6.29 ( $\delta$ , 1H,  $J = 9.6$  Hz), 7.03 (d, 1H,  $J = 2.4$  Hz), 7.15 (s, 1H), 7.60 (d, 1H,  $J = 2.4$  Hz), 8.17 (d, 1H,  $J = 9.6$  Hz),  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  60.1, 93.8, 103.1, 106.0, 106.3, 112.5, 112.6, 135.8, 139.3, 144.7, 148.5, 153.8, 158.3.

**7-methoxy-8-(3-methylbut-2-enyl)-2*H*-chromen-2-one (Osthole, 18).**  $^1\text{H}$  NMR ( $\text{CDCl}_3$ )  $\delta$  1.67 (s, 3H), 1.84 (s, 3H), 3.54 (d, 2H,  $J = 7.2$  Hz), 3.93 (s, 3H), 5.23 (t, 1H,  $J = 7.2$  Hz), 6.24 (d, 1H,  $J = 9.3$  Hz), 6.84 (d, 1H,  $J = 8.1$  Hz), 7.29 (d, 1H,  $J = 8.1$  Hz), 7.62 (d, 1H,  $J = 9.3$  Hz)  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  21.9, 25.8, 56.1, 107.3, 113.0, 118.0, 121.1, 126.1, 132.6, 143.7, 148.5, 152.8, 160.2, 162.1.

**4,9-dimethoxy-7*H*-furo[3,2-g]chromen-7-one (Isopimpinellin, 6).**  $^1\text{H}$  NMR ( $\text{CDCl}_3$ )  $\delta$  4.16 (s, 3H), 4.17 (s, 3H), 6.28 (d, 1H,  $J = 9.9$  Hz), 7.00 (d, 1H,  $J = 2.4$  Hz), 7.63 (d, 1H,  $J = 2.4$  Hz), 8.11 (d, 1H,  $J = 9.9$  Hz).  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  60.7, 61.7, 105.1, 107.5, 112.5, 114.7, 139.4, 112.6, 143.6, 144.2, 145.1, 149.2, 160.4.

**7-methoxy-8-((3,3-dimethyloxiran-2-yl)methyl)-2*H*-chromen-2-one (Meranzin, 5).**  $^1\text{H}$  NMR ( $\text{CDCl}_3$ )  $\delta$  1.29 (s, 3H), 1.50 (s, 3H), 3.04 (m, 2H), 3.16 (m, 1H), 3.94 (s, 3H), 6.26 (d, 1H,  $J = 9.9$  Hz), 6.88 (d, 1H,  $J = 8.7$  Hz), 7.36 (d, 1H,  $J = 8.7$  Hz), 7.64 (d, 1H,  $J = 9.9$  Hz).

**7-methoxy-8-(3-methyl-2-oxobutyl)-2*H*-chromen-2-one (Isomeranzin, 8).**  $^1\text{H}$  NMR ( $\text{CDCl}_3$ )  $\delta$  1.21 (d, 6H,  $J = 6.6$  Hz), 2.82 (ept, 1H,  $J = 6.6$  Hz), 3.87 (s, 3H), 4.01 (s, 2H), 6.23 (d, 1H,  $J = 9.6$  Hz), 6.85 (d, 1H,  $J = 8.7$  Hz), 7.37 (d, 1H,  $J = 8.7$  Hz), 7.63 (d, 1H,  $J = 9.6$  Hz)  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  18.3, 34.5, 40.8, 56.0, 107.1, 11.9, 112.8, 112.9, 127.3, 143.5, 160.2.

**7-((E)-3,7-dimethylocta-2,6-dienyloxy)-2*H*-chromen-2-one (Aurapten, 24).**  $^1\text{H}$  NMR ( $\text{CDCl}_3$ )  $\delta$  1.58 (s, 3H), 1.65 (s, 3H), 1.74 (s, 3H), 2.09 (m, 4H), 4.58 (d, 2H,  $J = 6.6$  Hz), 5.06 (m, 1H), 5.45 (t, 1H,  $J = 6.6$  Hz), 6.21 (d, 1H,  $J = 9.6$  Hz), 6.79 (s, 1H), 6.82 (d, 1H,  $J = 8.4$  Hz), 7.34 (d, 1H,  $J = 8.4$  Hz), 7.62 (d, 1H,  $J = 9.6$  Hz),  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  16.6, 17.6, 25.5, 26.1, 39.4, 65.3, 101.4, 112.3, 113.0, 113.0, 118.2, 123.5, 128.6, 131.8, 142.1, 143.3, 155.7, 161.1, 162.0.

**7-((E)-3-methyl-5-(3,3-dimethyloxiran-2-yl)pent-2-enyloxy)-2*H*-chromen-2-one (Epoxaurapten, 16).**  $^1\text{H}$  NMR ( $\text{CDCl}_3$ )  $\delta$  1.25 (s, 3H), 1.28 (s, 3H), 1.30 (s, 3H), 2.09 (m, 4H), 4.58 (d, 2H,  $J = 6.6$  Hz), 5.06 (t, 1H,  $J = 0.9$  Hz), 5.45 (t, 1H,  $J = 6.6$  Hz), 6.21 (d, 1H,  $J = 9.3$  Hz), 6.79 (s, 1H), 6.82 (d, 1H,  $J = 8.4$  Hz), 7.34 (d, 1H,  $J = 8.4$  Hz), 7.62 (d, 1H,  $J = 9.3$  Hz).

**5,6,7,8-tetramethoxy-2-(3,4-dimethoxyphenyl)-4*H*-chromen-4-one (Nobiletin, 10).**  $^1\text{H}$  NMR ( $\text{CDCl}_3$ )  $\delta$  3.96 (s, 6H), 3.97 (s, 3H), 3.98 (s, 3H), 4.03 (s, 3H), 4.11 (s, 3H), 6.63 (s, 1H), 7.00 (d, 1H,  $J = 8.4$  Hz), 7.42 (d, 1H,  $J = 2.1$  Hz), 7.57 (dd, 1H,  $J = 2.1$  and 8.4 Hz).

**3,5,6,7,8-pentamethoxy-2-(3,4-dimethoxyphenyl)-4H-chromen-4-one (Heptamethoxyflavone, 12).**  $^1\text{H}$  NMR ( $\text{CDCl}_3$ )  $\delta$  3.90 (s, 3H), 3.96 (s, 3H), 4.01 (s, 3H), 4.11 (s, 3H), 3.98 (s, 9H), 7.02 (d, 1H,  $J = 8.7$  Hz), 7.8-7.9 (m, 2H),  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  55.9, 56.0, 59.8, 61.7, 61.8, 61.9, 62.3, 110.9, 121.9, 123.4, 137.8, 140.7, 143.8, 146.7, 148.2, 148.7, 151.0, 151.3, 153.1, 173.8.

**5,6,7,8-tetramethoxy-2-(4-methoxyphenyl)-4H-chromen-4-one (Tangeretin, 14).**  $^1\text{H}$  NMR ( $\text{CDCl}_3$ )  $\delta$  3.89 (s, 3H), 3.95 (s, 3H), 4.02 (s, 3H), 4.09 (s, 3H), 4.11 (s, 3H), 6.75 (s, 1H), 7.02 (d, 2H,  $J = 9$  Hz), 7.89 (d, 2H,  $J = 9$  Hz),  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ )  $\delta$  55.5, 61.6, 61.8, 62.0, 62.2, 102.8, 102.8, 114.5, 123.7, 127.7, 138.0, 144.1, 147.7, 148.3, 151.4, 162.3, 171.4, 172.6, 177.3.