Synthesis of 3-(4-bromo-phenyl)-2-(4-hydroxy-6-methyl-2-oxo-2H-pyran-3-carbonyl)-6,6-dimethyl-3,5,6,7-tetrahydro-2H-benzofuran-4-one (4b). A mixture of 3-(2-bromoacetyl)-4-hydroxy-6-methyl-2H-pyran-2-one (1.1 mmol), dimedone (1 mmol), 4-bromo benzaldehyde **(**1 mmol) and pyridine (2 mmol) in acetonitrile (10 mL) was refluxed for 3hr. To the reaction mixture triethylamine (2.1 mmol) was added and the reaction mixture was refluxed for the appropriate time (Table 1). After cooling to room temperature, the solvent was distilled and neutralized with dil. HCl. The solid obtained was filtered washed with water and recrystallized from ethanol to give excellent yields of products (Table 1). Yellow solid; mp 278-280 ^{o}C; IR (KBr) (υ_{max}/ cm^{-1}): 3400, 1719, 1629; ^{1}H NMR (400 MHz, DMSO-d_6) 1.07 (s, 6H, 2xCH_3), 2.05-2.15 (m, 2H, CH_2), 2.27-2.39 (m, 5H, CH_2 & pyran CH_3), 4.21 (d, 1H, J = 4.8 Hz, furan C-3 proton), 4.80 (d, 1H, J = 4.4 Hz, furan C-2 proton), 6.15 (s, 1H, pyran proton), 7.21 (d, 2H, J = 8.0 Hz, ArH), 7.51 (d, 2H, J = 8.0 Hz, ArH); ^{13}C NMR (400 MHz, DMSO-d_6) 22.3, 27.9, 33.8, 36.2, 49.2, 51.6, 88.4, 99.4, 102.9, 112.7, 121.3, 130.9, 131.2, 136.1, 161.5, 164.6, 176.6, 185.4, 192.1, 199.9; Mass spectrum m/z: 475 $[M+2]^{+}$. Anal. calcd. for $C_{23}H_{21}BrO_6$: C, 58.36; H, 4.47. Found: C, 58.31; H, 4.42.

Synthesis of 3-(4-chloro-phenyl)-2-(4-hydroxy-6-methyl-2-oxo-2H-pyran-3-carbonyl)-6,6-dimethyl 3,5,6,7-tetrahydro-2H-benzofuran-4-one (4c). A mixture of 3-(2-bromoacetyl)-4-hydroxy-6-methyl-2H-pyran-2-one (1.1 mmol), dimedone (1 mmol), 4-chloro benzaldehyde **(**1 mmol) and pyridine (2 mmol) in acetonitrile (10 mL) was refluxed for 3hr. To the reaction mixture triethylamine (2.1 mmol) was added and the reaction mixture was refluxed for the appropriate time (Table 1). After cooling to room temperature, the solvent was distilled and neutralized with dil. HCl. The solid obtained was filtered washed with water and recrystallized from ethanol to give excellent yields of products (Table 1). Yellow solid; mp 271-273^{o}C; IR (KBr) (υ_{max}/ cm^{-1}): 3400, 1719, 1629; ^{1}H NMR (400 MHz, DMSO-d_6) 1.07 (s, 6H, 2xCH_3), 2.04-2.15 (m, 5H, CH_2 & pyran CH_3), 2.40-2.43 (m, 2H, CH_2), 4.01 (d, 1H, J = 4.8 Hz, furan C-3 proton), 4.81 (d, 1H, J = 4.0 Hz, furan C-2 proton), 6.16 (s, 1H, pyran proton), 7.27 (d, 2H, J = 8.4 Hz, ArH), 7.38 (d, 2H, J = 8.4 Hz, ArH); ^{13}C NMR (400 MHz, DMSO-d_6) 22.0, 27.9, 33.9, 36.2, 49.2, 51.6, 88.3, 100.0, 103.0, 112.8, 128.3, 130.6, 132.7, 135.7, 162.3, 164.4, 176.6, 185.2, 192.2, 198.9; Mass spectrum m/z: 429 $[M+H]^{+}$. Anal. calcd. for $C_{23}H_{21}ClO_6$: C, 64.41; H, 4.94. Found: C, 64.66; H, 4.87.

Synthesis of 2-(4-hydroxy-6-methyl-2-oxo-2H-pyran-3-carbonyl)-3-(4-hydroxy-phenyl)-6,6-dimethyl-3,5,6,7-tetrahydro-2H-benzofuran-4-one (4d). A mixture of 3-(2-bromoacetyl)-4-hydroxy-6-methyl-2H-pyran-2-one (1.1 mmol), dimedone (1 mmol), 4-

hydroxy benzaldehyde **(**1 mmol) and pyridine (2 mmol) in acetonitrile (10 mL) was refluxed for 3hr. To the reaction mixture triethylamine (2.1 mmol) was added and the reaction mixture was refluxed for the appropriate time (Table 1). After cooling to room temperature, the solvent was distilled and neutralized with dil. HCl. The solid obtained was filtered washed with water and recrystallized from ethanol to give excellent yields of products (Table 1). Yellow solid; mp 310-312 ^{o}C; IR (KBr) (υ_{max}/ cm^{-1}): 3379, 1720, 1630; ^{1}H NMR (400 MHz, DMSO-d_6) 1.07 (s, 6H, 2xCH_3), 2.04-2.14 (m, 2H, CH_2), 2.22 (s, 3H, CH_3), 2.40-2.48 (m, 2H, CH_2), 4.12 (d, 1H, J = 4.8 Hz, furan C-3 proton), 4.85 (d, 1H, J = 4.0 Hz, furan C-2 proton), 6.20 (s, 1H, pyran proton), 6.65 (d, 2H, J = 8.4 Hz, ArH), 7.02 (d, 2H, J = 8.0 Hz, ArH); ^{13}C NMR (400 MHz, DMSO-d_6) 22.2, 27.7, 33.0, 36.1, 49.2, 51.6, 88.6, 99.7, 103.0, 112.8, 128.3, 130.6, 135.7, 156.1, 162.5, 163.7, 176.6, 186.2, 192.2, 198.9; Mass spectrum m/z: 411 $[M+H]^+$. Anal. calcd. for $C_{23}H_{22}O_7$: C, 67.31; H, 5.40. Found: C, 67.38; H, 5.36.

Synthesis of 3-(4-Hydroxy-3-methoxy-phenyl)-2-(4-hydroxy-6-methyl-2-oxo-2H-pyran-3-carbonyl)-6,6 dimethyl-3,5,6,7-tetrahydro-2H-benzofuran-4-one (4e). A mixture of 3-(2-bromoacetyl)-4-hydroxy-6-methyl-2H-pyran-2-one (1.1 mmol), dimedone (1 mmol), 4-hydroxy-3-methoxy benzaldehyde **(**1 mmol) and pyridine (2 mmol) in acetonitrile (10 mL) was refluxed for 3hr. To the reaction mixture triethylamine (2.1 mmol) was added and the reaction mixture was refluxed for the appropriate time (Table 1). After cooling to room temperature, the solvent was distilled and neutralized with dil. HCl. The solid obtained was filtered washed with water and recrystallized from ethanol to give excellent yields of products (Table 1). Yellow solid; mp 225-227 ^{o}C; IR (KBr) (υ_{max}/ cm^{-1}): 3400, 1718, 1656; ^{1}H NMR (400 MHz, DMSO-d_6) 1.18 (s, 6H, 2xCH_3), 2.19-2.28 (m, 5H, CH_2 & pyran CH_3), 2.38-2.40 (m, 2H, CH_2), 3.84 (s, 3H, OCH_3), 4.12 (d, 1H, J = 4.8 Hz, furan C-3 proton), 4.96 (d, 1H, J = 4.4 Hz, furan C-2 proton), 6.17 (s, 1H, pyran proton), 7.09-7.12 (m, 2H, ArH), 7.55-7.59 (m, 1H, ArH); ^{13}C NMR (400 MHz, DMSO-d_6) 22.2, 27.8, 33.7, 36.4, 49.1, 51.5, 55.5, 88.1, 99.6, 108.1, 115.3, 118.9, 121.0, 126.9, 144.9, 146.0, 152.9, 160.0, 162.7, 176.5, 184.0, 190.9, 198.0; Mass spectrum m/z: 441 $[M+H]^+$. Anal. calcd. for $C_{24}H_{24}O_8$: C, 65.45; H, 5.49. Found: C, 65.49; H, 5.40.

Synthesis of 2-(4-Hydroxy-6-methyl-2-oxo-2H-pyran-3-carbonyl)-6,6-dimethyl-3-(4-nitro-phenyl)-3,5,6,7-tetrahydro-2H-benzofuran-4-one (4f). A mixture of 3-(2-bromoacetyl)-4-hydroxy-6-methyl-2H-pyran-2-one (1.1 mmol), dimedone (1 mmol), 4-nitro

benzaldehyde **(**1 mmol) and pyridine (2 mmol) in acetonitrile (10 mL) was refluxed for 3hr. To the reaction mixture triethylamine (2.1 mmol) was added and the reaction mixture was refluxed for the appropriate time (Table 1). After cooling to room temperature, the solvent was distilled and neutralized with dil. HCl. The solid obtained was filtered washed with water and recrystallized from ethanol to give excellent yields of products (Table 1). Yellow solid; mp 181-183 ^{o}C; IR (KBr) (υ_{max}/ cm^{-1}): 3379, 1720, 1649; ^{1}H NMR (400 MHz, DMSO-d_6) 1.15 (s, 6H, 2xCH_3), 2.07-2.17 (m, 5H, CH_2 & pyran CH_3), 2.43-2.47 (m, 2H, CH_2), 4.17 (d, 1H, J = 5.2 Hz, furan C-3 proton), 5.00 (d, 1H, J = 4.4 Hz, furan C-2 proton), 6.15 (s, 1H, pyran proton), 7.55(d, 2H, J = 8.0 Hz, ArH), 8.19 (d, 2H, J = 8.4 Hz, ArH); ^{13}C NMR (400 MHz, DMSO-d_6) 22.2, 27.8, 33.9, 36.2, 49.1, 51.4, 55.5, 88.5, 99.8, 102.8, 112.8, 122.6, 127.7, 144.2, 147.1, 162.2, 163.3, 177.0, 185.5, 192.1, 198.7. Anal. calcd. for $C_{23}H_{21}NO_8$: C, 62.86; H, 4.82; N, 3.19. Found: C, 62.82; H, 4.78; N, 3.24.

Synthesis of 2-(4-Hydroxy-6-methyl-2-oxo-2H-pyran-3-carbonyl)-6,6-dimethyl-3-(2,3,4-trimethoxy-phenyl)-3,5,6,7-tetrahydro-2H-benzofuran-4-one (4g). A mixture of 3-(2-bromoacetyl)-4-hydroxy-6-methyl-2H-pyran-2-one (1.1 mmol), dimedone (1 mmol), 2,3,4-trimethoxy benzaldehyde **(**1 mmol) and pyridine (2 mmol) in acetonitrile (10 mL) was refluxed for 3hr. To the reaction mixture triethylamine (2.1 mmol) was added and the reaction mixture was refluxed for the appropriate time (Table 1). After cooling to room temperature, the solvent was distilled and neutralized with dil. HCl. The solid obtained was filtered washed with water and recrystallized from ethanol to give excellent yields of products (Table 1). Yellow solid; mp 191-193 ^{o}C; IR (KBr) (υ_{max}/ cm^{-1}): 3395, 1708, 1648; ^{1}H NMR (400 MHz, DMSO-d_6) 1.13 (s, 6H, 2xCH_3), 2.17-2.28 (m, 5H, CH_2 & pyran CH_3), 2.47-2.53 (m, 2H, CH_2), 3.84 (s, 3H, OCH_3), 3.85 (s, 3H, OCH_3), 3.86 (s, 3H, OCH_3), 4.28 (d, 1H, J = 5.2 Hz, furan C-3 proton), 5.09 (d, 1H, J = 4.8 Hz, furan C-2 proton), 6.18 (s, 1H, pyran proton), 7.26 (d, 1H, J = 7.2 Hz, ArH), 7.58 (d, 1H, J = 6.8 Hz, ArH). Anal. calcd. for $C_{26}H_{28}O_9$: C, 64.45; H, 5.83. Found: C, 64.48; H, 5.87.

Synthesis of 3-(2-Hydroxy-3-methoxy-phenyl)-2-(4-hydroxy-6-methyl-2-oxo-2H-pyran-3-carbonyl)-6,6-dimethyl-3,5,6,7-tetrahydro-2H-benzofuran-4-one (4h). A mixture of 3-(2-bromoacetyl)-4-hydroxy-6-methyl-2H-pyran-2-one (1.1 mmol), dimedone (1 mmol), 2-hydroxy-3-methoxy benzaldehyde **(**1 mmol) and pyridine (2 mmol) in acetonitrile (10 mL) was refluxed for 3hr. To the reaction mixture triethylamine (2.1 mmol) was added and the reaction mixture was refluxed for the appropriate time (Table 1). After cooling to room temperature, the solvent was distilled and neutralized with dil. HCl. The solid obtained was

filtered washed with water and recrystallized from ethanol to give excellent yields of products (Table 1). Yellow solid; mp 219-221 ^{o}C; IR (KBr) (υ_{max}/ cm^{-1}): 3379, 1731, 1633; ^{1}H NMR (400 MHz, DMSO-d_6) 1.18 (s, 6H, 2xCH_3), 2.09-2.20 (m, 2H, CH_2), 2.28 (s, 3H, CH_3), 2.48-2.50 (m, 2H, CH_2), 3.84 (s, 3H, OCH_3), 4.26 (d, 1H, J = 4.4 Hz, furan C-3 proton), 5.10 (d, 1H, J = 4.4 Hz, furan C-2 proton), 6.15 (s, 1H, pyran proton), 7.22 (d, 1H, J = 9.2 Hz, ArH), 7.36-7.40 (m, 2H, ArH). Anal. calcd. for $C_{24}H_{24}O_8$: C, 65.43; H, 5.47. Found: C, 65.47; H, 5.49.

Synthesis of 2-(4-Hydroxy-6-methyl-2-oxo-2H-pyran-3-carbonyl)-3-(4-methoxy-phenyl)-6,6-dimethyl-3,5,6,7-tetrahydro-2H-benzofuran-4-one (4i). A mixture of 3-(2-bromoacetyl)-4-hydroxy-6-methyl-2H-pyran-2-one (1.1 mmol), dimedone (1 mmol), 4-methoxy benzaldehyde **(**1 mmol) and pyridine (2 mmol) in acetonitrile (10 mL) was refluxed for 3hr. To the reaction mixture triethylamine (2.1 mmol) was added and the reaction mixture was refluxed for the appropriate time (Table 1). After cooling to room temperature, the solvent was distilled and neutralized with dil. HCl. The solid obtained was filtered washed with water and recrystallized from ethanol to give excellent yields of products (Table 1). Yellow solid; mp 221-223 ^{o}C; IR (KBr) (υ_{max}/ cm^{-1}): 3384, 1731, 1649; ^{1}H NMR (400 MHz, DMSO-d_6) 1.18 (s, 6H, 2xCH_3), 2.12-2.23 (m, 5H, CH_2 & pyran CH_3), 2.39-2.43 (m, 2H, CH_2), 3.71 (s, 3H, OCH_3), 4.22 (d, 1H, J = 4.8 Hz, furan C-3 proton), 5.00 (d, 1H, J = 4.4 Hz, furan C-2 proton), 6.19 (s, 1H, pyran proton), 6.70 (d, 2H, J = 8.4 Hz, ArH), 7.08 (d, 2H, J = 8.4 Hz, ArH); ^{13}C NMR (400 MHz, DMSO-d_6) 22.5, 27.8, 33.9, 36.2, 49.1, 51.5, 56.1, 88.7, 100.1, 103.0, 112.8, 118.8, 130.6, 135.7, 159.9, 162.2, 163.8, 176.6, 185.7, 192.1, 200.0. Anal. calcd. for $C_{24}H_{24}O_7$: C, 67.91; H, 5.68. Found: C, 67.97; H, 5.63.

Synthesis of 2-(4-hydroxy-6-methyl-2-oxo-2H-pyran-3-carbonyl)-3-(2-hydroxy-naphthalen-1-yl)-6,6-dimethyl-3,5,6,7-tetrahydro-2H-benzofuran-4-one (4j). A mixture of 3-(2-bromoacetyl)-4-hydroxy-6-methyl-2H-pyran-2-one (1.1 mmol), dimedone (1 mmol), 2-hydroxy-1-naphthaldehyde **(**1 mmol) and pyridine (2 mmol) in acetonitrile (10 mL) was refluxed for 3hr. To the reaction mixture triethylamine (2.1 mmol) was added and the reaction mixture was refluxed for the appropriate time (Table 1). After cooling to room temperature, the solvent was distilled and neutralized with dil. HCl. The solid obtained was filtered washed with water and recrystallized from ethanol to give excellent yields of products (Table 1). Yellow solid; mp 201-203 ^{o}C; IR (KBr) (υ_{max}/ cm^{-1}): 3384, 1736, 1657; ^{1}H NMR (400 MHz, DMSO-d_6) 0.97 (s, 3H, CH_3), 1.07 (s, 3H, CH_3), 2.18-2.22 (m, 5H, CH_2 & pyran CH_3), 2.50-2.57 (m, 2H, CH_2), 4.40 (d, 1H, J = 4.8 Hz, furan C-3 proton), 4.85 (d,

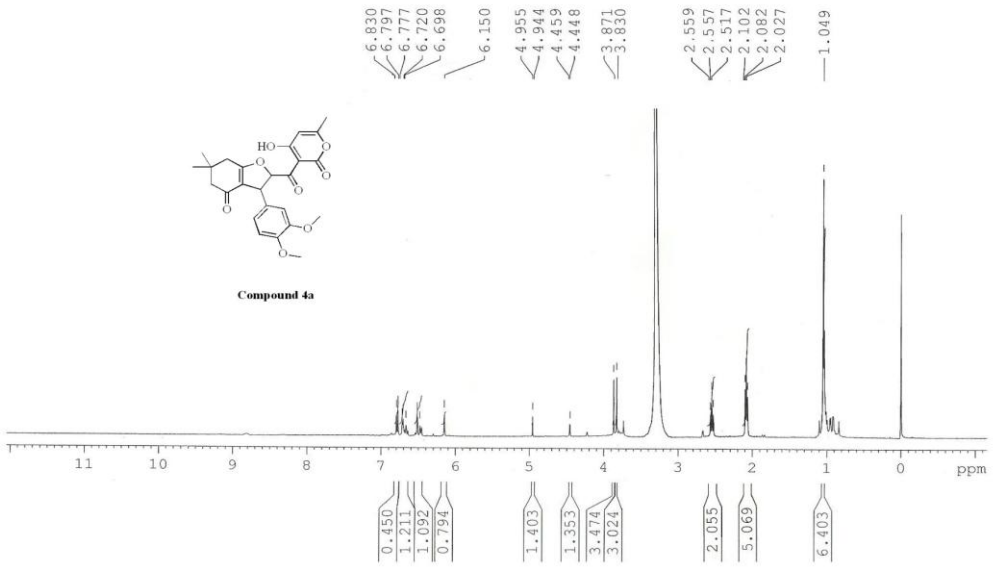
1H, J = 4.4 Hz, furan C-2 proton), 6.18 (s, 1H, pyran proton), 7.36-7.43 (m, 2H, ArH), 7.75 (d, 1H, J = 8.8 Hz, ArH), 7.83 (d, 1H, J = 7.6 Hz, ArH), 8.09-8.12 (m, 2H, ArH); ^{13}C NMR (400 MHz, DMSO-d_6) 22.0, 25.8, 27.4, 31.6, 40.4, 50.5, 87.1, 99.6, 108.2, 116.6, 117.3, 123.5, 124.2, 126.2, 126.8, 127.6, 128.1, 130.4, 131.5, 147.9, 159.8, 162.7, 176.0, 183.8, 190.0, 195.8. Anal. calcd. for $C_{27}H_{24}O_7$: C, 70.42; H, 5.25. Found: C, 70.49; H, 5.29.

Synthesis of 2-(4-hydroxy-6-methyl-2-oxo-2H-pyrn-3-carbonyl)-3-(2-hydroxy-phenyl)-6,6-dimethyl-3,5,6,7-tetrahydro-2H-benzofuran-4-one (4k). A mixture of 3-(2-bromoacetyl)-4-hydroxy-6-methyl-2H-pyran-2-one (1.1 mmol), dimedone (1 mmol), 2-hydroxy benzaldehyde **(**1 mmol) and pyridine (2 mmol) in acetonitrile (10 mL) was refluxed for 3hr. To the reaction mixture triethylamine (2.1 mmol) was added and the reaction mixture was refluxed for the appropriate time (Table 1). After cooling to room temperature, the solvent was distilled and neutralized with dil. HCl. The solid obtained was filtered washed with water and recrystallized from ethanol to give excellent yields of products (Table 1). Yellow solid; mp 210-212 ^{o}C; IR (KBr) (υ_{max}/ cm^{-1}): 3384, 1726, 1646; ^{1}H NMR (400 MHz, DMSO-d_6) 1.12 (s, 6H, 2xCH_3), 1.19-2.02 (m, 2H, CH_2), 2.22 (s, 3H, pyran CH_3), 2.44-2.47 (m, 2H, CH_2), 4.21 (d, 1H, J = 4.8 Hz, furan C-3 proton), 5.01 (d, 1H, J = 4.4 Hz, furan C-2 proton), 6.16 (s, 1H, pyran proton), 7.12-7.19 (m, 2H, ArH), 7.62-7.68 (m, 2H, ArH); ^{13}C NMR (400 MHz, DMSO-d_6) 21.9, 27.4, 29.2, 31.6, 48.8, 51.1, 88.2, 99.6, 108.2, 116.6, 117.3, 123.5, 127.6, 128.1, 130.4, 150.2, 162.7, 164.4, 175.5, 183.8, 192.7, 199.3. Anal. calcd. for $C_{23}H_{22}O_7$: C, 67.30; H, 5.38. Found: C, 67.35; H, 5.32.

Synthesis of 2-(4-Hydroxy-6-methyl-2-oxo-2H-pyran-3-carbonyl)-6,6-dimethyl-3-(3-nitro-phenyl)-3,5,6,7-tetrahydro-2H-benzofuran-4-one (4l). A mixture of 3-(2-bromoacetyl)-4-hydroxy-6-methyl-2H-pyran-2-one (1.1 mmol), dimedone (1 mmol), 3-nitro benzaldehyde **(**1 mmol) and pyridine (2 mmol) in acetonitrile (10 mL) was refluxed for 3hr. To the reaction mixture triethylamine (2.1 mmol) was added and the reaction mixture was refluxed for the appropriate time (Table 1). After cooling to room temperature, the solvent was distilled and neutralized with dil. HCl. The solid obtained was filtered washed with water and recrystallized from ethanol to give excellent yields of products (Table 1). Yellow solid; mp 208-210 ^{o}C; IR (KBr) (υ_{max}/ cm^{-1}): 3379, 1730, 1643; ^{1}H NMR (400 MHz, DMSO-d_6) 1.18 (s, 6H, 2xCH_3), 1.99-2.10 (m, 5H, CH_2 & pyran CH_3), 2.39-2.46 (m, 2H, CH_2), 4.20 (d, 1H, J = 4.8 Hz, furan C-3 proton), 5.12 (d, 1H, J = 4.4 Hz, furan C-2 proton), 6.16 (s, 1H, pyran proton), 7.57-7.61 (m, 2H, ArH), 8.09-8.13 (m, 2H, ArH); ^{13}C NMR (400 MHz, DMSO-d_6) 22.2, 27.7, 31.1, 36.2, 45.7, 50.4, 88.4, 99.6, 108.1, 115.3, 123.5, 126.9, 130.1,

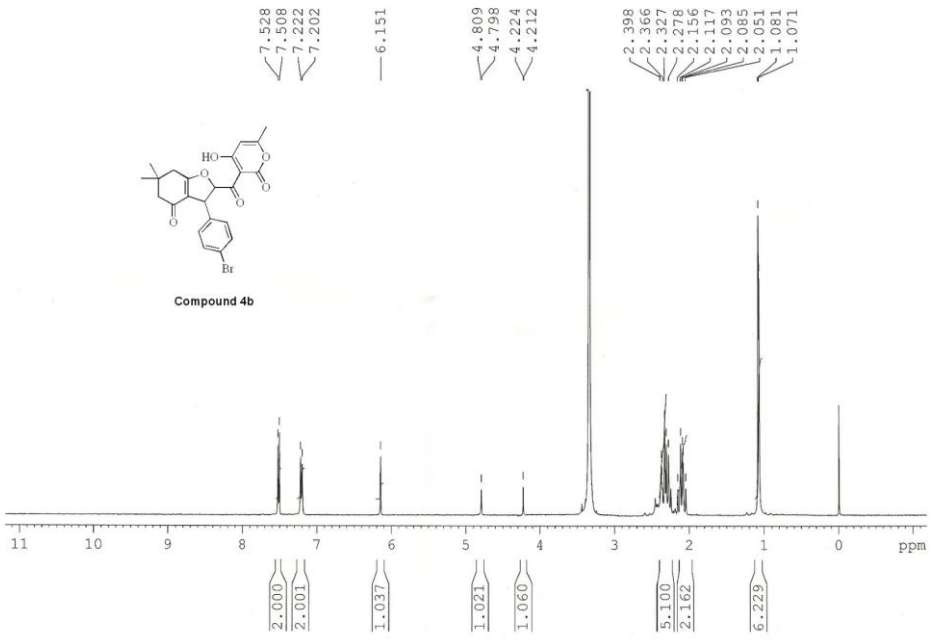
136.1, 143.5, 146.1, 160.1, 162.7, 175.0, 184.7, 192.2, 198.0. Anal. calcd. for $C_{23}H_{21}NO_8$: C, 62.85; H, 4.80; N, 3.18. Found: C, 62.80; H, 4.75; N, 3.22.

1H NMR IN DMSO-D6



Compound 4a

1H NMR IN DMSO-D6



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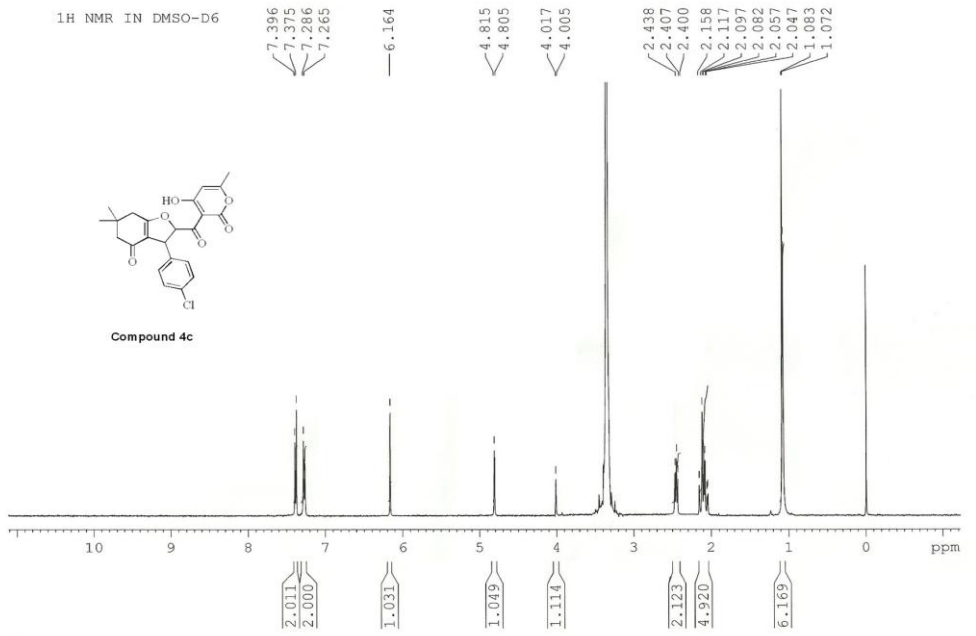
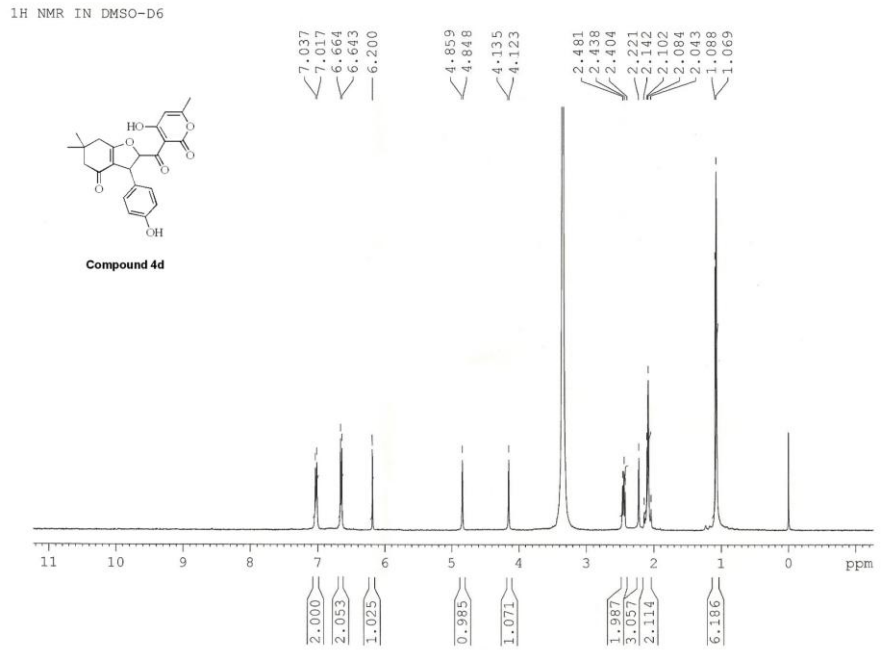
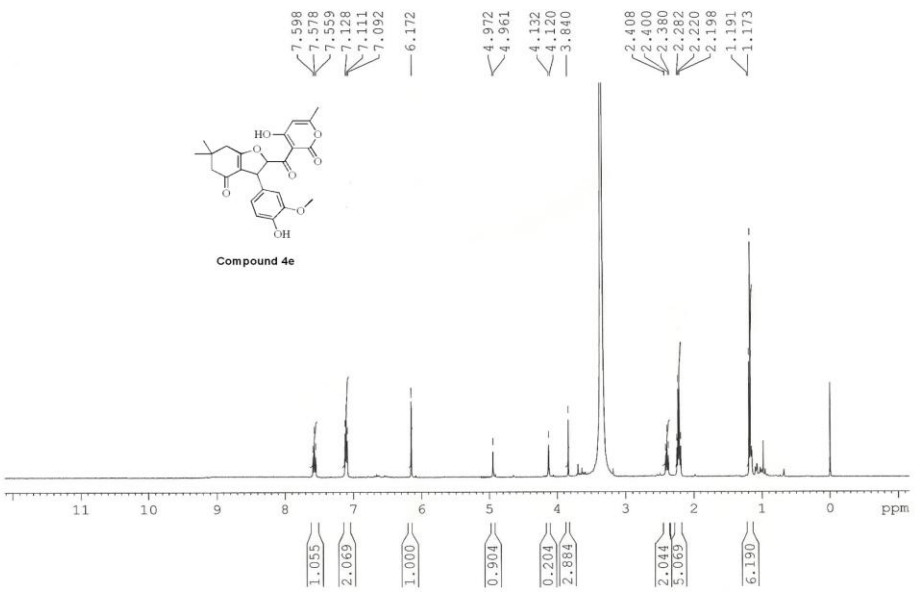


Compound 4c



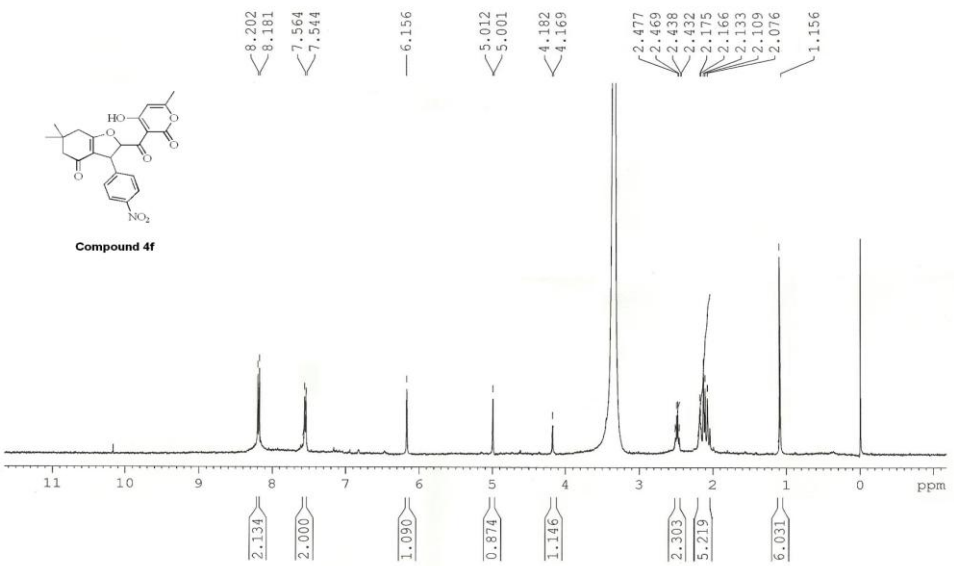
Compound 4d

1H NMR IN DMSO-D6



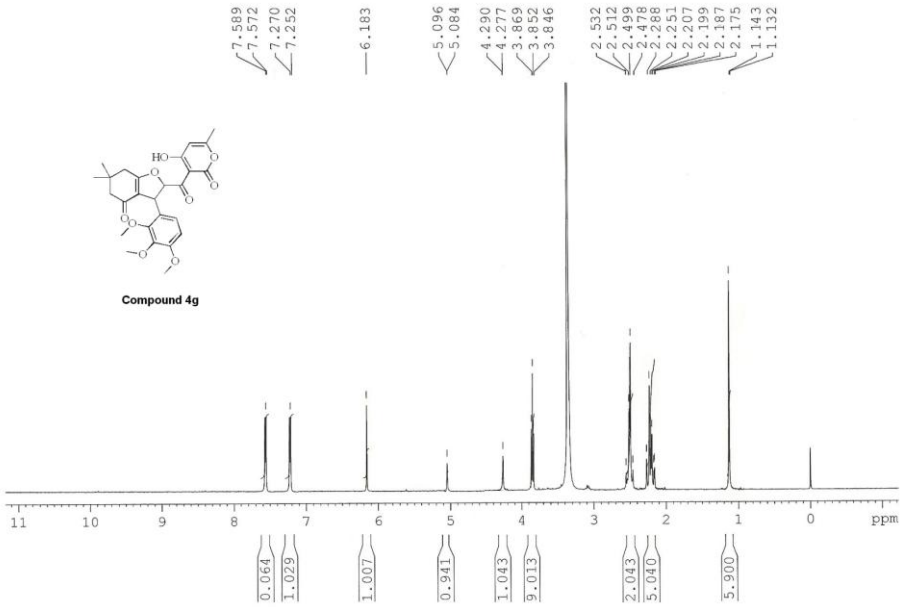
Compound 4e

1H NMR IN DMSO-D6



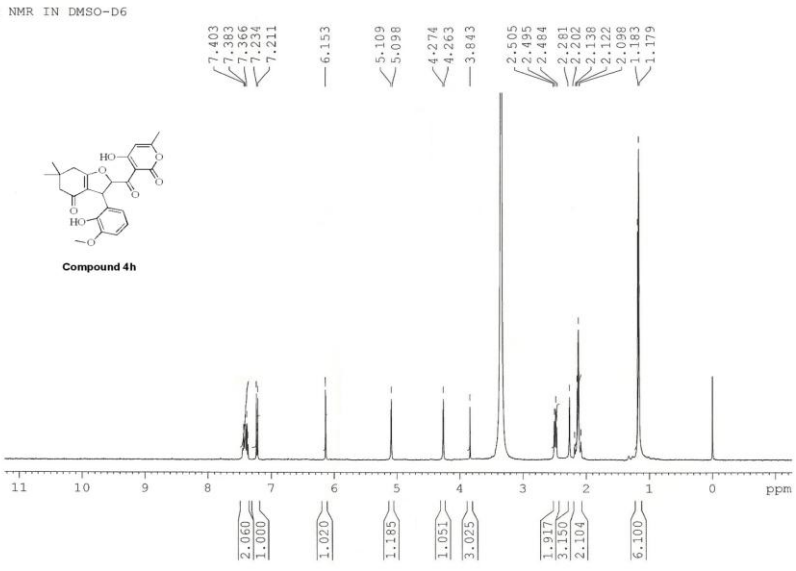
Compound 4f

1H NMR IN DMSO-D6



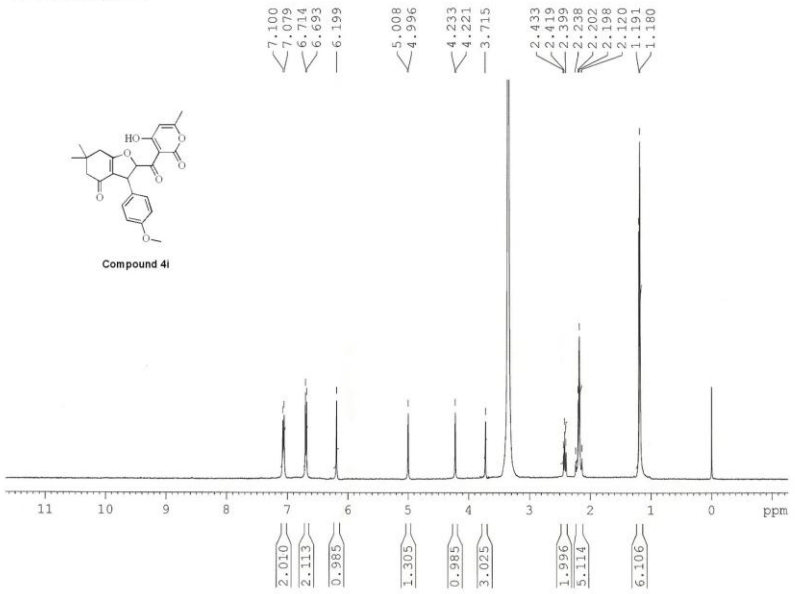
Compound 4g

1H NMR IN DMSO-D6



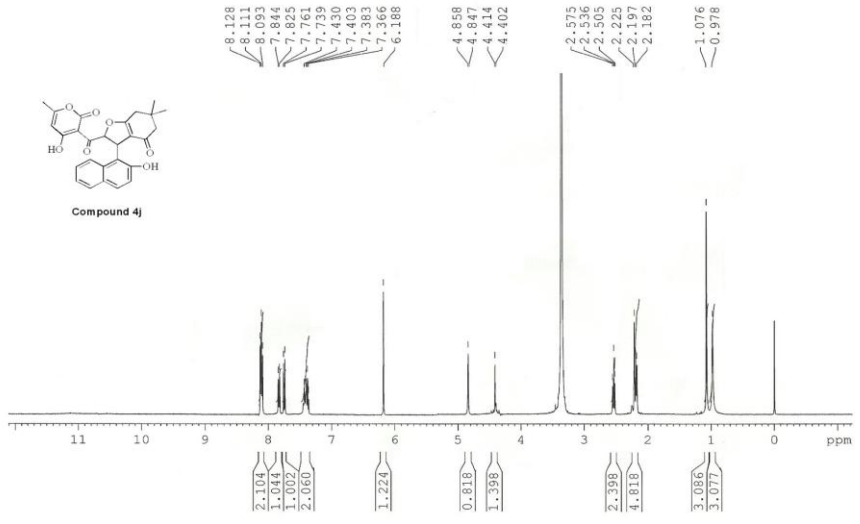
Compound 4h

1H NMR IN DMSO-D6



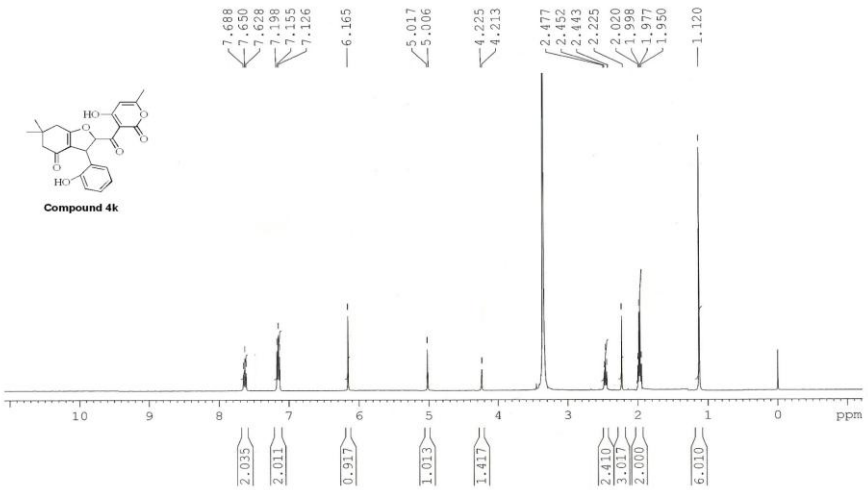
Compound 4i

1H NMR IN DMSO-D6



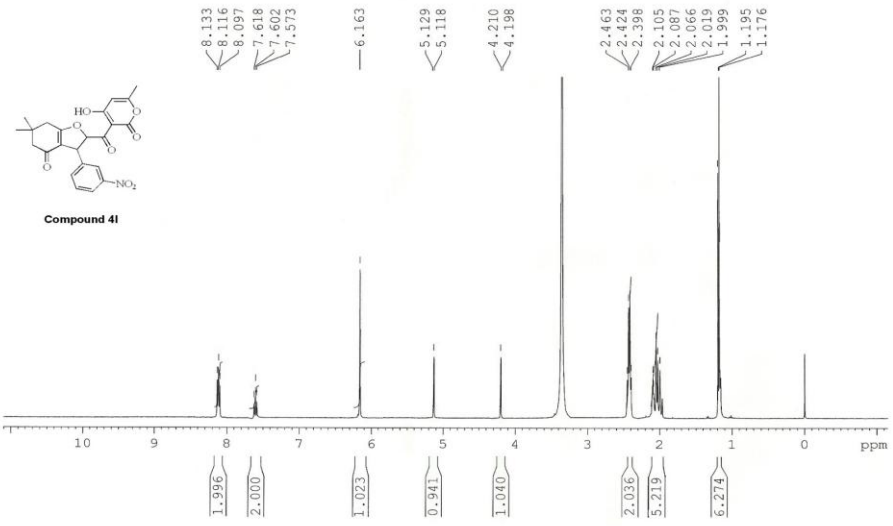
Compound 4j

1H NMR IN DMSO-D6

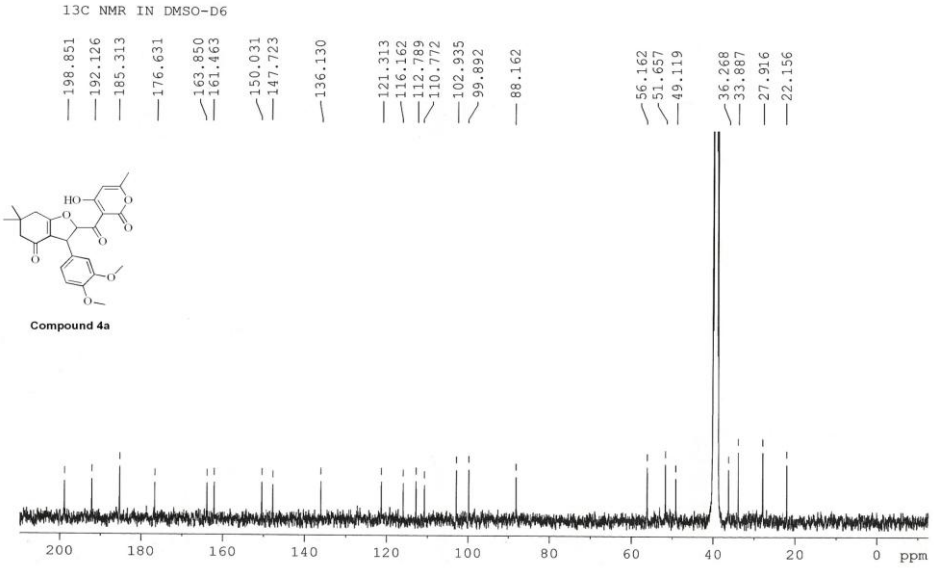


Compound 4k

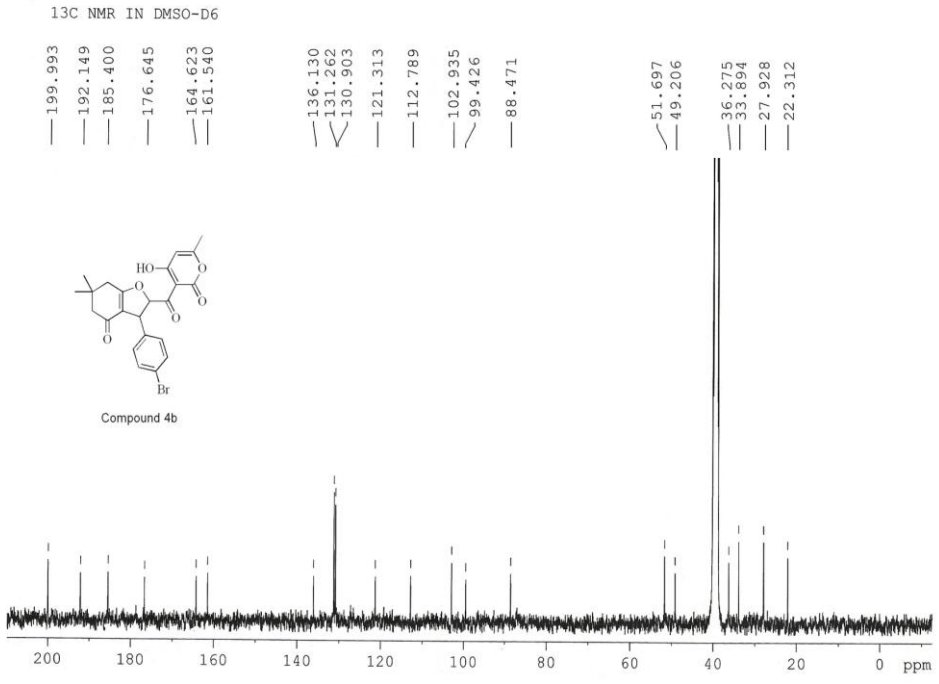
1H NMR IN DMSO-D6



Compound 4l

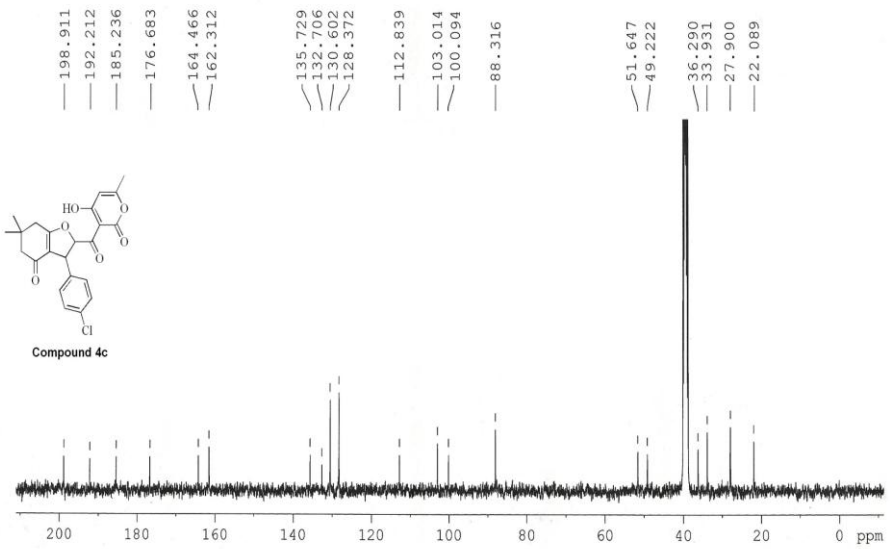


Compound 4a



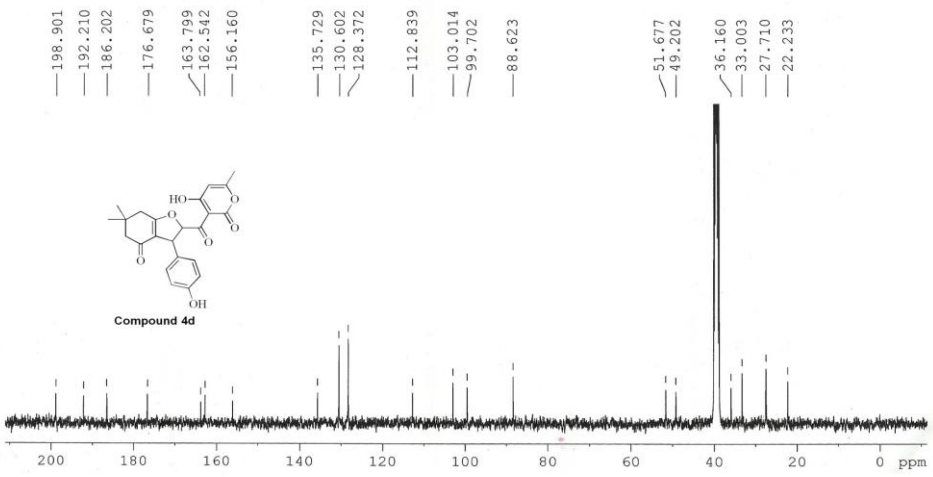
Compound 4b

13C NMR IN DMSO-D6

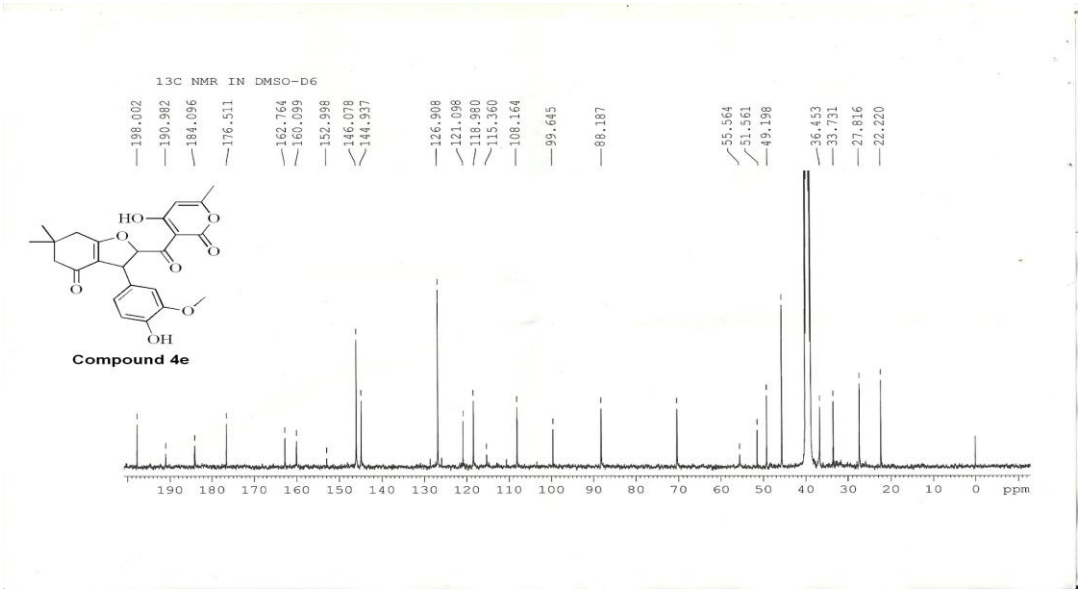


Compound 4c

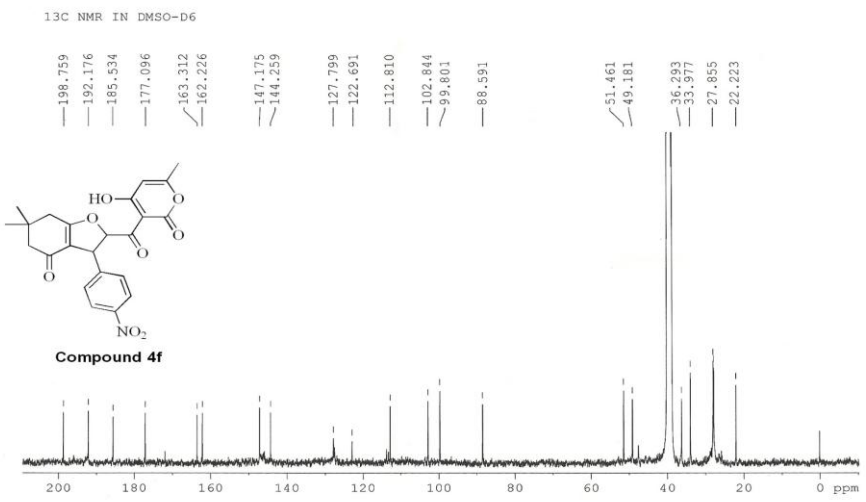
13C NMR IN DMSO-D6



Compound 4d

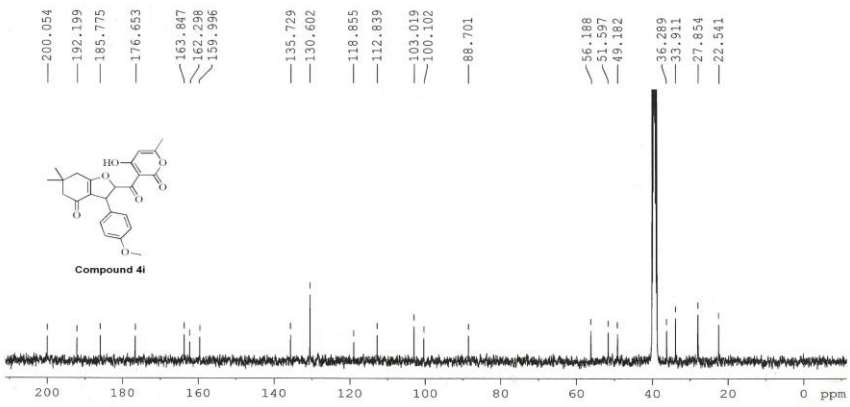


Compound 4e



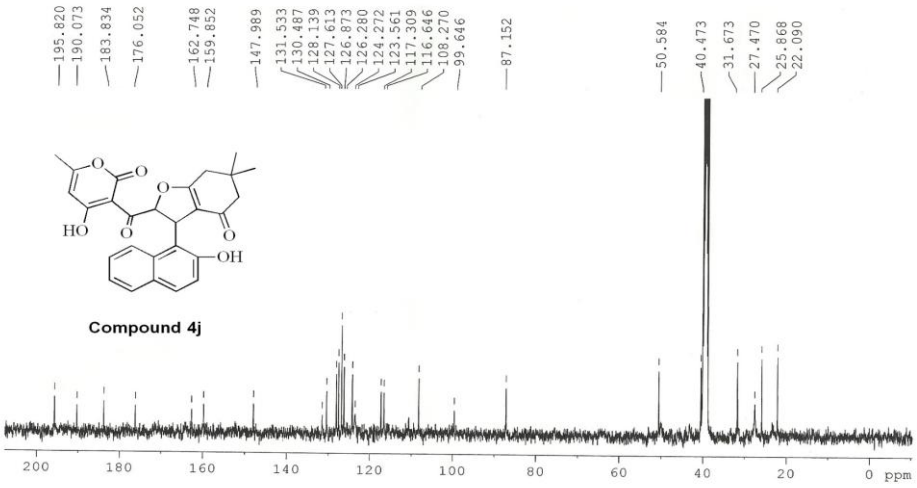
Compound 4f

13C NMR IN DMSO-D6



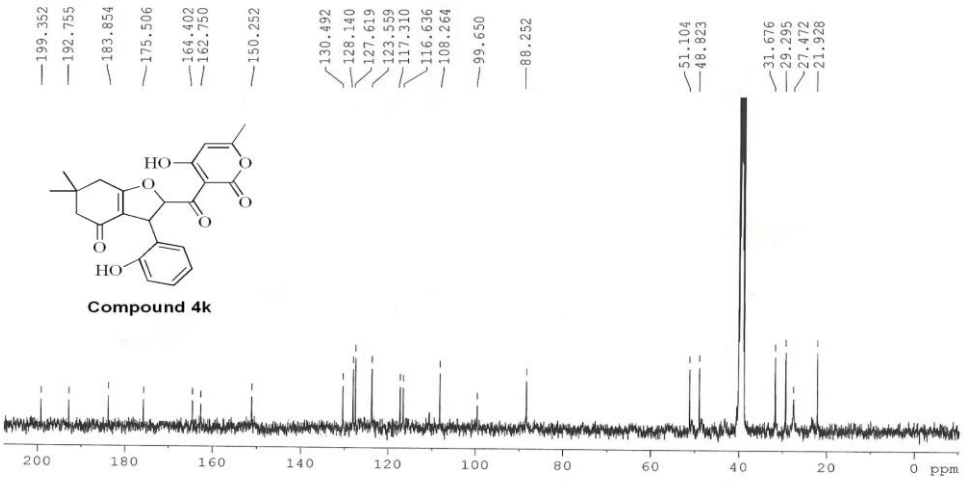
Compound 4i

13C NMR IN DMSO-D6



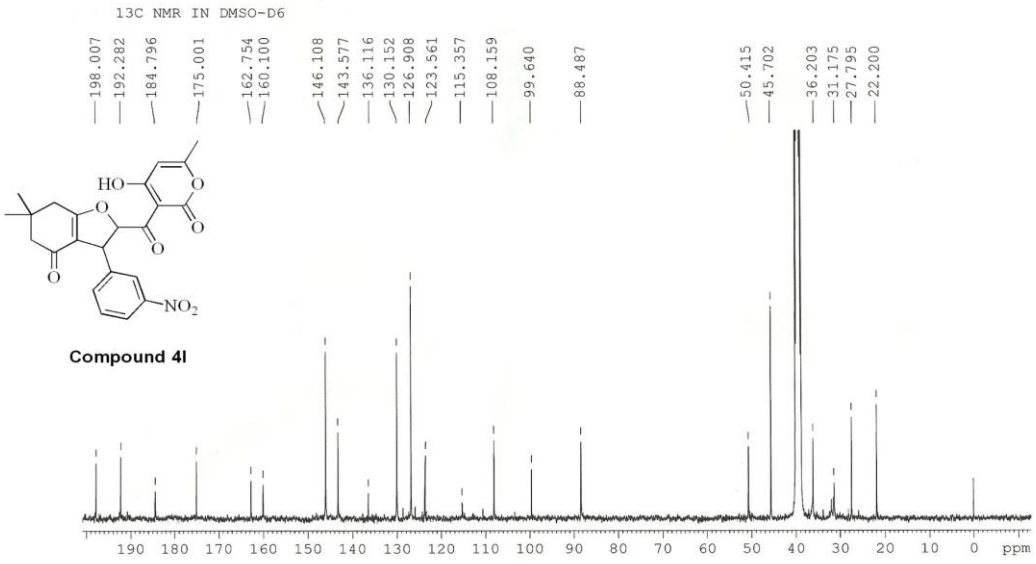
Compound 4j

13C NMR IN DMSO-D6

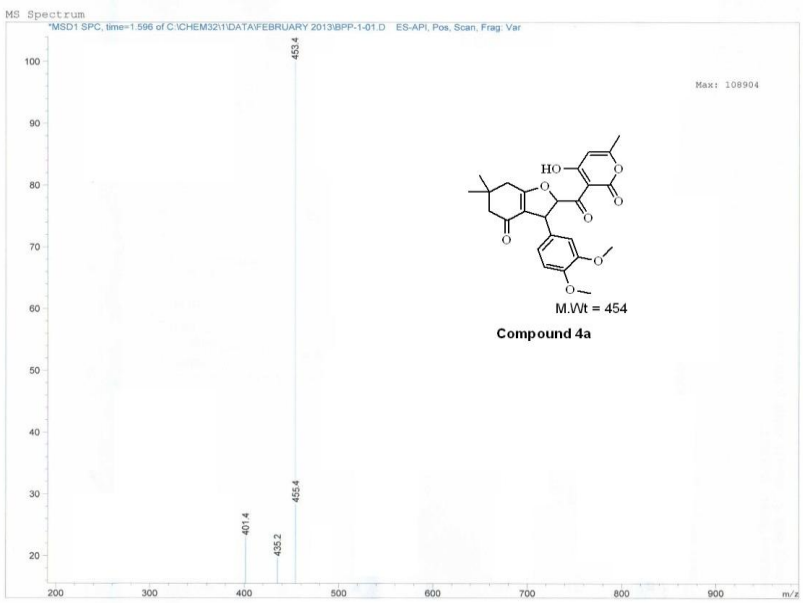


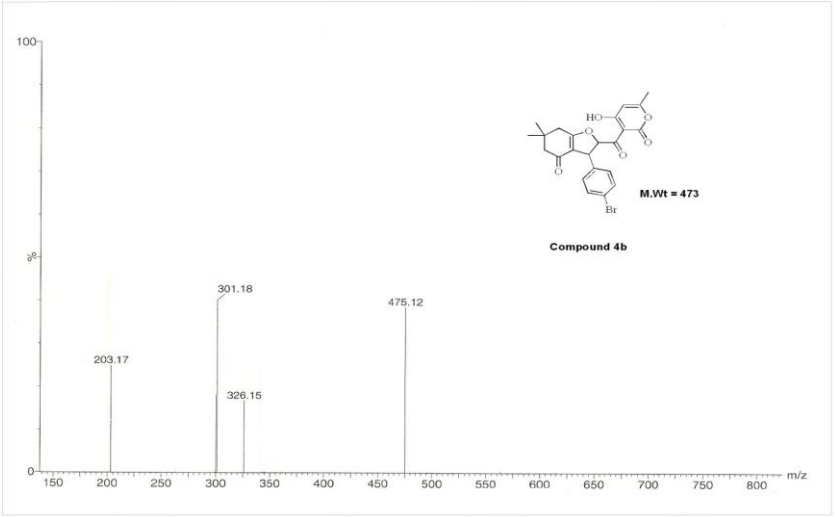
Compound 4k

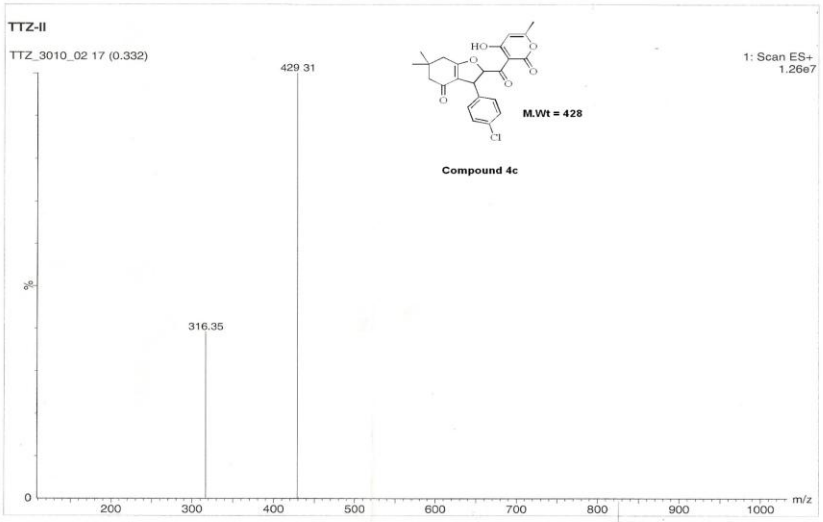
13C NMR IN DMSO-D6

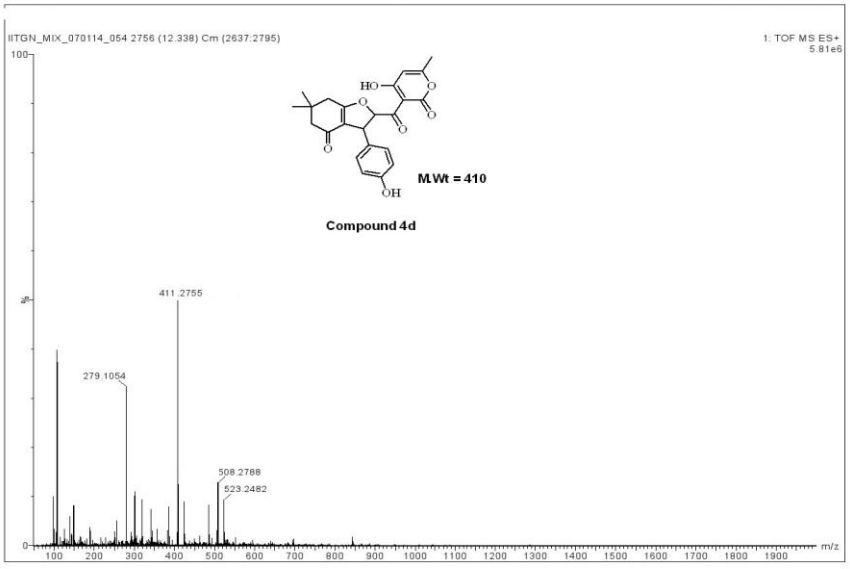


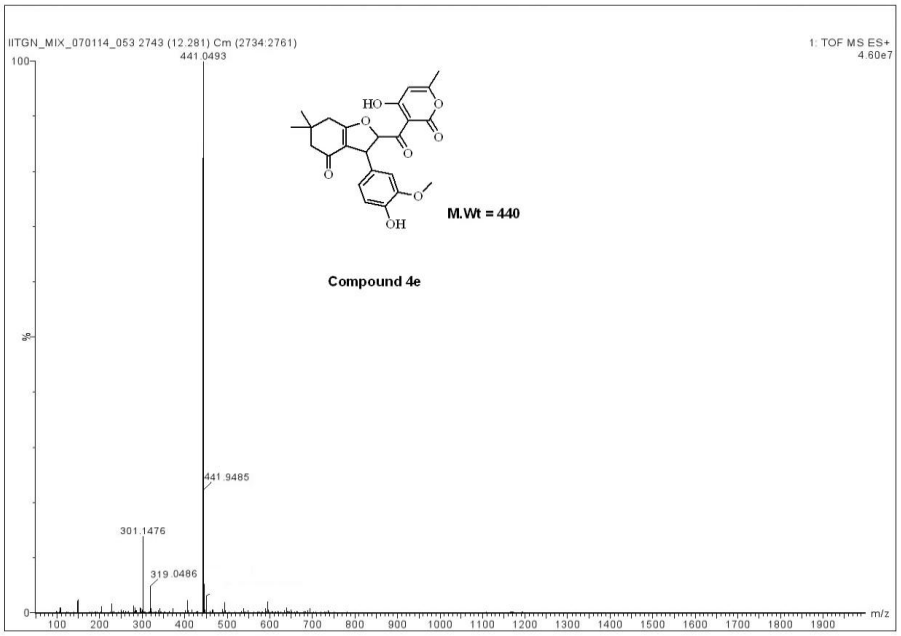
Compound 4l


MS Spectrum
*MSD1 SPC, time=1.596 of C:\CHEM32\1\DATA\FEBRUARY 2013\BPP-1-01.D ES-API, Pos, Scan, Frag: Var
Max: 108904
453.4
455.4
401.4
435.2
M.Wt = 454
Compound 4a
NRC-BA-I-027 2/7/2013 12:59:46 PM
Page 1 of 1


301.18
475.12
203.17
326.15
M.Wt = 473
Compound 4b
m/z


TTZ-II
TTZ_3010_02 17 (0.332)
1: Scan ES+
1.26e7
429.31
316.35
%
0
200
300
400
500
600
700
800
900
1000
m/z
M.Wt = 428
Compound 4c


IITGN_MIX_070114_054 2756 (12.338) Cm (2637:2795)
1: TOF MS ES+
5.81e6
100
%
0
411.2755
279.1054
508.2788
523.2482
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
m/z
M.Wt = 410
Compound 4d



M.Wt = 440

Compound 4e