

Electronic Supporting Information

One pot three component protocol for the synthesis of Indolyl-4*H*-chromene-3-carboxamides as antioxidant and antibacterial agents

Chitreddy V Subbareddy^a, and Shanmugam Sumathi^{*a}

^aDepartment of Chemistry, VIT University, Vellore 632014, Tamilnadu, Vellore, India

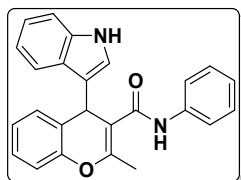
^{*}Corresponding authors: sumathishanmugam2003@gmail.com

Table S1. Reactivity of alcohols to influence the reaction^a

Entry	Solvent	Time	Yield ^b (%)
1	methanol	2.5	90
2	ethanol	3	78
3	n-propanol	5	72
4	isopropanol	5	75
5	n-butanol	5	70
6	isobutanol	5	76
7	2-ethoxy ethanol	5	53
8	2-methoxy ethanol	5	55
9	1-pentanol	10	—
10	1-hexanol	10	—
11	1-decanol	10	—

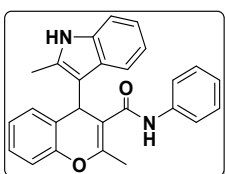
^a Reaction conditions: 2-Hydroxy benzaldehyde (1 mmol), Acetoacetanilide (1 mmol), indole (a mmol) DABCO (30 mol %), TBAB (10 mol%) various alcohols (2 mL), RT. ^b Isolated yields

4-(1*H*-indol-3-yl)-2-methyl-*N*-phenyl-4*H*-chromene-3-carboxamide 4a



White solid; mp: 144-146 °C; ¹H NMR (400 MHz, DMSO-*d*₆): δ 10.89 (s, 1H, NH), 9.79 (s, 1H, NH), 7.55 (d, *J* = 7.6 Hz, 2H, ArH), 7.46 (d, *J* = 8 Hz, 1H, ArH), 7.31 - 7.23 (m, 3H, ArH), 7.19 - 7.15 (m, 3H, ArH), 7.07 - 6.95 (m, 4H, ArH), 6.92 (t, *J* = 7.6 Hz, 1H, ArH), 5.47 (s, 1H, CH), 2.22 (s, 3H, CH₃); ¹³C NMR (100 MHz, DMSO-*d*₆) δ 166.3, 149.4, 149.2, 139.0, 136.5, 129.2, 128.5, 127.4, 125.7, 124.3, 123.6, 123.2, 123.0, 120.9, 119.5, 118.6, 118.5, 115.6, 111.5, 110.5, 32.9, 17.8; HRMS: *m/z* calcd. For C₂₅H₂₀N₂O₂ 380.4470 found 380.4468.

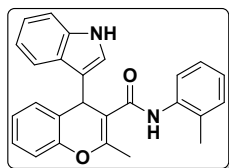
2-Methyl-4-(2-methyl-1*H*-indol-3-yl)-*N*-phenyl-4*H*-chromene-3-carboxamide 4b



White solid; mp: 140-142 °C; ¹H NMR (400 MHz, DMSO-*d*₆): δ 10.75 (s, 1H, NH), 9.80 (s, 1H, NH), 7.53 (d, *J* = 8.0 Hz, 2H, ArH), 7.26 (t, *J* = 7.9 Hz, 2H, ArH), 7.20 - 7.14 (m, 3H, ArH), 7.07 (d, *J* = 8.1 Hz, 1H, ArH), 7.02 (t, *J* = 7.4 Hz, 1H, ArH), 6.94 (dd, *J* = 4.4, 8.0, 3H, ArH), 6.81 (t, *J* = 7.6 Hz,

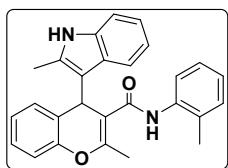
1H, ArH), 5.54 (s, 1H, CH), 2.36 (s, 3H, CH₃), 2.18 (s, 3H, CH₃); ¹³C NMR (100 MHz, DMSO-*d*₆) δ 166.2, 149.5, 148.8, 139.0, 135.2, 131.9, 129.3, 128.5, 127.4, 126.9, 123.8, 123.7, 123.1, 119.8, 119.3, 118.2, 117.6, 115.4, 113.7, 110.4, 110.0, 31.9, 17.6, 11.2; HRMS: *m/z* calcd. For C₂₆H₂₂N₂O₂ 394.4740 found 394.4738.

4-(1*H*-indol-3-yl)-2-methyl-*N*-(*o*-tolyl)-4*H*-chromene-3-carboxamide 4c



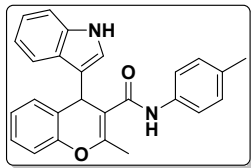
White solid; mp: 108-110 °C; ¹H NMR (400 MHz, DMSO-*d*₆): δ 10.95 (s, 1H, NH), 9.10 (s, 1H, NH), 7.51 (d, *J* = 8 Hz, 1H, ArH), 7.34 (d, *J* = 8 Hz, 1H, ArH), 7.27 (d, *J* = 2.4 Hz, 1H, ArH), 7.16 – 7.14 (m, 3H, ArH), 7.11 – 7.01 (m, 6H, ArH), 6.95 (t, *J* = 3.2 Hz, 1H, ArH), 5.44 (s, 1H, CH), 2.28 (s, 3H, CH₃), 1.78 (s, 3H, CH₃); ¹³C NMR (100 MHz, DMSO-*d*₆) δ 166.7, 149.8, 149.7, 137.1, 136.6, 132.8, 130.6, 129.7, 127.9, 126.2, 125.8, 125.7, 124.8, 124.1, 123.9, 123.8, 121.4, 119.2, 119.0, 118.9, 116.1, 111.9, 110.5, 33.4, 18.4, 17.8; HRMS: *m/z* calcd. For C₂₆H₂₂N₂O₂ 394.4740 found 394.4739.

2-Methyl-4-(2-methyl-1*H*-indol-3-yl)-*N*-(*o*-tolyl)-4*H*-chromene-3-carboxamide 4d



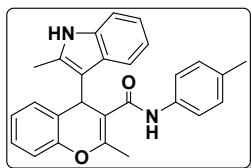
White solid; mp: 116-118 °C; ¹H NMR (400 MHz, DMSO-*d*₆): δ 10.80 (s, 1H, NH), 9.11 (s, 1H, NH), 7.30 (d, *J* = 7.6 Hz, 1H, ArH), 7.22 (d, *J* = 8.0 Hz, 1H, ArH), 7.17 – 7.13 (m, 1H, ArH), 7.10 – 7.01 (m, 5H, ArH), 6.96 – 6.90 (m, 3H, ArH), 6.85 (t, *J* = 7.4 Hz, 1H, ArH), 5.46 (s, 1H, CH), 2.39 (s, 3H, CH₃), 2.23 (s, 3H, CH₃), 1.71 (s, 3H, CH₃); ¹³C NMR (100 MHz, DMSO-*d*₆) δ 166.3, 149.5, 148.0, 136.1, 135.2, 132.7, 132.2, 130.1, 129.3, 127.3, 127.1, 125.7, 125.4, 123.9, 123.6, 119.8, 118.3, 117.7, 115.4, 113.7, 110.3, 109.7, 31.9, 17.7, 17.1, 11.4; HRMS: *m/z* calcd. For C₂₇H₂₄N₂O₂ 408.5010 found 408.5008.

4-(1*H*-indol-3-yl)-2-methyl-*N*-(*p*-tolyl)-4*H*-chromene-3-carboxamide 4e



White solid; mp: 122-124 °C; ¹H NMR (400 MHz, DMSO-*d*₆): δ 10.87 (s, 1H, NH), 9.68 (s, 1H, NH), 7.45 – 7.40 (m, 3H, ArH), 7.30 (d, *J* = 8 Hz, 1H, ArH), 7.17 – 7.13 (m, 3H, ArH), 7.06 – 6.94 (m, 5H, ArH), 6.91 (t, *J* = 7.2 Hz, 1H, ArH), 5.45 (s, 1H, CH), 2.21 (s, 3H, CH₃), 2.21 (s, 3H, CH₃); ¹³C NMR (100 MHz, DMSO-*d*₆) δ 166.5, 149.9, 149.6, 137.0, 132.6, 129.6, 129.3, 127.9, 126.2, 124.8, 124.1, 123.5, 121.3, 120.0, 119.1, 119.0, 116.1, 112.0, 111.0, 33.4, 20.8, 18.3; HRMS: *m/z* calcd. For C₂₆H₂₂N₂O₂ 394.4740 found 394.4738.

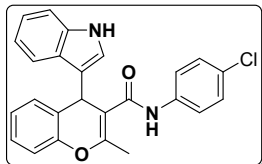
2-Methyl-4-(2-methyl-1*H*-indol-3-yl)-*N*-(*p*-tolyl)-4*H*-chromene-3-carboxamide 4f



White solid; mp: 122-124 °C; ¹H NMR (400 MHz, DMSO-*d*₆): δ 10.73 (s, 1H, NH), 9.70 (s, 1H, NH), 7.40 (d, *J* = 8 Hz, 2H, ArH), 7.20 – 7.13 (m, 3H, ArH), 7.06 (t, *J* = 6 Hz, 3H, ArH), 6.94 – 6.88 (m, 3H, ArH), 6.81 (t, *J* = 7.6 Hz, 1H, ArH), 5.52 (s, 1H, CH), 2.35 (s, 3H, CH₃), 2.21 (s, 3H, CH₃), 2.17 (s, 3H, CH₃); ¹³C NMR (100 MHz, DMSO-*d*₆) δ 166.5, 150.0, 149.2, 137.0, 135.7, 132.5, 132.4, 129.8, 129.3, 127.9, 127.4, 124.4, 124.1, 120.3, 119.9, 118.7,

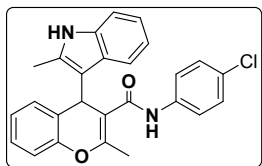
118.1, 115.9, 114.3, 110.9, 110.6, 32.4, 20.8, 18.1, 11.7; HRMS: m/z calcd. For $C_{27}H_{24}N_2O_2$ 408.5010 found 408.5008.

***N*-(4-Chlorophenyl)-4-(1*H*-indol-3-yl)-2-methyl-4*H*-chromene-3-carboxamide 4g**



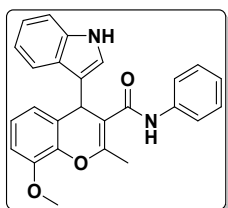
White solid; mp: 140-142 °C; 1H NMR (400 MHz, $DMSO-d_6$): δ 10.88 (s, 1H, NH), 9.93 (s, 1H, NH), 7.58 (d, J = 8.8 Hz, 2H, ArH), 7.43 (d, J = 8 Hz, 1H, ArH), 7.32 (t, J = 8.4 Hz, 3H, ArH), 7.19 – 7.13 (m, 3H, ArH), 7.07 (d, J = 8 Hz, 1H, ArH), 7.03 – 6.95 (m, 1H, ArH), 6.91 (t, J = 7.6 Hz, 1H, ArH), 5.46 (s, 1H, CH), 2.21 (s, 3H, CH_3); ^{13}C NMR (100 MHz, $DMSO-d_6$) δ 166.9, 150.0, 149.8, 138.5, 137.0, 129.6, 129.1, 128.9, 127.9, 127.3, 126.1, 124.7, 124.2, 123.5, 121.5, 121.4, 120.3, 119.0, 116.6, 112.0, 110.8, 33.3, 18.3; HRMS: m/z calcd. For $C_{25}H_{19}ClN_2O_2$ 414.8890 found 414.8897.

***N*-(4-Chlorophenyl)-2-methyl-4-(2-methyl-1*H*-indol-3-yl)-2-4*H*-chromene-3-carboxamide 4h**



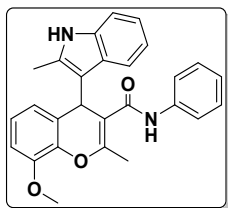
White solid; mp: 126-128 °C; 1H NMR (400 MHz, $DMSO-d_6$): δ 10.74 (s, 1H), 9.95 (s, 1H), 7.56 (d, J = 8.8 Hz, 2H), 7.31 (d, J = 8.8 Hz, 2H), 7.17 – 7.13 (m, 3H), 7.07 (d, J = 8.4 Hz, 1H), 6.94 – 6.88 (m, 3H), 6.80 (t, J = 7.6 Hz, 1H), 5.52 (s, 1H), 2.34 (s, 3H), 2.17 (s, 3H); ^{13}C NMR (100 MHz, $DMSO-d_6$) δ 166.8, 150.0, 149.6, 138.5, 135.6, 132.4, 129.8, 128.9, 127.9, 127.4, 127.1, 124.2, 121.3, 120.3, 118.8, 118.0, 115.9, 114.1, 110.9, 110.3, 32.4, 18.1, 11.6; HRMS: m/z calcd. For $C_{26}H_{21}ClN_2O_2$ 428.9160 found 428.9158.

4-(1*H*-indol-3-yl)-8-methoxy-2-methyl-*N*-phenyl-4*H*-chromene-3-carboxamide 4i



White solid; mp: 126-128 °C; 1H NMR (400 MHz, $DMSO-d_6$): δ 10.87 (s, 1H, NH), 9.76 (s, 1H, NH), 7.53 (d, J = 8 Hz, 2H, ArH), 7.45 (d, J = 8 Hz, 1H, ArH), 7.29 – 7.21 (m, 3H, ArH), 7.16 (d, J = 2.4 Hz, 1H, ArH), 7.02 (td, J = 7.6, 4.4 Hz, 2H, ArH), 6.91 – 6.82 (m, 3H, ArH), 6.70 (d, J = 7.6 Hz, 1H, ArH), 5.43 (s, 1H, CH), 3.82 (s, 3H, OCH_3), 2.21 (s, 3H, CH_3); ^{13}C NMR (100 MHz, $DMSO-d_6$) δ 166.32, 149.3, 147.0, 139.0, 138.9, 136.4, 128.5, 125.7, 125.0, 123.2, 123.0, 120.8, 120.3, 119.5, 118.6, 118.5, 111.5, 110.3, 109.7, 55.5, 32.9, 17.9; HRMS: m/z calcd. For $C_{26}H_{22}N_2O_3$ 410.4730 found 410.4726.

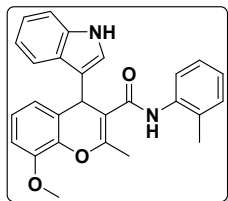
8-Methoxy-2-methyl-4-(2-methyl-1*H*-indol-3-yl)-*N*-phenyl-4*H*-chromene-3-carboxamide 4j



White solid; mp: 128-130 °C; 1H NMR (400 MHz, $DMSO-d_6$): δ 10.74 (s, 1H, NH), 9.80 (s, 1H, NH), 7.53 (d, J = 8 Hz, 2H, ArH), 7.26 – 7.16 (m, 4H, ArH), 7.00 (t, J = 7.3 Hz, 1H, ArH), 6.93 (t, J = 7.5 Hz, 1H, ArH), 6.86 (dt, J = 7.2, 7.2 Hz, 3H, ArH), 6.51 (dd, J = 7.0, 1.8, 1H, ArH), 5.53 (s, 1H, CH), 3.84 (s, 3H, OCH_3), 2.35 (s, 3H, CH_3), 2.19 (s, 3H, CH_3); ^{13}C NMR (100 MHz, $DMSO-d_6$) δ 166.2, 148.9, 146.8, 139.0, 139.0, 135.1, 131.8, 128.5,

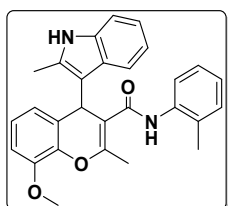
127.0, 124.5, 123.2, 123.1, 120.4, 119.8, 119.3, 118.3, 117.6, 113.7, 110.4, 109.8, 109.6, 55.5, 31.9, 17.6, 11.2; HRMS: m/z calcd. For $C_{27}H_{24}N_2O_3$ 424.5000 found 424.4999.

4-(1*H*-indol-3-yl)-8-methoxy-2-methyl-*N*-(*o*-tolyl)-4*H*-chromene-3-carboxamide 4k



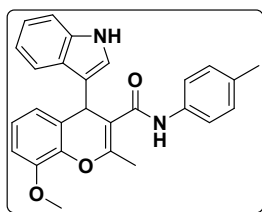
White solid; mp: 146-148 °C; 1H NMR (400 MHz, $DMSO-d_6$): δ 10.94 (s, 1H, NH), 9.08 (s, 1H, NH), 7.51 (d, $J = 8$ Hz, 1H, ArH), 7.34 (d, $J = 8.4$ Hz, 1H, ArH), 7.26 (d, $J = 2.0$ Hz, 1H, ArH), 7.16 (d, $J = 7.3$ Hz, 1H, ArH), 7.11 – 7.01 (m, 4H, ArH), 6.95 – 6.83 (m, 3H, ArH), 6.73 (d, $J = 6.4$ Hz, 1H, ArH), 5.42 (s, 1H, CH), 3.83 (s, 3H, OCH_3), 2.29 (s, 3H, CH_3), 1.77 (s, 3H, CH_3); ^{13}C NMR (100 MHz, $DMSO-d_6$) δ 166.2, 149.3, 147.0, 138.8, 136.5, 136.1, 132.3, 130.1, 125.7, 125.7, 125.3, 125.2, 125.0, 123.3, 123.1, 120.9, 120.4, 118.7, 118.5, 118.5, 111.4, 109.8, 109.7, 55.5, 33.0, 18.0, 17.3; HRMS: m/z calcd. For $C_{27}H_{24}N_2O_3$ 424.5000 found 424.4998.

8-Methoxy-2-methyl-4-(2-methyl-1*H*-indol-3-yl)-*N*-(*o*-tolyl)-4*H*-chromene-3-carboxamide 4l



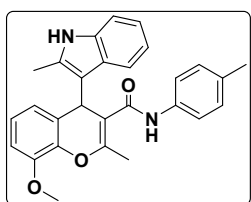
White solid; mp: 148-150 °C; 1H NMR (400 MHz, $DMSO-d_6$): δ 10.80 (s, 1H, NH), 9.13 (s, 1H, NH), 7.30 (d, $J = 7.6$ Hz, 1H, ArH), 7.22 (d, $J = 8$ Hz, 1H, ArH), 7.10-7.00 (m, 4H, ArH), 6.95 (t, $J = 7.2$ Hz, 1H, ArH), 6.87 (dd, $J = 8, 7.2$ Hz, 3H, ArH), 6.52 (dd, $J = 2, 2$ Hz, 1H, ArH), 5.44 (s, 1H, CH), 3.84 (s, 3H, OCH_3), 2.38 (s, 3H, CH_3), 2.23 (s, 3H, CH_3), 1.69 (s, 3H, CH_3); ^{13}C NMR (100 MHz, $DMSO-d_6$) δ 166.3, 148.1, 146.8, 139.0, 136.1, 135.2, 132.8, 132.1, 130.1, 127.1, 125.7, 125.5, 125.4, 124.5, 123.1, 120.4, 119.8, 118.3, 117.7, 113.7, 110.3, 109.6, 109.5, 55.5, 31.9, 17.7, 17.1, 11.4; HRMS: m/z calcd. For $C_{28}H_{26}N_2O_3$ 438.5270 found 438.5267.

4-(1*H*-indol-3-yl)-8-methoxy-2-methyl-*N*-(*p*-tolyl)-4*H*-chromene-3-carboxamide 4m



White solid; mp: 128-130 °C; 1H NMR (400 MHz, $DMSO-d_6$): δ 10.87 (d, $J = 1.6$ Hz, 1H, NH), 9.67 (s, 1H, NH), 7.45 – 7.39 (m, 3H, ArH), 7.30 (d, $J = 8$ Hz, 1H, ArH), 7.16 (d, $J = 2.4$ Hz, 1H, ArH), 7.05 – 6.99 (m, 3H, ArH), 6.92 – 6.83 (m, 3H, ArH), 6.71 (t, $J = 1.2$ Hz, 1H, ArH), 5.43 (s, 1H, CH), 3.82 (s, 3H, OCH_3), 2.21 (s, 6H, $(CH_3)_2$); ^{13}C NMR (100 MHz, $DMSO-d_6$) δ 166.6, 149.7, 147.4, 139.4, 137.0, 136.9, 132.6, 129.3, 126.2, 125.5, 123.7, 123.5, 121.3, 120.8, 120.7, 119.1, 119.1, 119.0, 110.9, 110.2, 56.0, 33.4, 20.8, 18.4; HRMS: m/z calcd. For $C_{27}H_{24}N_2O_3$ 424.5000 found 424.4998.

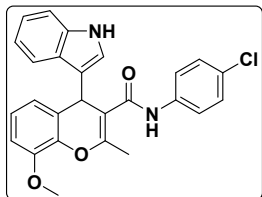
8-Methoxy-2-methyl-4-(2-methyl-1*H*-indol-3-yl)-*N*-(*p*-tolyl)-4*H*-chromene-3-carboxamide 4n



White solid; mp: 140-142 °C; 1H NMR (400 MHz, $DMSO-d_6$): δ 10.72 (s, 1H, NH), 9.69 (s, 1H, NH), 7.39 (d, $J = 8.4$ Hz, 2H, ArH), 7.20 (t, $J = 11.2$ Hz, 2H, ArH), 7.04 (d, $J = 8$ Hz, 2H, ArH), 6.92 (t, $J = 7.6$ Hz, 1H, ArH), 6.85 – 6.78 (m, 3H, ArH), 6.50 (dd, $J = 2, 2$ Hz, 1H, ArH), 5.50 (s, 1H,

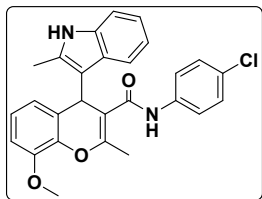
CH), 3.83 (s, 3H, OCH₃), 2.34 (s, 3H, CH₃), 2.21 (s, 3H, CH₃), 2.17 (s, 3H, CH₃); ¹³C NMR (100 MHz, DMSO-*d*₆) δ 166.5, 149.3, 147.2, 139.5, 137.0, 135.6, 132.5, 132.3, 129.3, 127.5, 125.0, 123.6, 120.9, 120.3, 119.9, 118.7, 118.3, 114.2, 110.9, 110.3, 110.1, 56.0, 32.4, 20.8, 18.1, 11.7; HRMS: *m/z* calcd. For C₂₈H₂₆N₂O₃ 438.5270 found 438.5267.

***N*-(4-Chlorophenyl)-4-(1*H*-indol-3-yl)-8-methoxy-2-methyl-4*H*-chromene-3-carboxamide**
4o



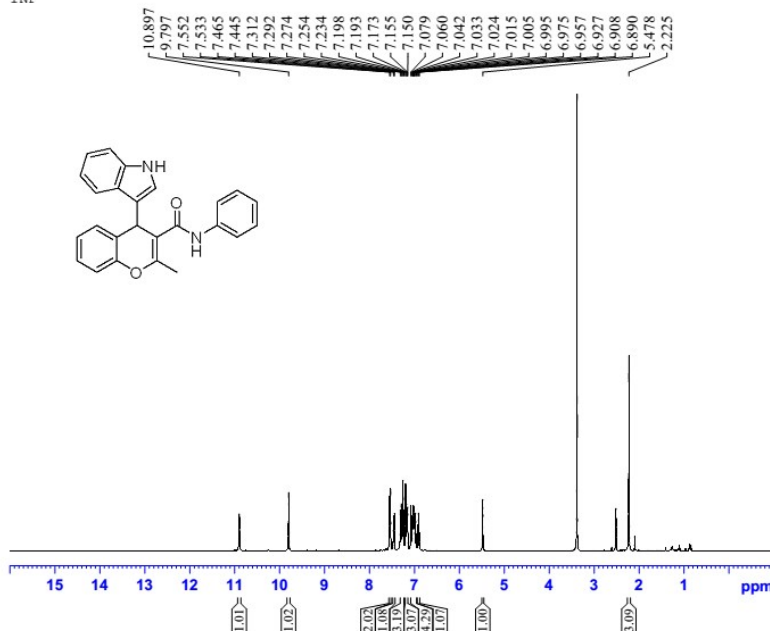
White solid; mp: 118-120 °C; ¹H NMR (400 MHz, DMSO-*d*₆): δ 10.87 (s, 1H, NH), 9.92 (s, 1H, NH), 7.58 (d, *J* = 8.0 Hz, 2H, ArH), 7.44 (d, *J* = 7.6 Hz, 1H, ArH), 7.31 (d, *J* = 7.6 Hz, 3H, ArH), 7.15 (s, 1H, ArH), 7.03 (t, *J* = 7.2 Hz, 1H, ArH). 6.91 – 6.84 (m, 3H, ArH), 6.71 (d, *J* = 6.8 Hz, 1H, ArH), 5.44 (s, 1H, CH), 3.83 (s, 3H, OCH₃), 2.22 (s, 3H, CH₃); ¹³C NMR (100 MHz, DMSO-*d*₆) δ 166.9, 150.1, 147.5, 139.4, 138.5, 136.9, 129.1, 128.9, 127.2, 126.1, 125.4, 123.8, 123.5, 121.5, 121.4, 120.8, 120.3, 119.0, 112.0, 110.7, 110.3, 56.0, 33.4, 18.4; HRMS: *m/z* calcd. For C₂₆H₂₁ClN₂O₃ 444.9150 found 444.9148.

***N*-(4-Chlorophenyl)-8-methoxy-2-methyl-4-(2-methyl-1*H*-indol-3-yl)-4*H*-chromene-3-carboxamide**
4p



White solid; mp: 136-138 °C; ¹H NMR (400 MHz, DMSO-*d*₆): δ 10.73 (s, 1H, NH), 9.95 (s, 1H, NH), 7.56 (d, *J* = 8.8 Hz, 2H, ArH), 7.30 (d, *J* = 9.2 Hz, 2H, ArH), 7.19 (t, *J* = 8.4 Hz, 2H, ArH), 6.92 – 7.78 (m, 4H, ArH), 6.50 (dd, *J* = 1.6, 1.6 Hz, 1H, ArH), 5.51 (s, 1H, CH), 3.83 (s, 3H, OCH₃), 2.33 (s, 3H, CH₃), 2.18 (s, 3H, CH₃); ¹³C NMR (100 MHz, DMSO-*d*₆) δ 166.9, 149.7, 147.2, 139.5, 138.5, 135.6, 132.3, 128.9, 127.4, 127.1, 124.8, 123.8, 121.3, 120.9, 120.3, 118.8, 118.0, 114.1, 110.9, 110.2, 110.1, 56.0, 32.4, 18.1, 11.6; HRMS: *m/z* calcd. For C₂₇H₂₃ClN₂O₃ 458.1397 found 458.1395.

Signature SIF VIT VELLORE
INP



Current Data Parameters
NAME Dr.LKA180916
EXPNO 60
PROCNO 1

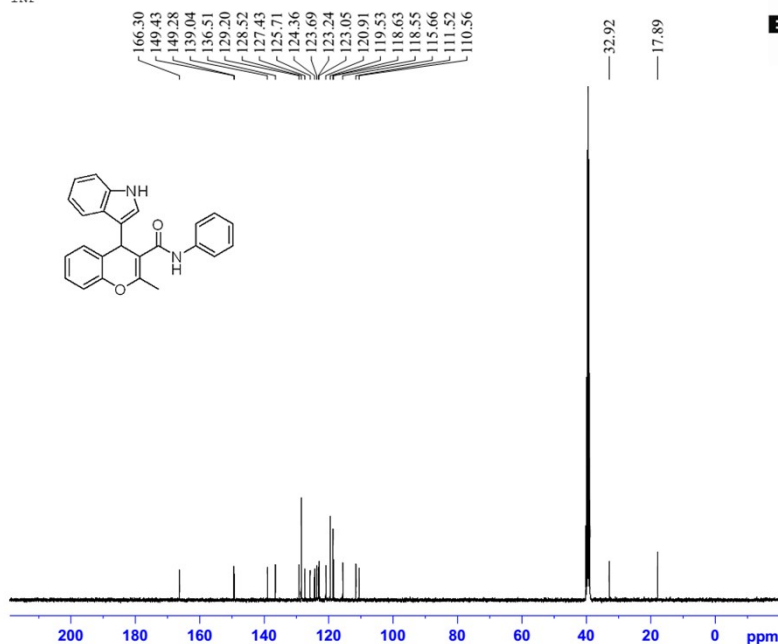
F2 - Acquisition Parameters
Date_ 20160919
Time_ 1.10
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8223.485 Hz
FIDRES 0.125483 Hz
AQ 3.9845889 sec
RG 98.85
DW 60.800 usec
DE 6.50 usec
TE 297.1 K
D1 1.00000000 sec
TD0 1

----- CHANNEL f1 -----
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W
SFO1 400.2604718 MHz

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 4-(1*H*-indol-3-yl)-2-methyl-*N*-phenyl-4*H*-chromene-3-carboxamide 4a

Signature SIF VIT VELLORE
INP



Current Data Parameters
NAME Dr.LKA180916
EXPNO 61
PROCNO 1

F2 - Acquisition Parameters
Date_ 20160919
Time_ 1.40
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 127.79
DW 20.800 usec
DE 6.50 usec
TE 297.9 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

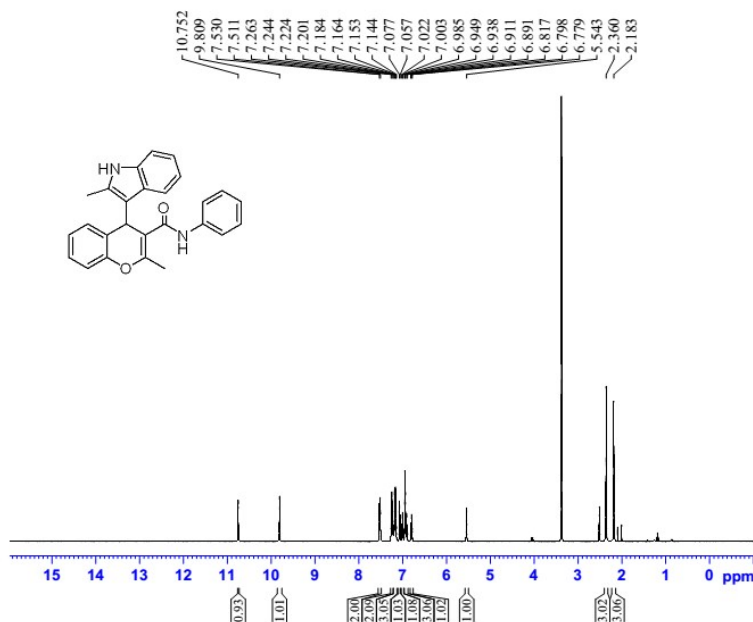
----- CHANNEL f1 -----
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO1 100.6550182 MHz

----- CHANNEL f2 -----
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.28428999 W
SFO2 400.2596010 MHz

F2 - Processing parameters
SI 32768
SF 100.6450043 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 4-(1*H*-indol-3-yl)-2-methyl-*N*-phenyl-4*H*-chromene-3-carboxamide 4a

Signature SIF VIT VELLORE
2MIP



Current Data Parameters
NAME Dr.LKA180916
EXPNO 68
PROCNO 1

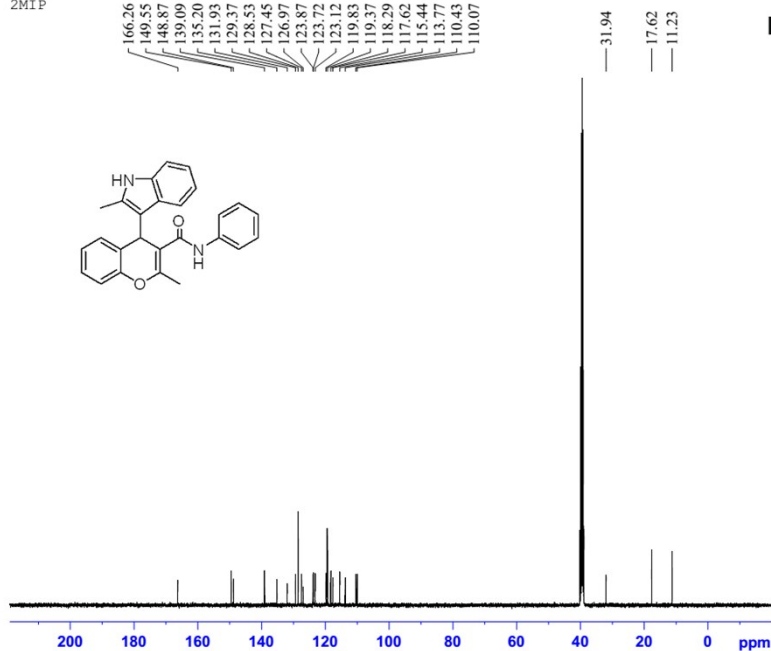
F2 - Acquisition Parameters
Date_ 20160919
Time 3.23
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9845889 sec
RG 112.69
DW 60.800 usec
DE 6.50 usec
TE 297.1 K
D1 1.00000000 sec
TD0 1

----- CHANNEL f1 -----
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W
SFO1 400.2604718 MHz

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 2-Methyl-4-(2-methyl-1H-indol-3-yl)-N-phenyl-4H-chromene-3-carboxamide 4b

Signature SIF VIT VELLORE
2MIP



Current Data Parameters
NAME Dr.LKA180916
EXPNO 69
PROCNO 1

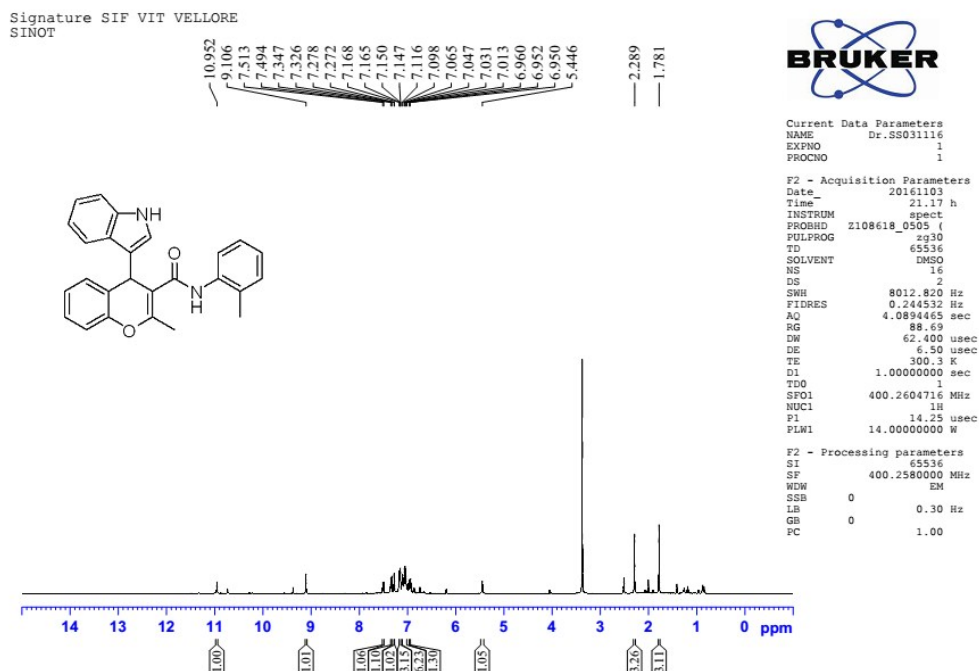
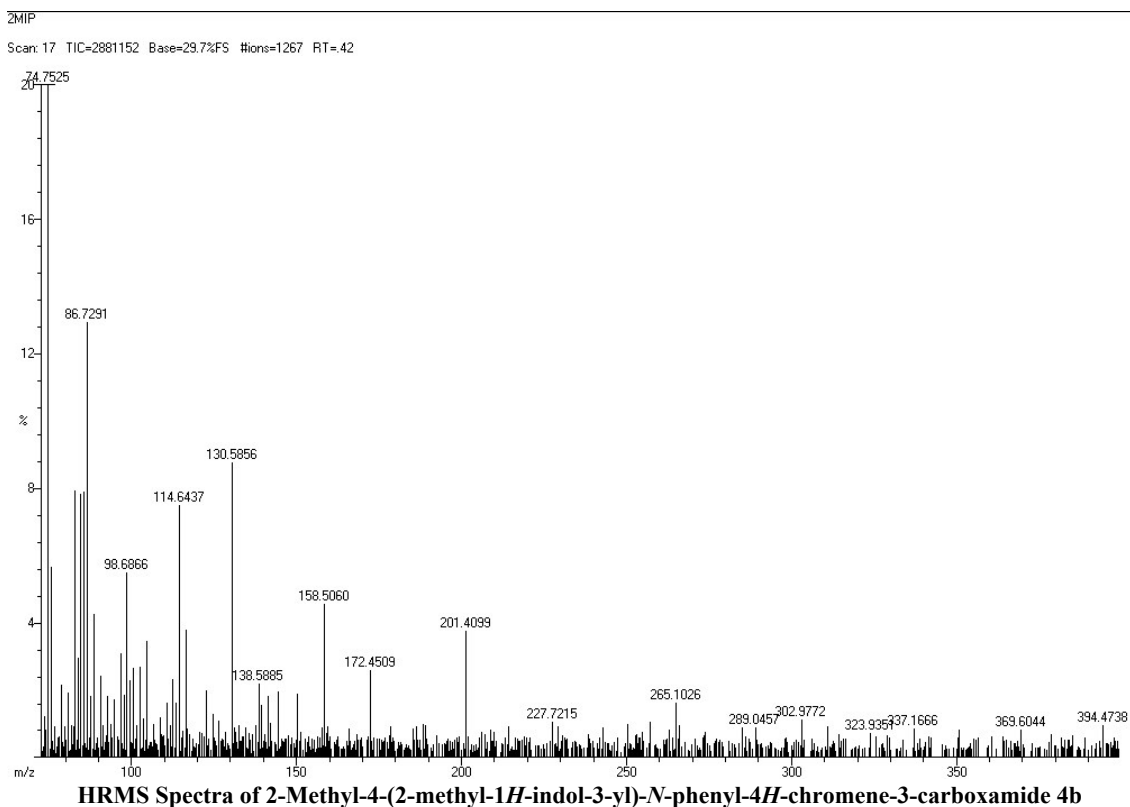
F2 - Acquisition Parameters
Date_ 20160919
Time 3.53
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 199.6
DW 20.800 usec
DE 6.50 usec
TE 297.7 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

----- CHANNEL f1 -----
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO1 100.6550182 MHz

----- CHANNEL f2 -----
CPDPRG12 waltz16
NUC2 1H
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.28428999 W
SFO2 400.2596010 MHz

F2 - Processing parameters
SI 32768
SF 100.6450043 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

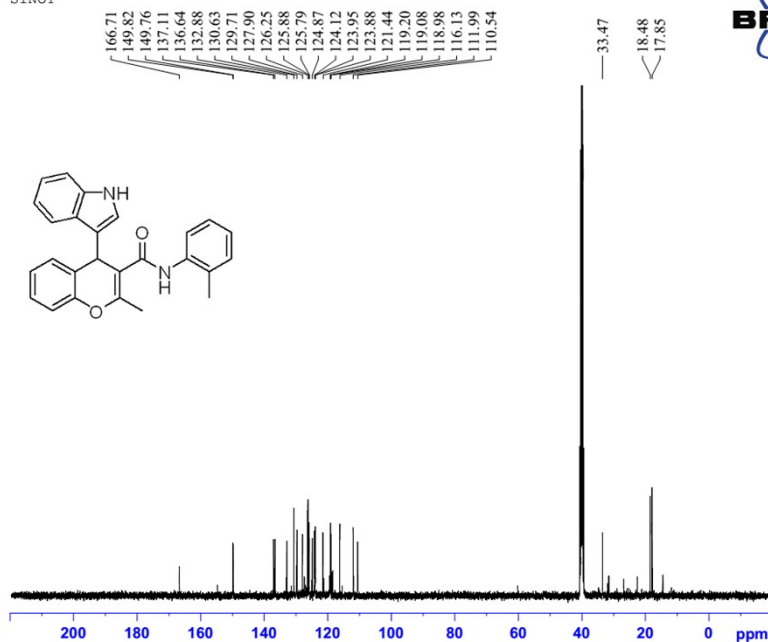
¹³C NMR Spectra of 2-Methyl-4-(2-methyl-1H-indol-3-yl)-N-phenyl-4H-chromene-3-carboxamide 4b

 ${}^1\text{H}$

NMR

Spectra of 4-(1*H*-indol-3-yl)-2-methyl-*N*-(*o*-tolyl)-4*H*-chromene-3-carboxamide 4c

Signature SIF VIT VELLORE
SINOT



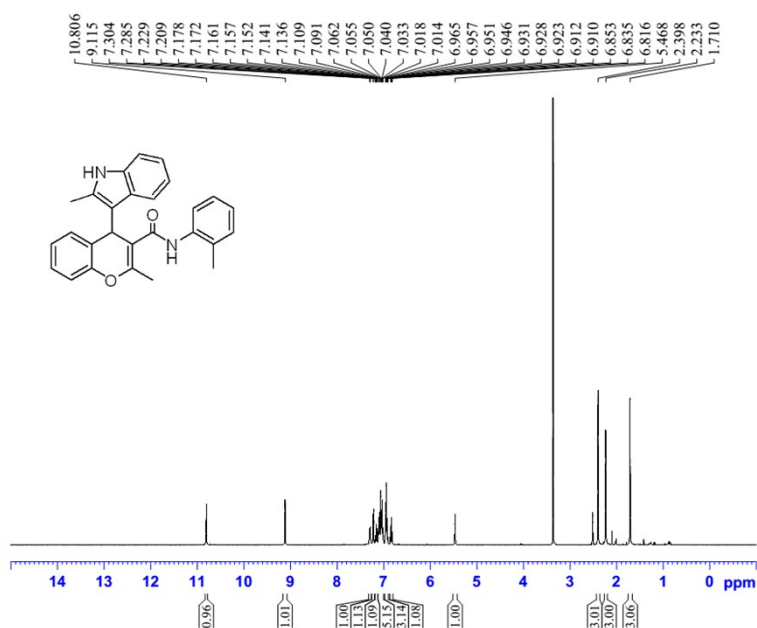
Current Data Parameters
NAME Dr.SS031116
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date 20161103
Time 21.46 h
INSTRUM spect
PROBHD Z108618 0505 (
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 1.3631488 sec
RG 199.6
DW 20.800 usec
DE 6.50 usec
TE 301.3 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1
SF01 100.6550186 MHz
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SF02 400.2596010 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 30.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.17654000 W

F2 - Processing parameters
SI 32768
SF 100.6449542 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 4-(1H-indol-3-yl)-2-methyl-N-(o-tolyl)-4H-chromene-3-carboxamide 4c

Signature SIF VIT VELLORE
S-2MIOT



Current Data Parameters
NAME Dr.RS061016
EXPNO 9
PROCNO 1

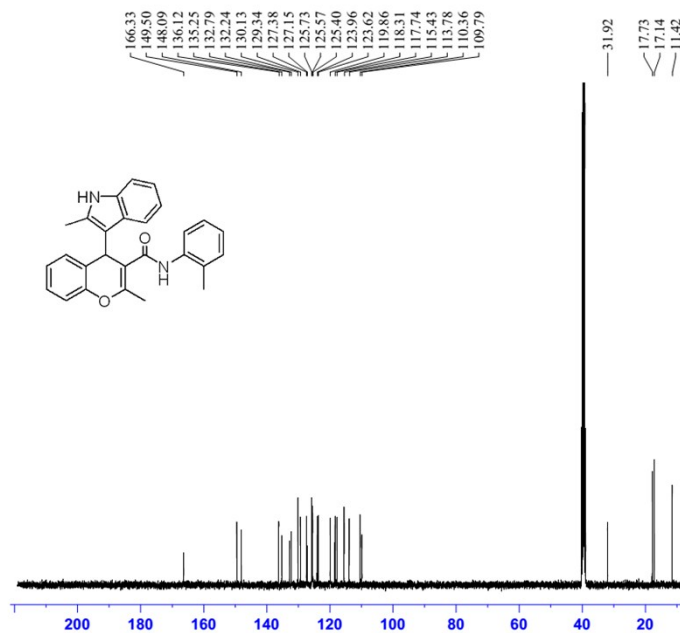
F2 - Acquisition Parameters
Date 20161006
Time 5.24
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9845889 sec
RG 98.85
DW 60.800 usec
DE 6.50 usec
TE 300.7 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W
SF01 400.2604718 MHz

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 2-Methyl-4-(2-methyl-1H-indol-3-yl)-N-(o-tolyl)-4H-chromene-3-carboxamide 4d

Signature SIF VIT VELLORE
S-2MIOT



Current Data Parameters
NAME Dr.RS061016
EXPNO 10
PROCNO 1

F2 - Acquisition Parameters
Date_ 20161006
Time 5.54
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 199.6
DW 20.800 usec
DE 6.50 usec
TE 301.5 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

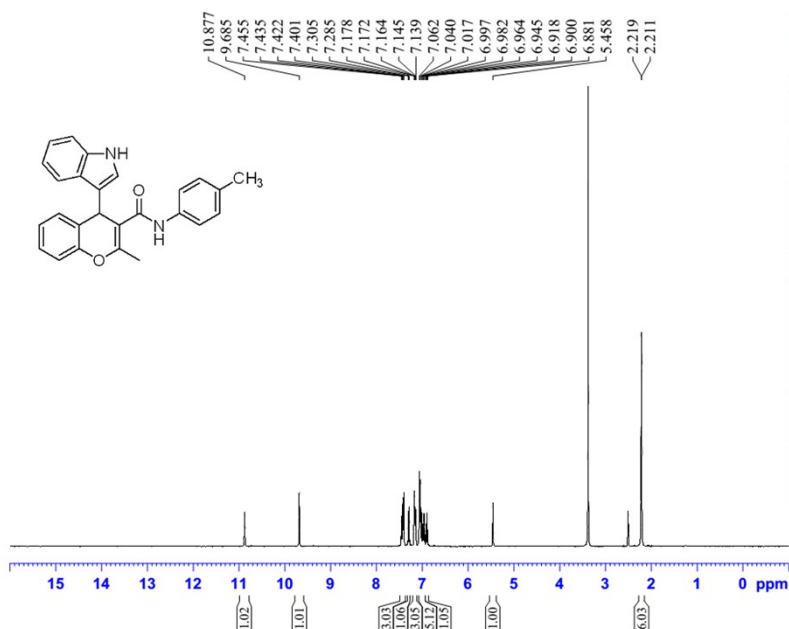
===== CHANNEL f1 =====
NUC1 13C
PI 9.80 usec
PLW1 58.00000000 W
SFO1 100.6550182 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.28428999 W
SFO2 400.2596010 MHz

F2 - Processing parameters
SI 32768
SF 100.6450043 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 2-Methyl-4-(2-methyl-1H-indol-3-yl)-N-(o-tolyl)-4H-chromene-3-carboxamide 4d

Signature SIF VIT VELLORE
SA-PT-AA-IND



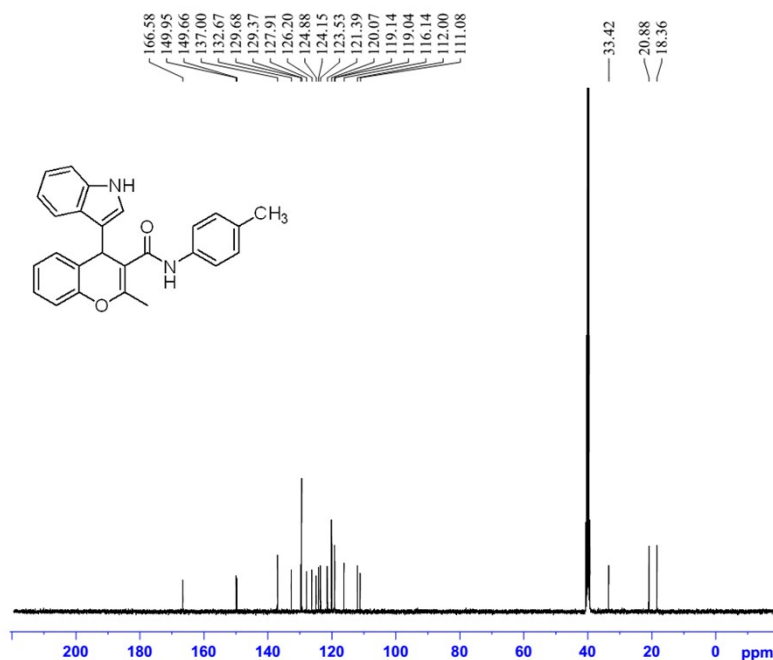
Current Data Parameters
NAME Dr.LRA170217
EXPNO 34
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170217
Time 19.51 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.244532 Hz
AQ 4.0894465 sec
RG 88.69
DW 62.400 usec
DE 6.50 usec
TE 298.4 K
D1 1.00000000 sec
TD0 1
SFO1 400.2604716 MHz
NUC1 1H
PI 14.25 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 4-(1H-indol-3-yl)-2-methyl-N-(p-tolyl)-4H-chromene-3-carboxamide 4e

Signature SIF VIT VELLORE
SA-PT-AA-IND



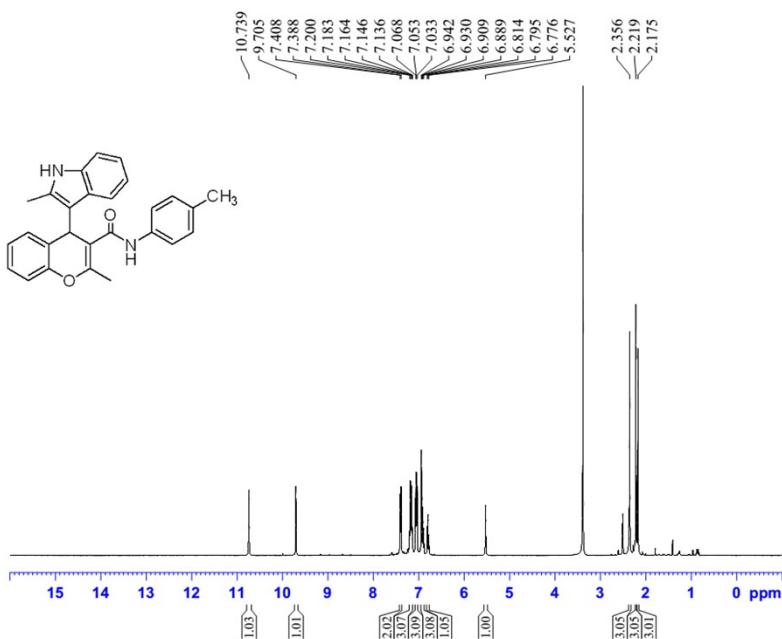
Current Data Parameters
NAME Dr.LKA170217
EXPNO 35
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170217
Time 20.20 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 1.3631488 sec
RG 127.79
DW 20.800 usec
DE 6.50 usec
TE 299.0 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1
SFO1 100.6550186 MHz
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO2 400.2596010 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLM2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.17654000 W

F2 - Processing parameters
SI 32768
SF 100.6449542 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 4-(1*H*-indol-3-yl)-2-methyl-*N*-(*p*-tolyl)-4*H*-chromene-3-carboxamide 4e

Signature SIF VIT VELLORE
SA-PT-AA-2MIN



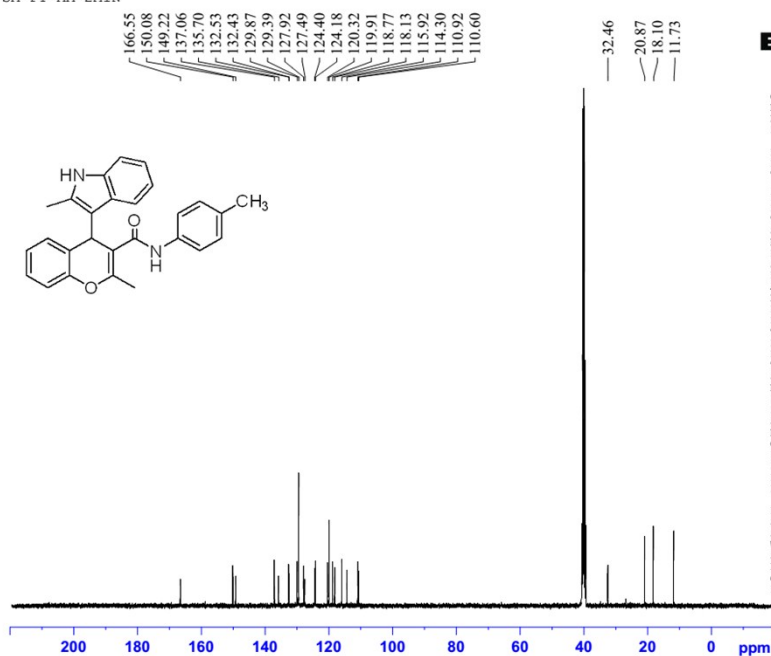
Current Data Parameters
NAME Dr.LKA170217
EXPNO 32
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170217
Time 19.16 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.244532 Hz
AQ 4.0894465 sec
RG 77.73
DW 62.400 usec
DE 6.50 usec
TE 298.4 K
D1 1.00000000 sec
D11 1
SFO1 400.2604716 MHz
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 2-Methyl-4-(2-methyl-1*H*-indol-3-yl)-*N*-(*p*-tolyl)-4*H*-chromene-3-carboxamide 4f

Signature SIF VIT VELLORE
SA-PT-AA-2MIN



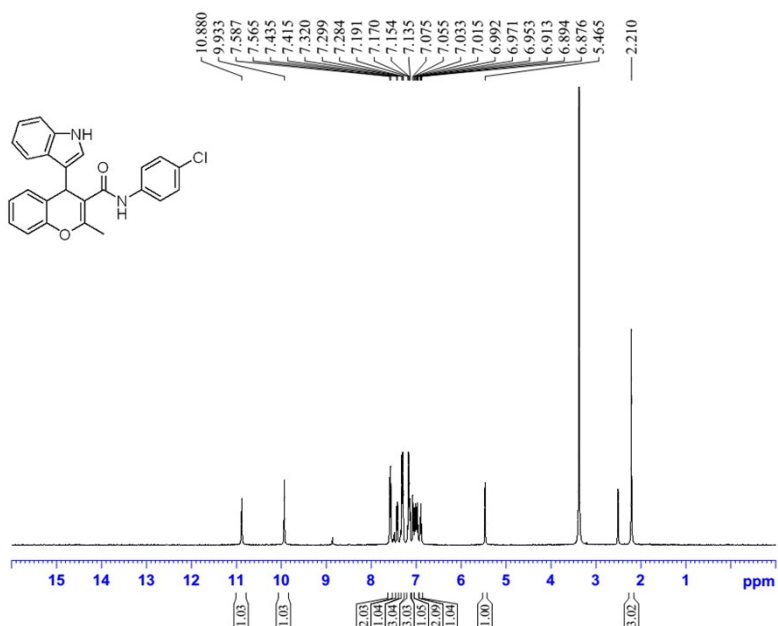
Current Data Parameters
NAME Dr.LKA170217
EXPNO 33
PROCNO 1

F2 - Acquisition Parameters
Date 20170217
Time 19.46 h
INSTRUM spect
PROBHD Z108618_0505 ()
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 1.3631488 sec
RG 143.73
DW 20.800 usec
DE 6.50 usec
TE 299.1 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1
SFO1 100.6550186 MHz
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO2 400.2596010 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.17654000 W

F2 - Processing parameters
SI 32768
SF 100.6449542 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 2-Methyl-4-(2-methyl-1H-indol-3-yl)-N-(p-tolyl)-4H-chromene-3-carboxamide 4f

Signature SIF VIT VELLORE
SA-IN-4CL-AA



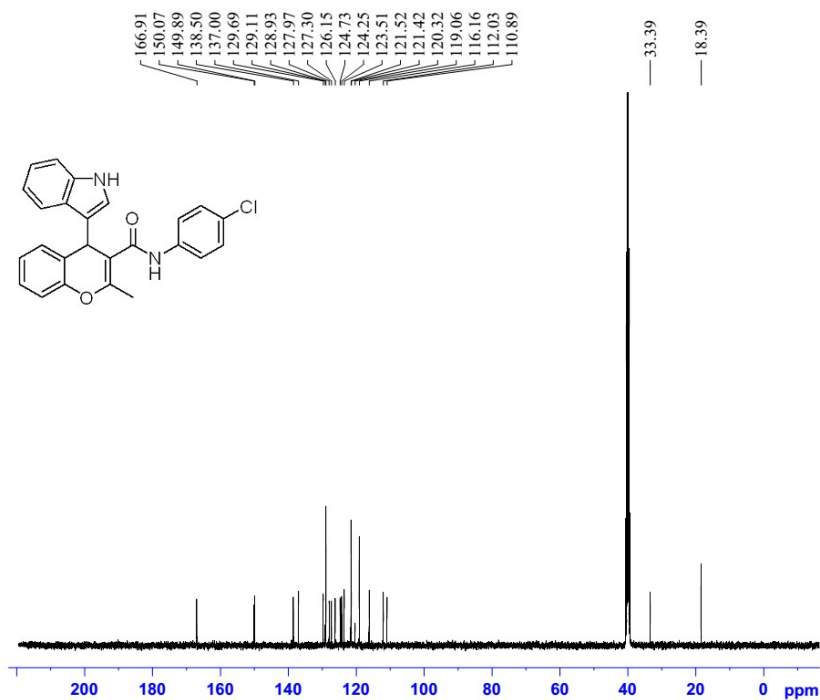
Current Data Parameters
NAME Dr.LKA150217
EXPNO 24
PROCNO 1

F2 - Acquisition Parameters
Date 20170215
Time 15.56 h
INSTRUM spect
PROBHD Z108618_0505 ()
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.244532 Hz
AQ 4.0894465 sec
RG 112.69
DW 62.400 usec
DE 6.50 usec
TE 298.5 K
D1 1.00000000 sec
TD0 1
SFO1 400.2604716 MHz
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of N-(4-Chlorophenyl)-4-(1H-indol-3-yl)-2-methyl-4H-chromene-3-carboxamide 4g

Signature SIF VIT VELLORE
SA-IN-4CL-AA



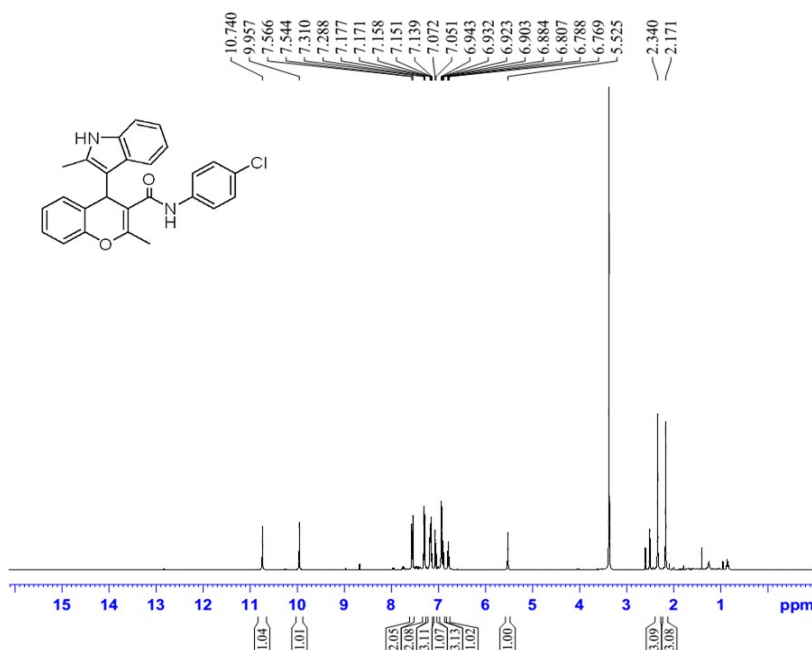
Current Data Parameters
NAME Dr.LKA150217
EXPNO 25
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170216
Time_ 0.29 h
INSTRUM spect
PROBHD Z108618 0505 (
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 1.3631488 sec
RG 156.91
DW 20.800 usec
DE 6.50 usec
TE 298.7 K
D1 2.00000000 sec
D11 0.03000000 sec
TDO 1
SFO1 100.6550186 MHz
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO2 400.2596010 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.17654000 W

F2 - Processing parameters
SI 32768
SF 100.6449542 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of *N*-(4-Chlorophenyl)-4-(1*H*-indol-3-yl)-2-methyl-4*H*-chromene-3-carboxamide 4g

Signature SIF VIT VELLORE
SA-2MI-4CL-AA



Current Data Parameters
NAME Dr.LKA150217
EXPNO 26
PROCNO 1

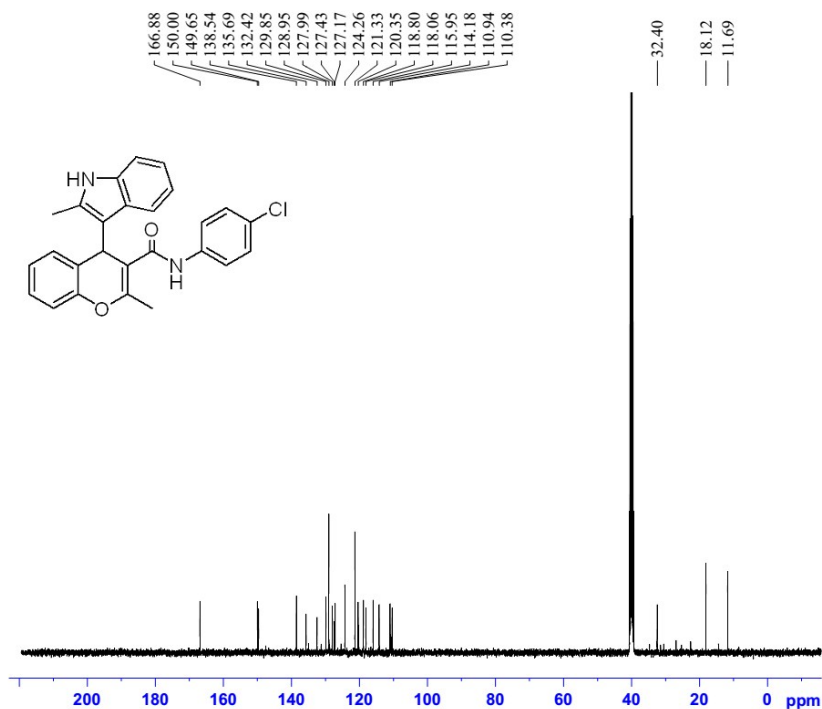
F2 - Acquisition Parameters
Date_ 20170215
Time 16.00 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.244532 Hz
AQ 4.0894465 sec
RG 98.85
DW 62.400 usec
DE 6.50 usec
TE 298.5 K
D1 1.00000000 sec
TDO 1
SFO1 400.2604716 MHz
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H

NMR Spectra of *N*-(4-Chlorophenyl)-2-methyl-4-(2-methyl-1*H*-indol-3-yl)-2-4*H*-chromene-3-carboxamide 4h

Signature SIF VIT VELLORE
SA-2MI-4CL-AA



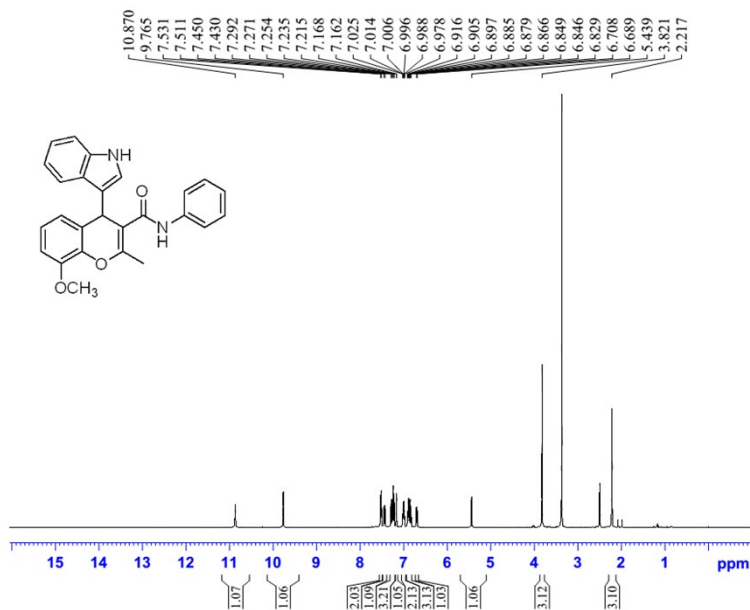
Current Data Parameters
NAME Dr.LKA150217
EXPNO 27
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170216
Time 1.00 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 1.3631488 sec
RG 143.73
DW 20.800 usec
DE 6.50 usec
TE 298.7 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1
SFO1 100.6550186 MHz
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO2 400.2596010 MHz
NUC2 1H
CPDPRG2 waitz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.17654000 W

F2 - Processing parameters
SI 32768
SF 100.6449542 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of *N*-(4-Chlorophenyl)-2-methyl-4-(2-methyl-1*H*-indol-3-yl)-2,4*H*-chromene-3-carboxamide 4h

Signature SIF VIT VELLORE
OINP



Current Data Parameters
NAME 1
EXPNO 5
PROCNO 1

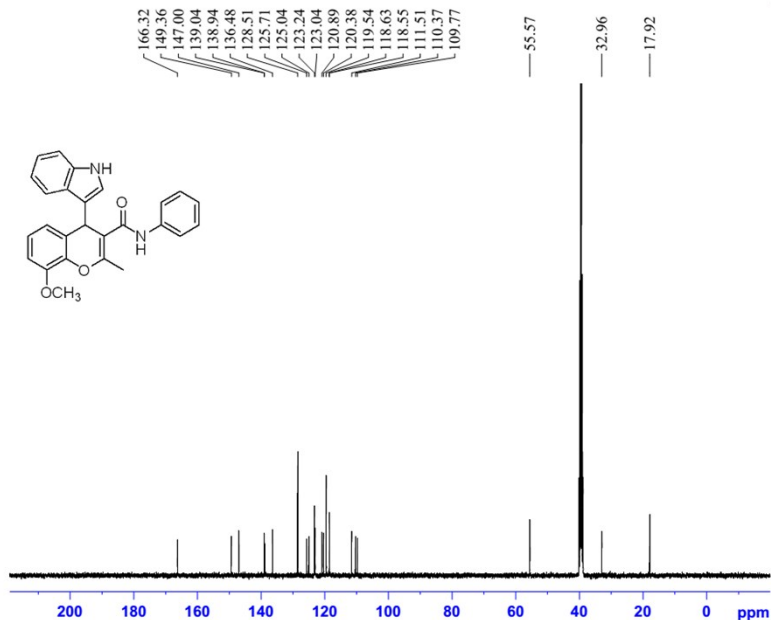
F2 - Acquisition Parameters
Date_ 20160902
Time 20.35
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9845889 sec
RG 98.85
DW 60.800 usec
DE 6.50 usec
TE 297.7 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W
SFO1 400.2604718 MHz

F2 - Processing parameters
SI 65536
SF 400.2580061 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 4-(1H-indol-3-yl)-8-methoxy-2-methyl-N-phenyl-4H-chromene-3-carboxamide 4i

Signature SIF VIT VELLORE
OINP



Current Data Parameters
NAME 1
EXPNO 6
PROCNO 1

F2 - Acquisition Parameters
Date_ 20160902
Time 21.05
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 156.91
DW 20.800 usec
DE 6.50 usec
TE 298.4 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

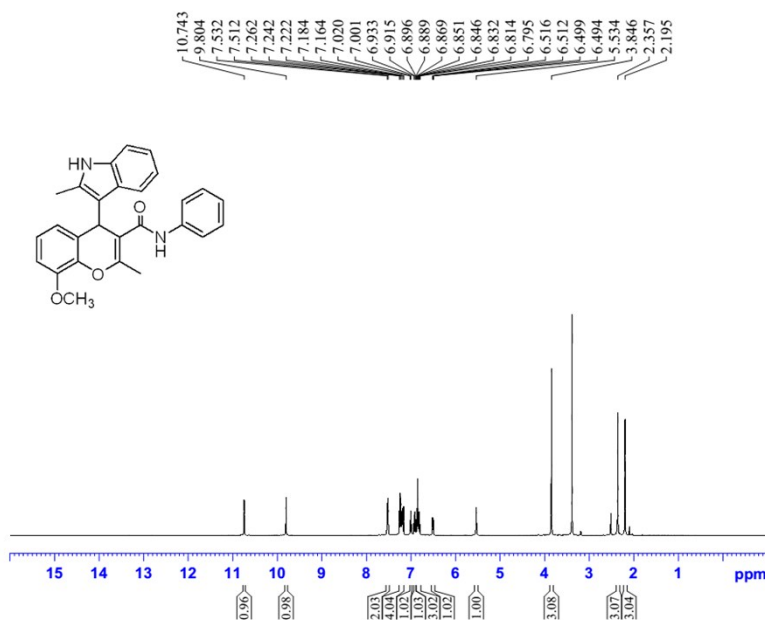
===== CHANNEL f1 =====
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO1 100.6550182 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.28428999 W
SFO2 400.2596010 MHz

F2 - Processing parameters
SI 32768
SF 100.6450043 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 4-(1H-indol-3-yl)-8-methoxy-2-methyl-N-phenyl-4H-chromene-3-carboxamide 4i

Signature SIF VIT VELLORE
02MIP



Current Data Parameters
NAME Dr.LKA180916
EXPNO 64
PROCNO 1

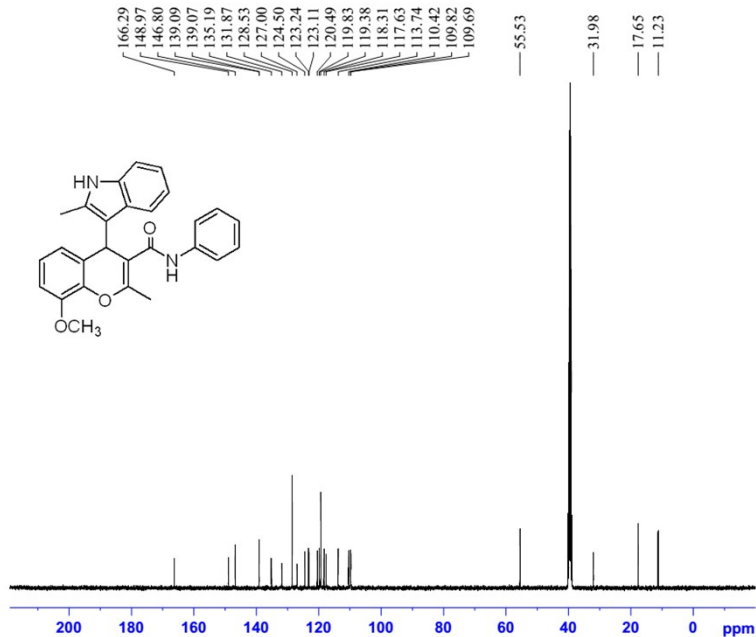
F2 - Acquisition Parameters
Date 20160919
Time 2.16
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9845889 sec
RG 88.69
DM 60.800 usec
DE 6.50 usec
TE 297.1 K
D1 1.00000000 sec
TD0 1

***** CHANNEL f1 *****
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W
SFO1 400.2604718 MHz

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 8-Methoxy-2-methyl-4-(2-methyl-1H-indol-3-yl)-N-phenyl-4H-chromene-3-carboxamide 4j

Signature SIF VIT VELLORE
02MIP



Current Data Parameters
NAME Dr.LKA180916
EXPNO 65
PROCNO 1

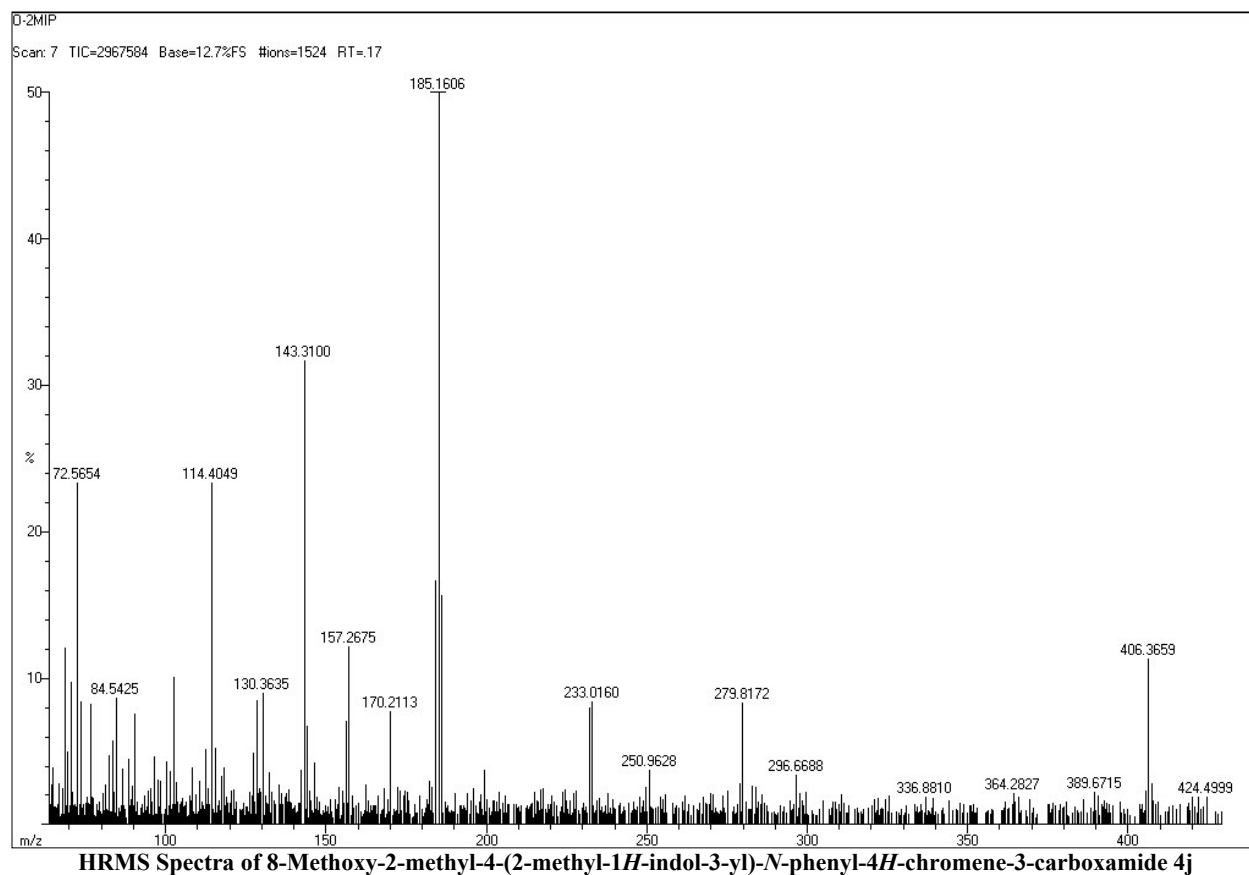
F2 - Acquisition Parameters
Date 20160919
Time 2.46
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 143.73
DM 20.800 usec
DE 6.50 usec
TE 297.9 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

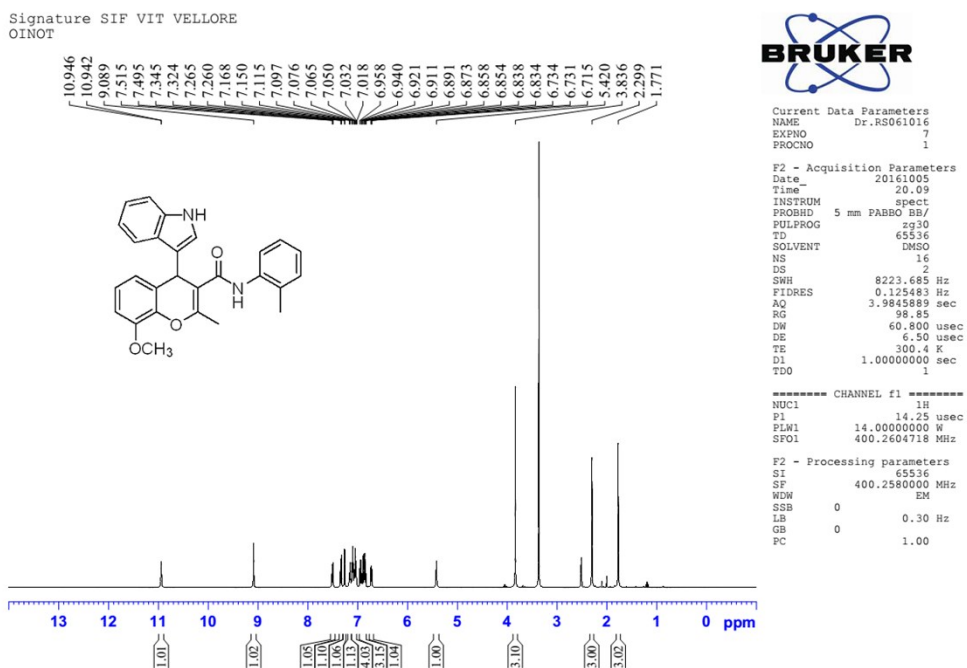
***** CHANNEL f1 *****
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO1 100.6550182 MHz

***** CHANNEL f2 *****
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.28428999 W
SFO2 400.2596010 MHz

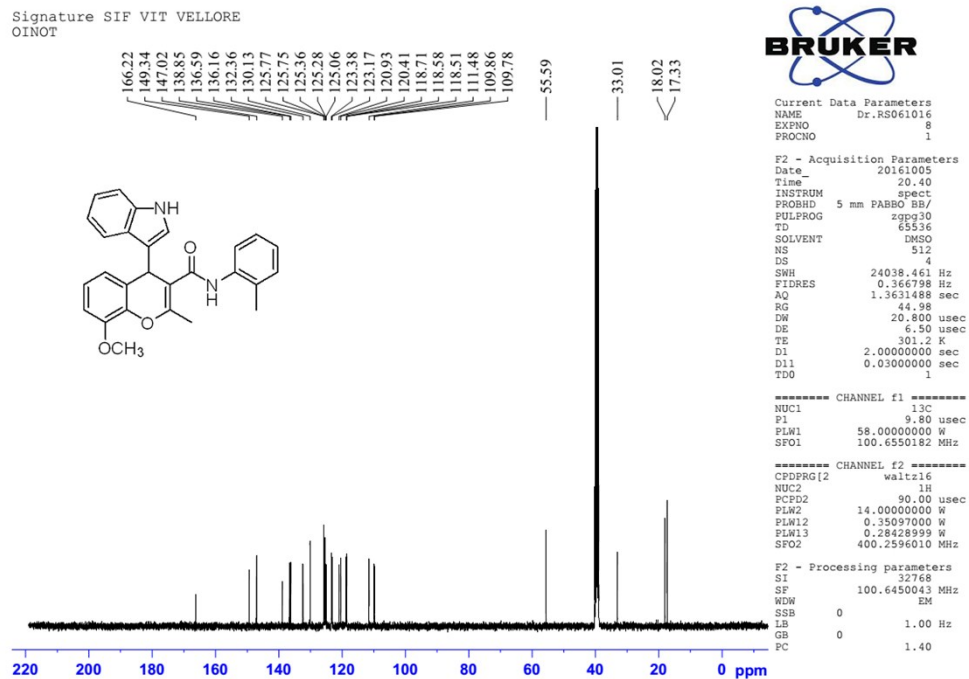
F2 - Processing parameters
SI 32768
SF 100.6450043 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 8-Methoxy-2-methyl-4-(2-methyl-1H-indol-3-yl)-N-phenyl-4H-chromene-3-carboxamide 4j



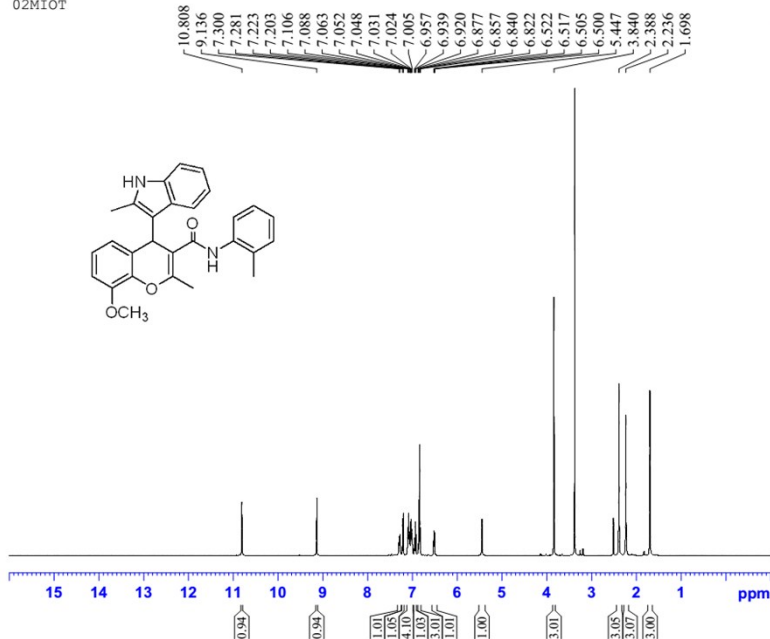


¹H NMR Spectra of 4-(1*H*-indol-3-yl)-8-methoxy-2-methyl-*N*-(*o*-tolyl)-4*H*-chromene-3-carboxamide 4k



¹³C NMR Spectra of 4-(1*H*-indol-3-yl)-8-methoxy-2-methyl-*N*-(*o*-tolyl)-4*H*-chromene-3-carboxamide 4k

Signature SIF VIT VELLORE
02MIOT



Current Data Parameters
NAME Dr.LKA180916
EXPNO 62
PROCNO 1

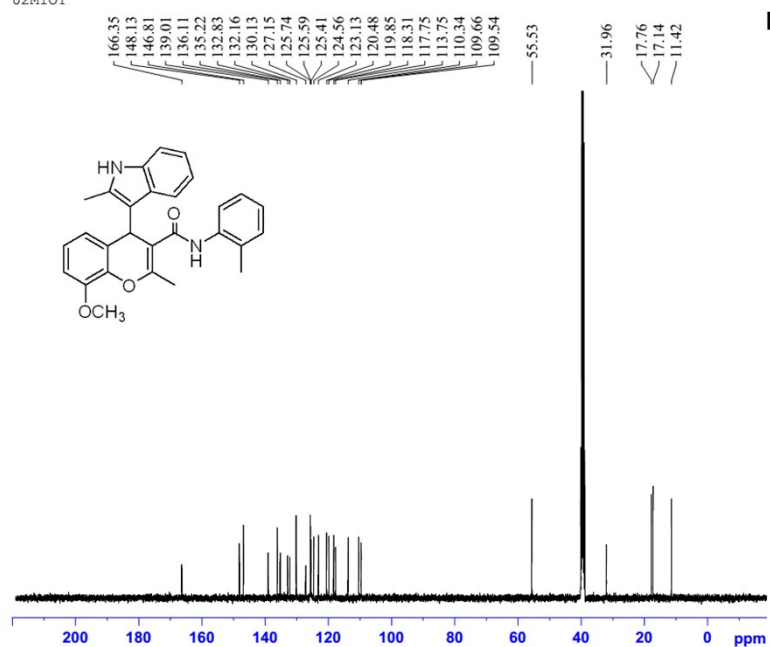
F2 - Acquisition Parameters
Date_ 20160919
Time_ 1.43
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9845889 sec
RG 88.69
DW 60.800 usec
DE 6.50 usec
TE 297.2 K
D1 1.00000000 sec
TD0 1

***** CHANNEL f1 *****
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W
SFO1 400.2604718 MHz

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 8-Methoxy-2-methyl-4-(2-methyl-1H-indol-3-yl)-N-(o-tolyl)-4H-chromene-3-carboxamide 4l

Signature SIF VIT VELLORE
02MIOT



NAME Dr.LKA180916
EXPNO 63
PROCNO 1

F2 - Acquisition Parameters
Date_ 20160919
Time_ 2.13
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 156.91
DW 20.800 usec
DE 6.50 usec
TE 297.9 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

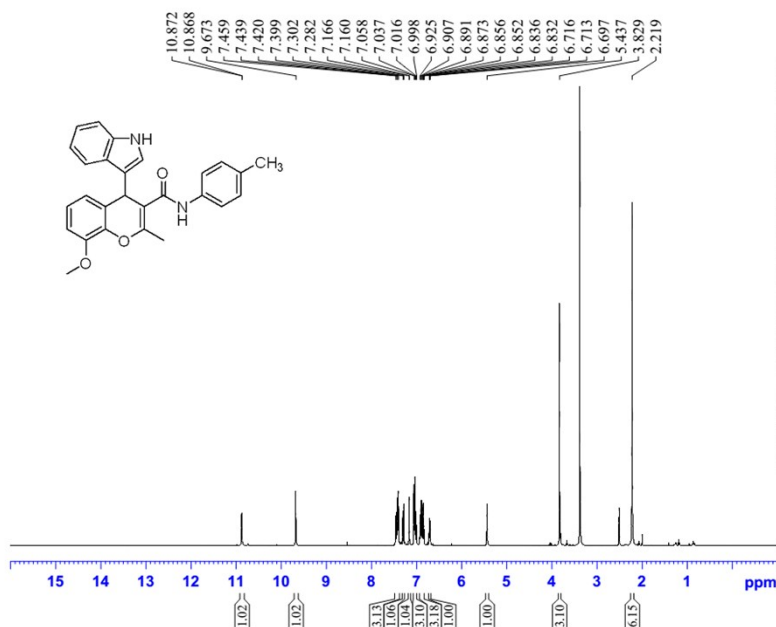
***** CHANNEL f1 *****
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO1 100.6550182 MHz

***** CHANNEL f2 *****
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.28428999 W
SFO2 400.2596010 MHz

F2 - Processing parameters
SI 32768
SF 100.6450043 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 8-Methoxy-2-methyl-4-(2-methyl-1H-indol-3-yl)-N-(o-tolyl)-4H-chromene-3-carboxamide 4l

Signature SIF VIT VELLORE
OME-IN-PT-AA



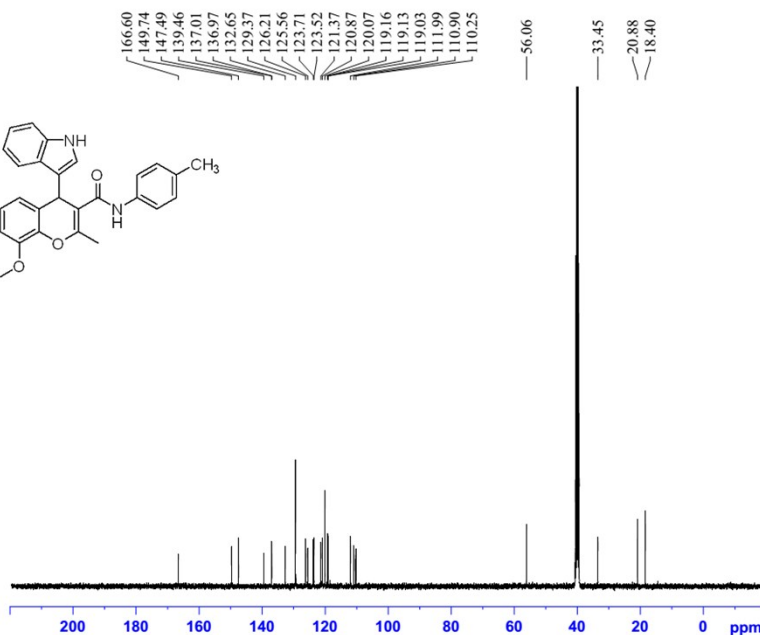
Current Data Parameters
NAME Dr.LKA150217
EXPNO 22
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170215
Time 15.53 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.244532 Hz
AQ 4.0894465 sec
RG 88.69
DW 62.400 usec
DE 6.50 usec
TE 298.5 K
D1 1.00000000 sec
D11 1
SFO1 400.2604716 MHz
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 4-(1*H*-indol-3-yl)-8-methoxy-2-methyl-*N*-(*p*-tolyl)-4*H*-chromene-3-carboxamide 4m

Signature SIF VIT VELLORE
OME-IN-PT-AA



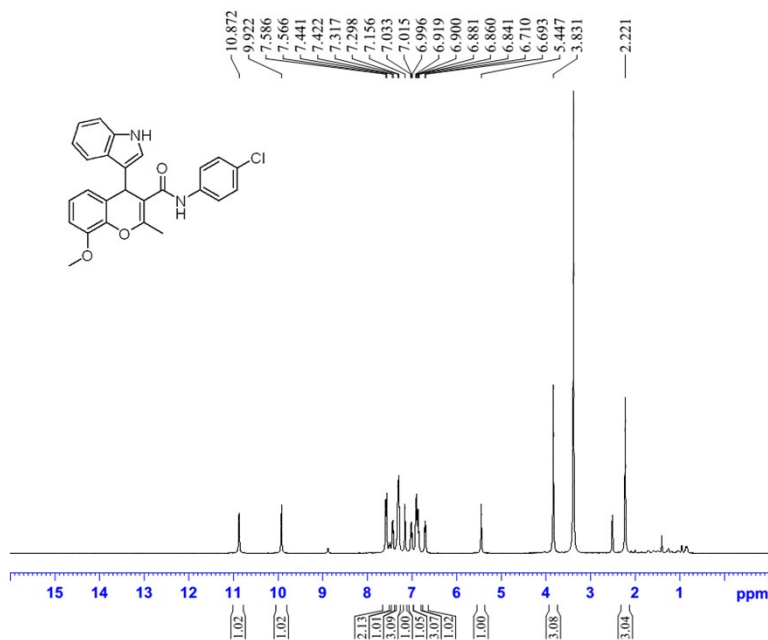
Current Data Parameters
NAME Dr.LKA150217
EXPNO 23
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170215
Time 23.57 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 1.3631488 sec
RG 143.73
DW 20.800 usec
DE 6.50 usec
TE 298.7 K
D1 2.00000000 sec
D11 0.03000000 sec
D12 1
SFO1 100.6550184 MHz
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO2 400.2596010 MHz
NUC2 1H
CPDPRG2 waltz16
PCPG2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.17654000 W

F2 - Processing parameters
SI 32768
SF 100.6449542 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 4-(1*H*-indol-3-yl)-8-methoxy-2-methyl-*N*-(*p*-tolyl)-4*H*-chromene-3-carboxamide 4m

Signature SIF VIT VELLORE
OME-IN-4CL-AA



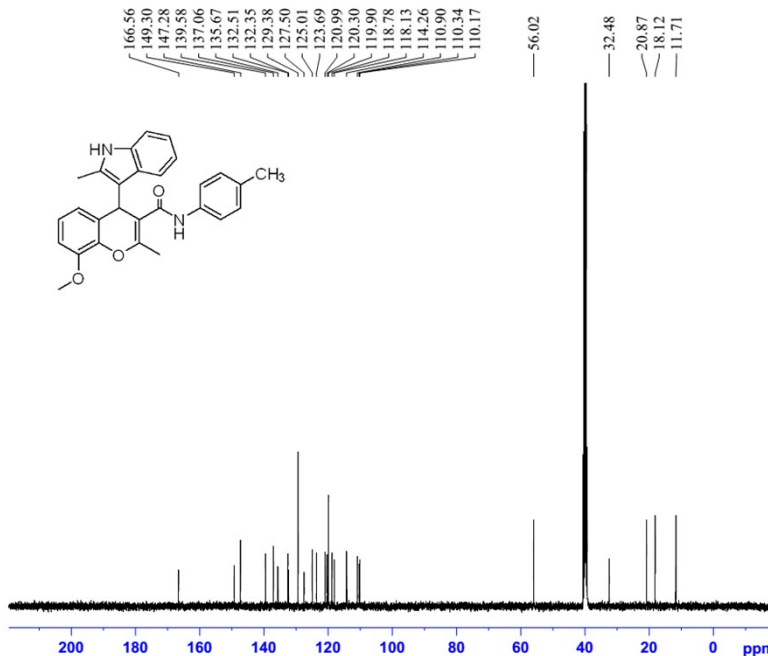
Current Data Parameters
NAME Dr.RS150217
EXPNO 18
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170215
Time 16.51 h
INSTRUM spect
PROBHD Z108618_0505 ()
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.244532 Hz
AQ 4.0894465 sec
RG 88.69
DW 62.400 usec
DE 6.50 usec
TE 298.8 K
D1 1.00000000 sec
TD0 1
SFO1 400.2604716 MHz
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 8-Methoxy-2-methyl-4-(2-methyl-1H-indol-3-yl)-N-(p-tolyl)-4H-chromene-3-carboxamide 4n

Signature SIF VIT VELLORE
OME-2MI-PT-AA



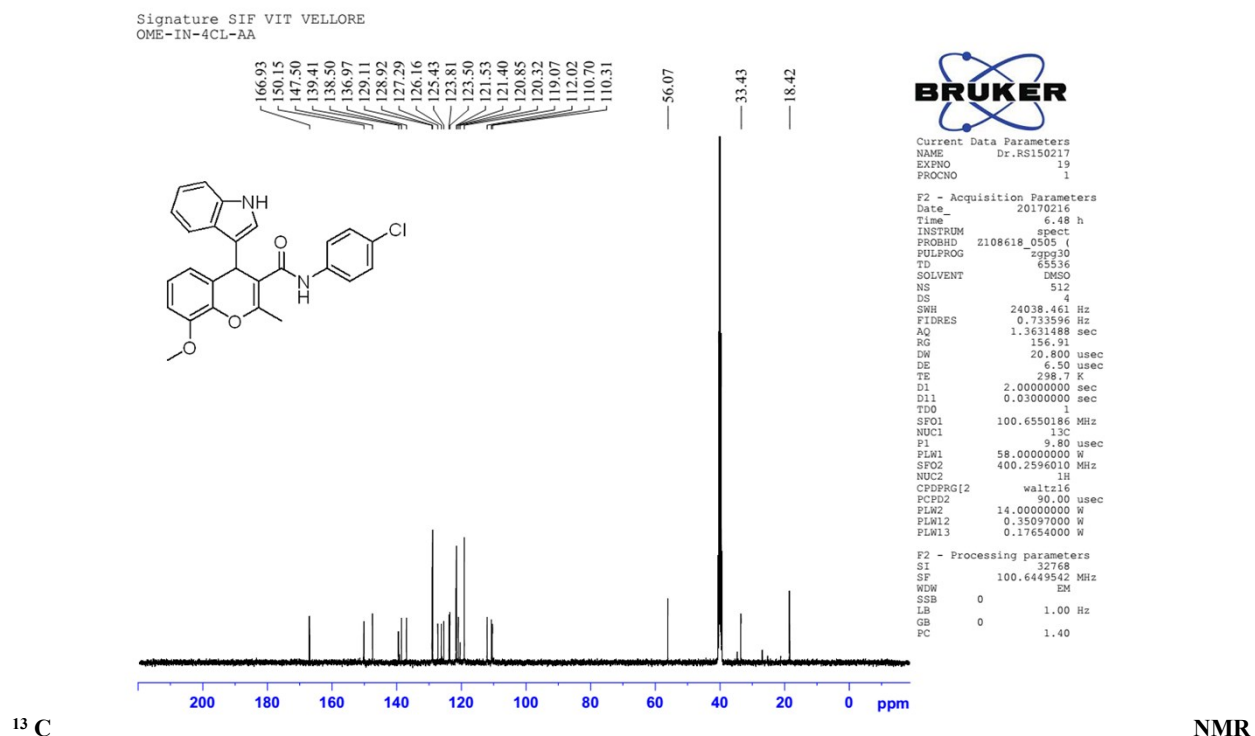
Current Data Parameters
NAME Dr.RS150217
EXPNO 17
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170216
Time 6.16 h
INSTRUM spect
PROBHD Z108618_0505 ()
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 1.3631488 sec
RG 143.73
DW 20.800 usec
DE 6.50 usec
TE 298.7 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1
SFO1 100.6550186 MHz
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO2 400.2596010 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.17654000 W

F2 - Processing parameters
SI 32768
SF 100.6449542 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

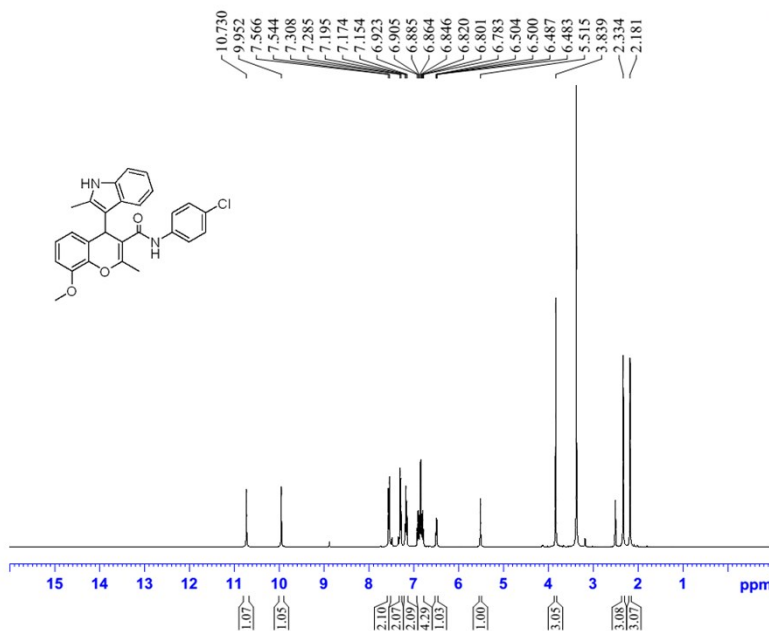
¹³CNMR Spectra of 8-Methoxy-2-methyl-4-(2-methyl-1H-indol-3-yl)-N-(p-tolyl)-4H-chromene-3-carboxamide 4n

¹H NMR Spectra of *N*-(4-Chlorophenyl)-4-(1*H*-indol-3-yl)-8-methoxy-2-methyl-4*H*-chromene-3-carboxamide 4o



Spectra of *N*-(4-Chlorophenyl)-4-(1*H*-indol-3-yl)-8-methoxy-2-methyl-4*H*-chromene-3-carboxamide 4o

Signature SIF VIT VELLORE
OME-2MIN-4CL-AA



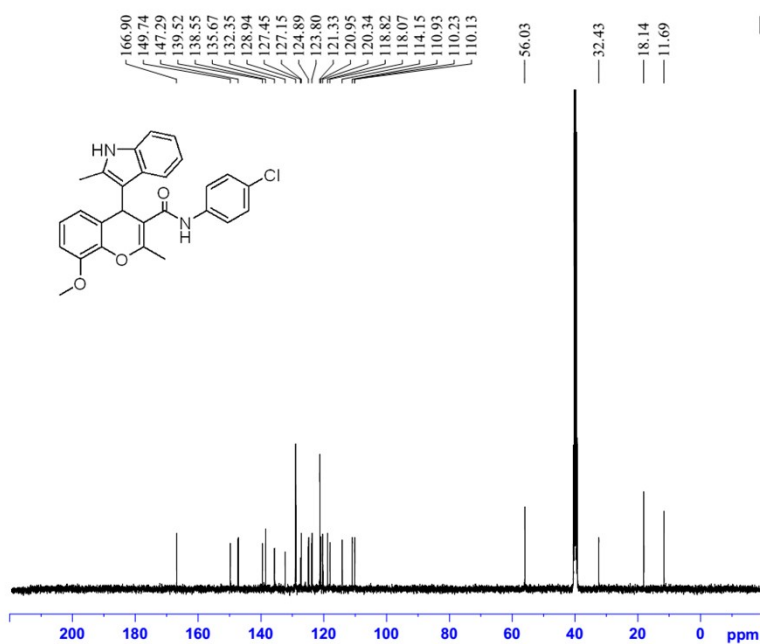
Current Data Parameters
NAME Dr.RS150217
EXPNO 14
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170215
Time 16.44 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.244532 Hz
AQ 4.0894465 sec
RG 98.85
DW 62.400 usec
DE 6.50 usec
TE 298.7 K
D1 1.00000000 sec
TD0 1
SFO1 400.2604716 MHz
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of *N*-(4-Chlorophenyl)-8-methoxy-2-methyl-4-(2-methyl-1*H*-indol-3-yl)-4*H*-chromene-3-carboxamide 4p

Signature SIF VIT VELLORE
OME-2MIN-4CL-AA



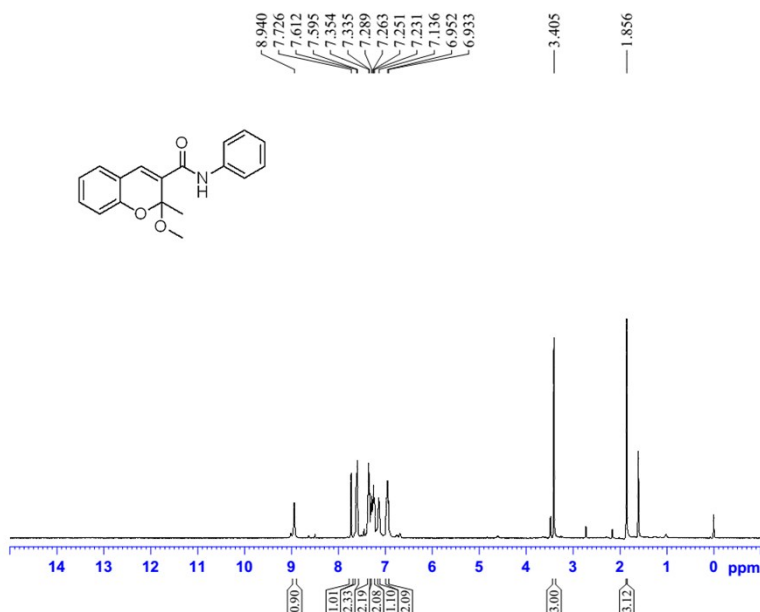
Current Data Parameters
NAME Dr.RS150217
EXPNO 15
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170216
Time 5.44 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 1.3631488 sec
RG 156.91
DW 20.800 usec
DE 6.50 usec
TE 298.7 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1
SFO1 100.6550186 MHz
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO2 400.2596010 MHz
NUC2 1H
CPDPRG12 waltz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.17654000 W

F2 - Processing parameters
SI 32768
SF 100.6449542 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of *N*-(4-Chlorophenyl)-8-methoxy-2-methyl-4-(2-methyl-1*H*-indol-3-yl)-4*H*-chromene-3-carboxamide 4p

Signature SIF VIT VELLORE
SA-OME-CARB



Current Data Parameters
NAME RS40716
EXPNO 2
PROCNO 1

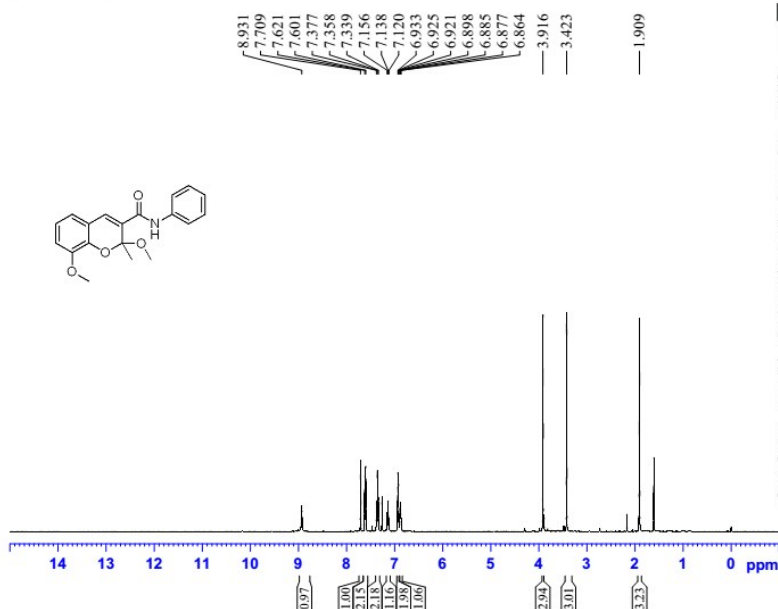
F2 - Acquisition Parameters
Date_ 20160708
Time 14.54
INSTRUM spect
PROBHD 5 mm PABBO B8/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9845889 sec
RG 143.73
DW 60.800 usec
DE 6.50 usec
TE 306.6 K
D1 1.00000000 sec
TDO 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W
SFO1 400.2604718 MHz

F2 - Processing parameters
SI 65536
SF 400.2580146 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 2-Methoxy-2-methyl-N-phenyl-2H-chromene-3-carboxamide

Signature SIF VIT VELLORE
OME-AMD-MEOH



Current Data Parameters
NAME 32
EXPNO 31
PROCNO 1

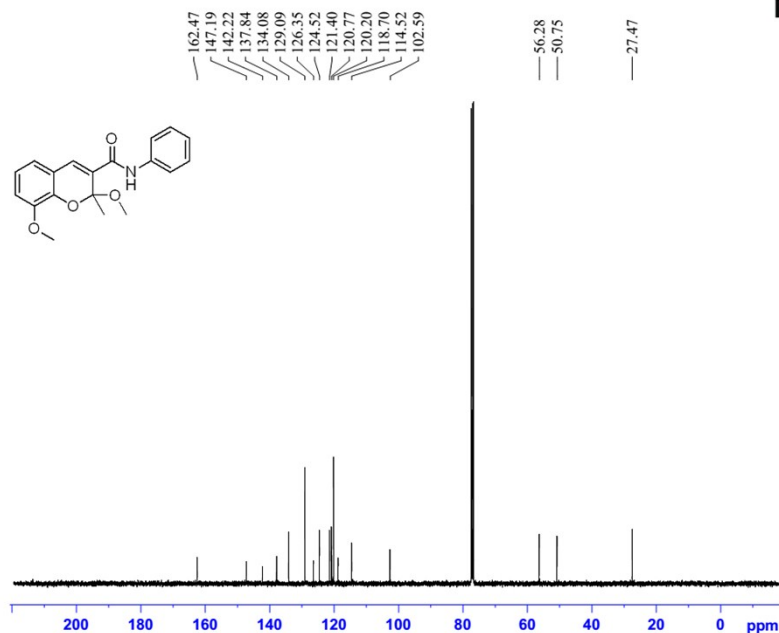
F2 - Acquisition Parameters
Date_ 20160616
Time 18.03
INSTRUM spect
PROBHD 5 mm PABBO B8/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9845889 sec
RG 156.91
DW 60.800 usec
DE 6.50 usec
TE 300.9 K
D1 1.00000000 sec
TDO 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W
SFO1 400.2604718 MHz

F2 - Processing parameters
SI 65536
SF 400.2580117 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 2,8-Dimethoxy-2-methyl-N-phenyl-2H-chromene-3-carboxamide

Signature SIF VIT VELLORE
OME-AMD-MEOH



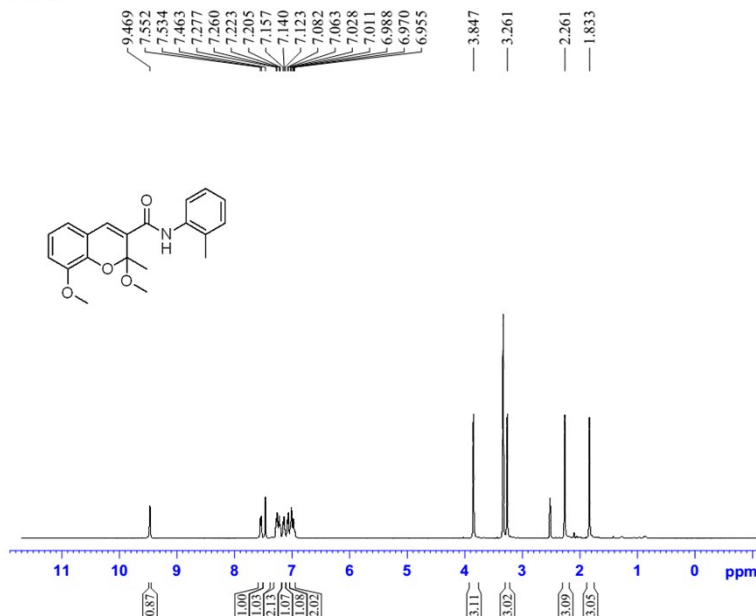
Current Data Parameters
NAME 35
EXPNO 34
PROCNO 1

F2 - Acquisition Parameters
Date_ 20160616
Time 18.33
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 195.6
DW 20.800 usec
DE 6.50 usec
TE 301.9 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
SFO1 100.6550182 MHz
NUC1 13C
P1 9.80 usec
PLM1 58.00000000 W
SFO2 400.2596010 MHz
NUC2 1H
CFDPRG2 waltz16
PCPD 90.00 usec
PLM2 14.00000000 W
PLM12 0.35097000 W
PLM13 0.28428999 W

F2 - Processing parameters
SI 32768
SF 100.6449540 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 2,8-Dimethoxy-2-methyl-N-phenyl-2H-chromene-3-carboxamide

Signature SIF VIT VELLORE
OME-OT



Current Data Parameters
NAME 6
EXPNO 6
PROCNO 1

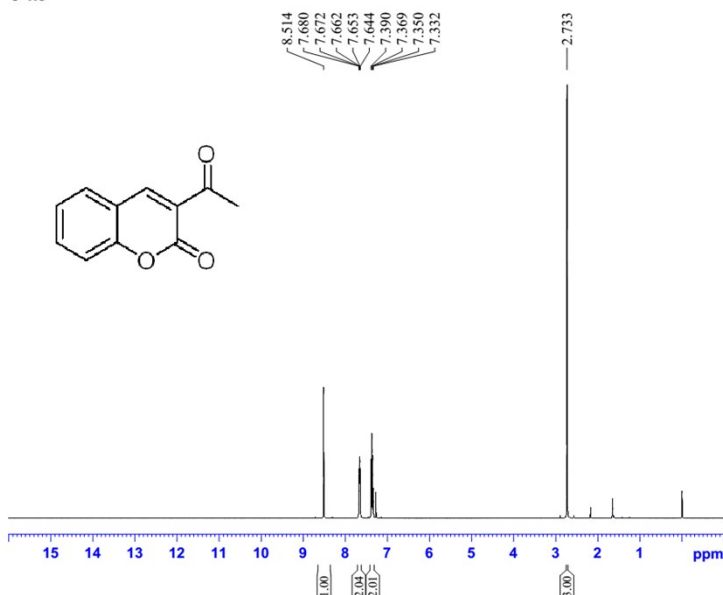
F2 - Acquisition Parameters
Date_ 20160706
Time 12.31
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9845889 sec
RG 112.69
DW 60.800 usec
DE 6.50 usec
TE 306.9 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.25 usec
PLM1 14.00000000 W
SFO1 400.2604718 MHz

F2 - Processing parameters
SI 65536
SF 400.2599013 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 2,8-Dimethoxy-2-methyl-N-(o-tolyl)-2H-chromene-3-carboxamide

Signature SIF VIT VELLORE
3-AC



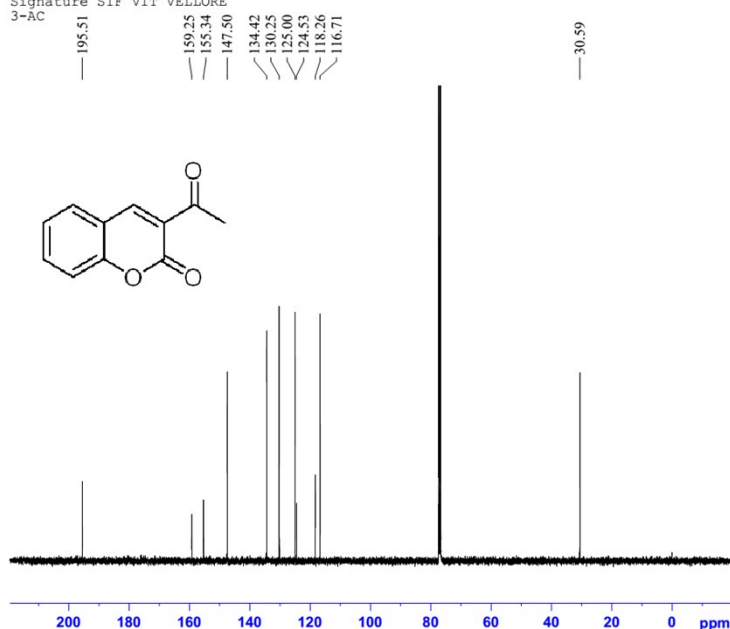
Current Data Parameters
NAME Dr.RS020317
EXPNO 5
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170303
Time 6.10 h
INSTRUM spect
PROBHD Z108618_0505 (f
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.244532 Hz
AQ 4.0894465 sec
RG 143.73
DW 62.400 usec
DE 6.50 usec
TE 298.3 K
D1 1.00000000 sec
TDO 1
SFO1 400.2604716 MHz
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.2580045 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 3-Acetyl-2H-chromen-2-one 6a

Signature SIF VIT VELLORE
3-AC



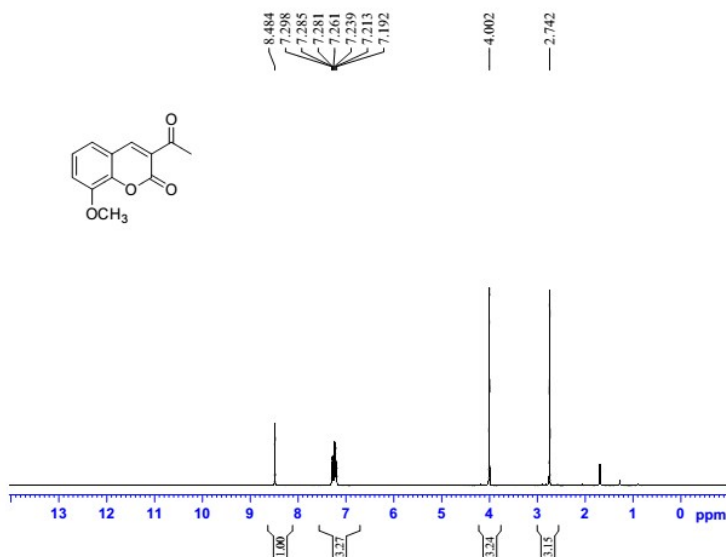
Current Data Parameters
NAME Dr.RS020317
EXPNO 6
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170303
Time 6.40 h
INSTRUM spect
PROBHD Z108618_0505 (f
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 1.3631488 sec
RG 156.91
DW 20.800 usec
DE 6.50 usec
TE 298.9 K
D1 2.00000000 sec
D11 0.03000000 sec
TDO 1
SFO1 100.6550186 MHz
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO2 400.2596010 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.17654000 W

F2 - Processing parameters
SI 32768
SF 100.6448942 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 3-Acetyl-2H-chromen-2-one 6a

Signature SIF VIT VELLORE
CHR-OET



Current Data Parameters
NAME 1
EXPNO 1
PROCNO 1

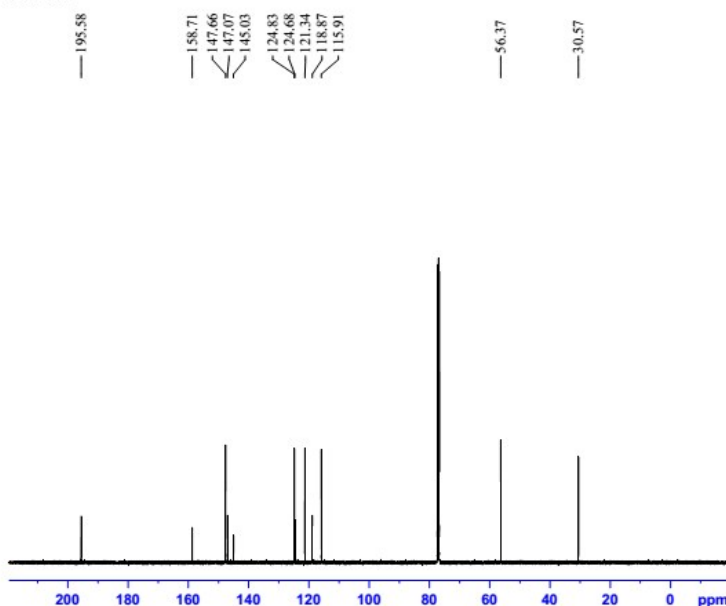
F2 - Acquisition Parameters
Date_ 20160402
Time 16.54
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9845889 sec
RG 127.79
CW 60.800 usec
DE 6.50 usec
TE 303.2 K
D1 1.00000000 sec
TD0 1

***** CHANNEL f1 *****
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W
SFO1 400.2604718 MHz

F2 - Processing parameters
SI 65536
SF 400.2580000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 3-Acetyl-8-methoxy-2H-chromen-2-one 6b

Signature SIF VIT VELLORE
CHR-OET



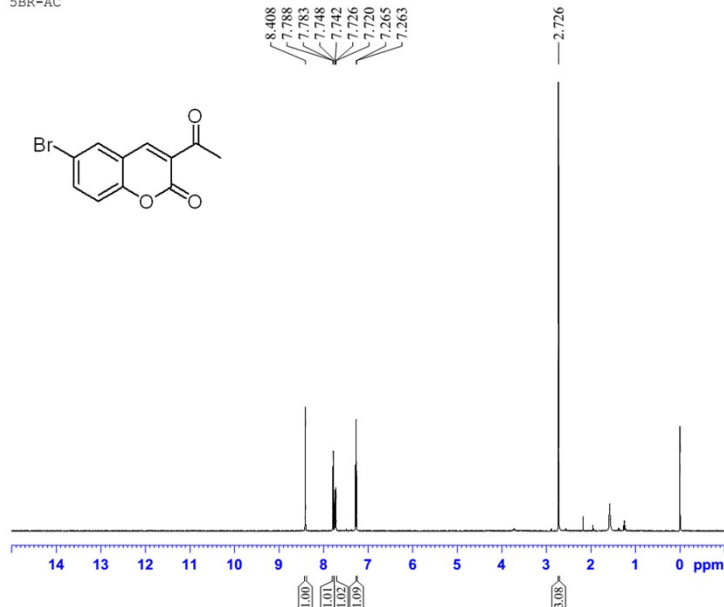
Current Data Parameters
NAME 2
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20160403
Time 5.31
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 175.97
CW 20.500 usec
DE 6.50 usec
TE 300.7 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
SFO1 100.6550182 MHz
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO2 400.2596010 MHz
NUC2 1H
PCPDPRG12 waltz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.28428999 W

F2 - Processing parameters
SI 32768
SF 100.6449540 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 3-Acetyl-8-methoxy-2H-chromen-2-one 6b

Signature SIF VIT VELLORE
5BR-AC



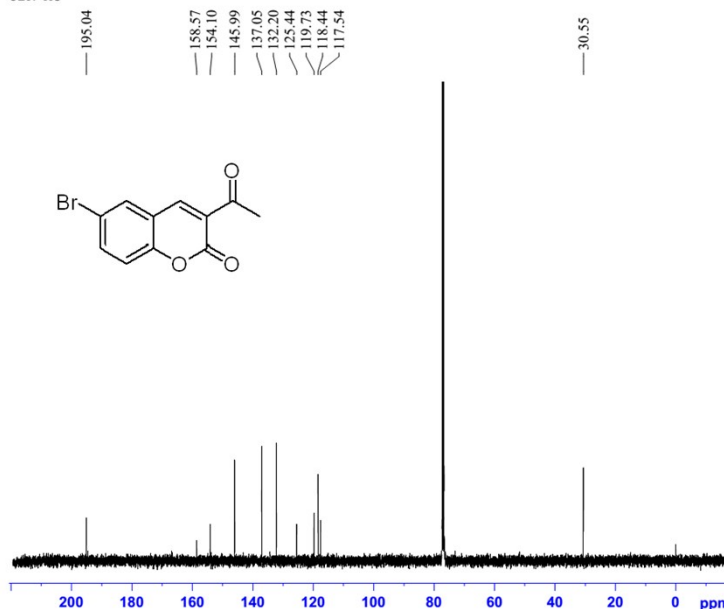
Current Data Parameters
NAME Dr.LKA020317
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170303
Time_ 0.21 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.244532 Hz
AQ 4.0894465 sec
RG 199.6
DW 62.400 usec
DE 6.50 usec
TE 298.4 K
D1 1.00000000 sec
TDO 1
SFO1 400.2604716 MHz
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.2580081 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 3-Acetyl-6-bromo-2H-chromen-2-one 6c

Signature SIF VIT VELLORE
5BR-AC



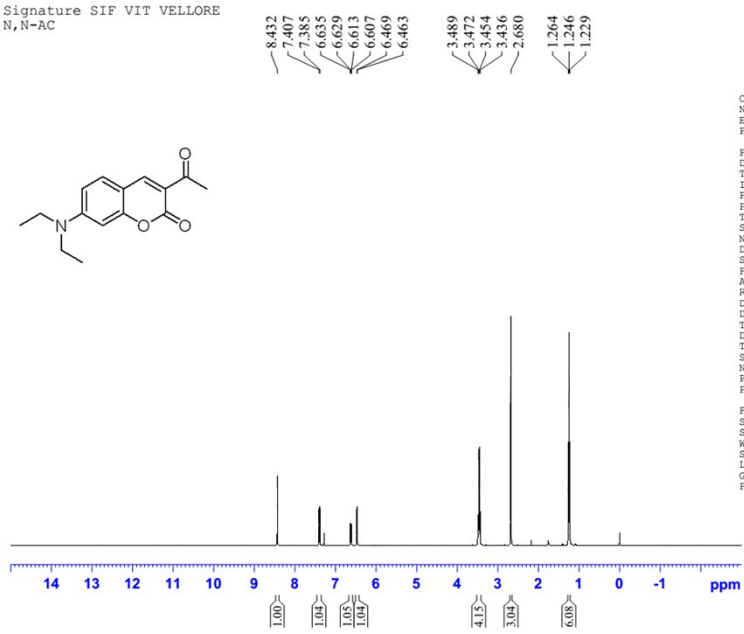
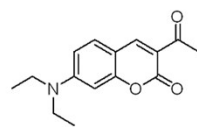
Current Data Parameters
NAME Dr.LKA020317
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170303
Time_ 0.51 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 1.3631488 sec
RG 343.73
DW 20.800 usec
DE 6.50 usec
TE 299.0 K
D1 2.00000000 sec
D11 0.03000000 sec
TDO 1
SFO1 100.6550186 MHz
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO2 400.2596010 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.17654000 W

F2 - Processing parameters
SI 32768
SF 100.6449542 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 3-Acetyl-6-bromo-2H-chromen-2-one 6c

Signature SIF VIT VELLORE
N,N-AC



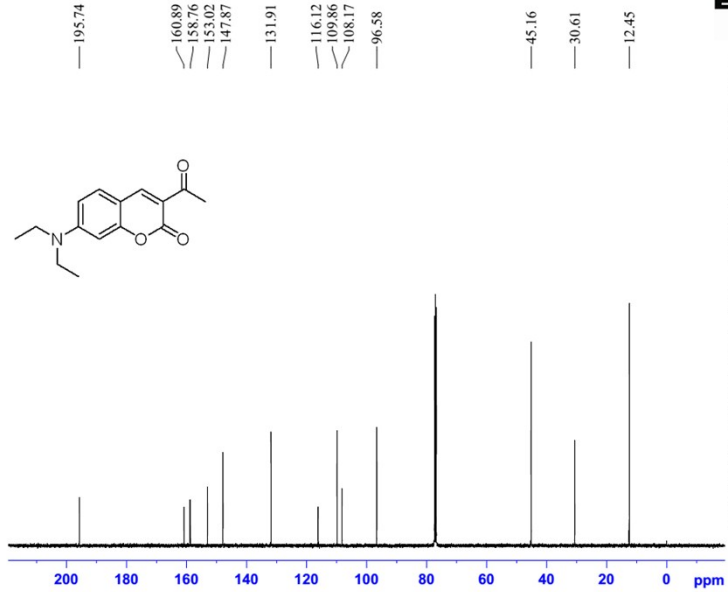
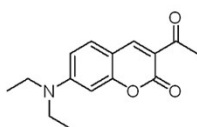
Current Data Parameters
NAME Dr.RS020317
EXPNO 3
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170303
Time 9.36 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.244532 Hz
AQ 4.0894465 sec
RG 88.69
SW 62.400 usec
DE 6.50 usec
TE 298.3 K
D1 1.00000000 sec
TD0
SFO1 400.2604716 MHz
NUC1 1H
P1 14.25 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.2580008 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H NMR Spectra of 3-Acetyl-7-(diethylamino)-2H-chromen-2-one 6d

Signature SIF VIT VELLORE
N,N-AC



Current Data Parameters
NAME Dr.RS020317
EXPNO 4
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170303
Time 6.06 h
INSTRUM spect
PROBHD Z108618_0505 (
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.733596 Hz
AQ 1.3631488 sec
RG 112.69
SW 20.800 usec
DE 6.50 usec
TE 298.9 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0
SFO1 100.6550186 MHz
NUC1 13C
P1 9.80 usec
PLW1 58.00000000 W
SFO2 400.2596010 MHz
NUC2 1H
CPOPRG[2] waltz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.35097000 W
PLW13 0.17654000 W

F2 - Processing parameters
SI 32768
SF 100.6449542 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C NMR Spectra of 3-Acetyl-7-(diethylamino)-2H-chromen-2-one 6d

