

Supplementary Information

Synthesis, *in-silico*, *in-vitro* evaluation of furanyl- and thiophenyl-3-phenyl-1*H*-indole-2-carbohydrazide derivatives as tubulin inhibitors and anticancer agents

Rungroj Saruengkhanphasit,^{1, 2*} Lukana Ngiwsara,³ Kriengsak Lirdprapamongkol,^{2, 3} Jaruwan Chatwichien,^{1, 4} Worawat Niwetmarin,¹ Chatchakorn Eurtivong,^{5*} Prasat Kittakoop,^{1, 2, 6} Jismuson Svasti,³ Somsak Ruchirawat,^{1, 2, 7}

¹ Chulabhorn Graduate Institute, Program in Chemical Sciences, 54 Kamphaeng Phet 6, Talat Bang Khen, Lak Si, Bangkok 10210, Thailand.

² Center of Excellence On Environmental Health and Toxicology (EHT), OPS, Ministry of Higher Education, Science, Research and Innovation, Bangkok, Thailand.

³ Laboratory of Biochemistry, Chulabhorn Research Institute, Bangkok 10210, Thailand.

⁴ Chulabhorn Royal Academy, Bangkok 10210, Thailand.

⁵ Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Mahidol University, 447 Sri-Ayutthaya Road, Ratchathewi, Bangkok 10400, Thailand.

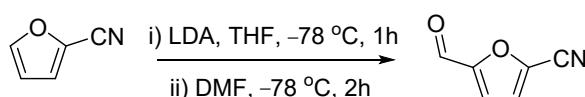
⁶Laboratory of Natural Products, Chulabhorn Research Institute, Bangkok 10210, Thailand.

⁷Laboratory of Medicinal Chemistry, Chulabhorn Research Institute, Bangkok 10210, Thailand.

Table of contents

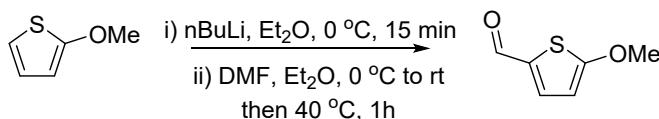
Synthesis of various aldehydes	page 2–5
¹ H and ¹³ C Spectra	page 6–42
Figure S1. NCI60 one dose screen for compounds 5a–b , 5e–k , and 6a–o	page 43–66
Table S1. GI ₅₀ and LC ₅₀ screen for compounds 5a–b , 5e–i , 5k , 6a–j , 6m , and 6o	page 67–70
Figure S2. NCI60 five dose screen for compounds 5a–b , 5e–i , 5k , 6a–j , 6m , and 6o	page 71–110
Figure S3. Overlay between co-crystallised colchicine	page 111
Table S2. Docking scores of compounds 5a–b , 5f , 5k , 6h , and 6j	page 111
Table S3. Physiochemical properties of compounds 5e–k , and 6b–6o	page 112

Synthesis of various aldehydes



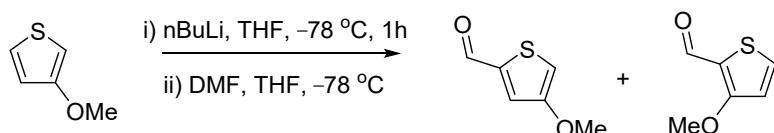
5-formylfuran-2-carbonitrile

To a solution of 2-furancarbonitrile (0.5 mL, 5.50 mmol) in anhydrous THF (20 mL) was added LDA (1.5 M, 4.70 mL, 7.05 mmol) at -78 °C under argon atmosphere. The reaction mixture was stirred -78 °C for 1 h. Anhydrous *N,N*-dimethylformamide (0.70 mL, 9.04 mmol) was added slowly at -78 °C. The resulting mixture was stirred at -78 °C for 2 h. The mixture was poured into water 30 mL and was extracted with Et₂O (3 x 20 mL). The combined organic layers were dried (Na₂SO₄), filtered, and the solvent was evaporated. Purification by flash column chromatography, elute with EtOAc-Hexane (1:9 to 4:6), gave 5-formylfuran-2-carbonitrile (0.224 g, 1.85 mmol, 34%) as brown oil; R_f 0.31 [EtOAc-Hexane (3:7)]; ¹H NMR (300 MHz, CDCl₃) δ 9.76 (s, 1H), 7.29 (d, *J* = 3.8 Hz, 1H), 7.24 (d, *J* = 3.8 Hz, 1H) Data were in agreement to those reported in the literature.¹



5-methoxythiophene-2-carbaldehyde

To a solution of 2-methoxythiophene (0.5 mL, 4.99 mmol) in anhydrous Et₂O (20mL) was added *n*BuLi (1.6 M, 3.80 mL, 6.08 mmol) at 0 °C under argon atmosphere. The reaction mixture was stirred at 0 °C for 1h and was allowed to stand at room temperature for 15 min. Anhydrous *N,N*-dimethylformamide (0.4 mL, 5.17 mmol) was added slowly at room temperature. The reaction mixture was heated to 40 °C for 1 h. The mixture was poured into water 30 mL and was extracted with EtOAc (3 x 20 mL). The combined organic layers were washed with H₂O (40 mL), dried (Na₂SO₄), and the solvent was evaporated. Purification by flash column chromatography, elute with EtOAc-Hexane (1:9 to 3:7), gave 5-methoxythiophene-2-carbaldehyde (0.552 g, 4.38 mmol, 88%) as brown oil; R_f 0.49 [EtOAc-Hexane (3:7)]; ¹H NMR (300 MHz, CDCl₃) δ 9.62 (s, 1H), 7.49 (d, *J* = 4.3 Hz, 1H), 6.23 (s, 1H), 6.32 (d, *J* = 4.3 Hz, 1H), 3.96 (s, 3H) Data were in agreement to those reported in the literature.²



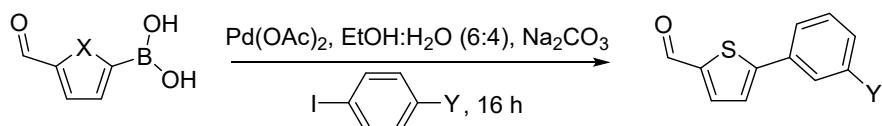
4-methoxythiophene-2-carbaldehyde and 3-methoxythiophene-2-carbaldehyde

To a solution of 3-methoxythiophene (0.5 mL, 5.01 mmol) in anhydrous THF (20mL) was added *n*BuLi (2.5 M, 2.4 mL, 6.00 mmol) at -78 °C under argon atmosphere. The reaction mixture was stirred -78 °C for 1 h. Anhydrous *N,N*-dimethylformamide (0.60 mL, 7.50 mmol) was added slowly at -78 °C. The resulting mixture was allowed to warm to room temperature over 2 h. The mixture was poured into water 30 mL and was extracted with EtOAc (3 x 20 mL). The combined organic layers were washed with H₂O (40 mL), dried (Na₂SO₄), and the solvent was evaporated. Purification by flash column chromatography, elute with EtOAc-Hexane (1:9 to 4:6), gave 4-methoxythiophene-2-carbaldehyde (0.24 g, 1.9 mmol, 38%) as a

yellow solid (form solid when keep in the fridge) and 3-methoxythiophene-2-carbaldehyde (0.29 g, 2.3 mmol, 46%) as a yellow solid.

4-methoxythiophene-2-carbaldehyde; R_f 0.54 [EtOAc-Hexane (3:7)]; m.p. 39–41 °C; $\nu_{\text{max}}/\text{cm}^{-1}$ 3009, 2962, 2801, 2704, 1663, 1460, 1027; ^1H NMR (300 MHz, CDCl_3) δ 9.84 (d, J = 1.2 Hz, 1H), 7.42 (d, J = 1.8 Hz, 1H), 6.77 (br t, J = 1.5 Hz, 1H), 3.86 (s, 3H); ^{13}C NMR (75 MHz, CDCl_3) δ 182.83, 158.88, 141.42, 126.39, 107.75, 57.74; HRMS (ESI) m/z [M+H]⁺ calcd for $\text{C}_6\text{H}_7\text{O}_2^{32}\text{S}$ 143.0161; found 143.0164.

3-methoxythiophene-2-carbaldehyde; R_f 0.36 [EtOAc-Hexane (3:7)]; m.p. 77–80 °C; ^1H NMR (300 MHz, CDCl_3) δ 10.01 (d, J = 1.20 Hz, 1H), 7.68 (dd, J = 5.40, 1.20 Hz, 1H), 6.90 (d, J = 5.40 Hz, 1H), 4.01 (s, 3H) Data were in agreement to those reported in the literature.³



5-(3-nitrophenyl)furan-2-carbaldehyde

To a solution of 1-iodo-3-nitrobenzene (0.403 g, 1.62 mmol) and 5-formyl-2-furanboronic acid (0.249 g, 1.78 mmol) in EtOH/H₂O (6:4, 15 mL), were added $\text{Pd}(\text{OAc})_2$ (0.018 g, 0.08 mmol) and Na_2CO_3 (0.172 g, 1.62 mmol) at room temperature. The resulting mixture was stirred at room temperature for 16 h. the mixture was filtered through a sintered glass filter, the filter cake was rinsed with EtOAc 30 mL, and most of EtOAc and EtOH was evaporated. The solution was extracted with EtOAc (3 x 20 mL). The combined organic layers were dried (Na_2SO_4), filtered, and the solvent was evaporated. Purification by flash column chromatography, elute with EtOAc-Hexane (1:9 to 4:6), gave 5-(3-nitrophenyl)furan-2-carbaldehyde (0.328 g, 1.51 mmol, 93%) as yellow solid; R_f 0.34 [EtOAc-Hexane (3:7)]; m.p. 156–158 °C, lit⁴ m.p. 159.5–160.5 °C; ^1H NMR (300 MHz, CDCl_3) δ 9.75 (s, 1H), 8.66 (s, 1H), 8.28 (d, J = 8.1 Hz, 1H), 8.19 (d, J = 7.9 Hz, 1H), 7.68 (t, J = 8.0 Hz, 1H), 7.40 (d, J = 3.8 Hz, 1H), 7.04 (d, J = 3.8 Hz, 1H) Data were in agreement to those reported in the literature.⁵ Compounds below were synthesized following the procedure described here.

5-(3-methoxyphenyl)furan-2-carbaldehyde

Orange solid (0.399 g, 1.97 mmol, 86%); R_f 0.54 [EtOAc-Hexane (3:7)]; m.p. 69–71 °C, lit⁴ m.p. 70.5–71.5 °C; $\nu_{\text{max}}/\text{cm}^{-1}$ 3004, 2964, 2836, 2729, 1663, 1471, 1026; ^1H NMR (300 MHz, CDCl_3) δ 9.68 (s, 1H), 7.44–7.37 (m, 3H), 7.35 (d, J = 3.7 Hz, 1H), 6.99 (ddd, J = 7.8, 2.8, 1.4 Hz, 1H), 6.87 (d, J = 3.8 Hz, 1H), 3.90 (s, 3H); ^{13}C NMR (75 MHz, CDCl_3) δ 177.31, 160.04, 159.31, 152.02, 130.22, 130.08, 123.60, 117.93, 115.76, 110.32, 108.03, 55.48; HRMS (ESI) m/z [M+H]⁺ calcd for $\text{C}_{12}\text{H}_{11}\text{O}_3$ 203.0703; found 203.0704.

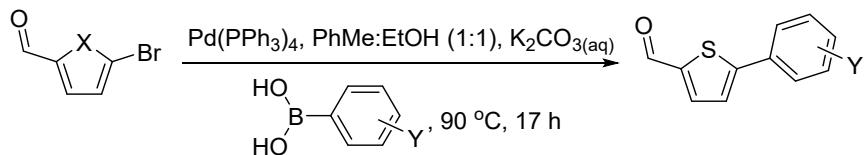
5-(3-nitrophenyl)thiophene-2-carbaldehyde

Yellow solid (0.219 g, 0.94 mmol, 54%); R_f 0.4 [EtOAc-Hexane (3:7)]; m.p. 149–152 °C, lit⁵ m.p. 147 °C; ^1H NMR (300 MHz, CDCl_3) δ 9.96 (s, 1H), 8.55 (br t, J = 2 Hz, 1H), 8.29 (ddd, J = 8.3, 2.2, 1.0 Hz, 1H), 8.02 (ddd, J = 7.8, 1.9, 1.0 Hz, 1H), 7.83 (d, J = 4 Hz, 1H), 7.69 (t, J = 8 Hz, 1H), 7.57 (d, J = 3.9 Hz, 1H) Data were in agreement to those reported in the literature.⁶

5-(3-methoxyphenyl)thiophene-2-carbaldehyde

Yellow oil (0.321 g, 1.47 mmol, 98%); R_f 0.58 [EtOAc-Hexane (3:7)]; $\nu_{\text{max}}/\text{cm}^{-1}$ 3006, 2939, 2835, 2799, 1658, 1437, 1214; ^1H NMR (300 MHz, CDCl_3) δ 9.92 (s, 1H), 7.77 (d, J = 4.0 Hz, 1H), 7.43 (d, J = 3.9 Hz, 1H), 7.38 (t, J = 7.9 Hz, 1H), 7.31–7.27 (m, 1H), 7.21 (br t, J = 2.1

Hz), 6.99 (ddd, $J = 8.1, 2.5, 1.1$ Hz, 3.89 (s, 3H); ^{13}C NMR (75 MHz, CDCl_3) δ 182.85, 160.09, 154.10, 142.46, 137.39, 134.31, 130.29, 124.34, 118.96, 114.91, 112.07, 55.40; HRMS (ESI) m/z [M+H]⁺ calcd for $\text{C}_{12}\text{H}_{11}\text{O}_2\text{S}^{32}\text{S}$ 219.0474; found 219.0475.



4-(5-formylfuran-2-yl)benzoic acid

To a solution of 5-bromo-2-furaldehyde (0.209g, 1.19 mmol) and 4-carboxyphenylboronic acid (0.201 g, 1.46 mmol) in toluene/EtOH (1:1, 20mL), was added K_2CO_3 (0.506 g, 3.66 mmol) and H_2O 3 mL. The mixture was put in sonicator for 10 min, and then $\text{Pd}(\text{PPh}_3)_4$ (0.071 g, 0.06 mmol) was added. The resulting mixture was heated to 90 °C and stirred for 17 h. The reaction mixture was cool to room temperature, filtered through a sintered glass filter, the filter cake was rinsed with EtOH 40 mL, and solvent was evaporated. H_2O 15 mL was added to the residue. The resulting solution was added conc. HCl until the pH of solution adjusted to 1-2. The precipitate product was filtered, washed with H_2O (3 x 10 mL) and dried over night to gave 4-(5-formylfuran-2-yl)benzoic acid (0.203 g, 0.94 mmol, 77%) as orange solid; m.p. not determined; $\nu_{\text{max}}/\text{cm}^{-1}$ 3121, 2845, 1667, 1609, 1419, 1043; ^1H NMR (300 MHz, CDCl_3) δ 13.14 (br s, 1H), 9.66 (s, 1H), 8.07–7.97 (m, 4H), 7.69 (d, $J = 3.8$ Hz, 1H), 7.45 (d, $J = 3.8$ Hz, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 178.68, 167.19, 157.36, 152.65, 132.77, 131.71, 130.60, 125.46, 111.04; HRMS (ESI) m/z [M+H]⁺ calcd for $\text{C}_{12}\text{H}_9\text{O}_4$ 217.0495; found 217.0503. Compounds below were synthesized following the procedure described here.

3-(5-formylfuran-2-yl)benzoic acid

Orange solid (0.242 g, 1.12 mmol, 89%); m.p. not determined; $\nu_{\text{max}}/\text{cm}^{-1}$ 3100, 2836, 1666, 1610, 1454, 1292, 1041; ^1H NMR (300 MHz, CDCl_3) δ 13.30 (br s, 1H), 9.64 (s, 1H), 8.38 (t, $J = 1.7$ Hz, 1H), 8.14 (dt, $J = 7.9, 1.5$ Hz, 1H), 8.02 (dt, $J = 7.8, 1.4$ Hz, 1H), 7.68–7.62 (m, 2H), 7.43 (d, $J = 3.8$ Hz, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 178.57, 167.20, 157.51, 152.38, 132.25, 130.67, 130.14, 129.67, 129.49, 125.78, 110.03; HRMS (ESI) m/z [M+H]⁺ calcd for $\text{C}_{12}\text{H}_9\text{O}_4$ 217.0495; found 217.0497.

4-(5-formylthiophene-2-yl)benzoic acid

Yellow solid (0.144 g, 0.62 mmol, 33%); m.p. not determined; ^1H NMR (300 MHz, CDCl_3) δ 13.15 (br s, 1H), 9.95 (s, 1H), 8.10 (d, $J = 4.0$ Hz, 1H), 8.04–7.93 (m, 4H), 7.89 (d, $J = 4.0$ Hz, 1H) Data were in agreement to those reported in the literature.⁷

3-(5-formylthiophene-2-yl)benzoic acid

Orange solid (0.40 g, 1.72 mmol, 92%); m.p. not determined; $\nu_{\text{max}}/\text{cm}^{-1}$ 3108, 2858, 1719, 1680, 1654, 1426, 1232, 1056; ^1H NMR (300 MHz, CDCl_3) δ 13.27 (br s, 1H), 9.94 (s, 1H), 8.27 (br t, $J = 1.8$ Hz, 1H), 8.08–8.04 (m, 2H), 8.01 (dt, $J = 7.8, 1.3$ Hz, 1H), 7.85 (d, $J = 4.0$ Hz, 1H), 7.63 (t, $J = 7.8$ Hz, 1H); ^{13}C NMR (75 MHz, CDCl_3) δ 184.66, 167.17, 151.70, 142.96, 139.68, 133.28, 132.40, 130.90, 130.56, 130.33, 127.02, 126.53; HRMS (ESI) m/z [M-H]⁻ calcd for $\text{C}_{12}\text{H}_7\text{O}_3^{32}\text{S}$ 231.0110; found 231.0114.

5-(4-hydroxyphenyl)furan-2-carbaldehyde

To a solution of 5-bromo-2-furaldehyde (0.234g, 1.34 mmol) and 4-hydroxyphenylboronic acid (0.222 g, 1.61 mmol) in toluene/EtOH (1:1, 24mL), was added K_2CO_3 (0.556 g, 4.02

mmol) and H₂O 4 mL. The mixture was put in sonicator for 10 min, and then Pd(PPh₃)₄ (0.077 g, 0.07 mmol) was added. The resulting mixture was heated to 90 °C and stirred for 17 h. The reaction mixture was cool to room temperature, diluted with H₂O 20 mL, and extracted with EtOAc (3 x 30 mL). The combined organic layers were washed with brine 30 mL, dried (Na₂SO₄), filtered, and the solvent was evaporated. Purification by flash column chromatography, elute with EtOAc-Hexane (1:9 to 1:1), gave 5-(4-hydroxyphenyl)furan-2-carbaldehyde (0.204 g, 1.08 mmol, 81%) as yellow solid; R_f 0.26 [EtOAc-Hexane (3:7)]; m.p. 176–178 °C (decompose) lit⁴ m.p. 178–180 °C; ¹H NMR (300 MHz, (CD₃)₂CO) δ 9.62 (s, 1H), 8.91 (s, 1H), 7.79–7.76 (m, 2H), 7.51 (d, J = 3.7 Hz, 1H), 7.00–6.97 (m, 3H) Data were in agreement to those reported in the literature.⁸ Compound below was synthesized following the procedure described here.

5-(4-hydroxyphenyl)thiophene-2-carbaldehyde

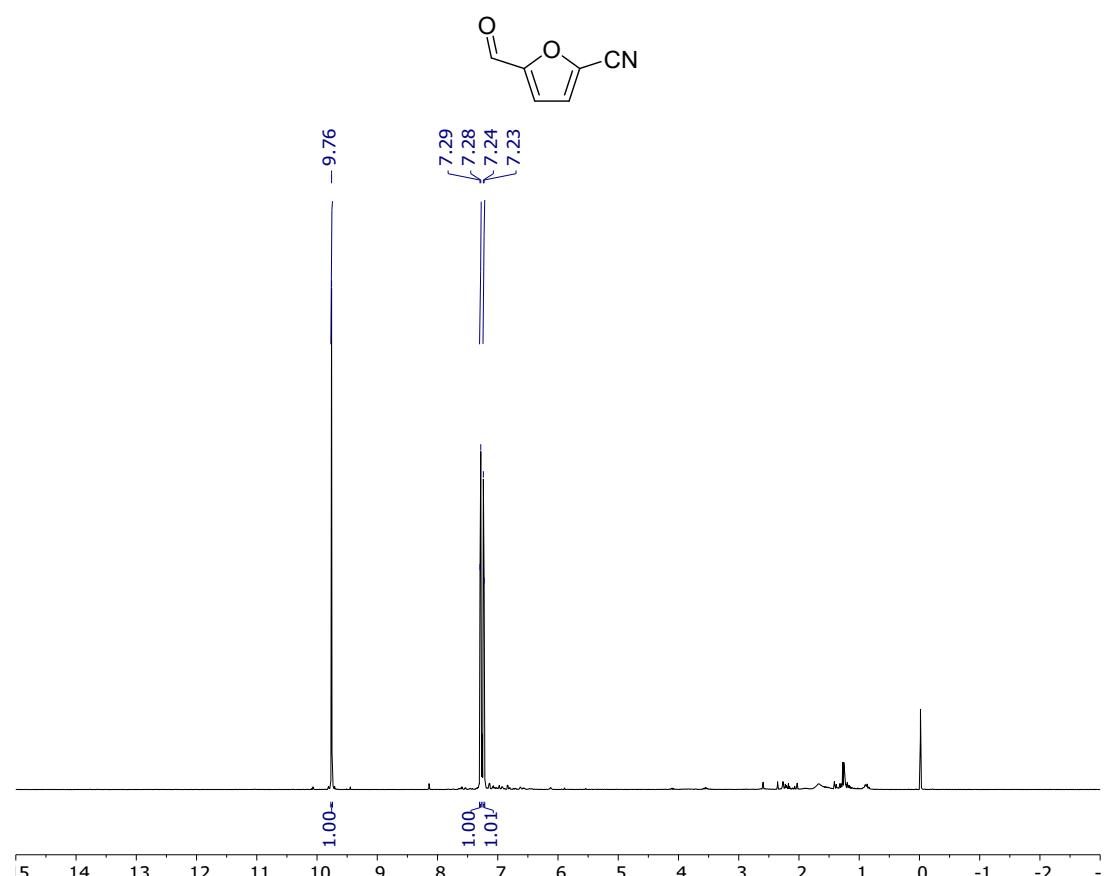
Yellow solid (0.306 g, 1.50 mmol, 81%); ; R_f 0.29 [EtOAc-Hexane (3:7)]; m.p. 212–214 °C (decompose) lit⁹ m.p. 210–212 (decompose) °C; ¹H NMR (300 MHz, (CD₃)₂SO) δ 10.00 (s, 1H), 9.86 (s, 1H), 7.99 (d, J = 4.0 Hz, 1H), 7.66 (d, J = 8.7 Hz, 2H), 7.56 (d, J = 4.0 Hz, 1H), 6.88 (d, J = 8.7 Hz, 2H) Data were in agreement to those reported in the literature.⁹

References

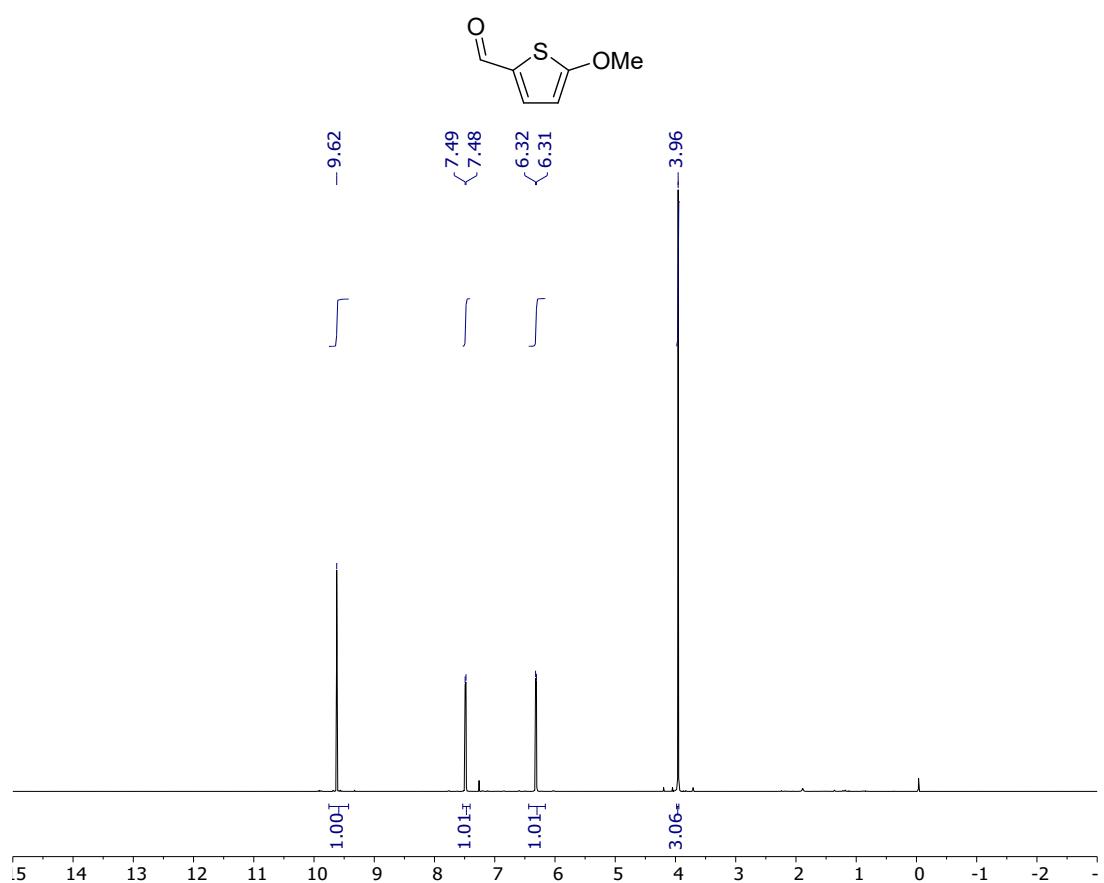
1. A. J. Floyd, R. G. Kinsman, Y. Roshan-Ali, D. W. Brown, *Tetrahedron*, 1983, **39**, 3881–3885.
2. Y. Bao, J.-Y. Wang, Y.-X. Zhang, Y. Li, X.-S. Wang, *Tetrahedron Lett.*, 2018, **59**, 3147–3150.
3. A. Faouzi, A. Arnaud, A. Bancet, C. Barette, J. Preto, C. V. Do, L. P. Jordheim, Z. Bousfiha, T. T. B. Nguyen, M. Berrière, A. Farce, M.-O. Fauvarque, R. Barret, T. Lomberget, *Eur. J. Med. Chem.*, 2021, **215**, 113275.
4. T. Hosoya, H. Aoyama, T. Ikemoto, Y. Kihara, T. Hiramatsu, M. Endo, M. Suzuki, *Bioorg. Med. Chem.*, 2003, **11**, 663–673.
5. S. Aslam, N. Asif, M. N. Khan, M. A. Khan, M. A. Munawar, M. Nasrullah, *Asian J. Chem.*, 2013, **25**, 7738–7742.
6. W. Hanefeld, M. Schlitzer, *J. Heterocycl. Chem.*, 1995, **32**, 1019–1025.
7. L. Racane, V. Tralić-Kulenović, G. Karminski-Zamola, L. Fišer-Jakić, *Monatsh. Chem.*, 1995, **126**, 1375–1381.
8. M. D. Moya-Garzón, C. M. Higueras, P. Peñalver, M. Romera, M. X. Fernandes, F. Franco-Montalbán, J. A. Gómez-Vidal, E. Salido, M. Díaz-Gavilán, *J. Med. Chem.*, 2018, **61**, 7144–7167.
9. P. Guo, A. Paul, A. Kumar, N. K. Harika, S. Wang, A. A. Farahat, D. W. Boykin, W. D. Wilson, *Chem. Commun.*, 2017, **53**, 10406–10409.

¹H and ¹³C spectra

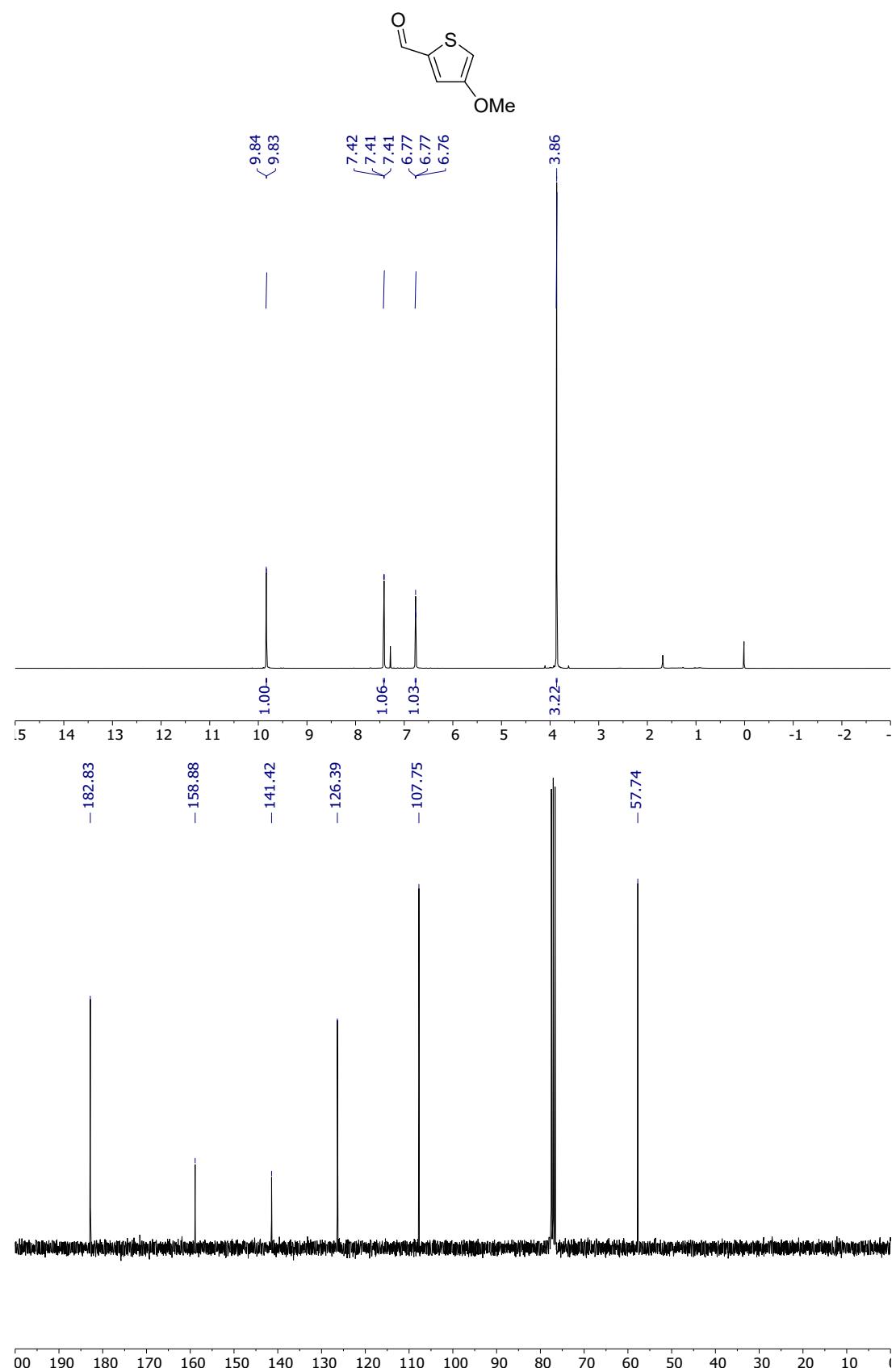
5-formylfuran-2-carbonitrile spectra in CDCl₃



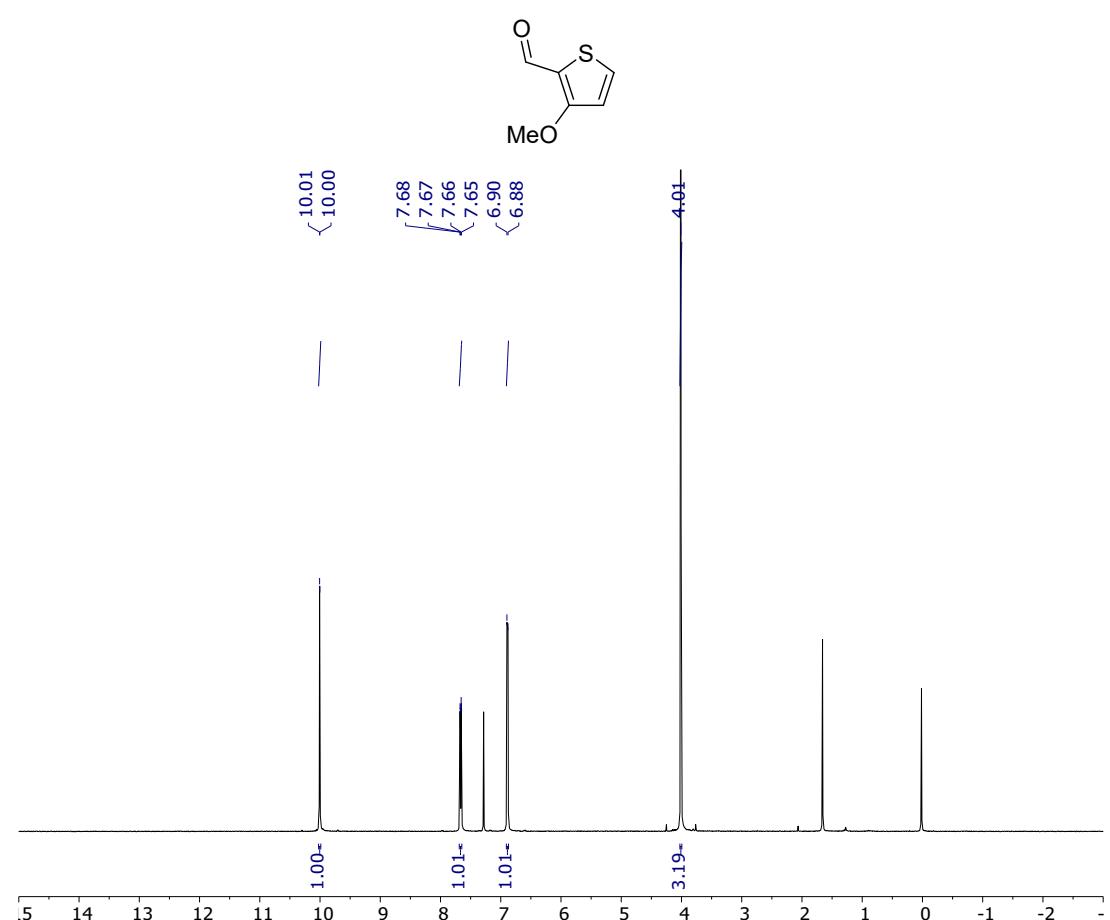
5-methoxythiophene-2-carbaldehyde spectra in CDCl₃



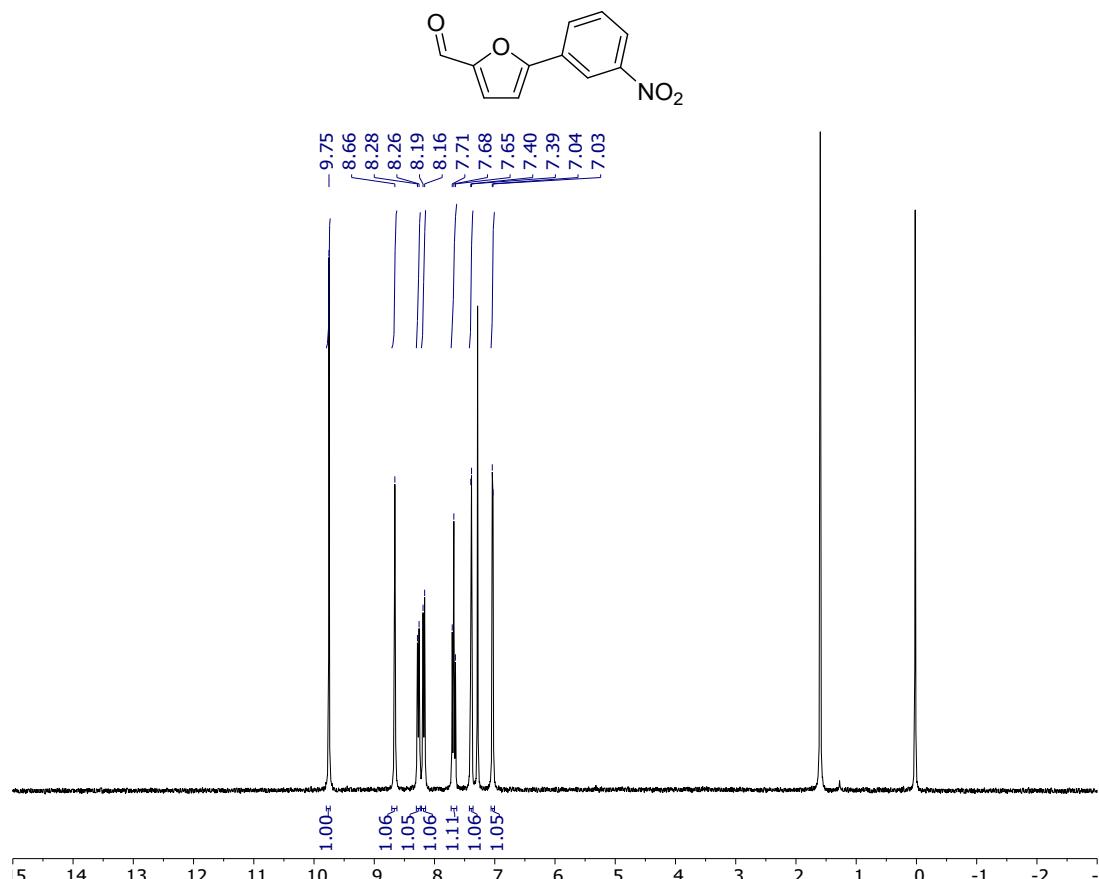
4-methoxythiophene-2-carbaldehyde spectra in CDCl_3



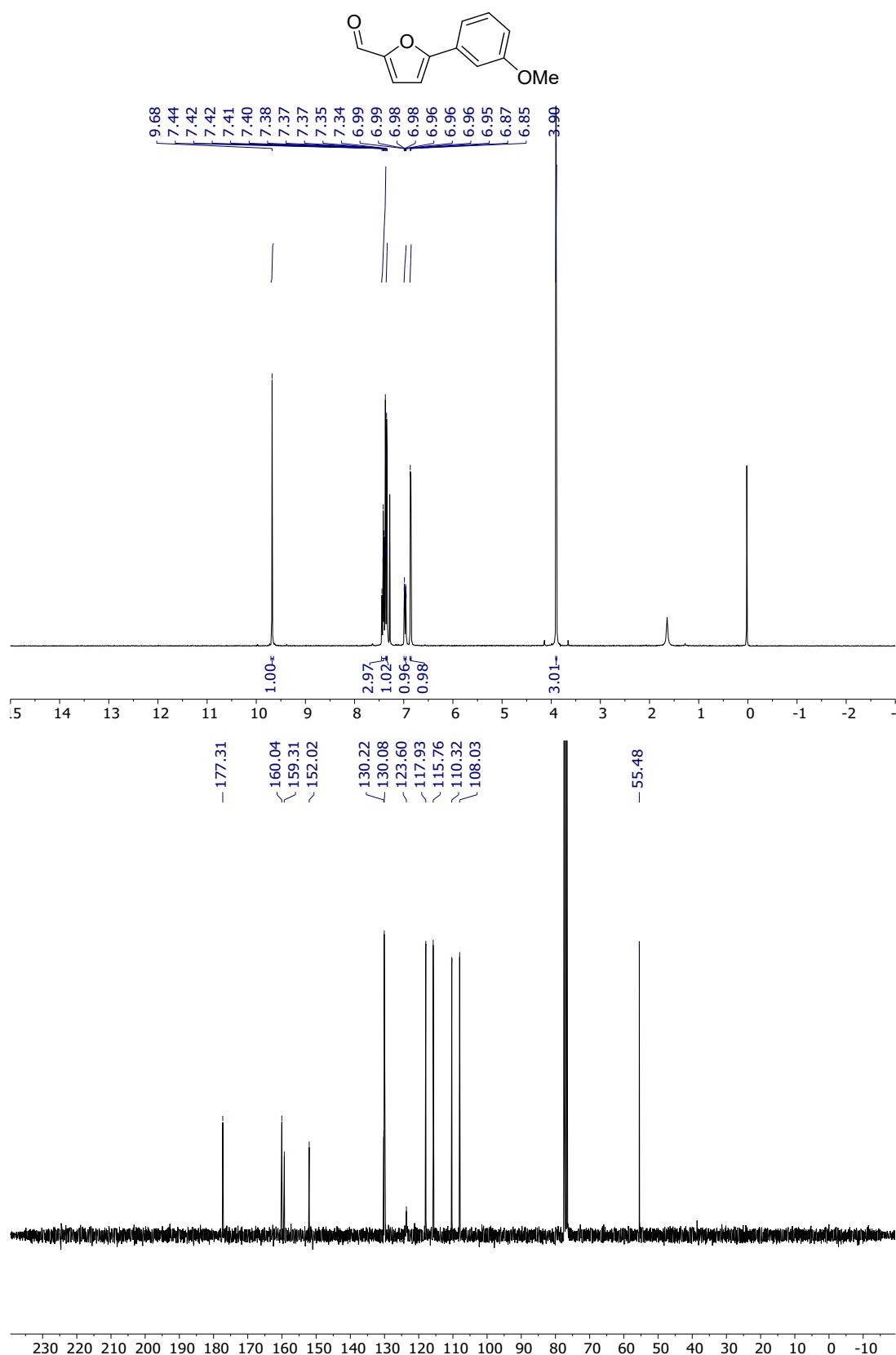
3-methoxythiophene-2-carbaldehyde spectra in CDCl_3



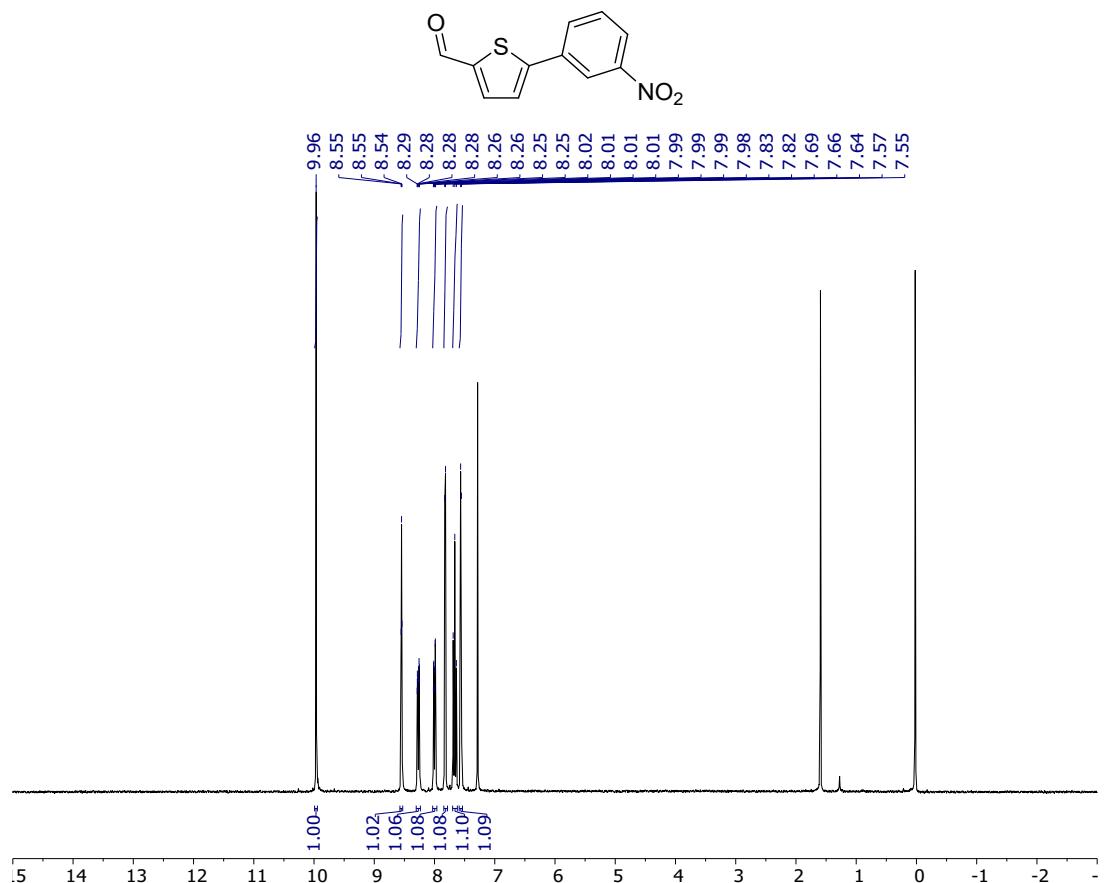
5-(3-nitrophenyl)furan-2-carbaldehyde spectra in CDCl₃



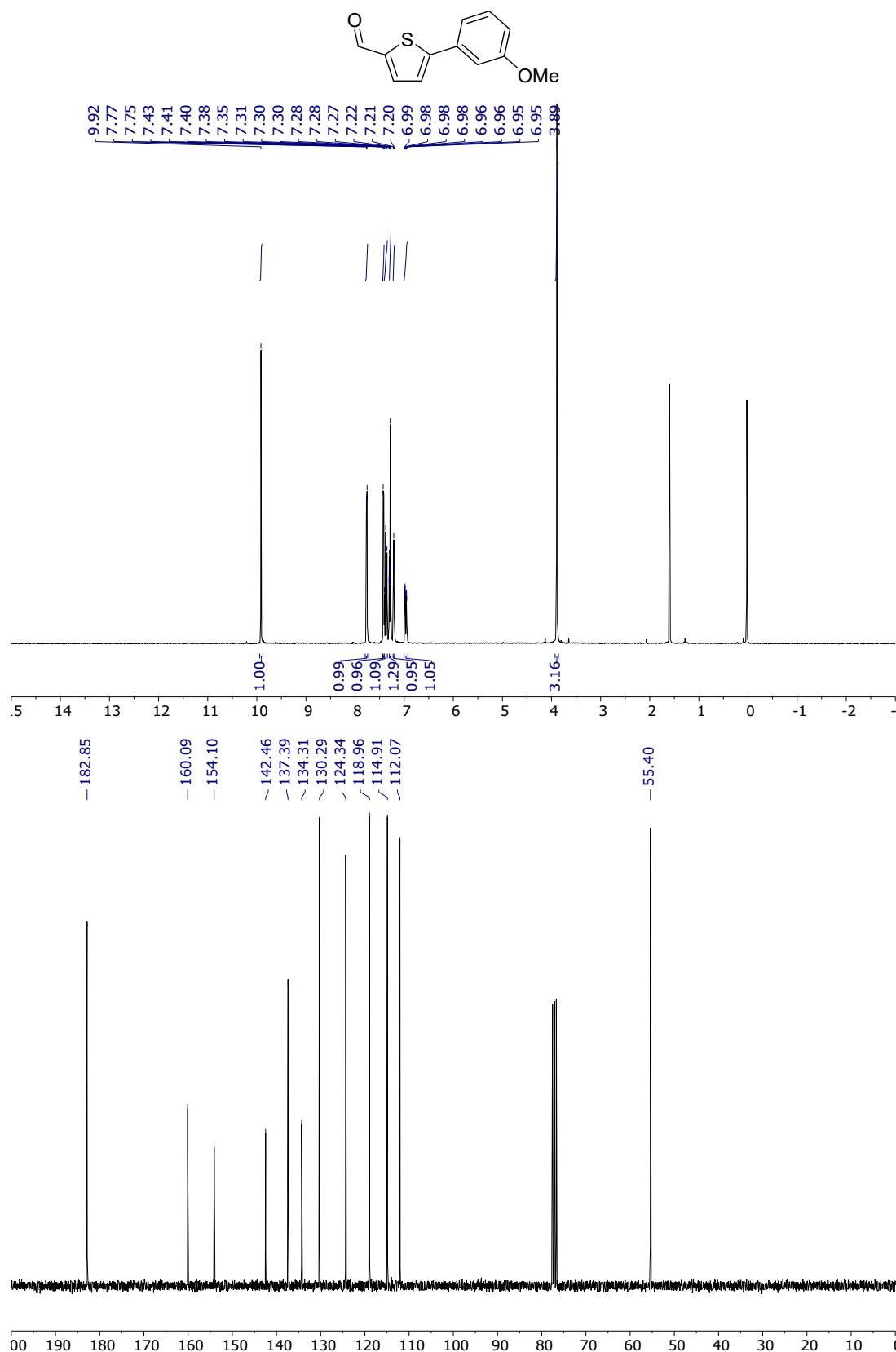
5-(3-methoxyphenyl)furan-2-carbaldehyde spectra in CDCl_3



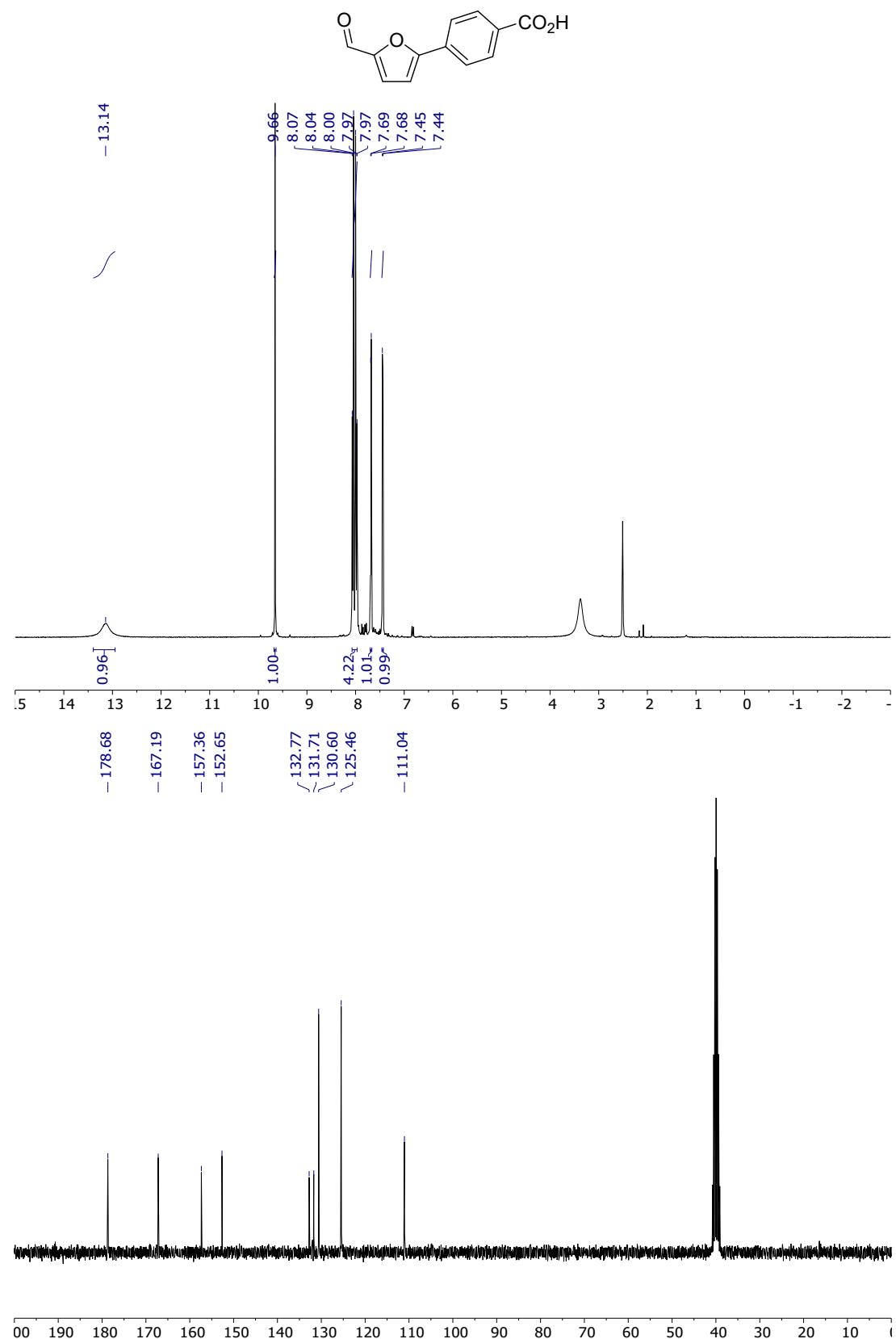
5-(3-nitrophenyl)thiophene-2-carbaldehyde spectra in CDCl_3



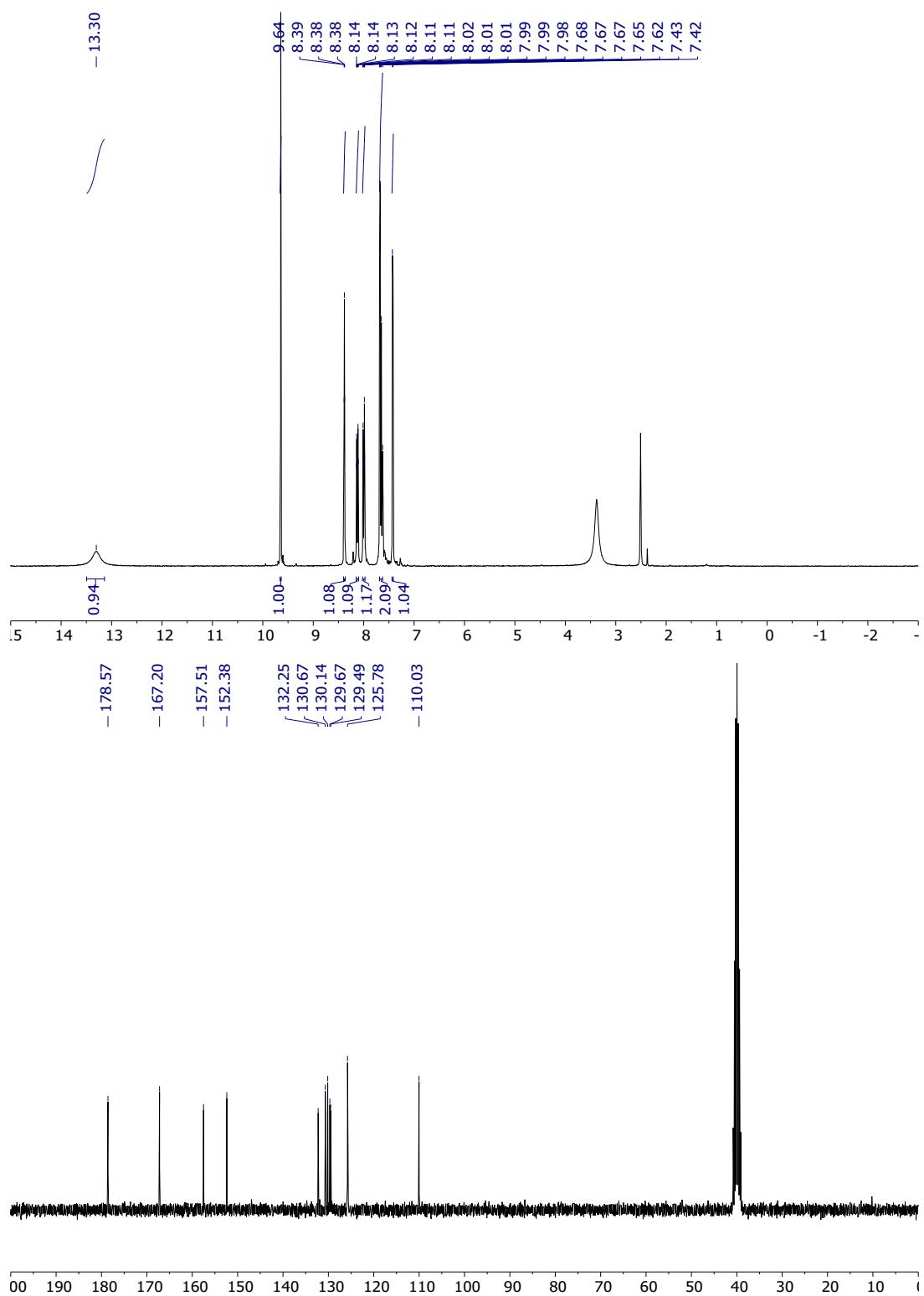
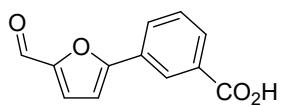
5-(3-methoxyphenyl)thiophene-2-carbaldehyde spectra in CDCl_3



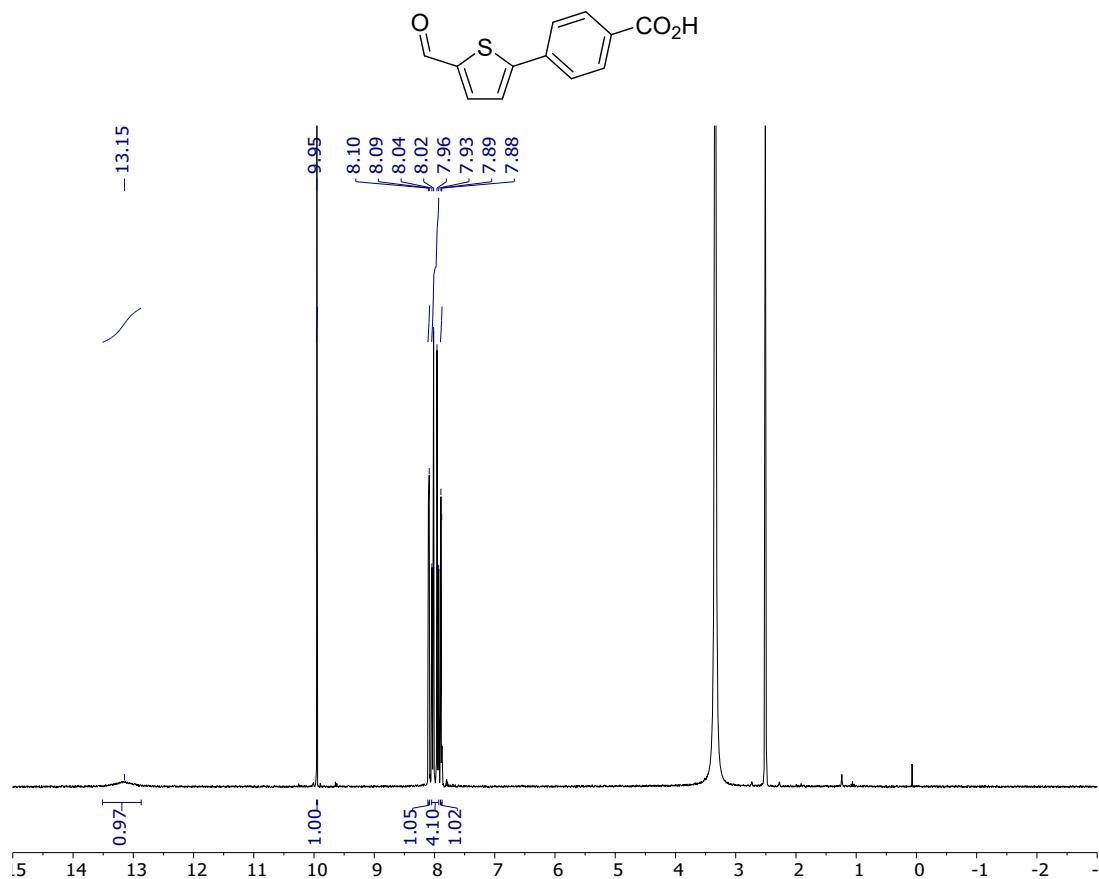
4-(5-formylfuran-2-yl)benzoic acid spectra in dmso-d₆



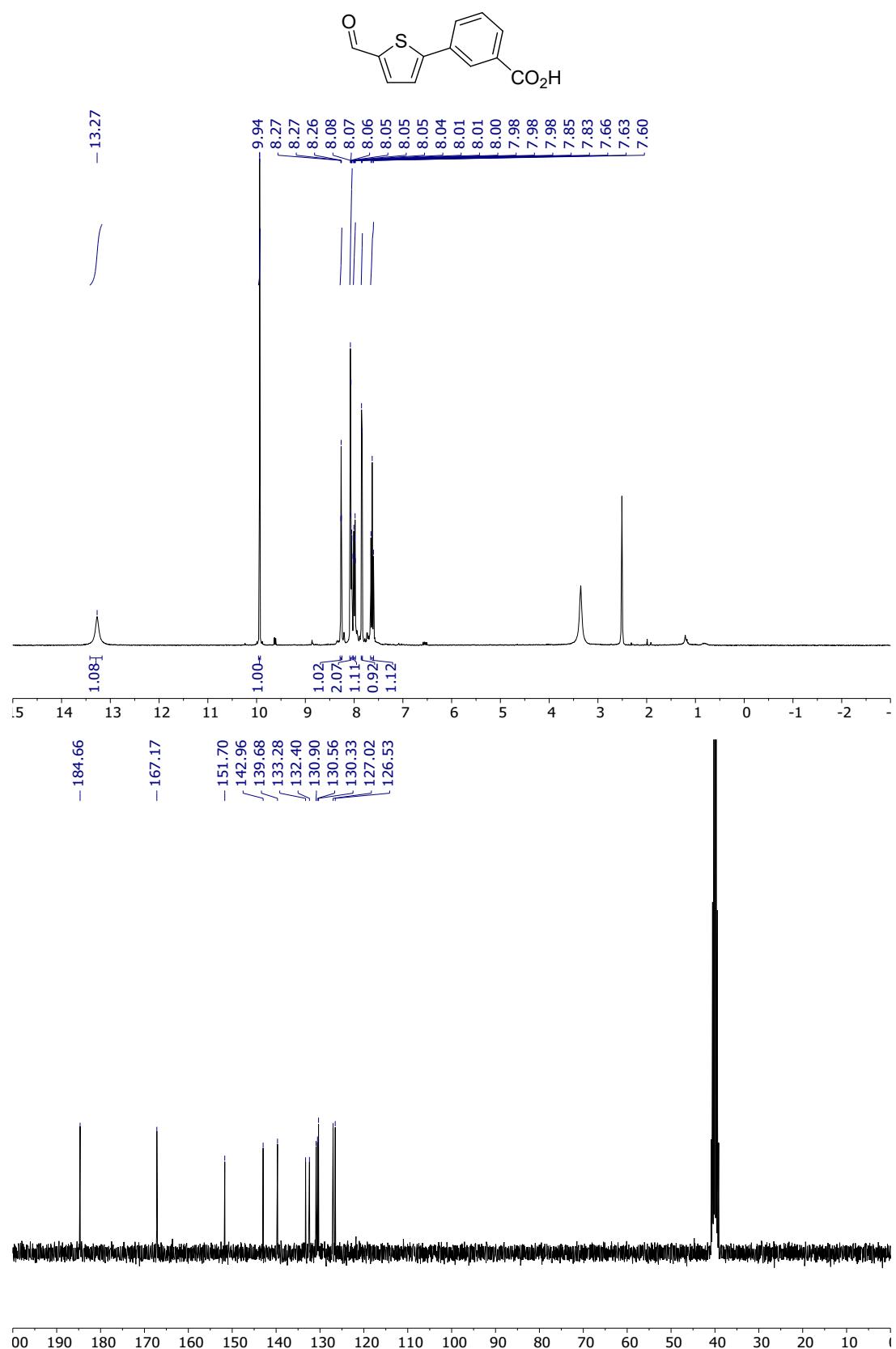
3-(5-formylfuran-2-yl)benzoic acid spectra in d₆-dmso



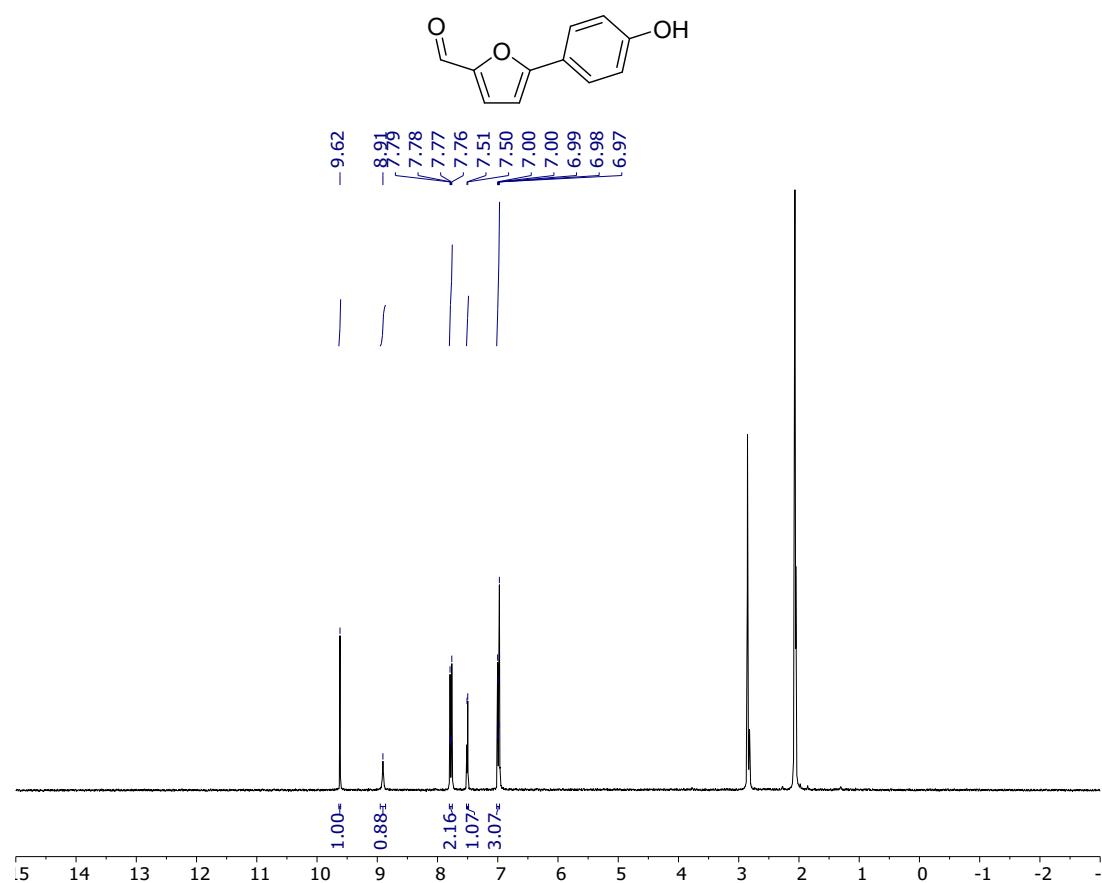
4-(5-formylthiophene-2-yl)benzoic acid spectra in dmso-d₆



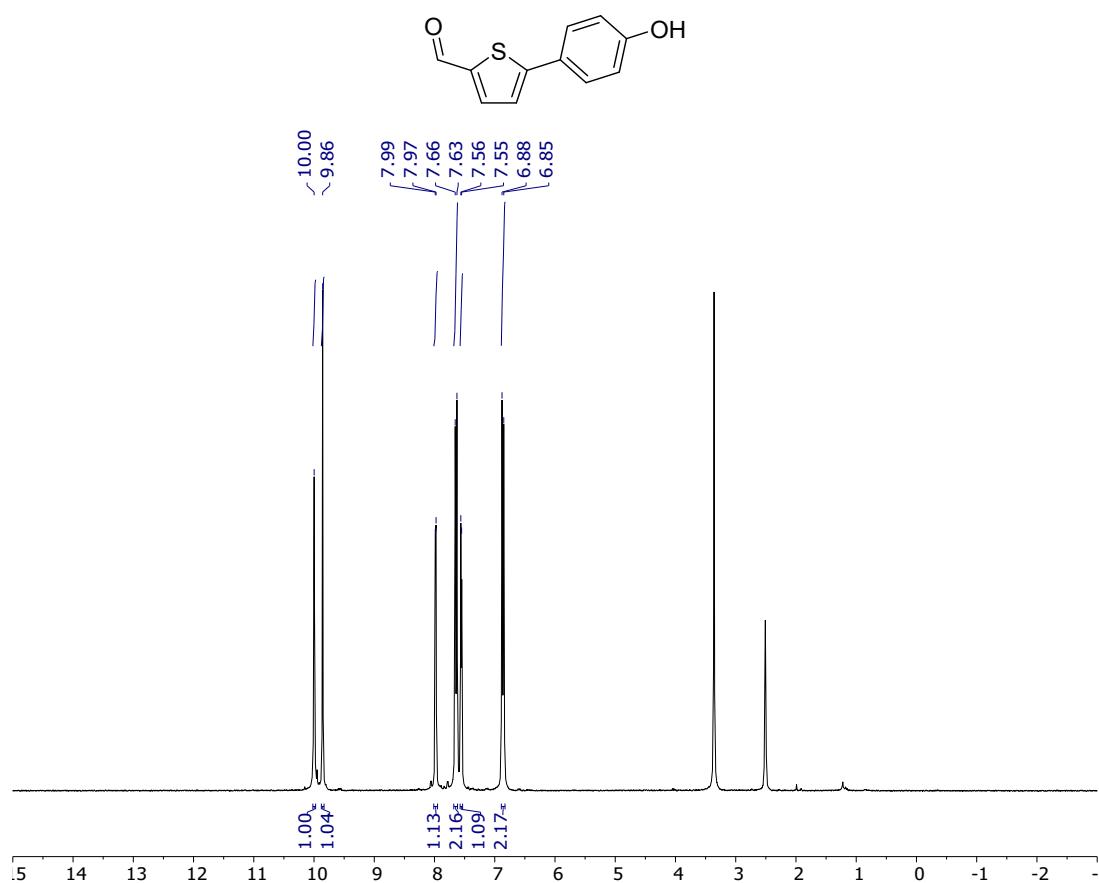
3-(5-formylthiophene-2-yl)benzoic acid spectra in dmso-d₆



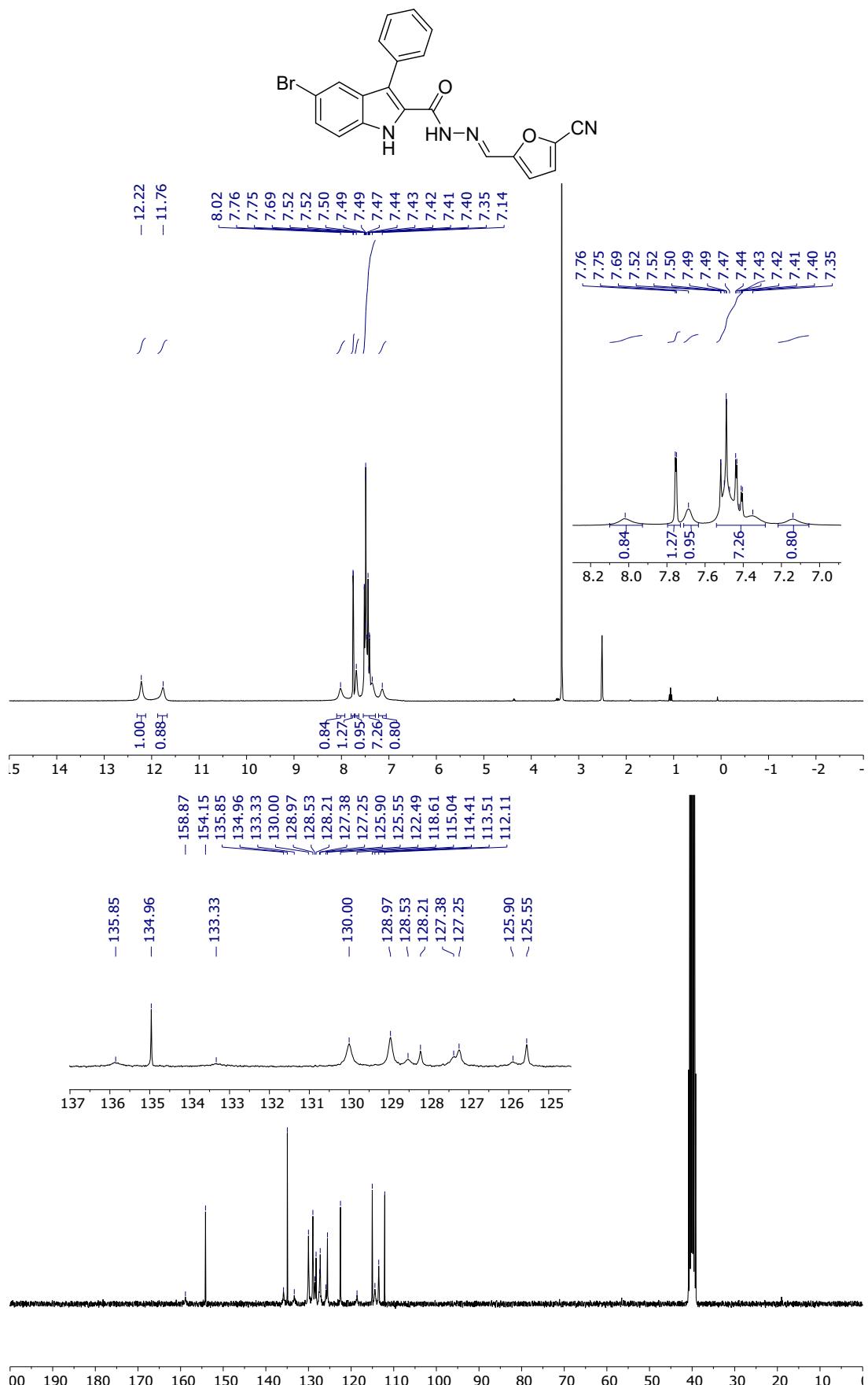
5-(4-hydroxyphenyl)furan-2-carbaldehyde spectra in acetone-d₆



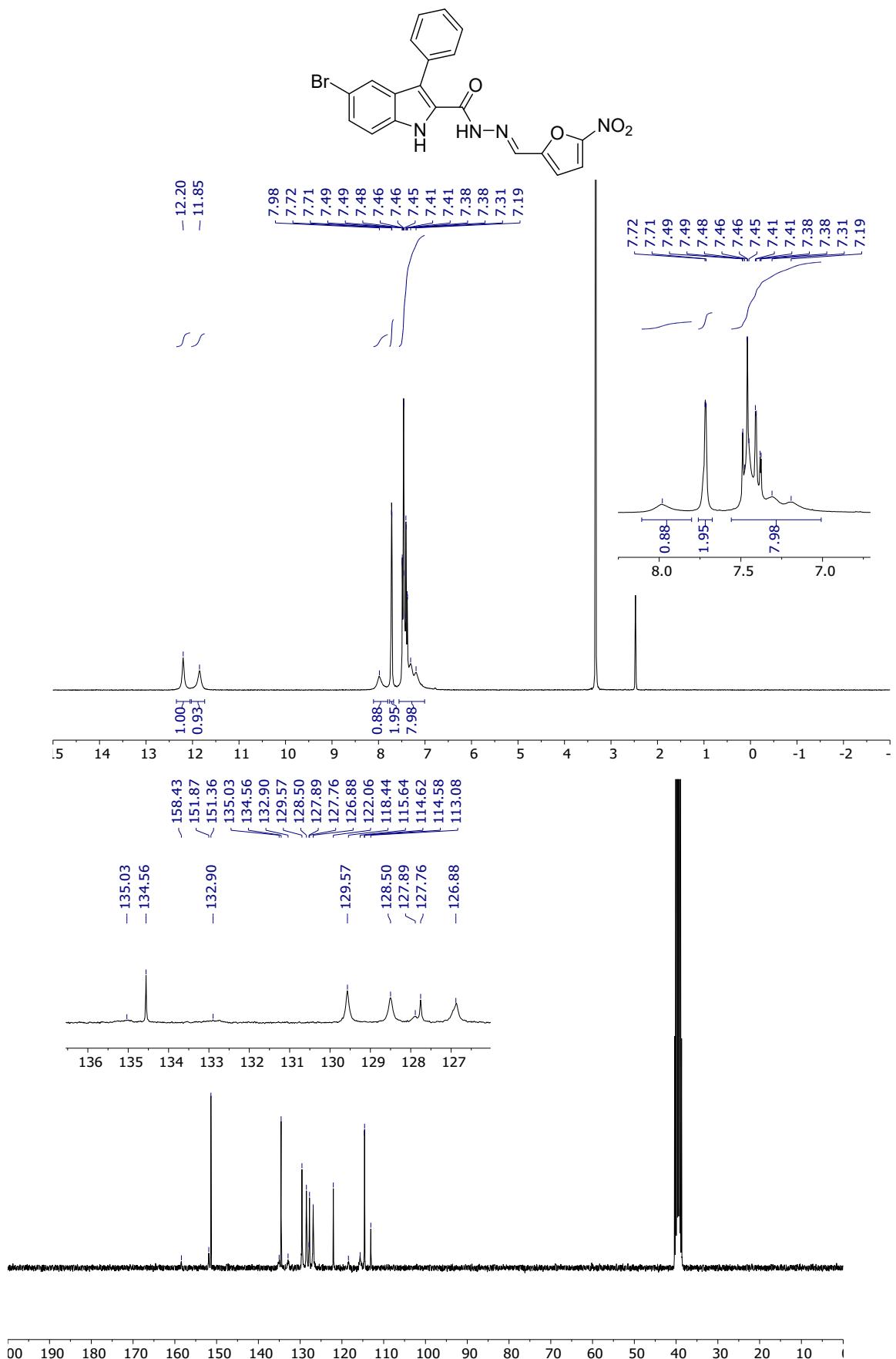
5-(4-hydroxyphenyl)thiophene-2-carbaldehyde spectra in dmso-d₆



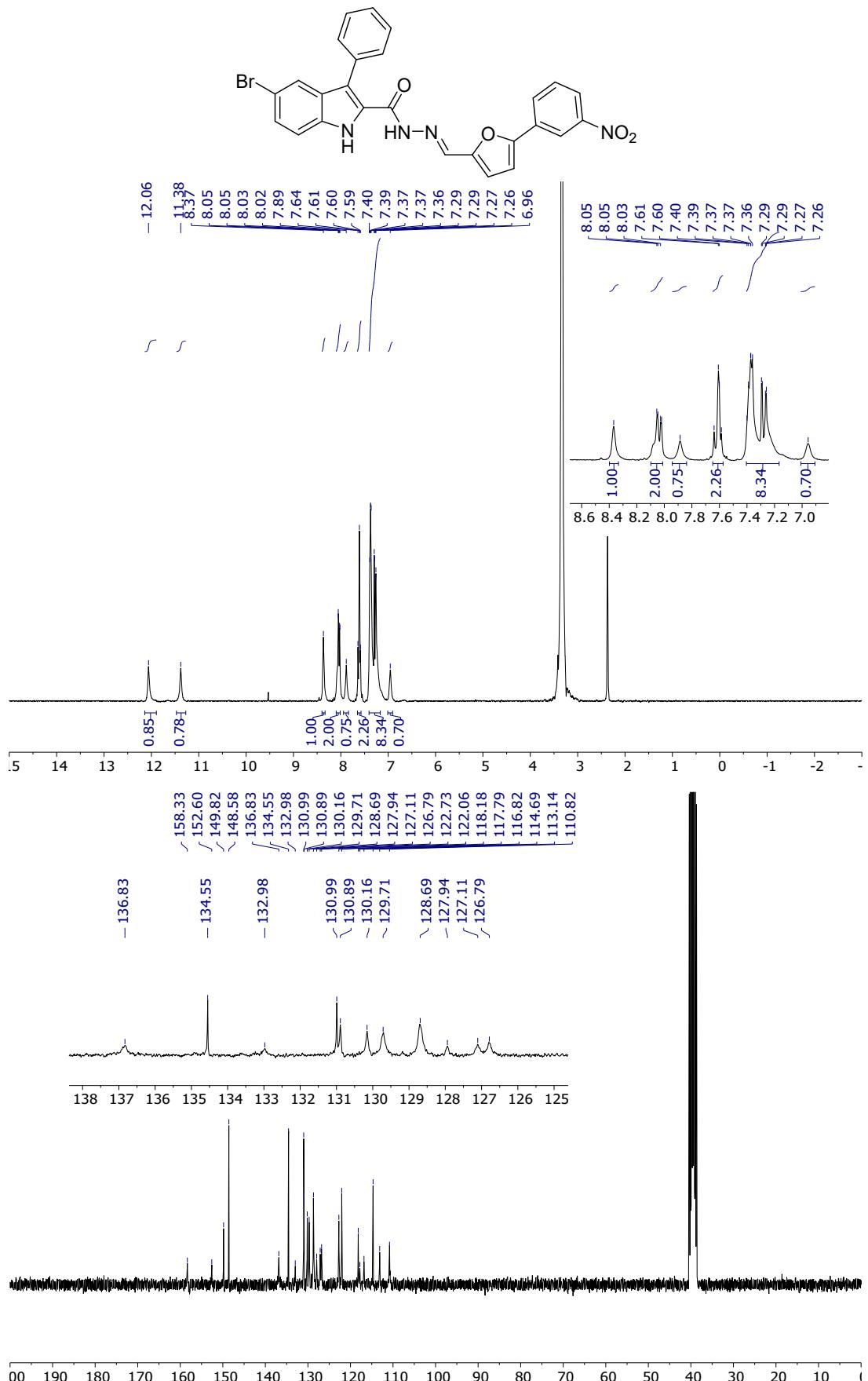
(E)-5-bromo-N'-(5-cyanofuran-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (5e) spectra in d₆mso-d₆



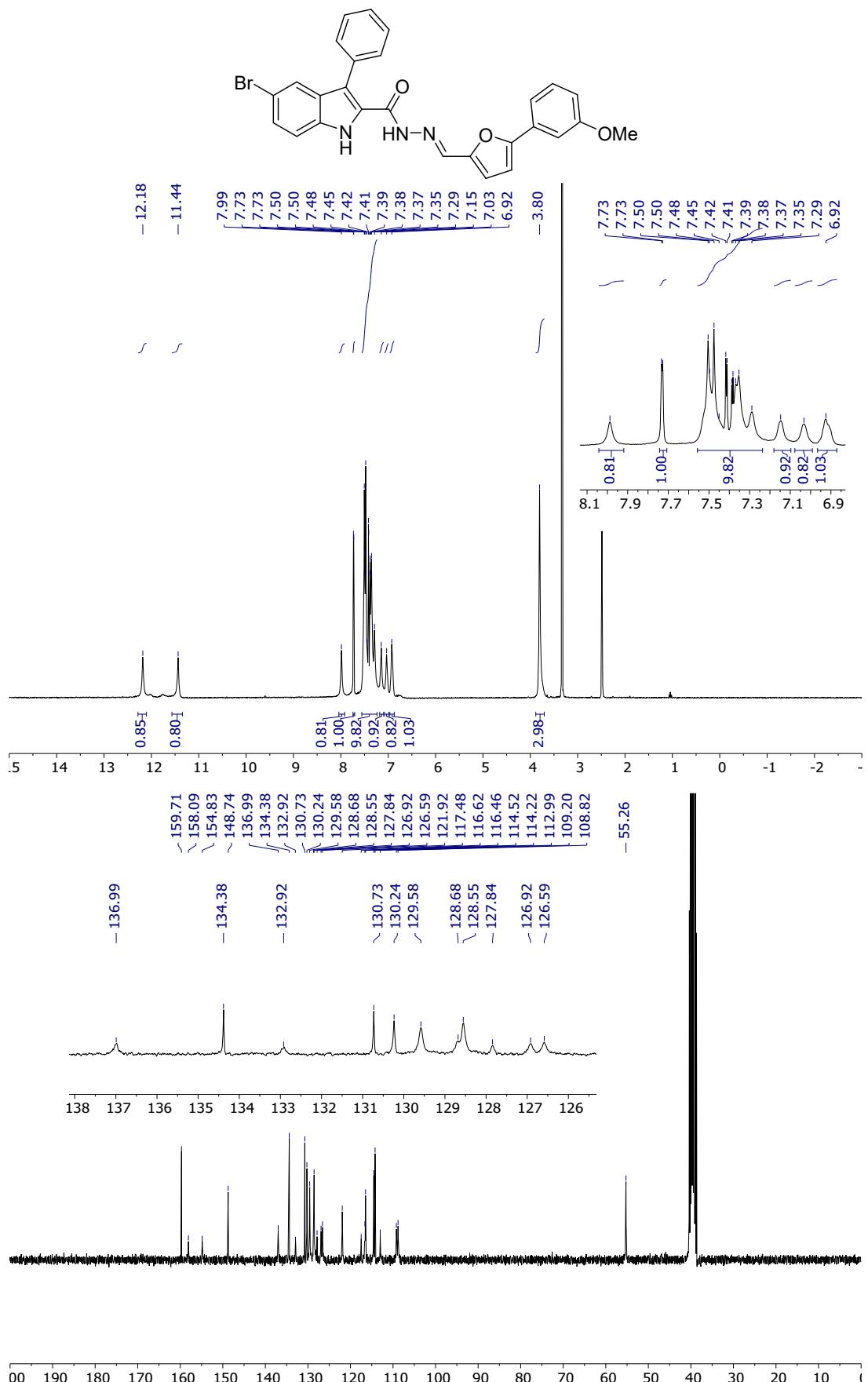
(E)-5-bromo-N'-(5-nitrofuran-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (5f) spectra in dmso-d₆



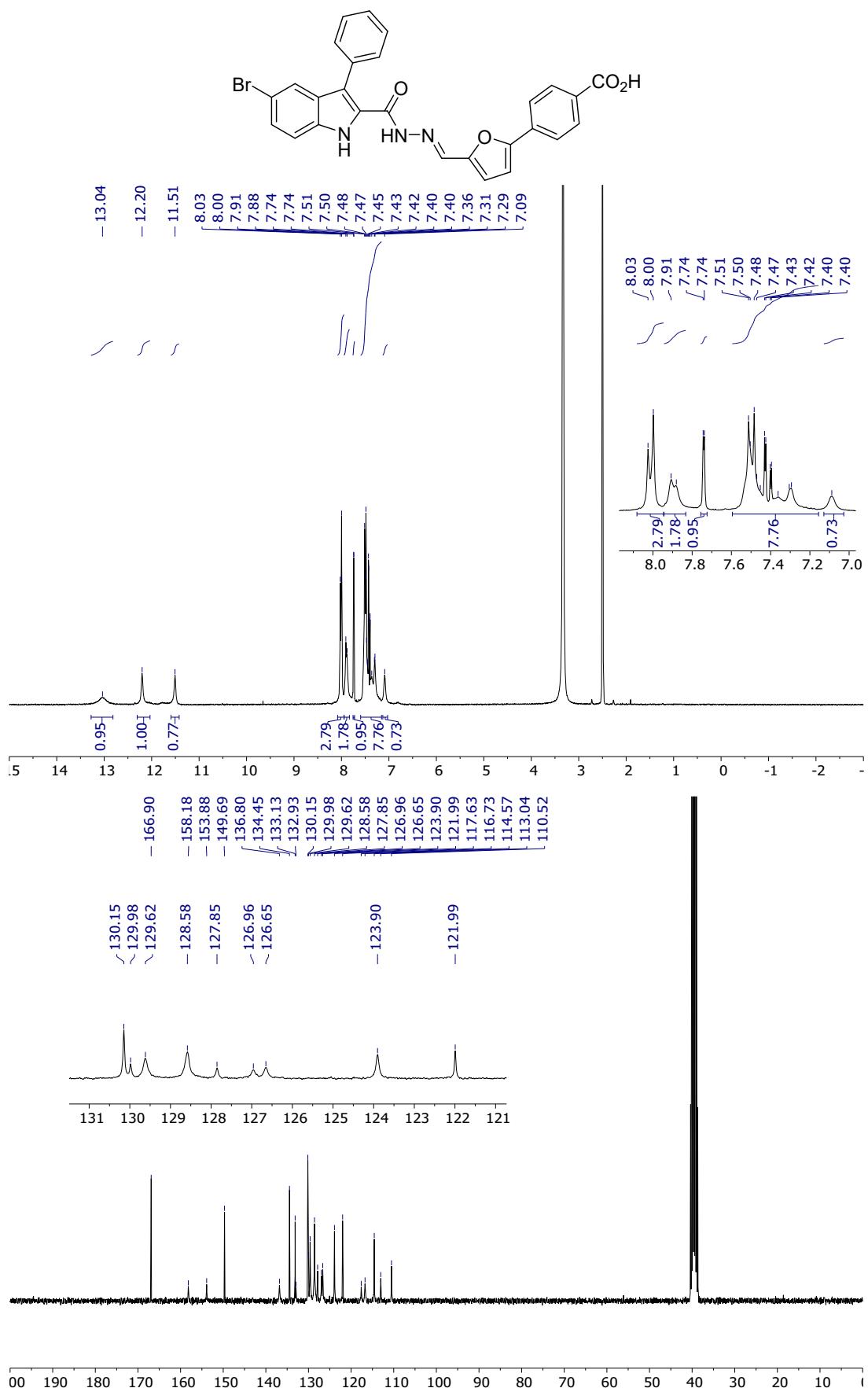
(E)-5-bromo-N'-(5-(3-nitrophenyl)furan-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (5g) spectra in d₆-DMSO



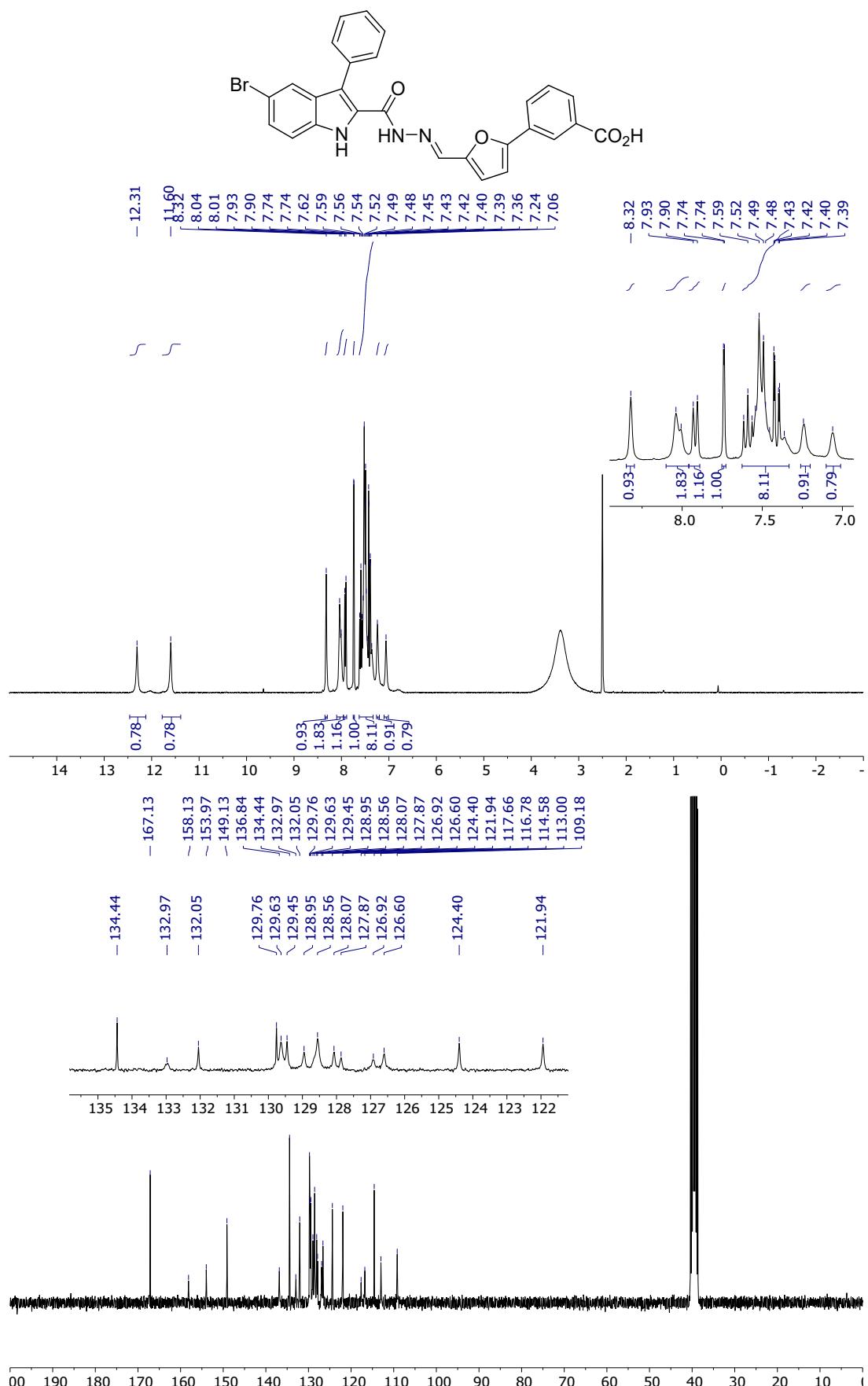
(E)-5-bromo-N¹-((5-(3-methoxyphenyl)furan-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (5h) spectra in dmso-d₆



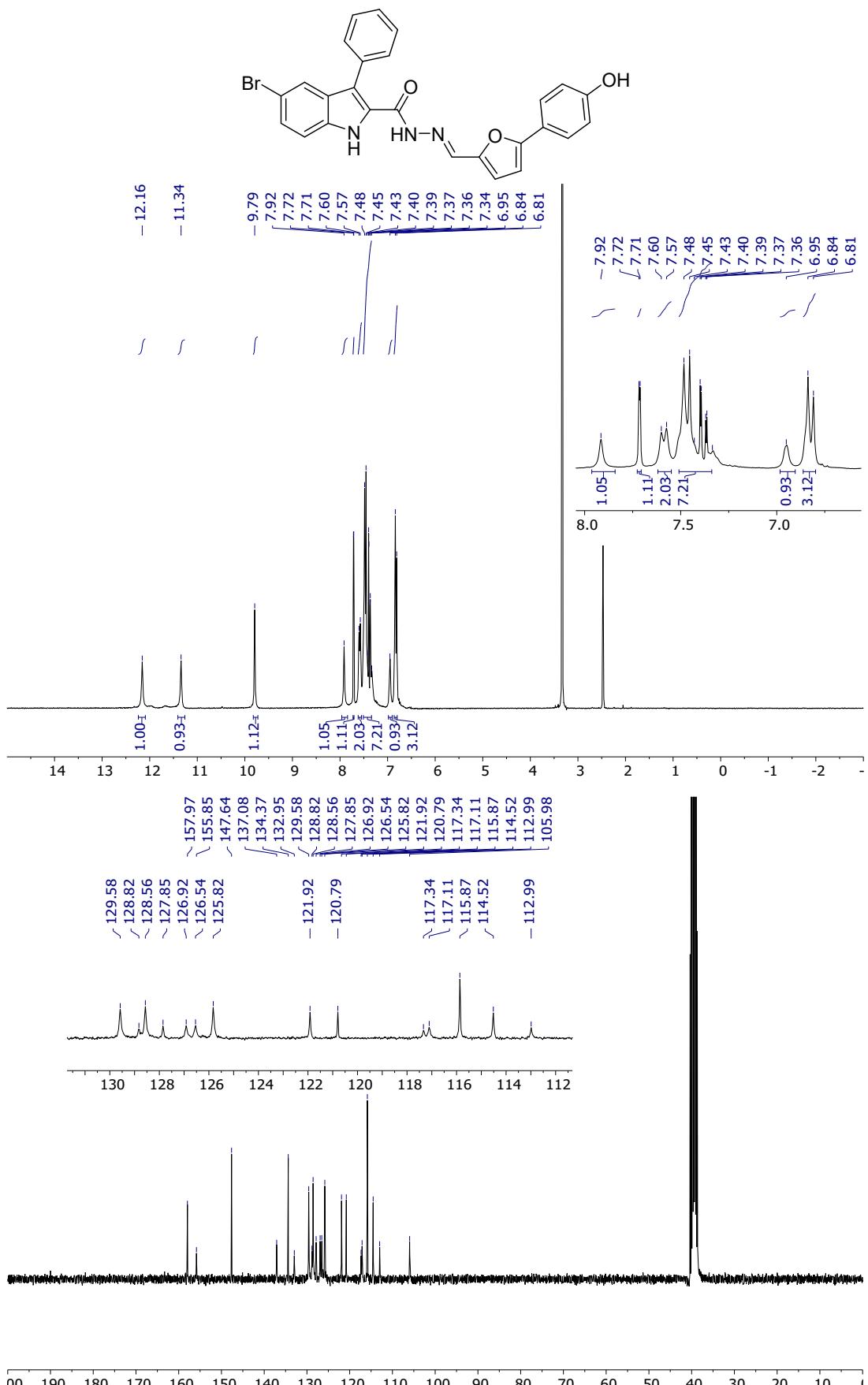
(E)-4-((2-(5-bromo-3-phenyl-1H-indole-2-carbonyl)hydrazono)methyl)furan-2-yl)benzoic acid (5i) spectra in dmso-d₆



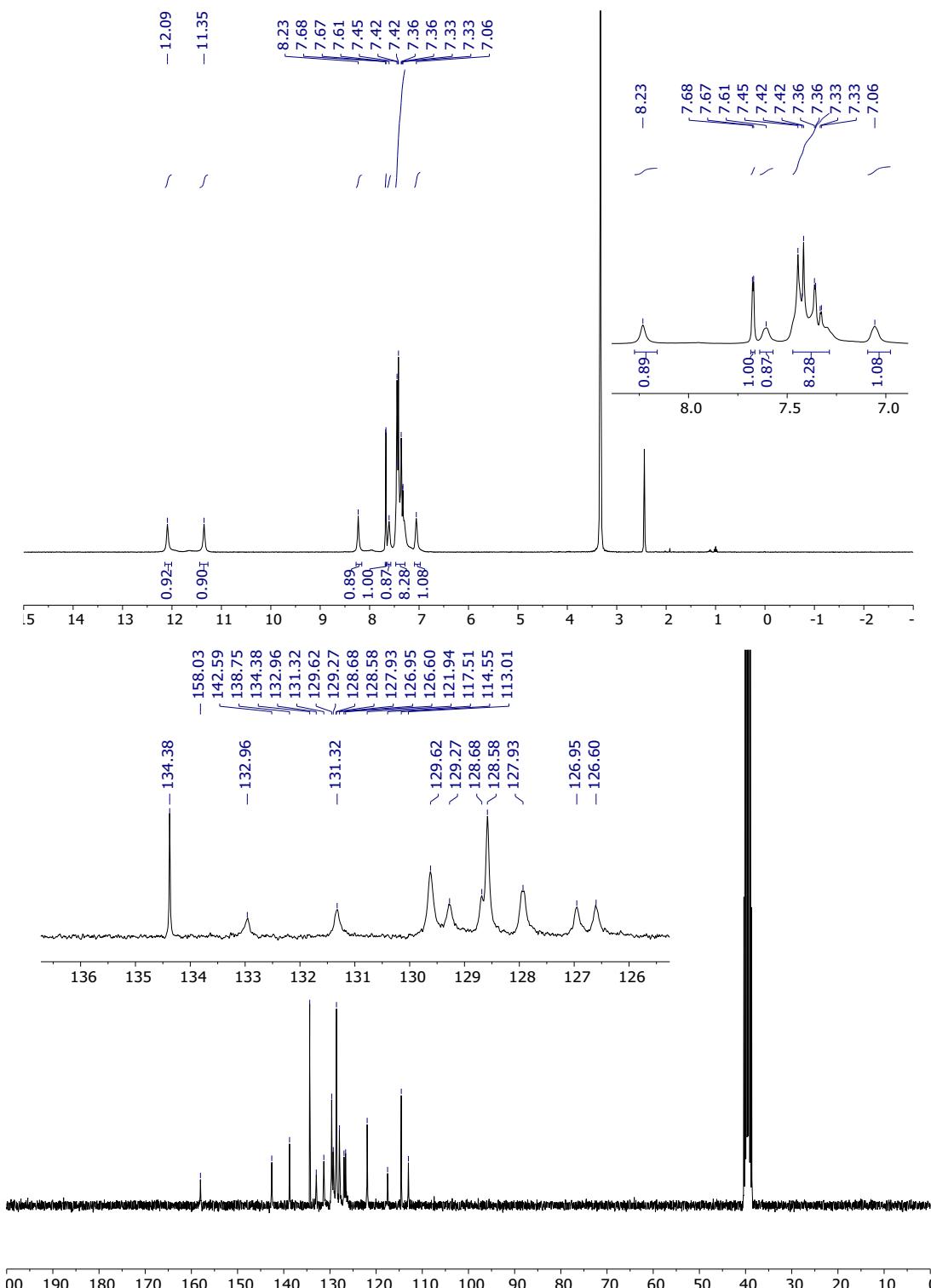
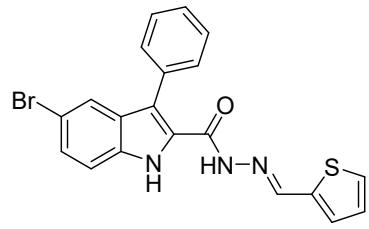
(E)-3-((2-(5-bromo-3-phenyl-1*H*-indole-2-carbonyl)hydrazone)methyl)furan-2-yl)benzoic acid (5j) spectra in dmso-d₆



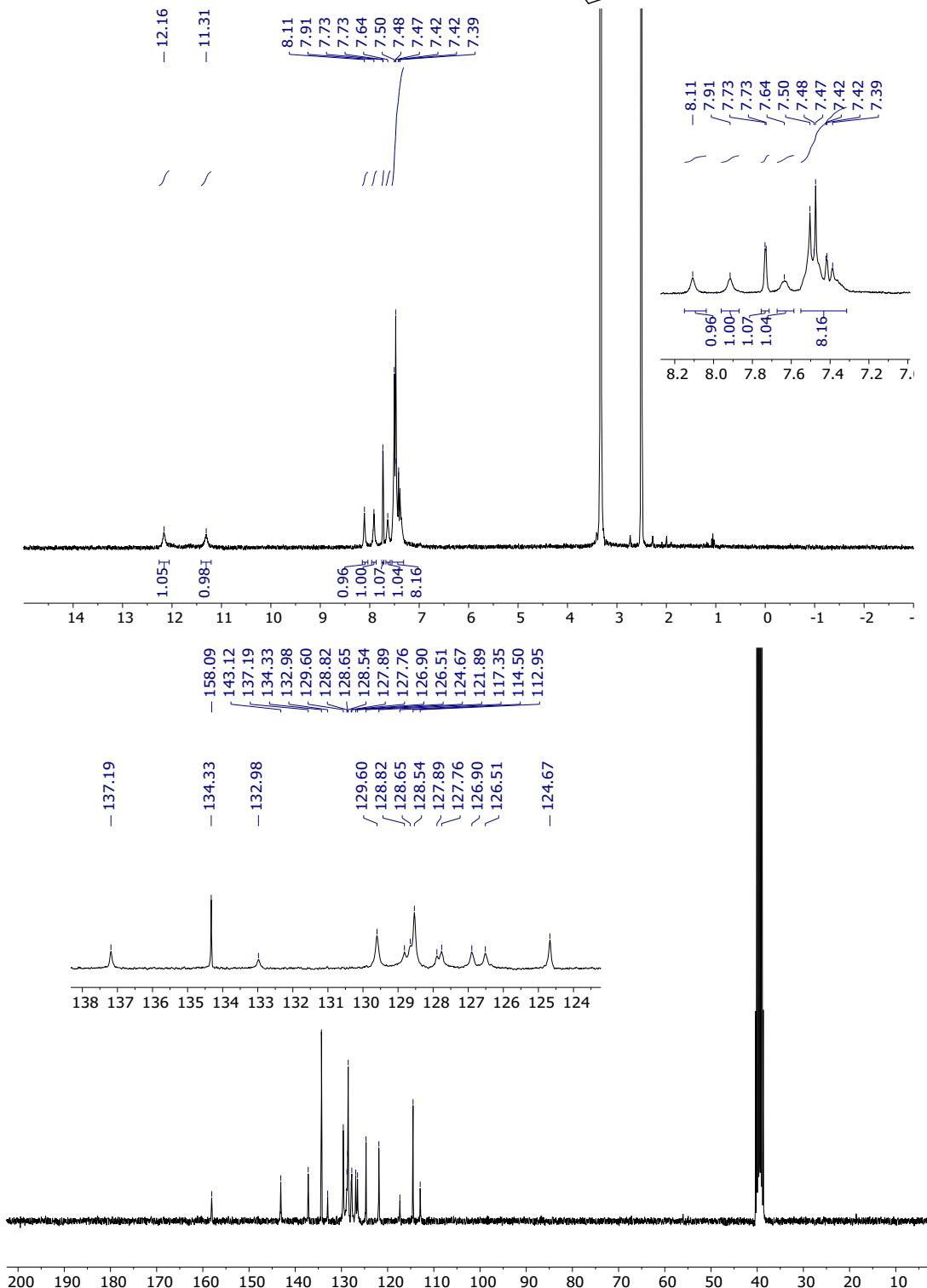
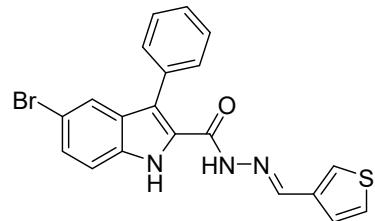
(E)-5-bromo-N'-(5-(4-hydroxyphenyl)furan-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (5k) spectra in d₆-dmso



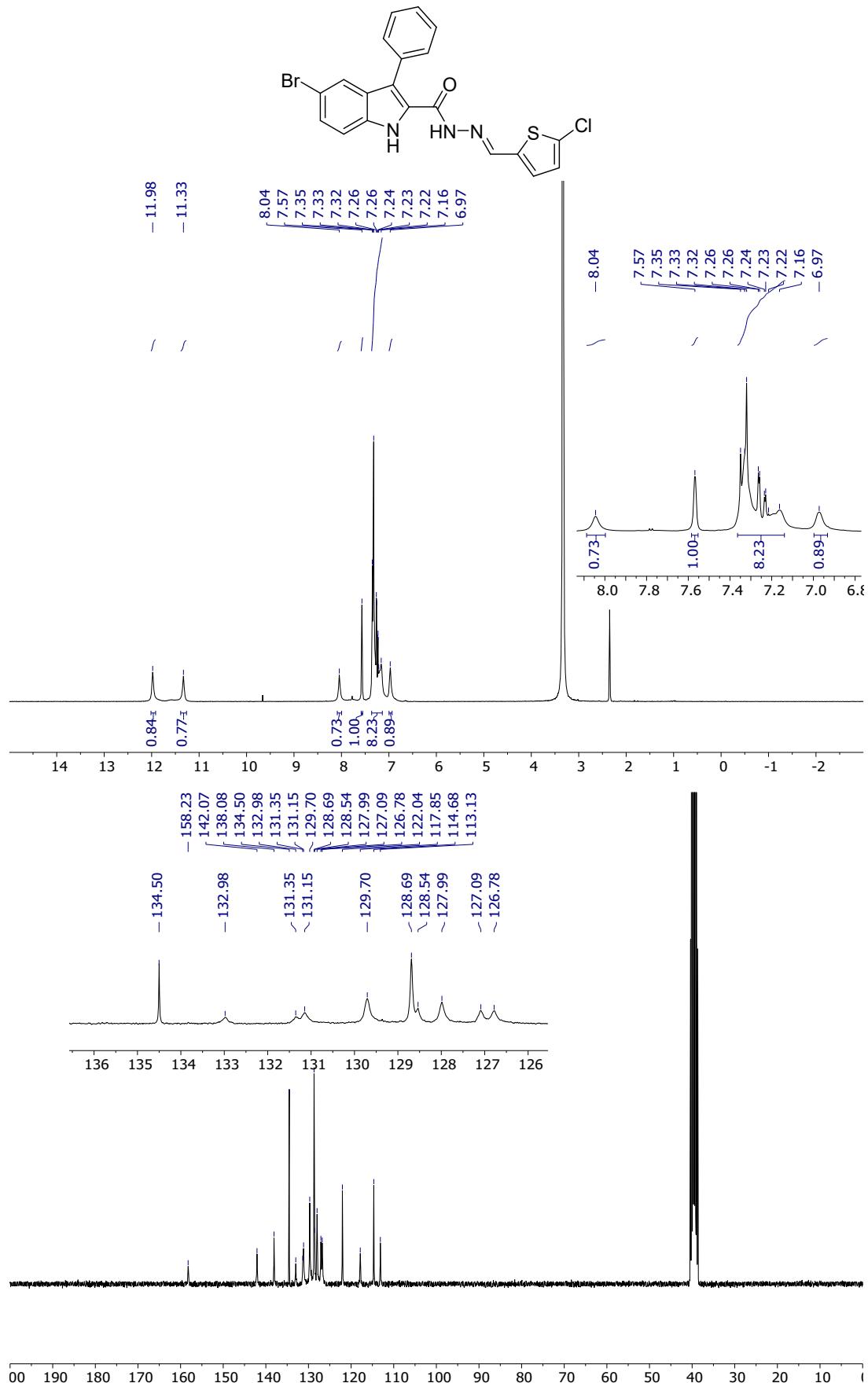
(E)-5-bromo-3-phenyl-N'-(thiophene-2-ylmethylene)-1*H*-indole-2-carbohydrazide (6a) spectra in d₆MSO



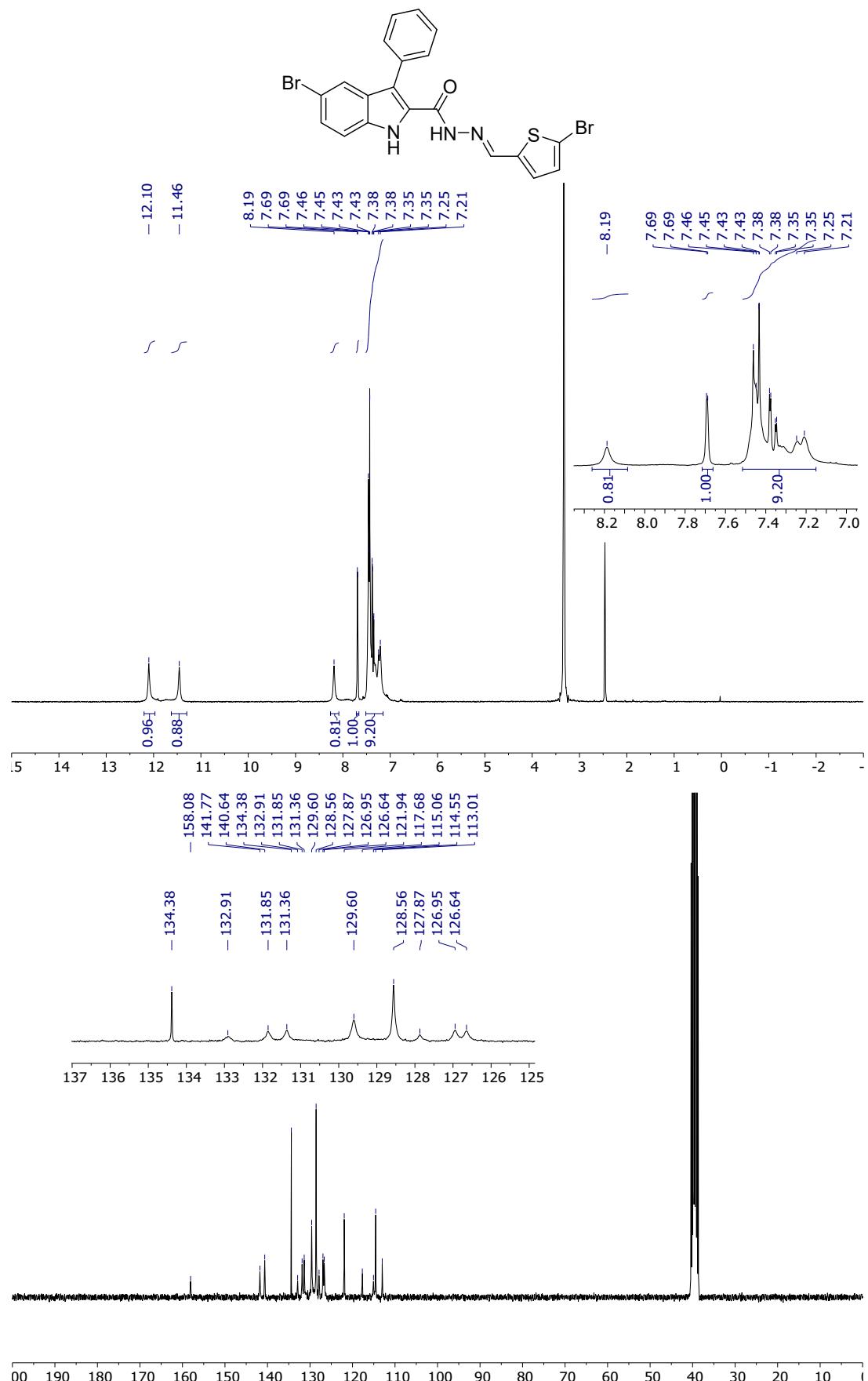
(E)-5-bromo-3-phenyl-N'-(thiophene-3-ylmethylene)-1*H*-indole-2-carbohydrazide (6b) spectra in d₆ms₀



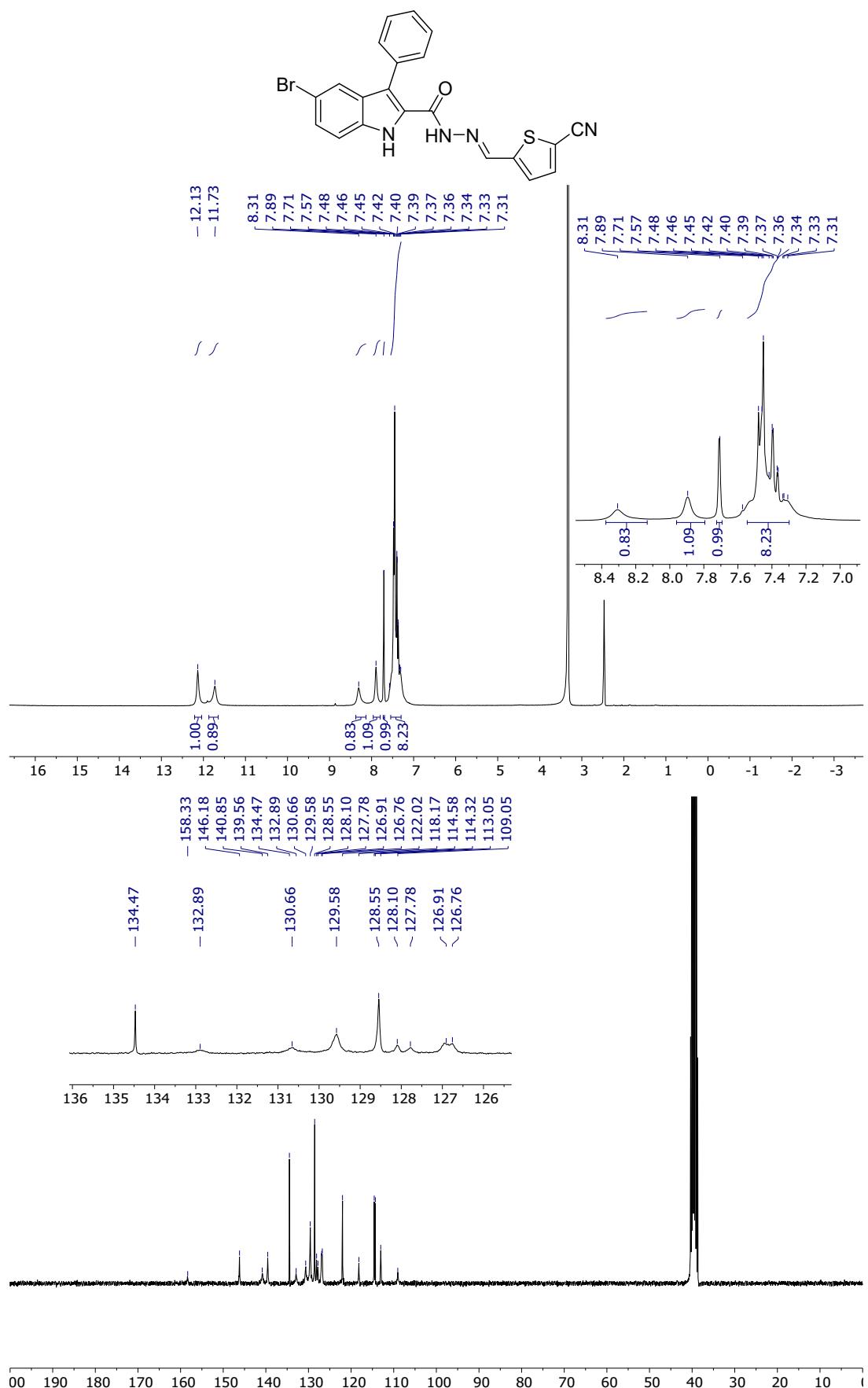
(E)-5-bromo-N¹-((5-chlorothiophene-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (6c) spectra in dmso-d₆



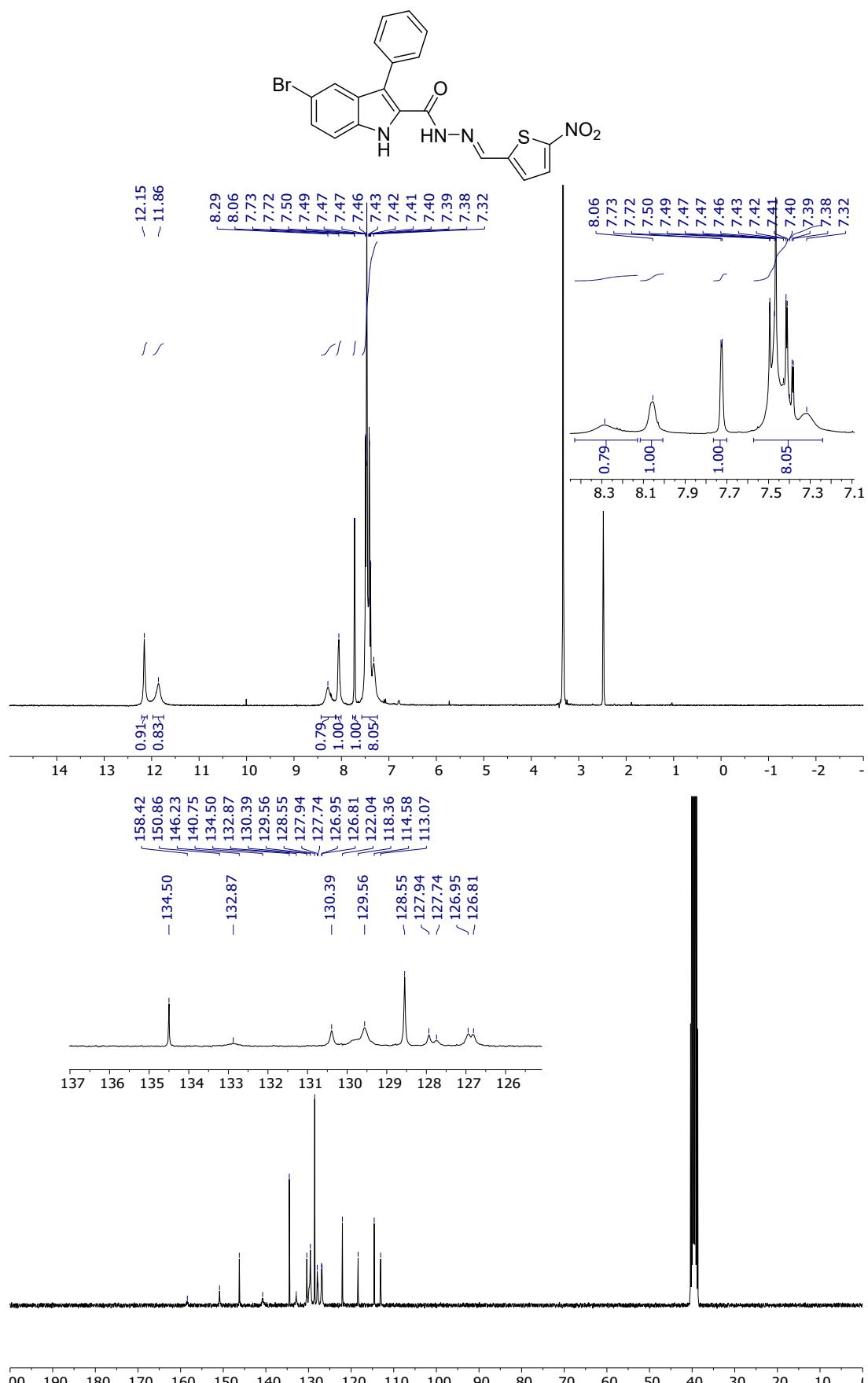
(E)-5-bromo-N¹-((5-bromothiophene-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (6d) spectra in dmso-d₆



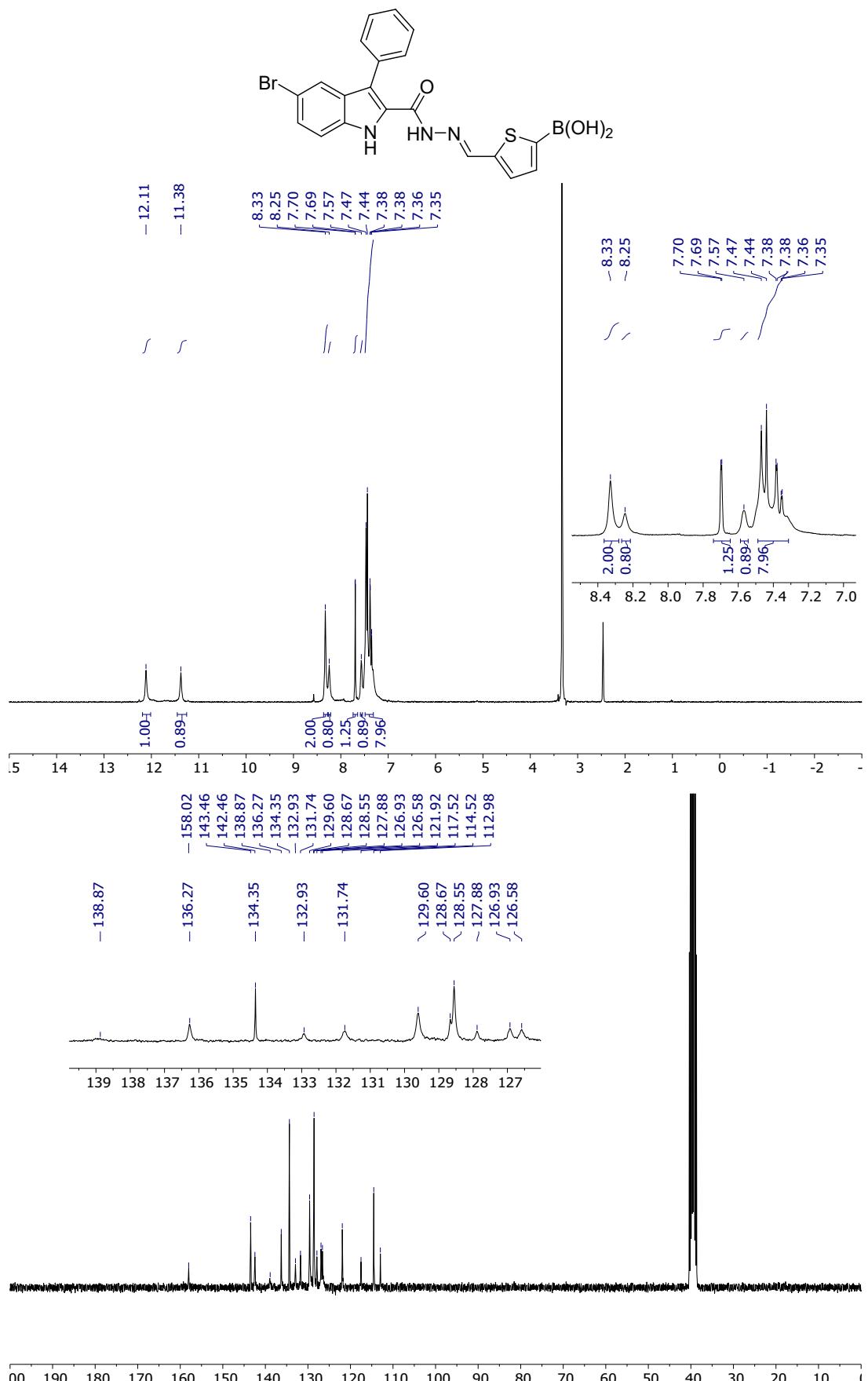
(E)-5-bromo-N'-(5-cyanothiophene-2-yl)methylene-3-phenyl-1*H*-indole-2-carbohydrazide (6e) spectra in dmso-d₆



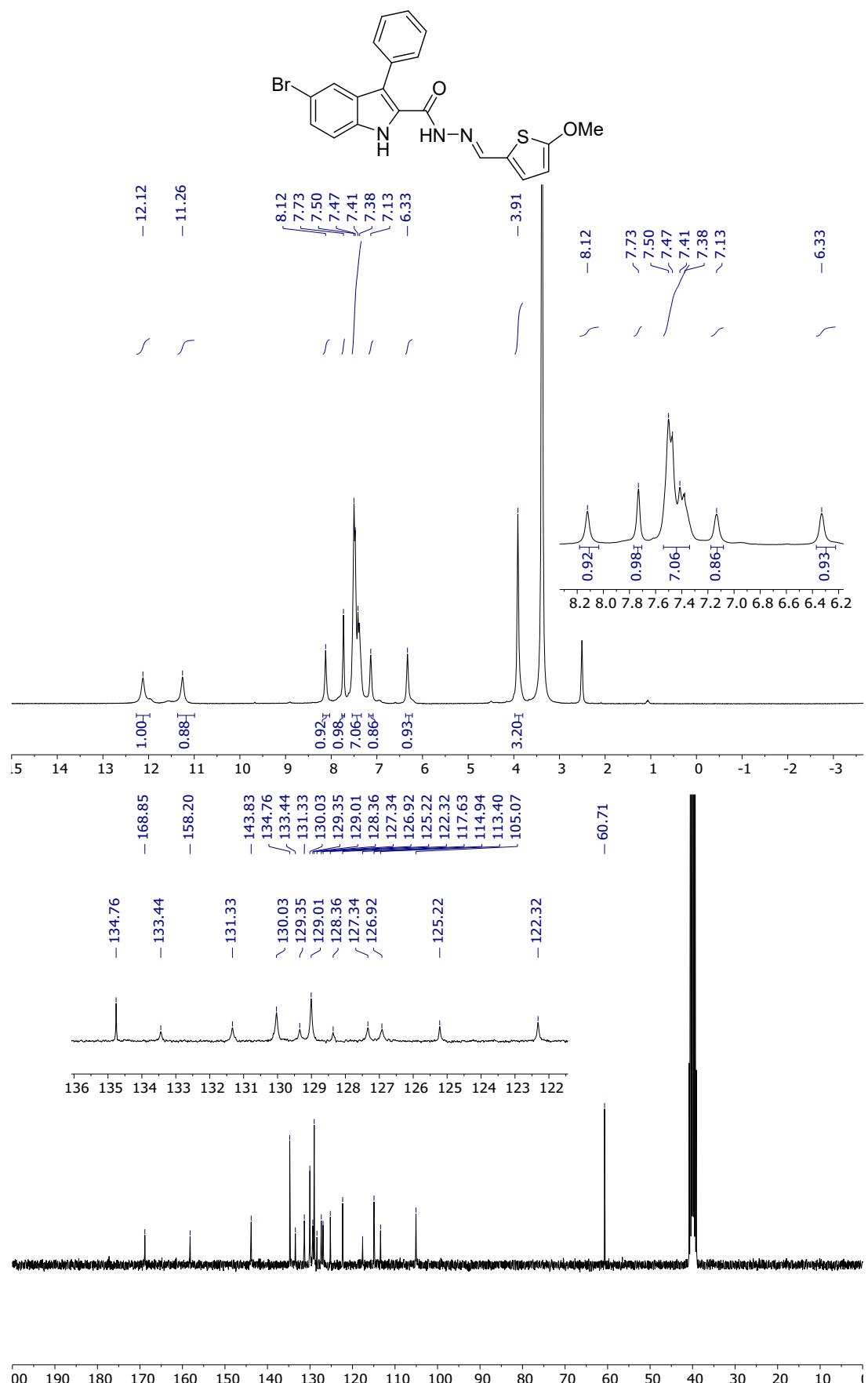
(E)-5-bromo-N¹-((5-nitrothiophene-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (6f) spectra in dmso-d₆



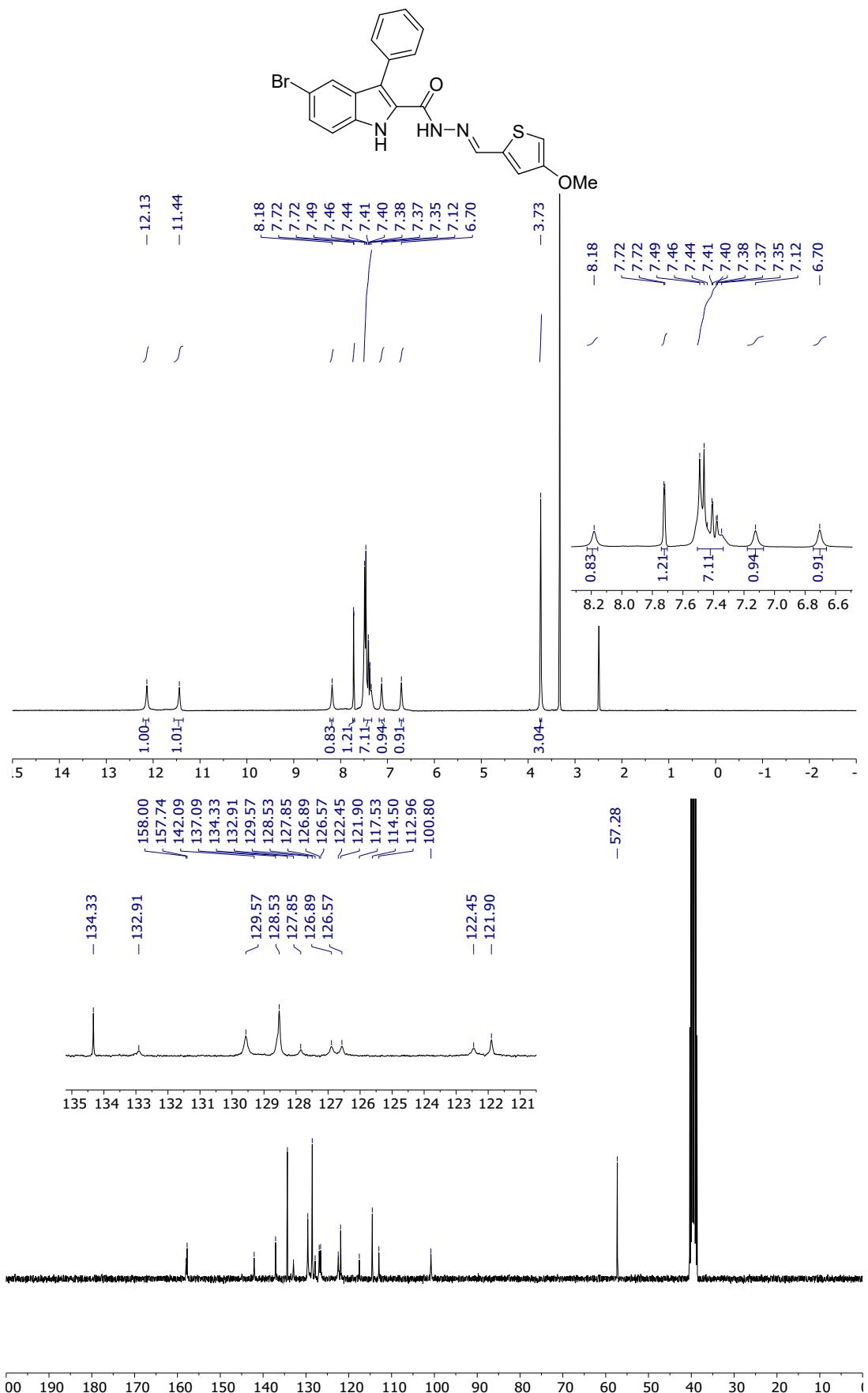
(E)-(5-((2-(5-bromo-3-phenyl-1H-indole-2-carbonyl)hydrazono)methyl)thiophene-2-yl)boronic acid (6g) spectra in dmso-d₆



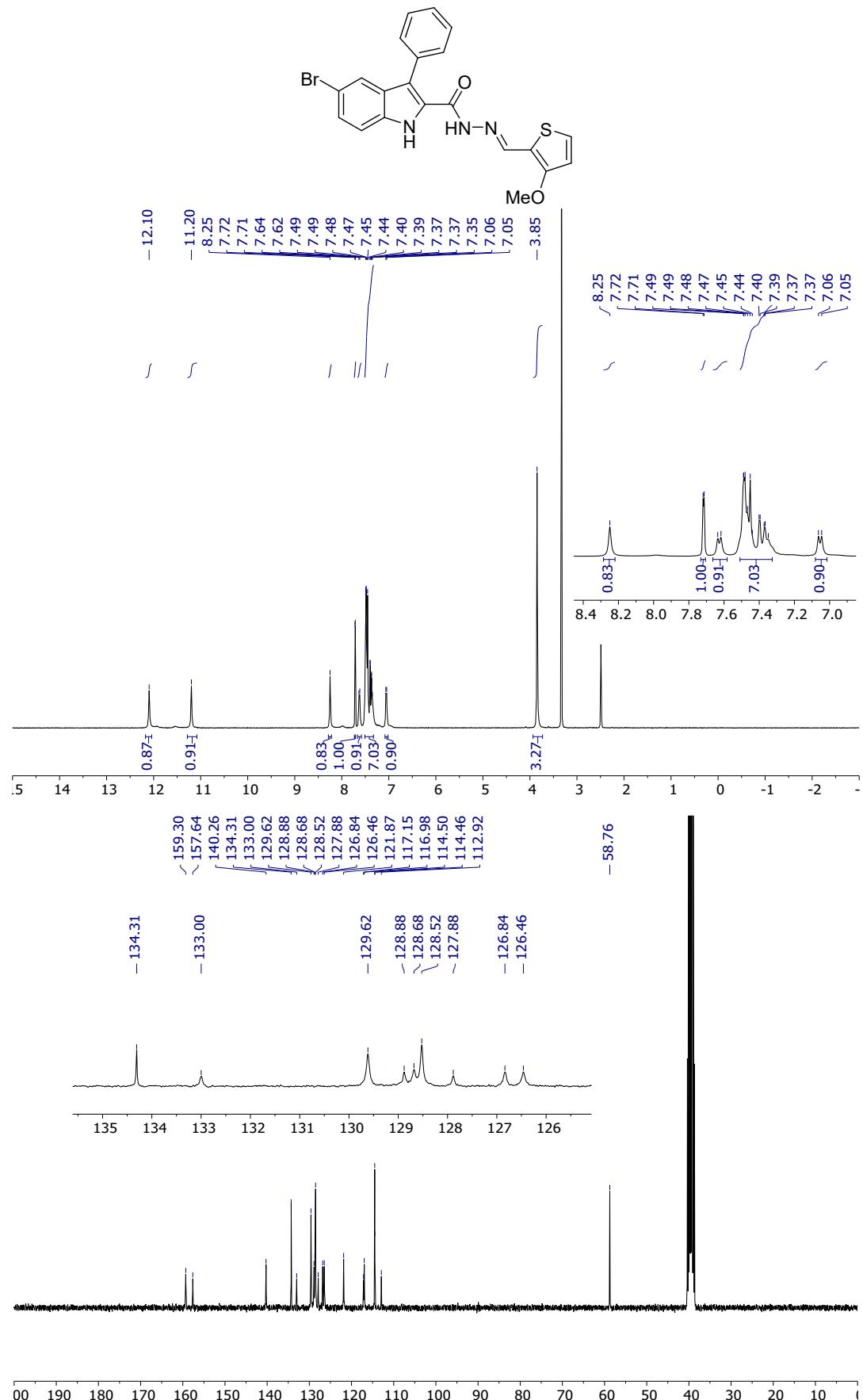
(E)-5-bromo-N'-(5-methoxythiophene-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (6h**) spectra in dmso-d₆**



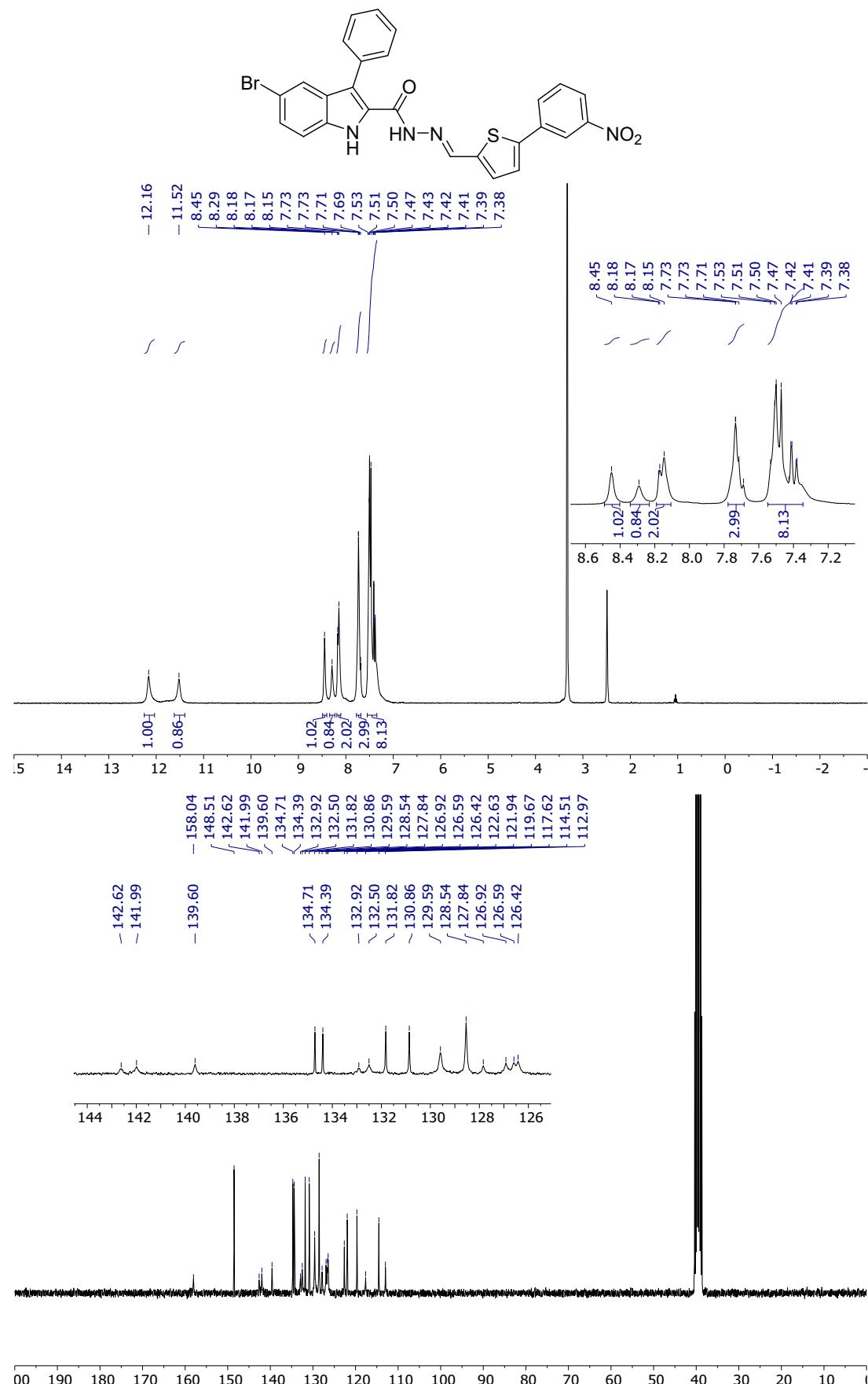
(E)-5-bromo-N¹-((4-methoxythiophene-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (6i) spectra in dmso-d₆



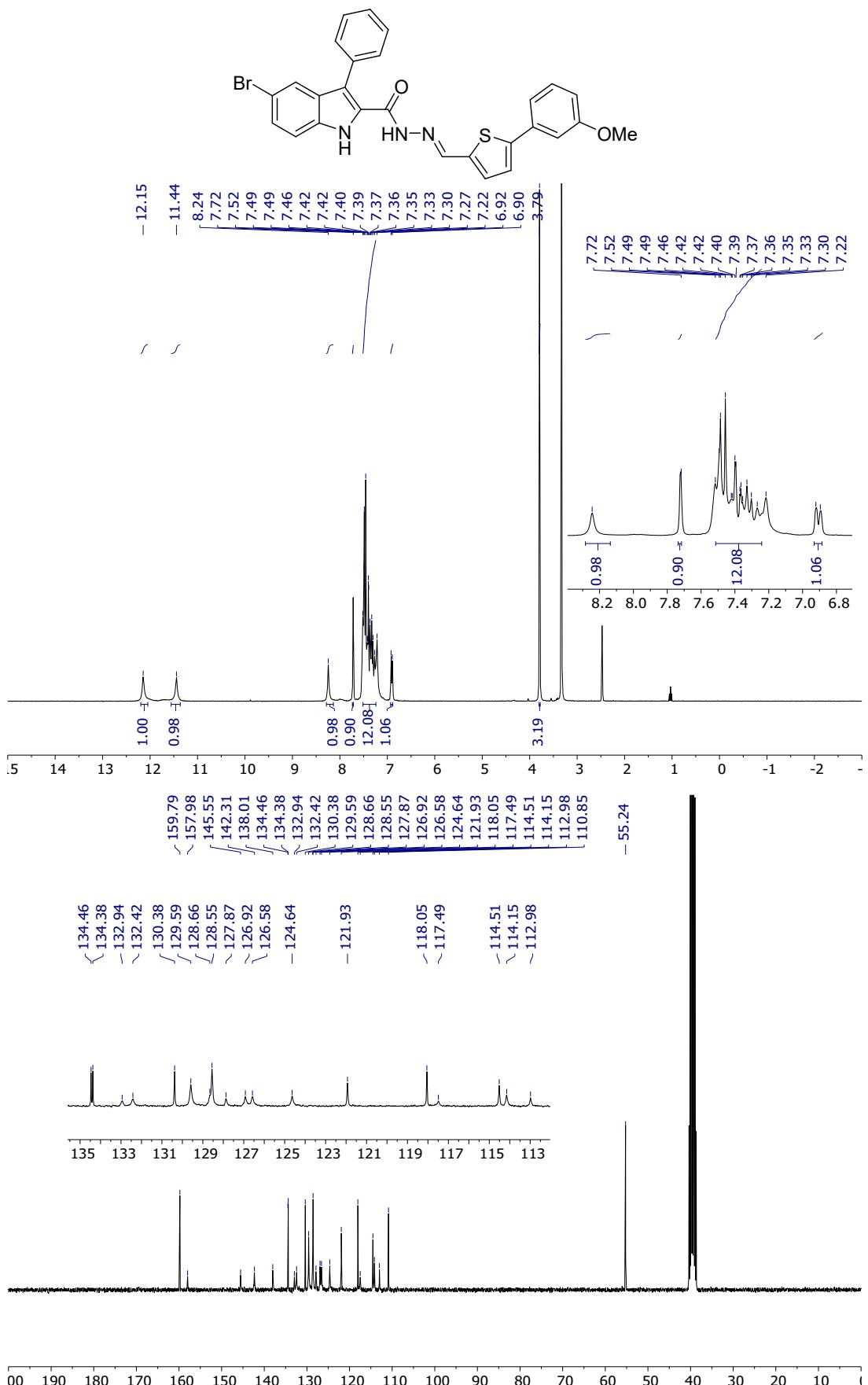
(E)-5-bromo-N¹-((3-methoxythiophene-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (6j) spectra in dmso-d₆



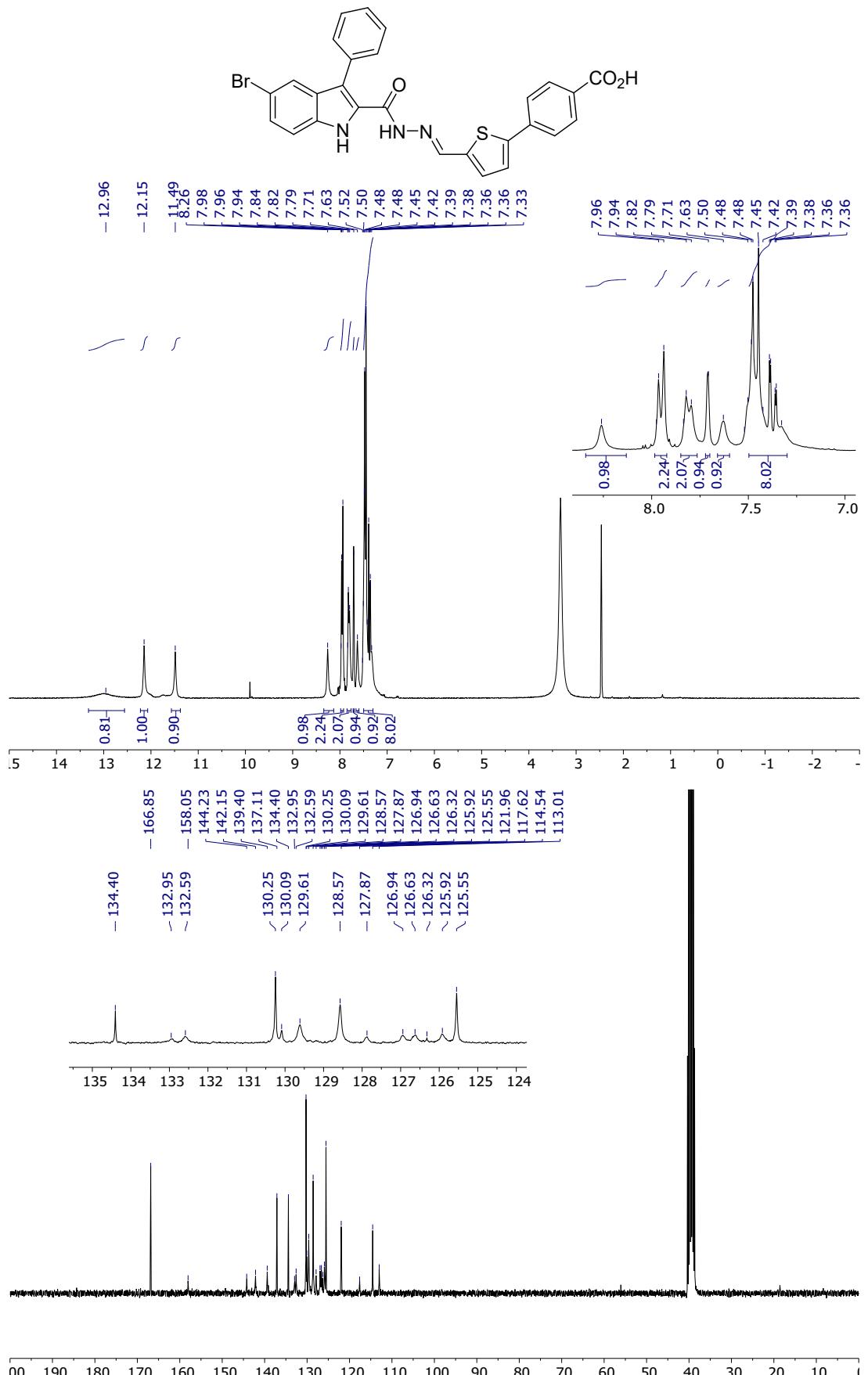
(E)-5-bromo-N'-(5-(3-nitrophenyl)thiophene-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (6k) spectra in d₆mso-d₆



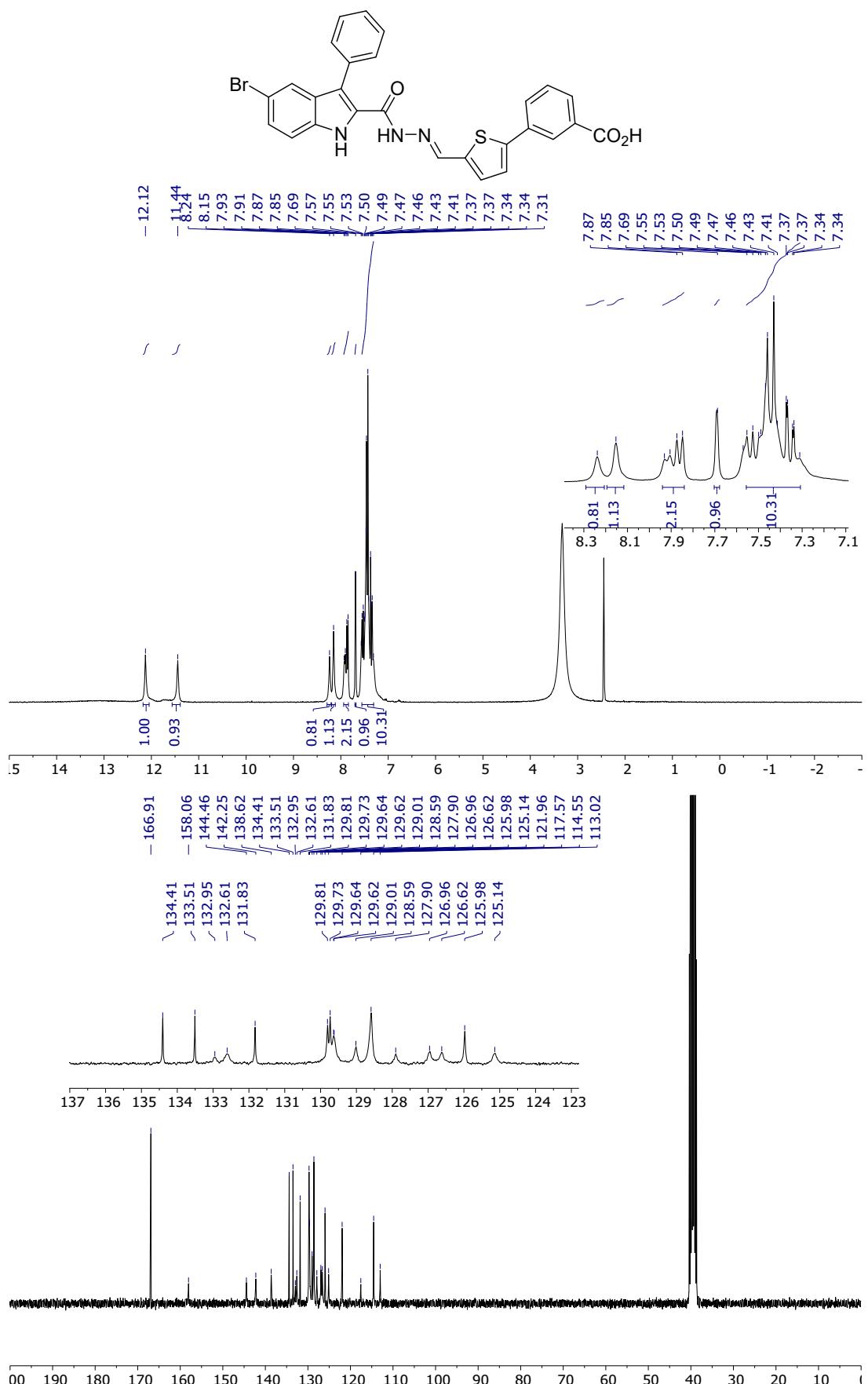
(E)-5-bromo-N¹-((5-(3-methoxyphenyl)thiophene-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (6l) spectra in dmso-d₆



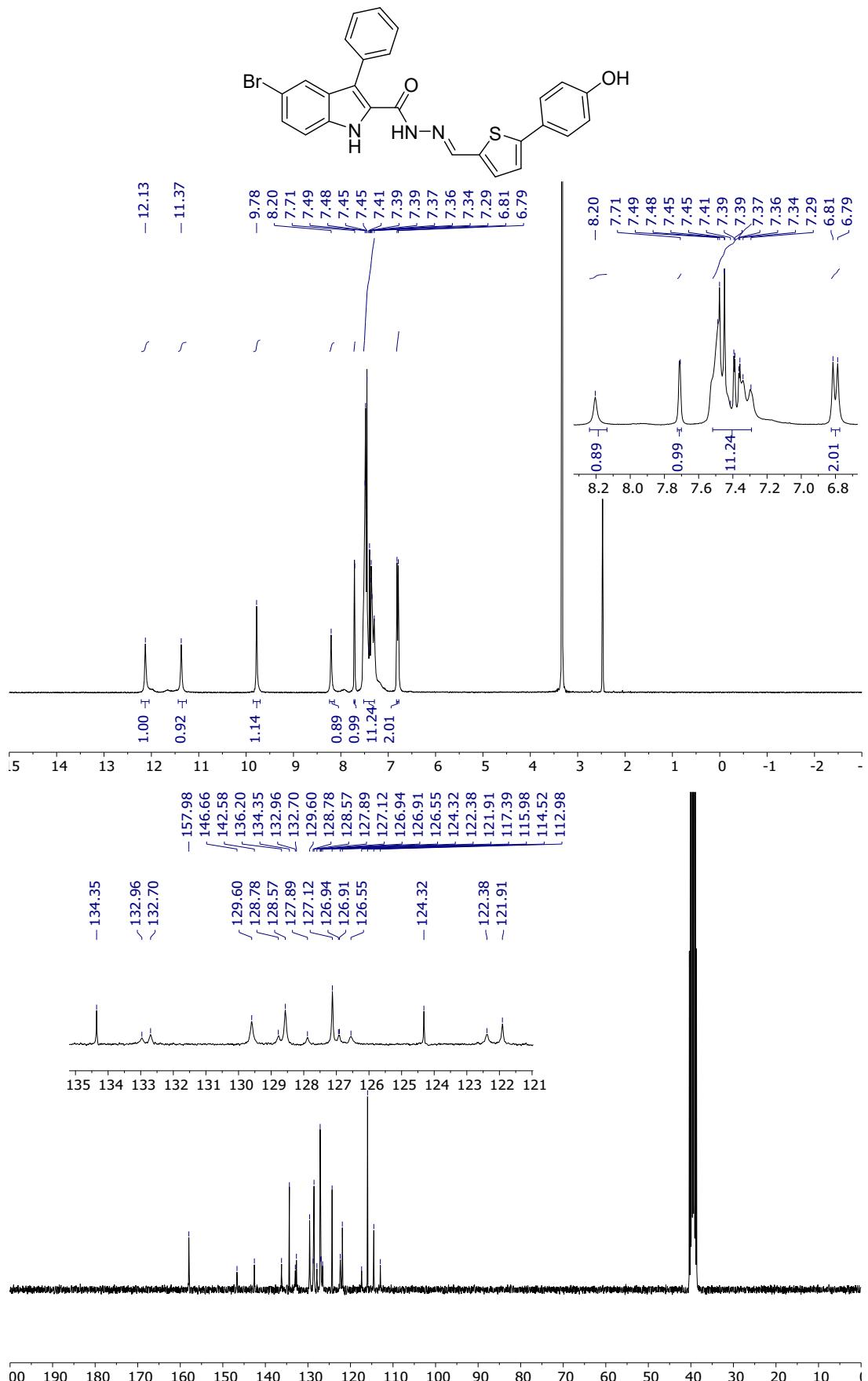
(E)-4-((2-(5-bromo-3-phenyl-1H-indole-2-carbonyl)hydrazono)methyl)thiophene-2-ylbenzoic acid (6m) spectra in dmso-d₆



(E)-3-((2-(5-bromo-3-phenyl-1H-indole-2-carbonyl)hydrazono)methyl)thiophene-2-ylbenzoic acid (6n) spectra in dmso-d₆



(E)-5-bromo-N¹-((5-(4-hydroxyphenyl)thiophene-2-yl)methylene)-3-phenyl-1*H*-indole-2-carbohydrazide (6o) spectra in dmso-d₆



5-bromo-3-phenyl-1*H*-indole-2-carbohydrazide (8) spectra in dmso-d₆

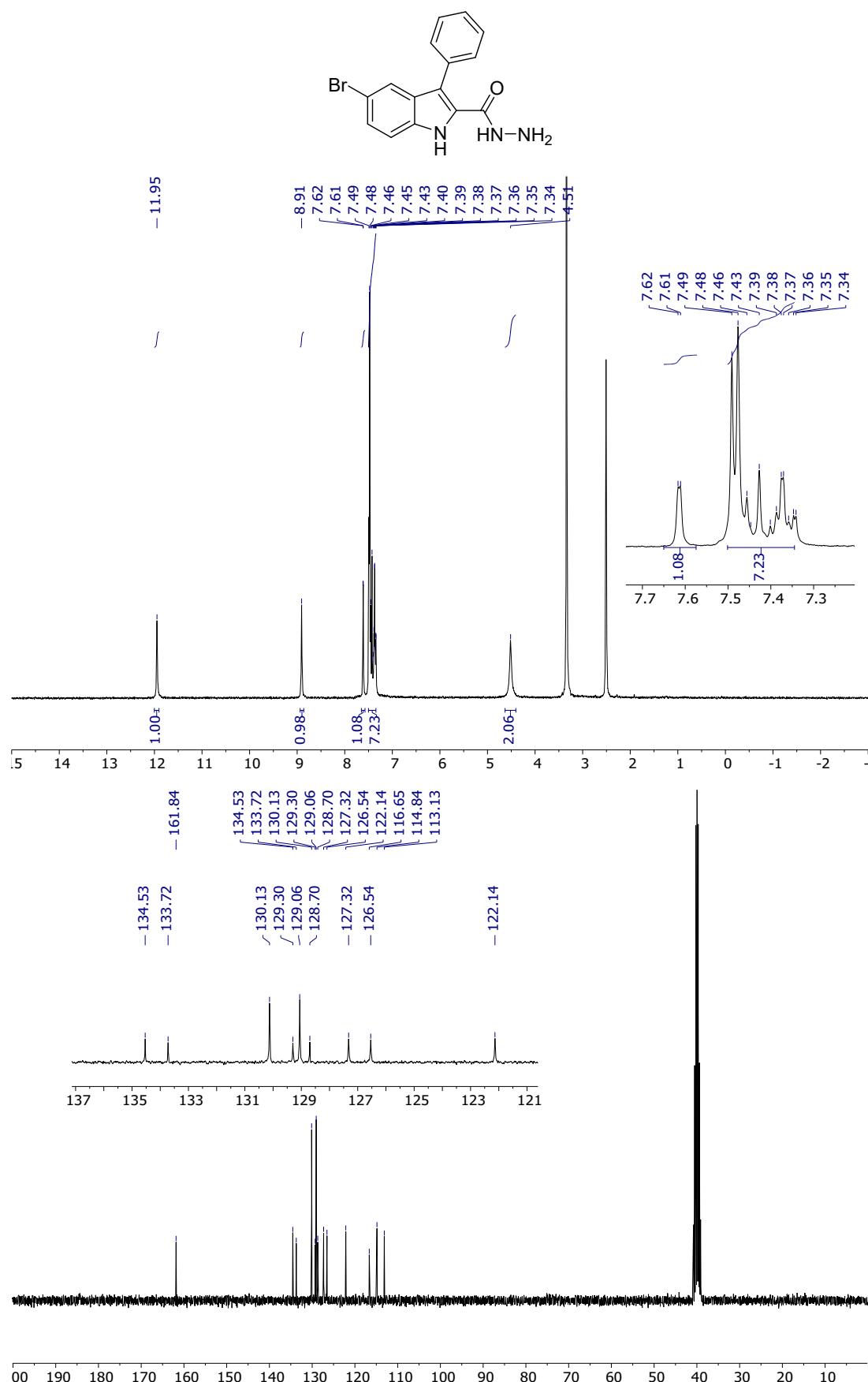
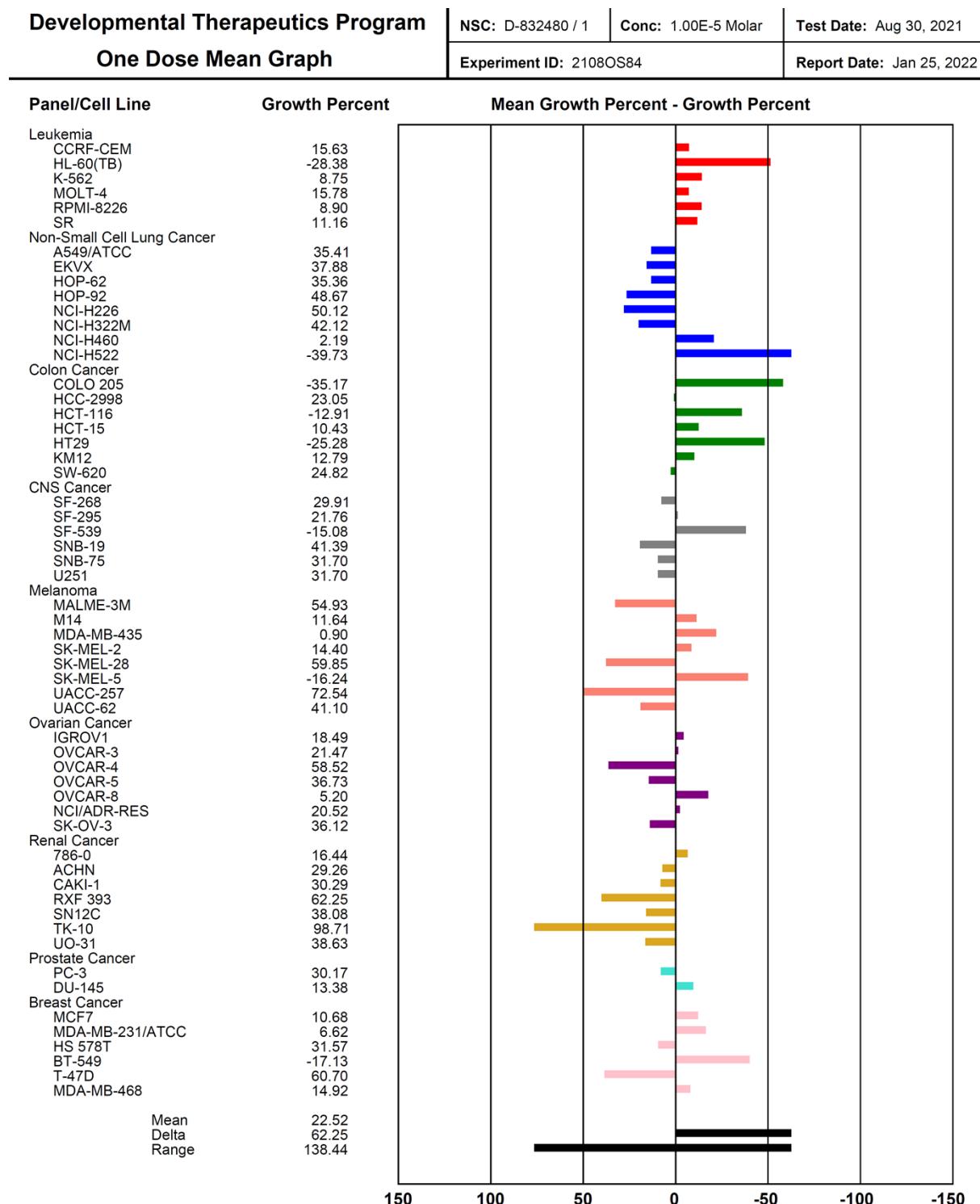
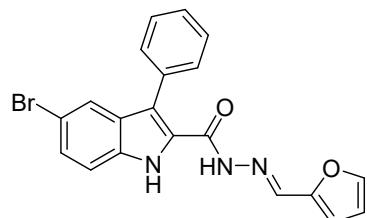
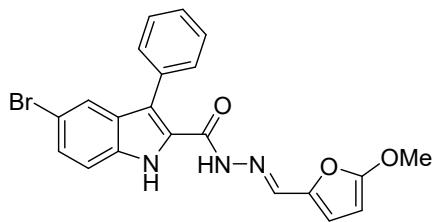


Figure S1. NCI60 one dose screen

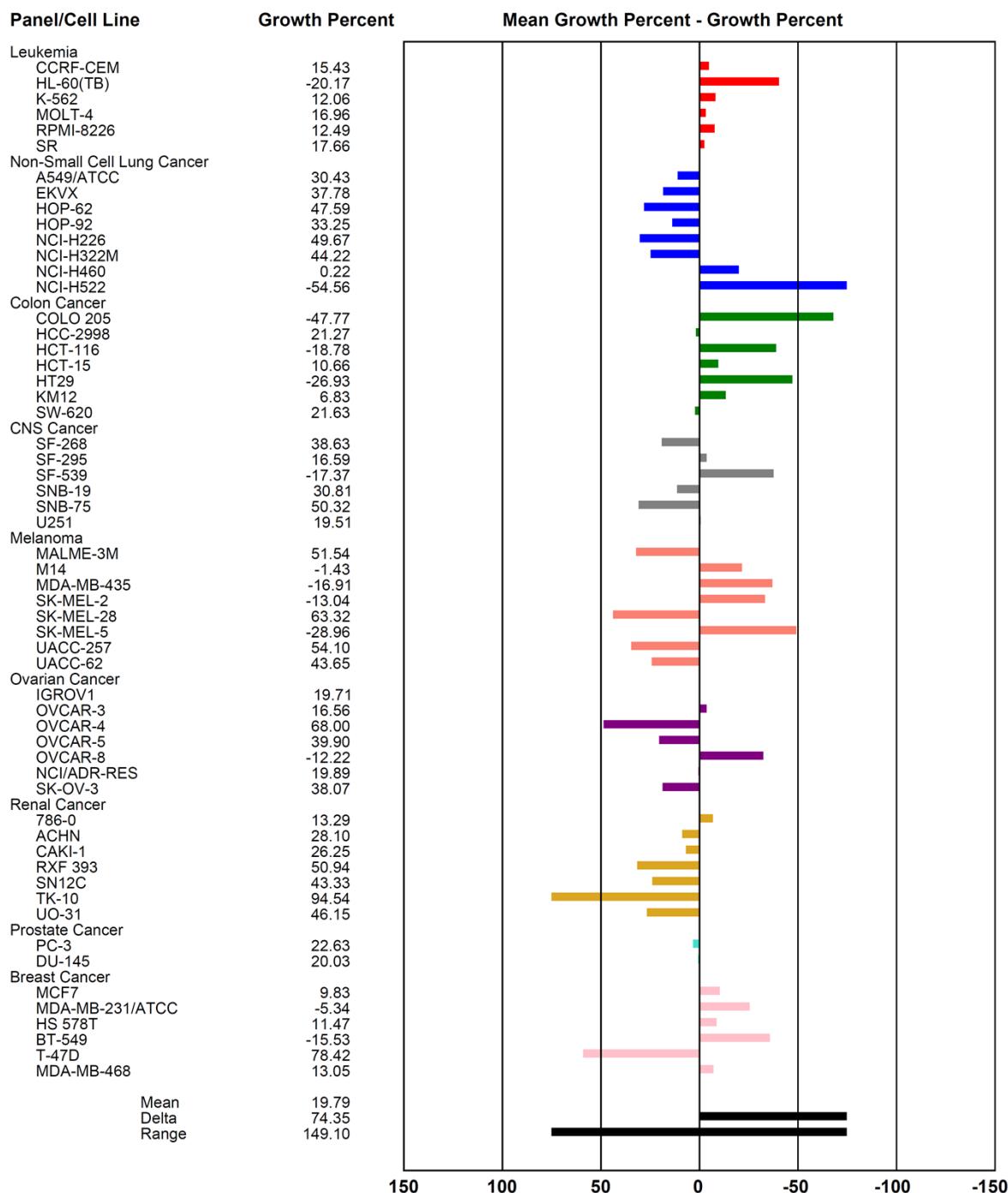
Compound **5a**



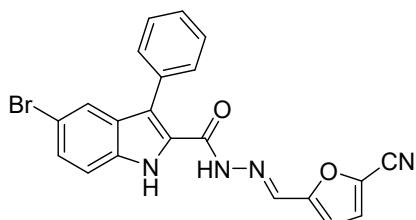
Compound 5b



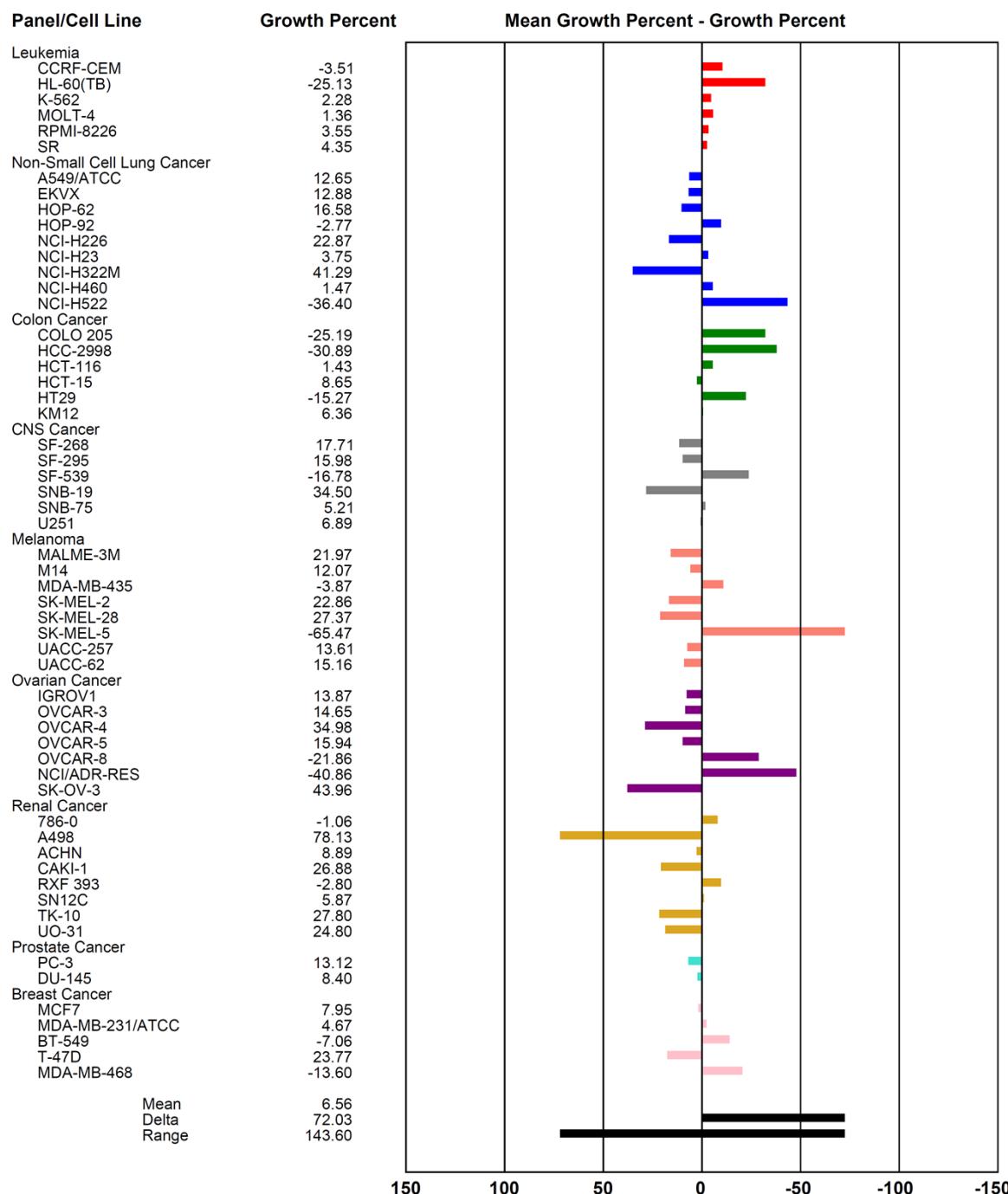
Developmental Therapeutics Program	NSC: D-832481 / 1	Conc: 1.00E-5 Molar	Test Date: Aug 30, 2021
One Dose Mean Graph	Experiment ID: 2108OS84	Report Date: Jan 25, 2022	



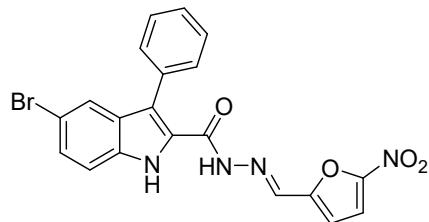
Compound 5e



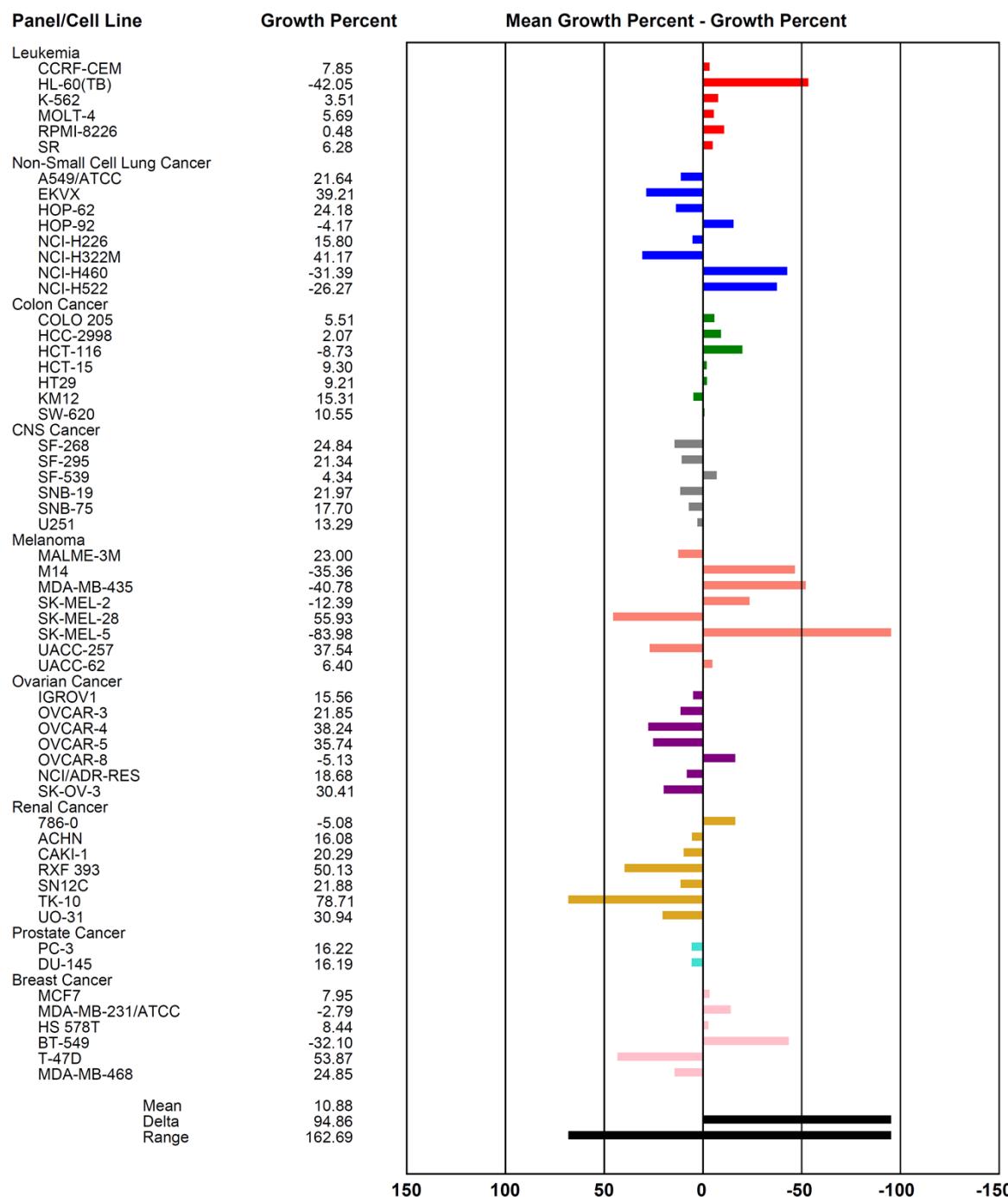
Developmental Therapeutics Program	NSC: D-838296 / 1	Conc: 1.00E-5 Molar	Test Date: May 23, 2022
One Dose Mean Graph	Experiment ID: 2205OS30	Report Date: Jun 26, 2022	



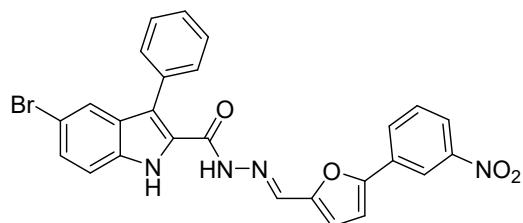
Compound 5f



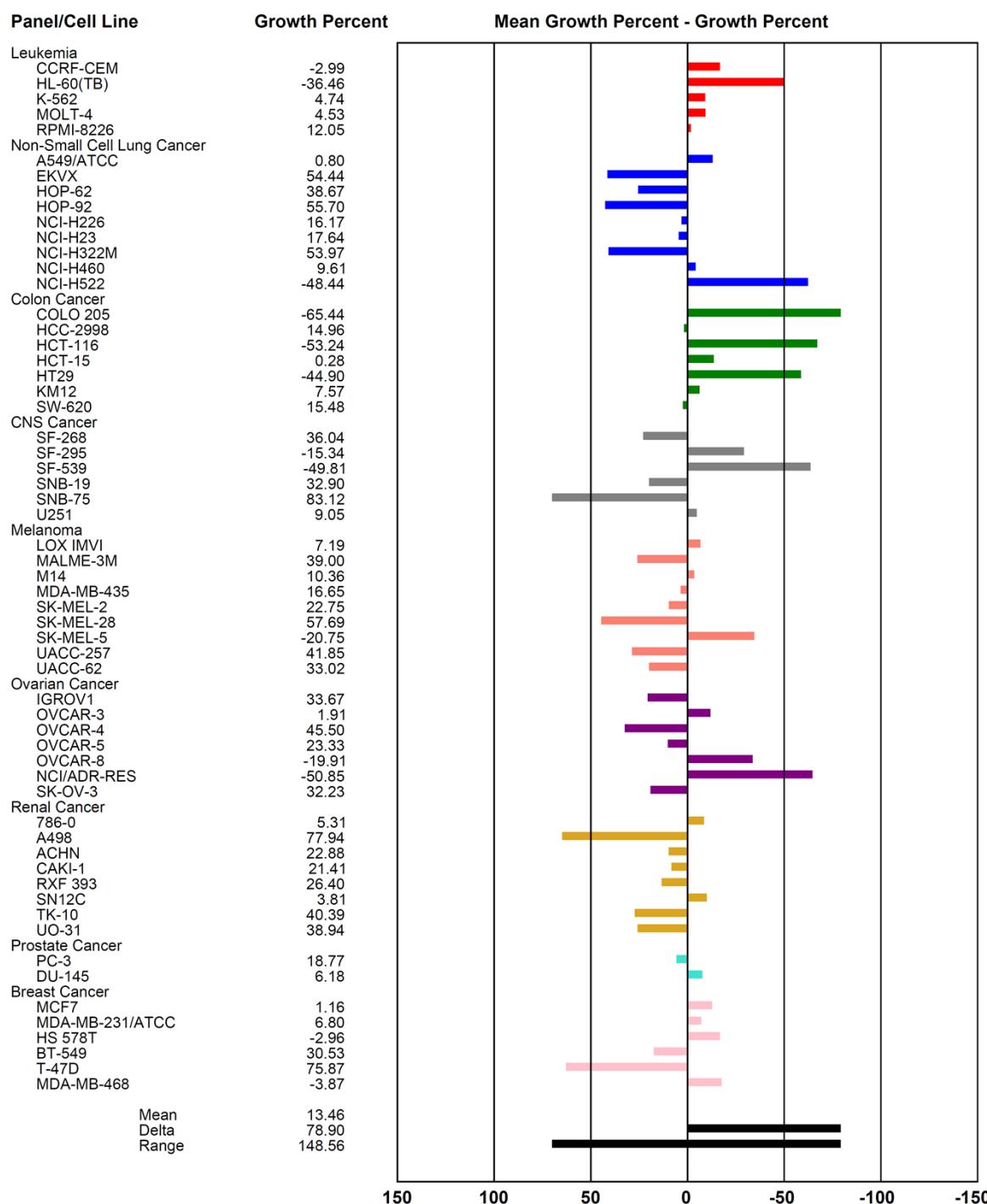
Developmental Therapeutics Program	NSC: D-832483 / 1	Conc: 1.00E-5 Molar	Test Date: Aug 30, 2021
One Dose Mean Graph	Experiment ID: 2108OS84	Report Date: Jan 25, 2022	



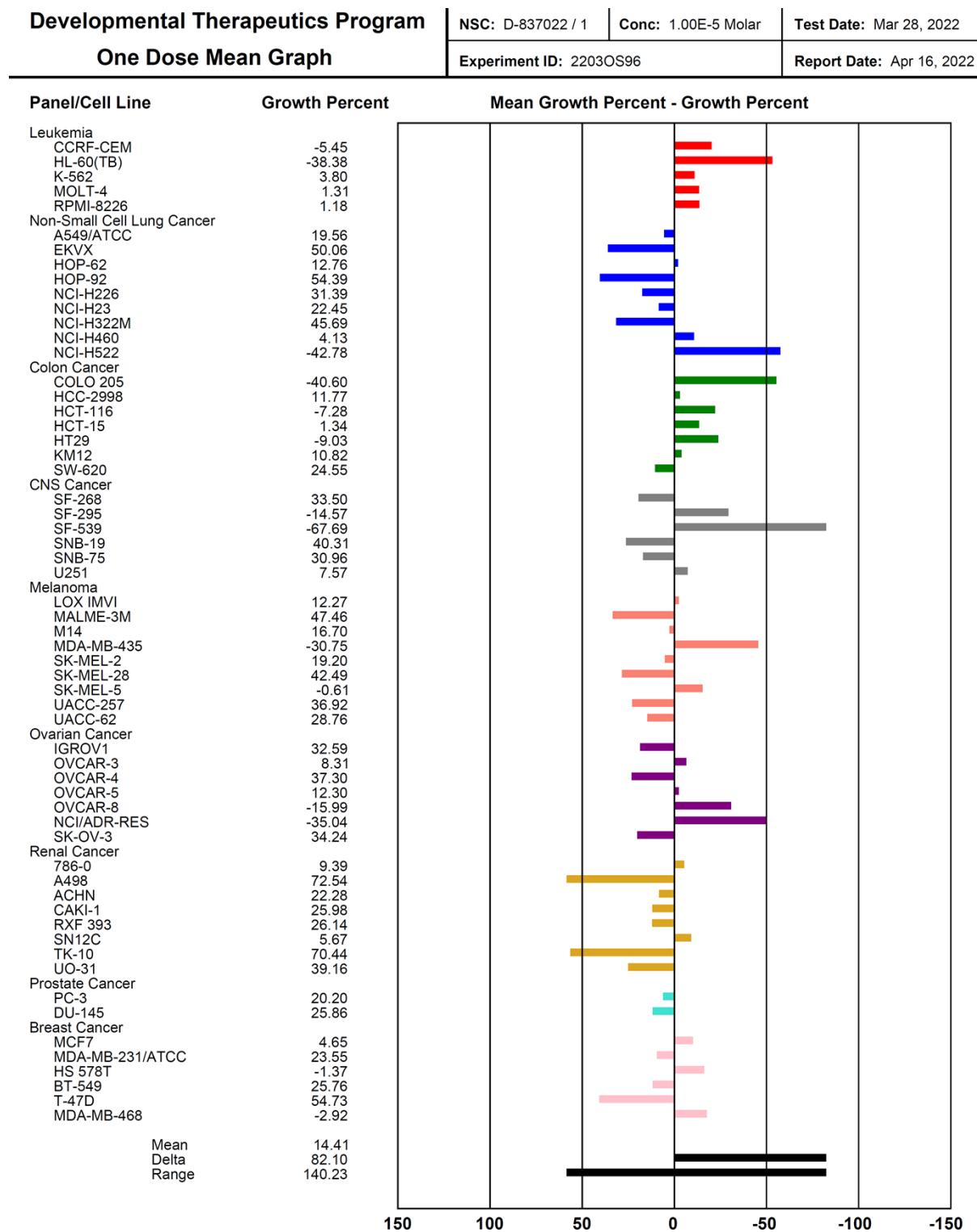
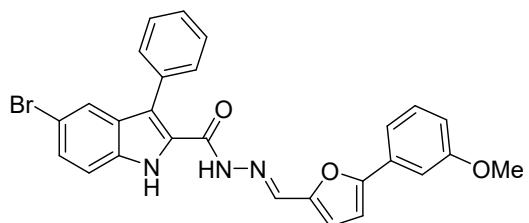
Compound 5g



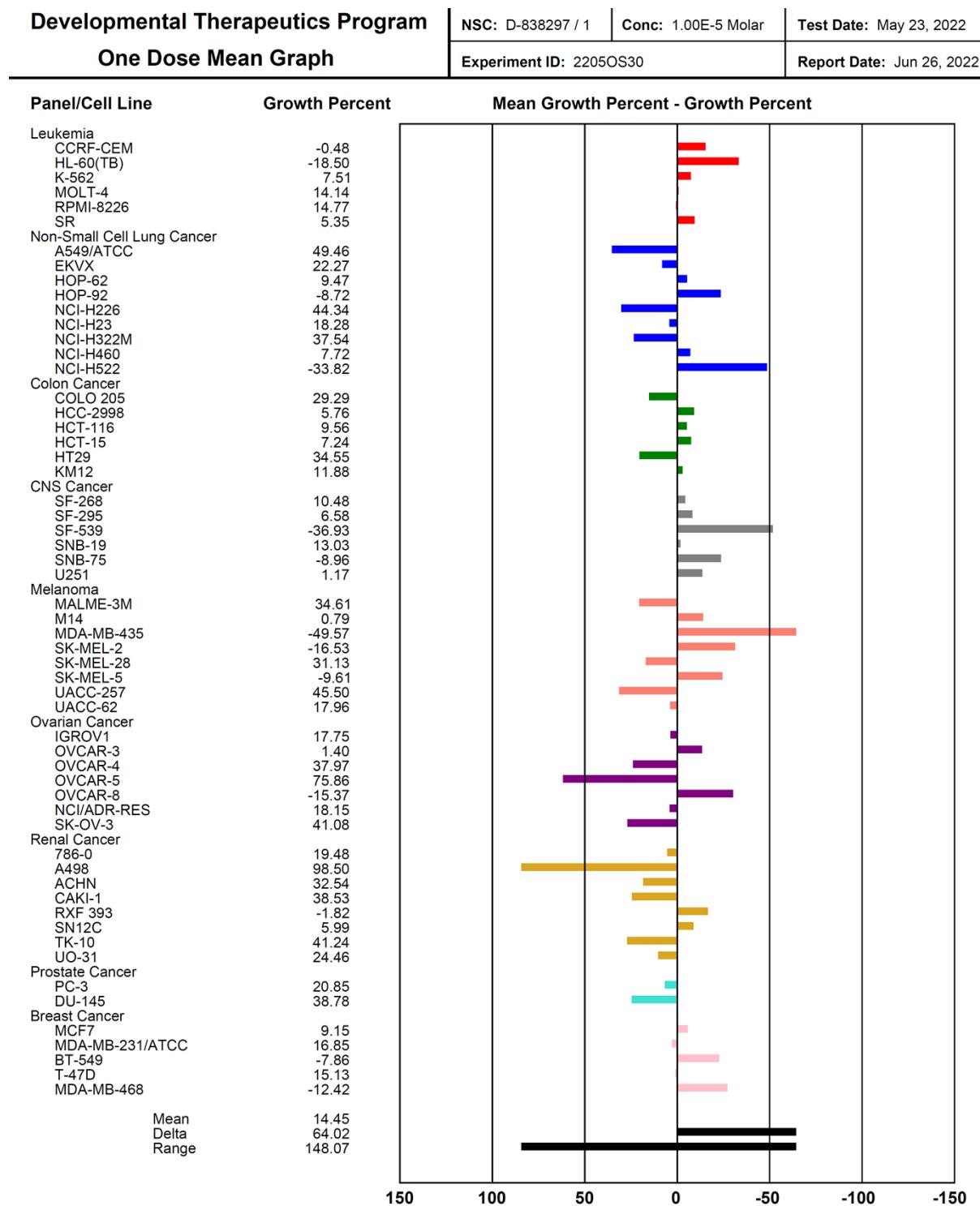
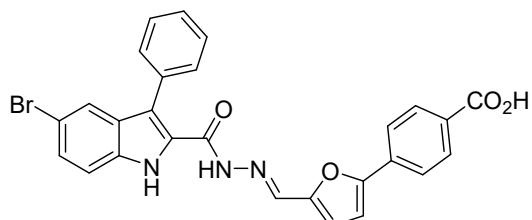
Developmental Therapeutics Program	NSC: D-837020 / 1	Conc: 1.00E-5 Molar	Test Date: Mar 28, 2022
One Dose Mean Graph	Experiment ID: 2203OS96	Report Date: Apr 16, 2022	



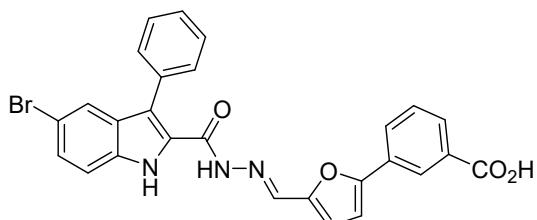
Compound 5h



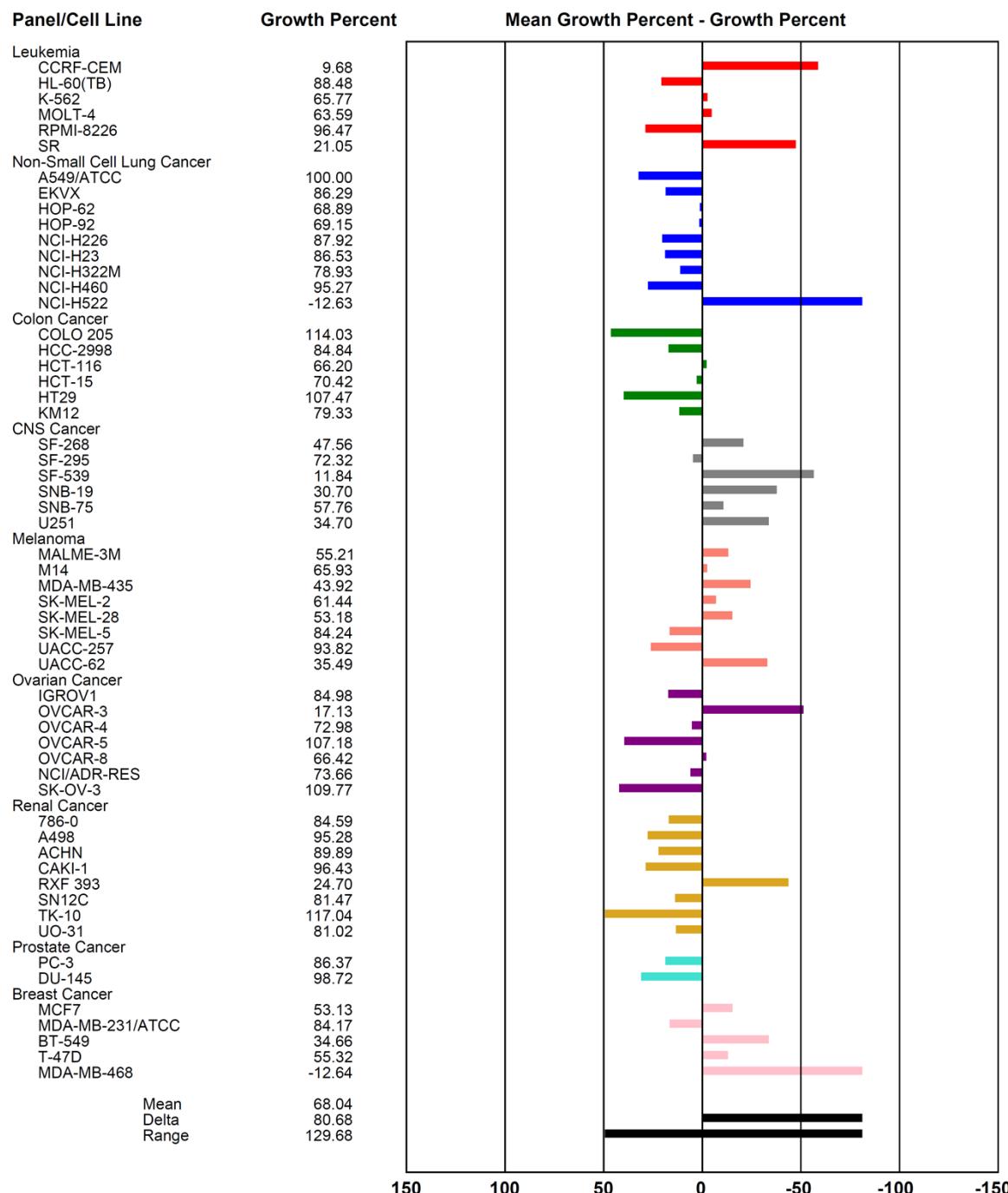
Compound 5i



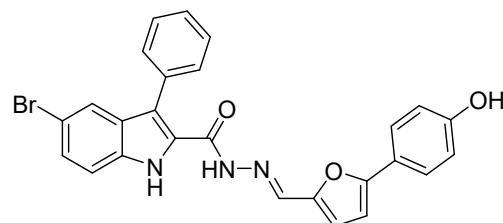
Compound 5j



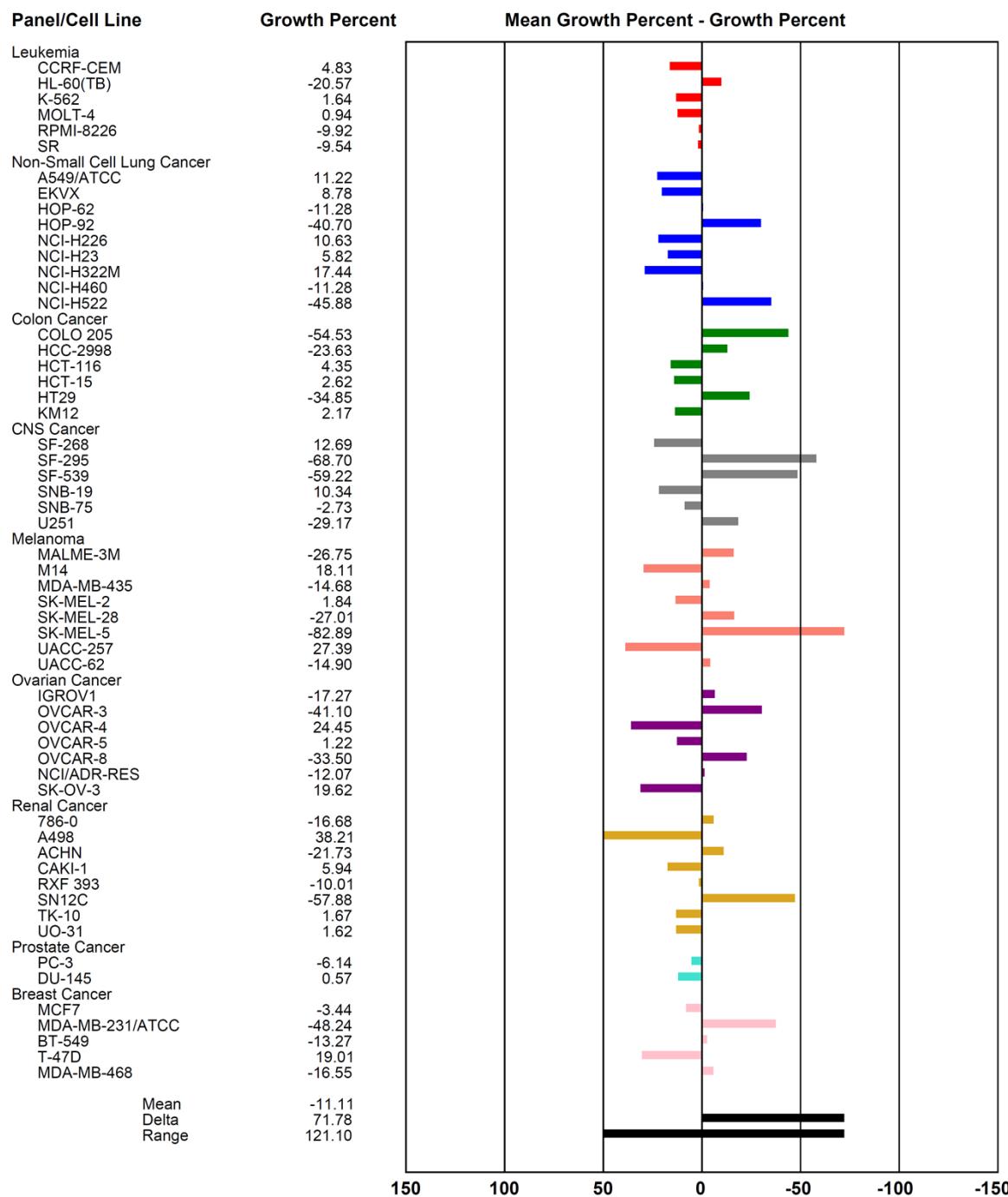
Developmental Therapeutics Program	NSC: D-838298 / 1	Conc: 1.00E-5 Molar	Test Date: May 23, 2022
One Dose Mean Graph	Experiment ID: 2205OS30	Report Date: Jun 26, 2022	



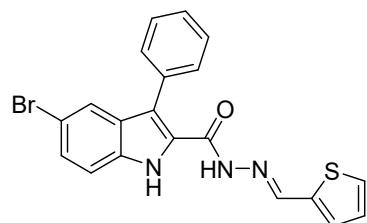
Compound 5k



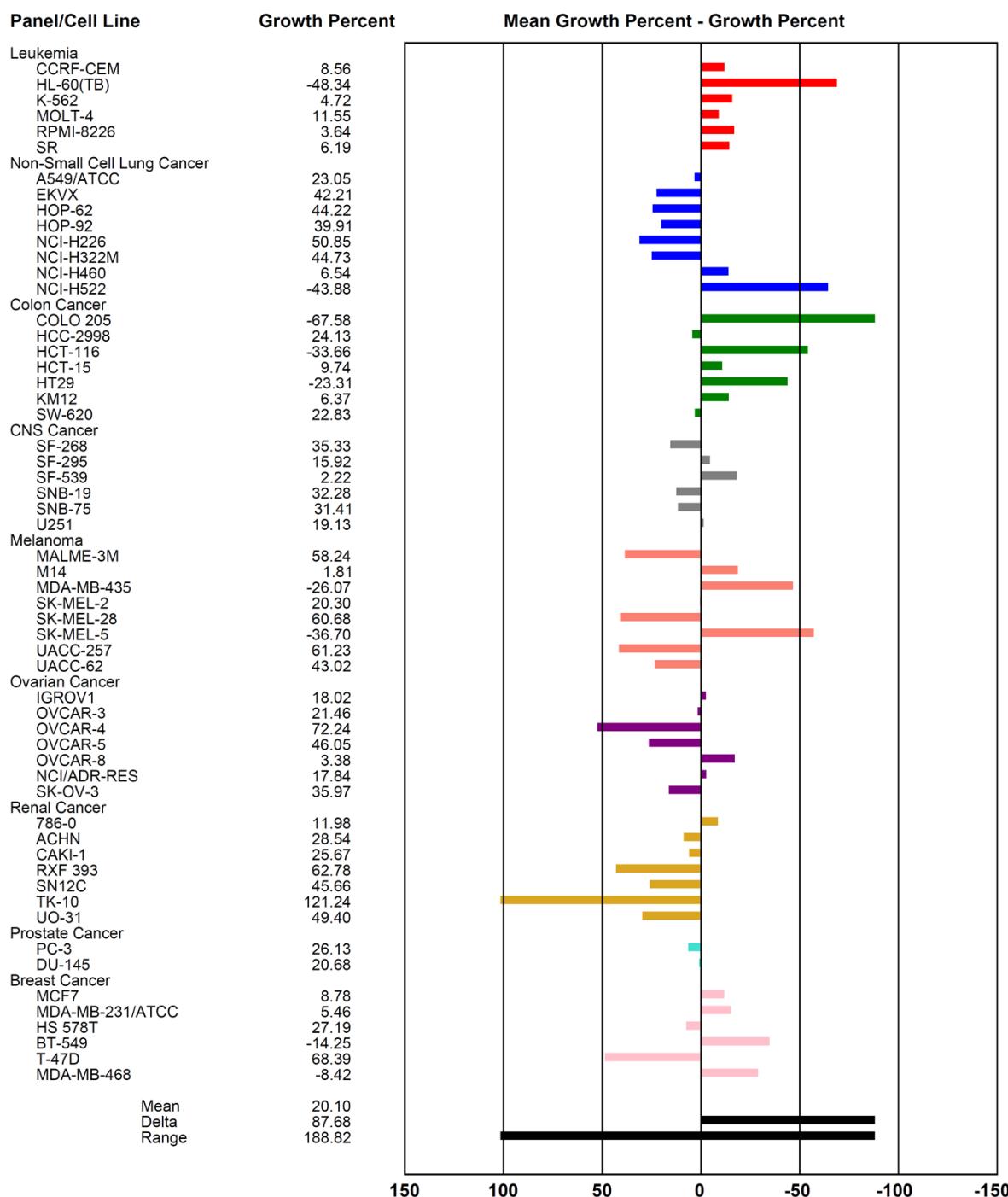
Developmental Therapeutics Program	NSC: D-838304 / 1	Conc: 1.00E-5 Molar	Test Date: May 23, 2022
One Dose Mean Graph	Experiment ID: 2205OS30	Report Date: Jun 26, 2022	



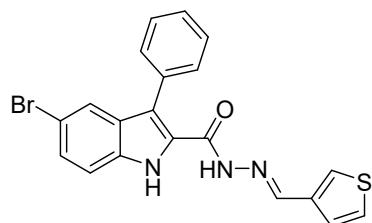
Compound 6a



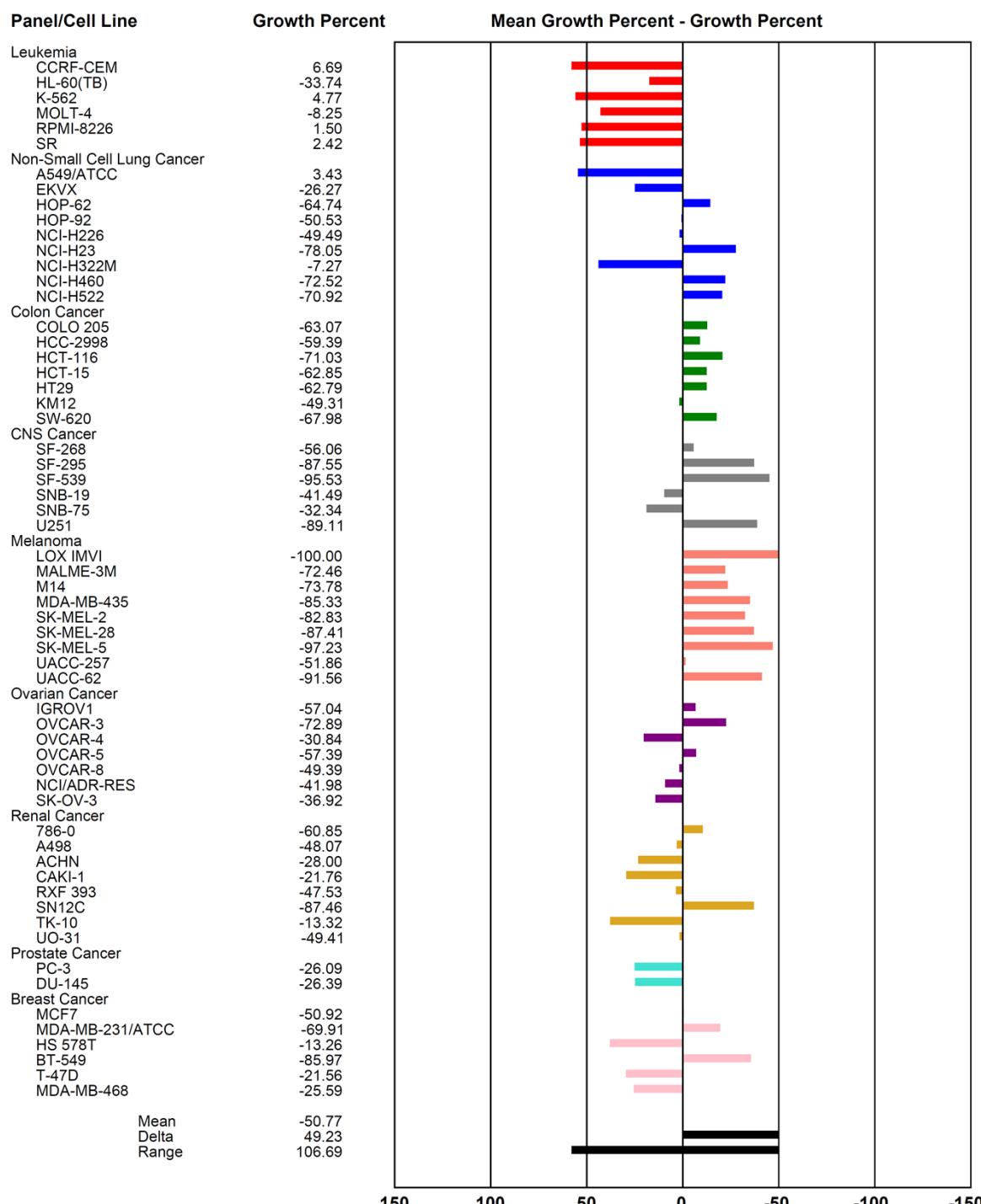
Developmental Therapeutics Program	NSC: D-832474 / 1	Conc: 1.00E-5 Molar	Test Date: Aug 30, 2021
One Dose Mean Graph	Experiment ID: 2108OS84	Report Date: Jan 25, 2022	



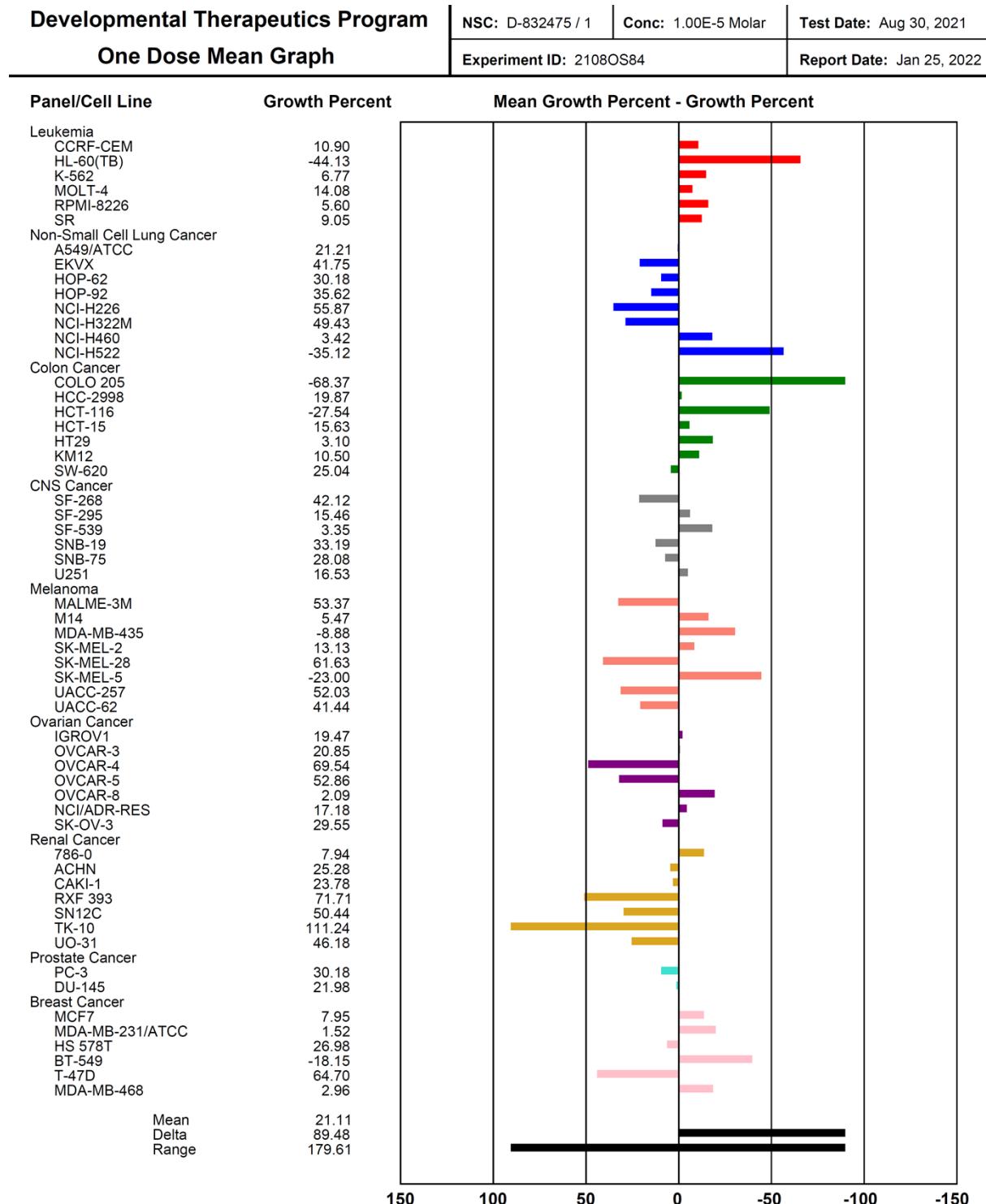
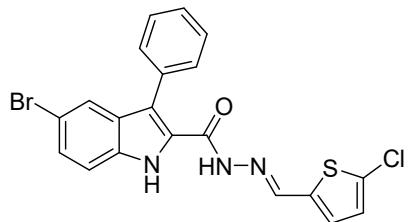
Compound 6b



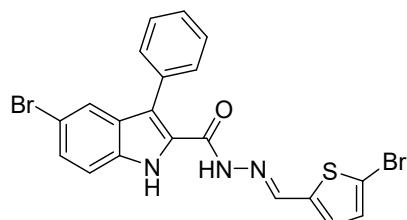
Developmental Therapeutics Program	NSC: D-834623 / 1	Conc: 1.00E-5 Molar	Test Date: Feb 07, 2022
One Dose Mean Graph	Experiment ID: 2202OS59	Report Date: Mar 02, 2022	



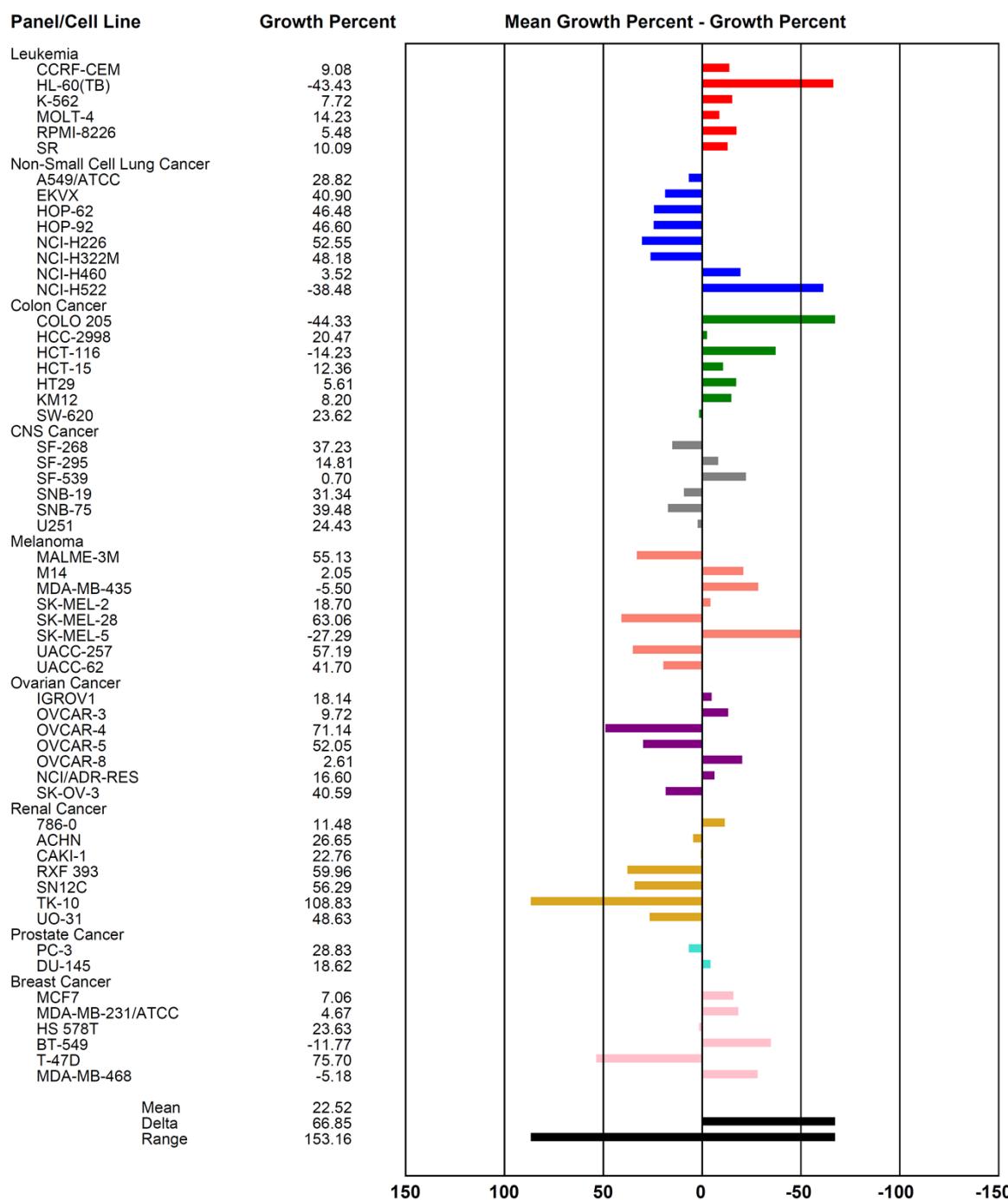
Compound 6c



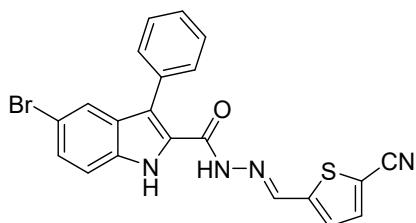
Compound 6d



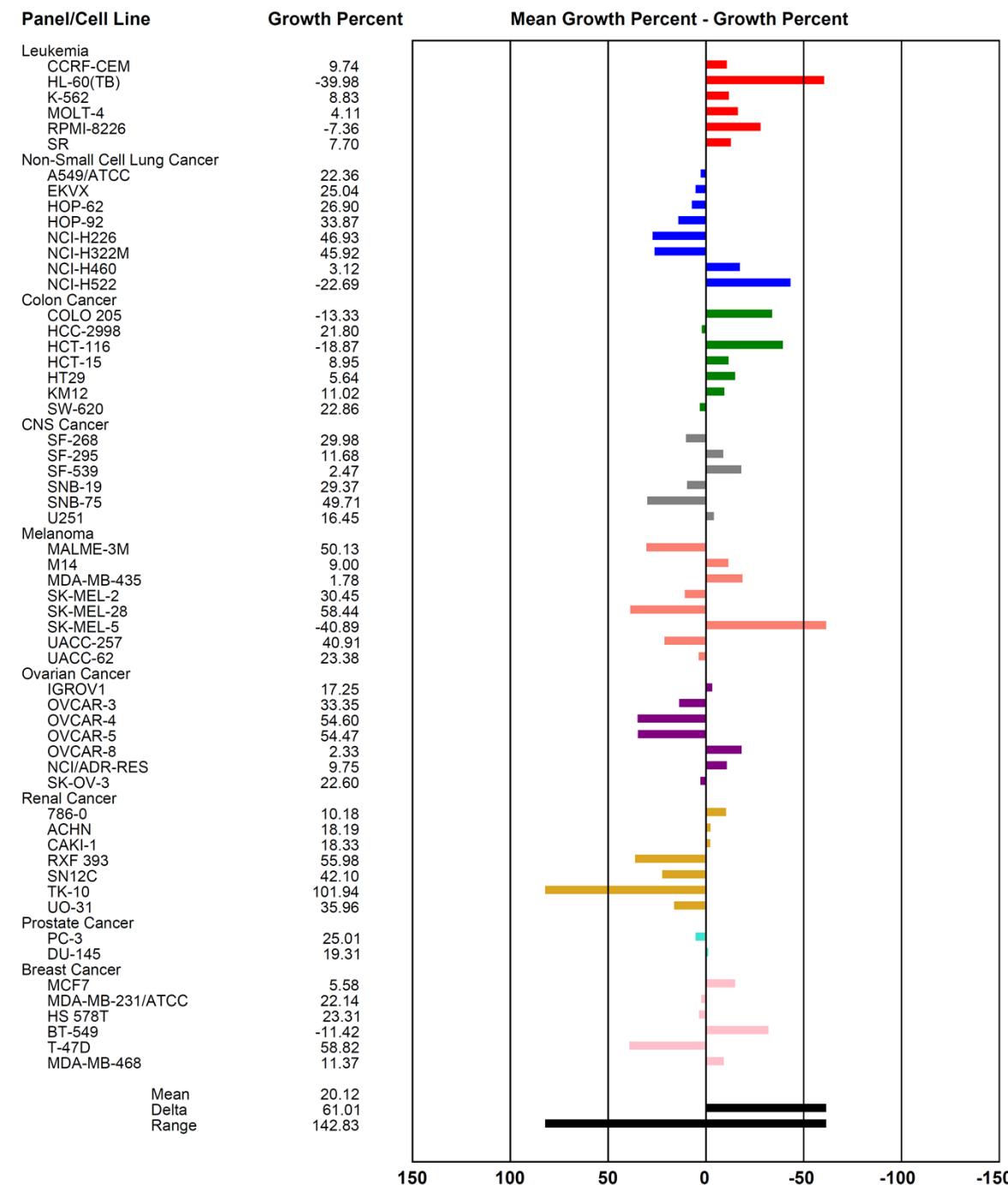
Developmental Therapeutics Program	NSC: D-832476 / 1	Conc: 1.00E-5 Molar	Test Date: Aug 30, 2021
One Dose Mean Graph	Experiment ID: 2108OS84	Report Date: Jan 25, 2022	



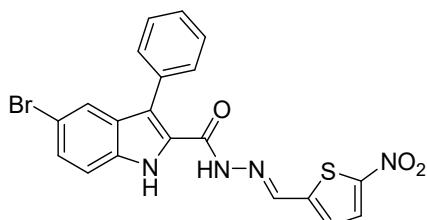
Compound 6e



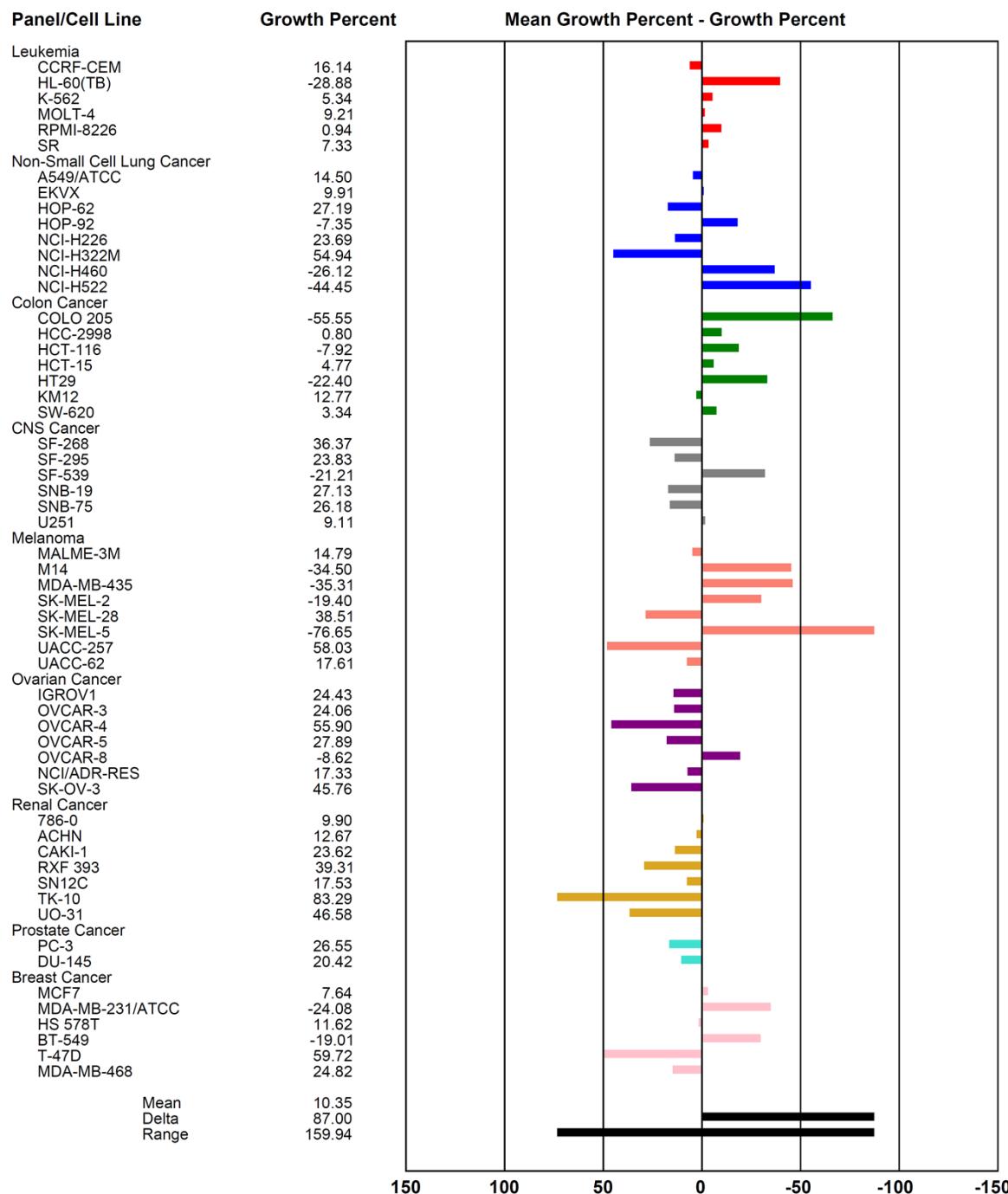
Developmental Therapeutics Program	NSC: D-832477 / 1	Conc: 1.00E-5 Molar	Test Date: Aug 30, 2021
One Dose Mean Graph	Experiment ID: 2108OS84	Report Date: Jan 25, 2022	



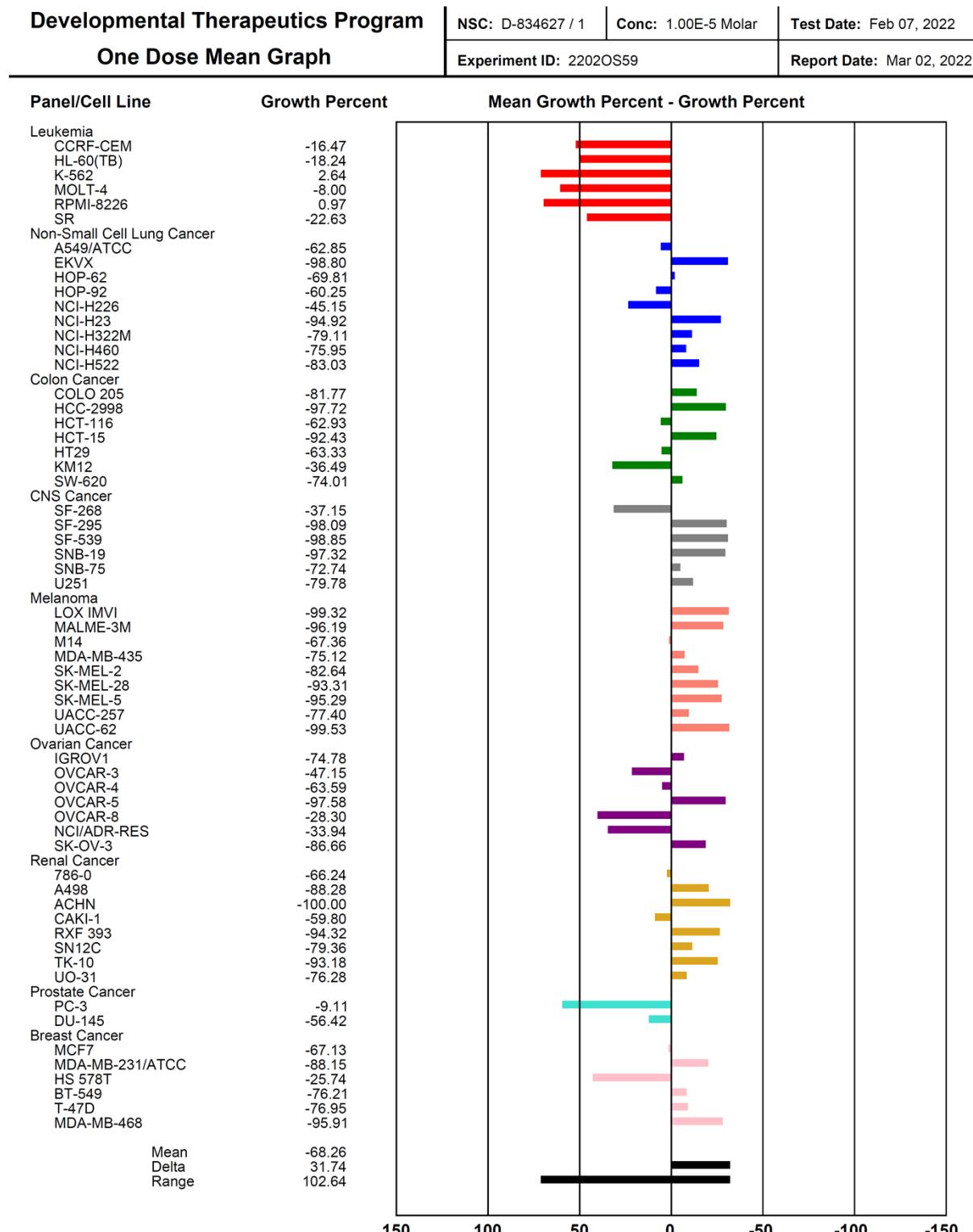
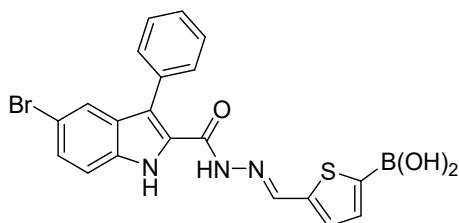
Compound 6f



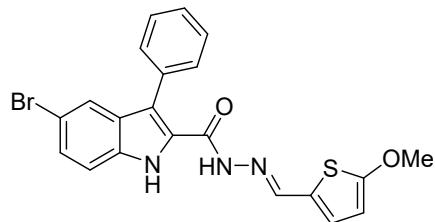
Developmental Therapeutics Program	NSC: D-832479 / 1	Conc: 1.00E-5 Molar	Test Date: Aug 30, 2021
One Dose Mean Graph	Experiment ID: 2108OS84	Report Date: Jan 25, 2022	



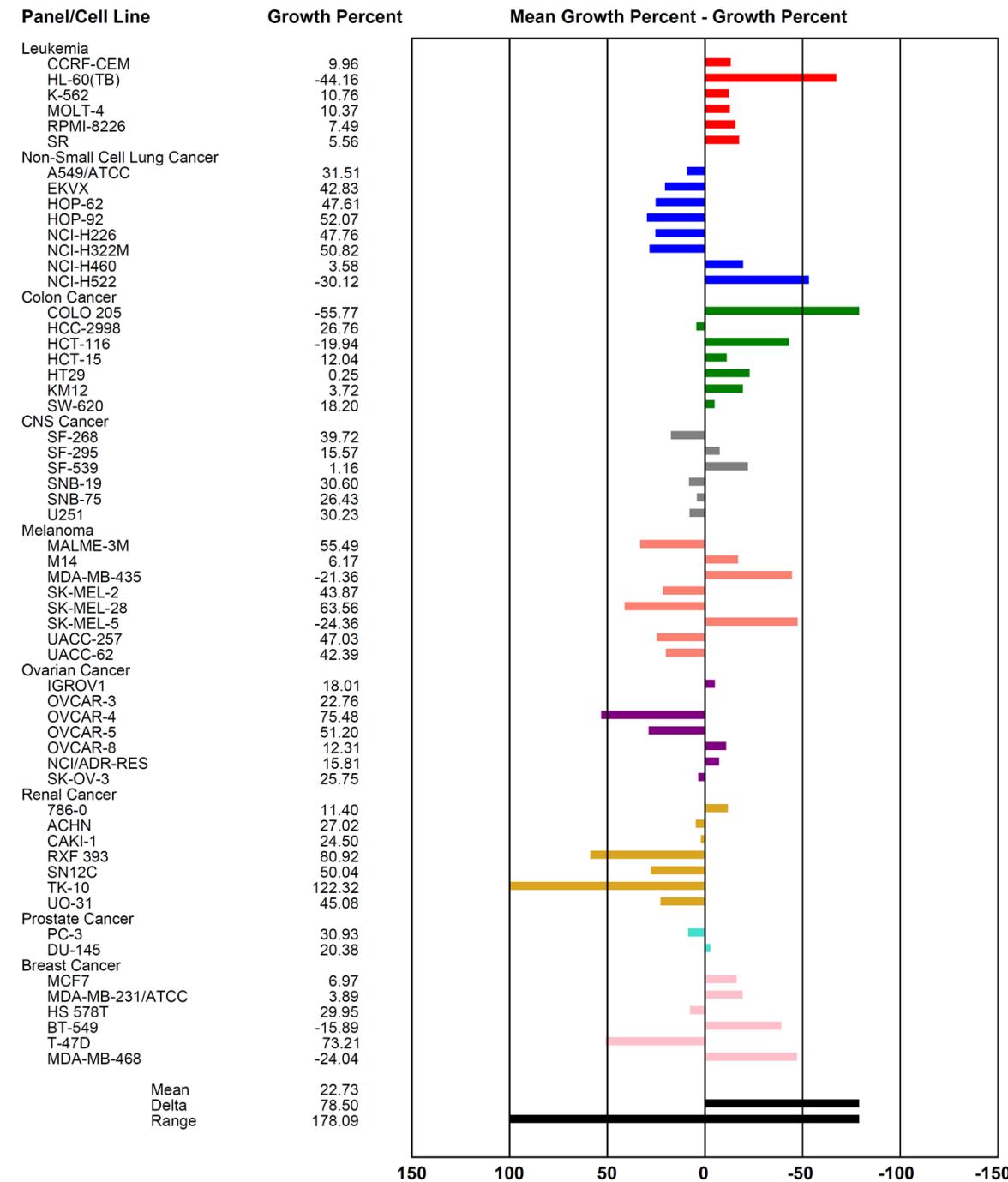
Compound 6g



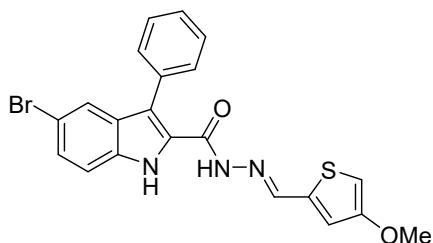
Compound 6h



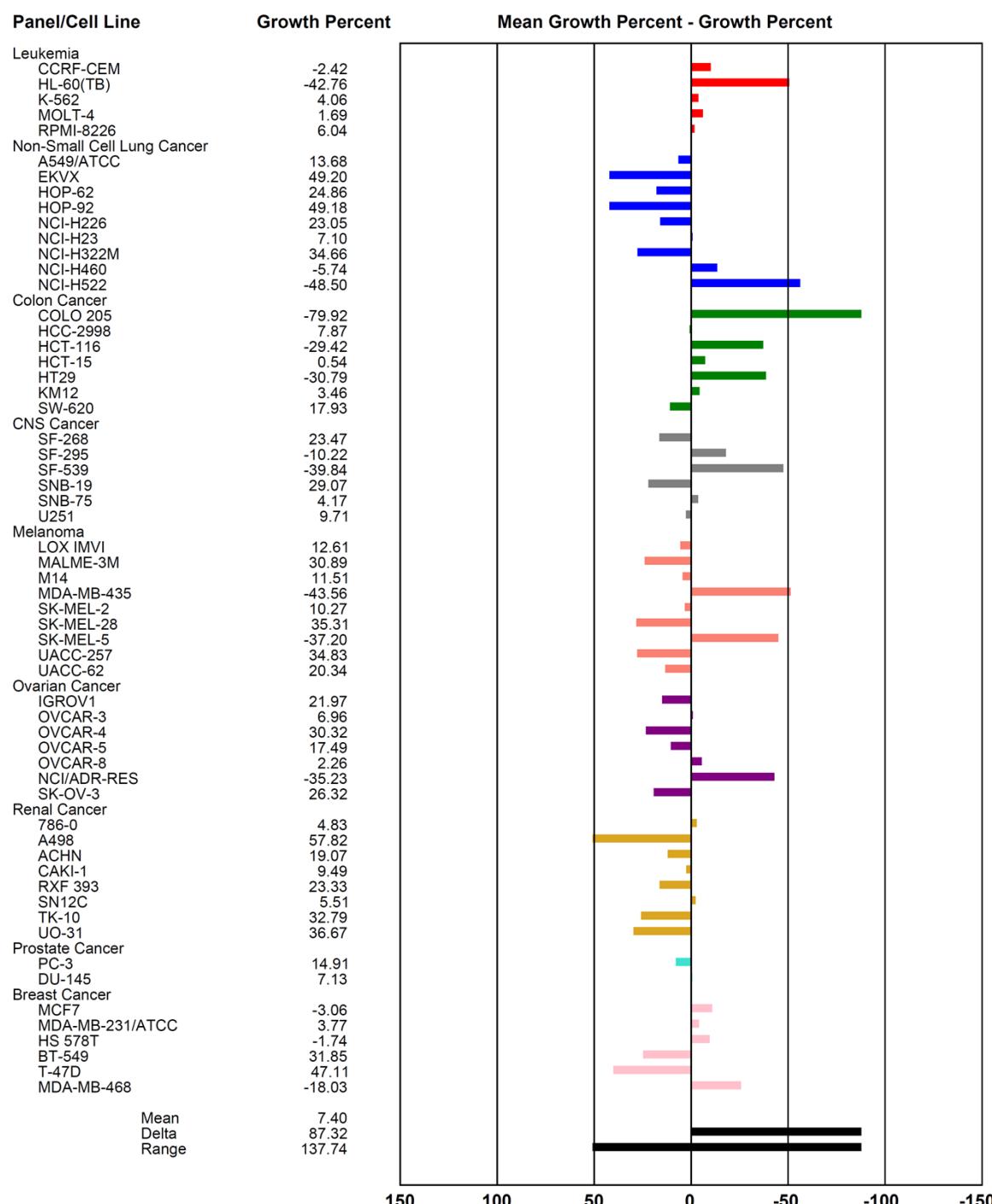
Developmental Therapeutics Program	NSC: D-832478 / 1	Conc: 1.00E-5 Molar	Test Date: Aug 30, 2021
One Dose Mean Graph	Experiment ID: 2108OS84	Report Date: Jan 25, 2022	



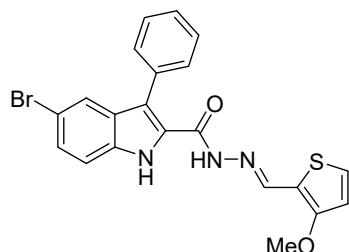
Compound 6i



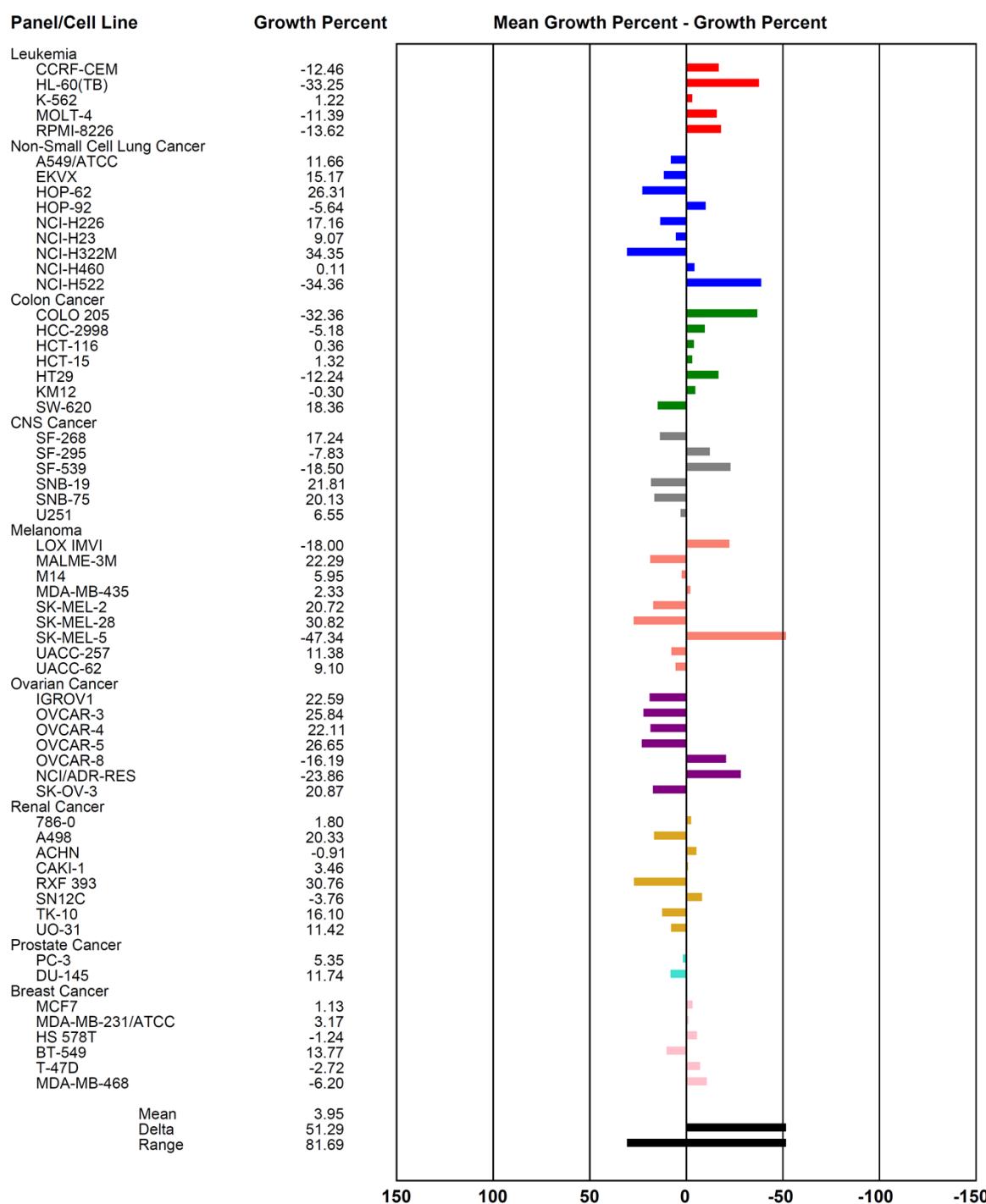
Developmental Therapeutics Program		NSC: D-837015 / 1	Conc: 1.00E-5 Molar	Test Date: Mar 28, 2022
One Dose Mean Graph		Experiment ID: 2203OS96	Report Date: Apr 16, 2022	



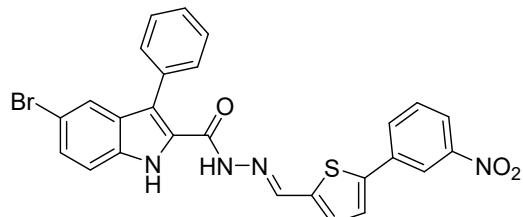
Compound 6j



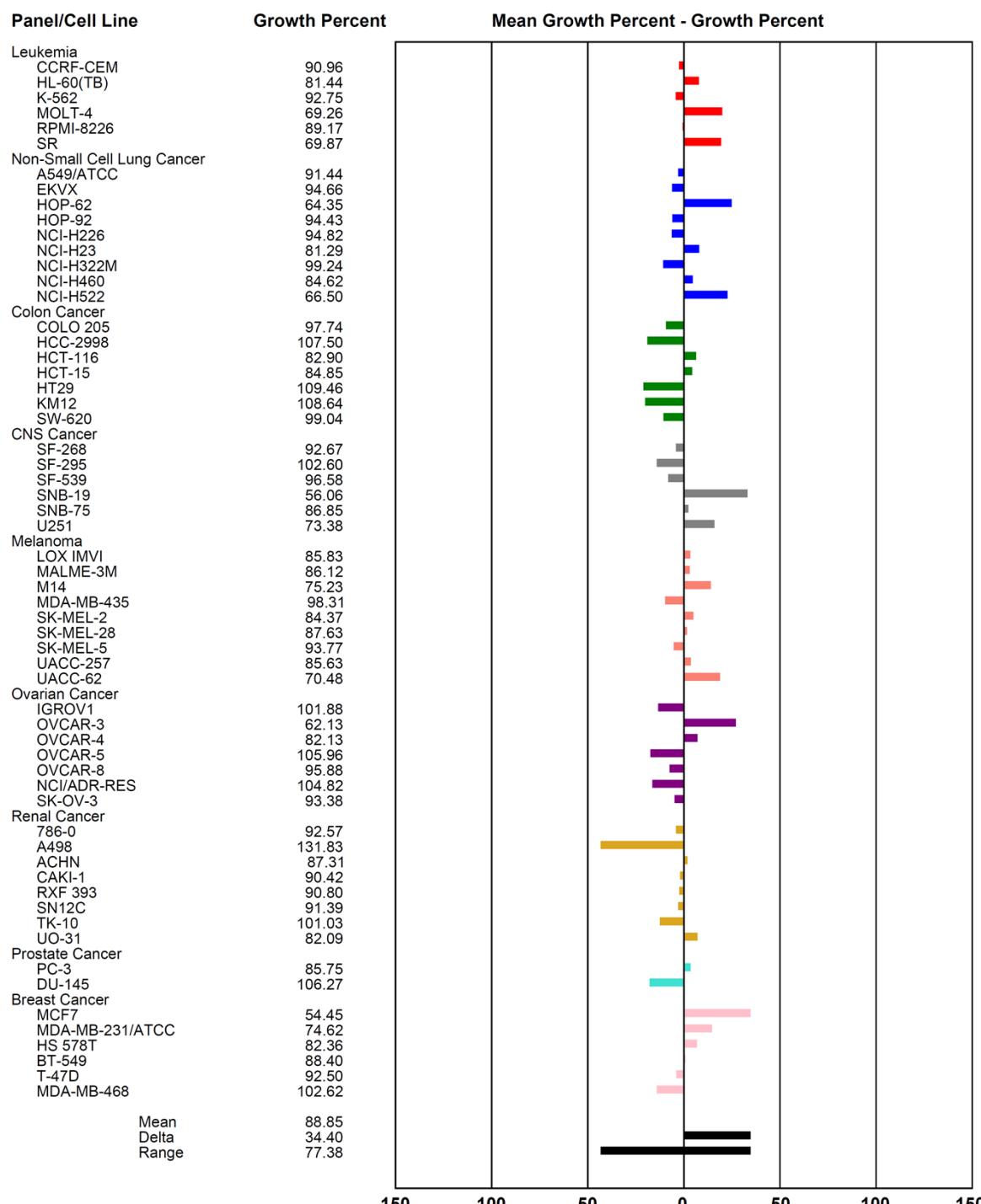
Developmental Therapeutics Program		NSC: D-837016 / 1	Conc: 1.00E-5 Molar	Test Date: Mar 28, 2022
One Dose Mean Graph		Experiment ID: 2203OS96		Report Date: Apr 16, 2022



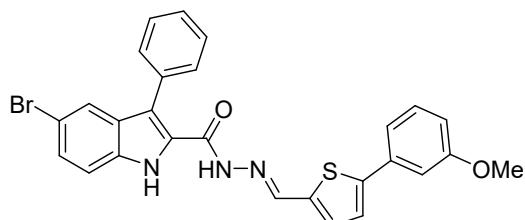
Compound 6k



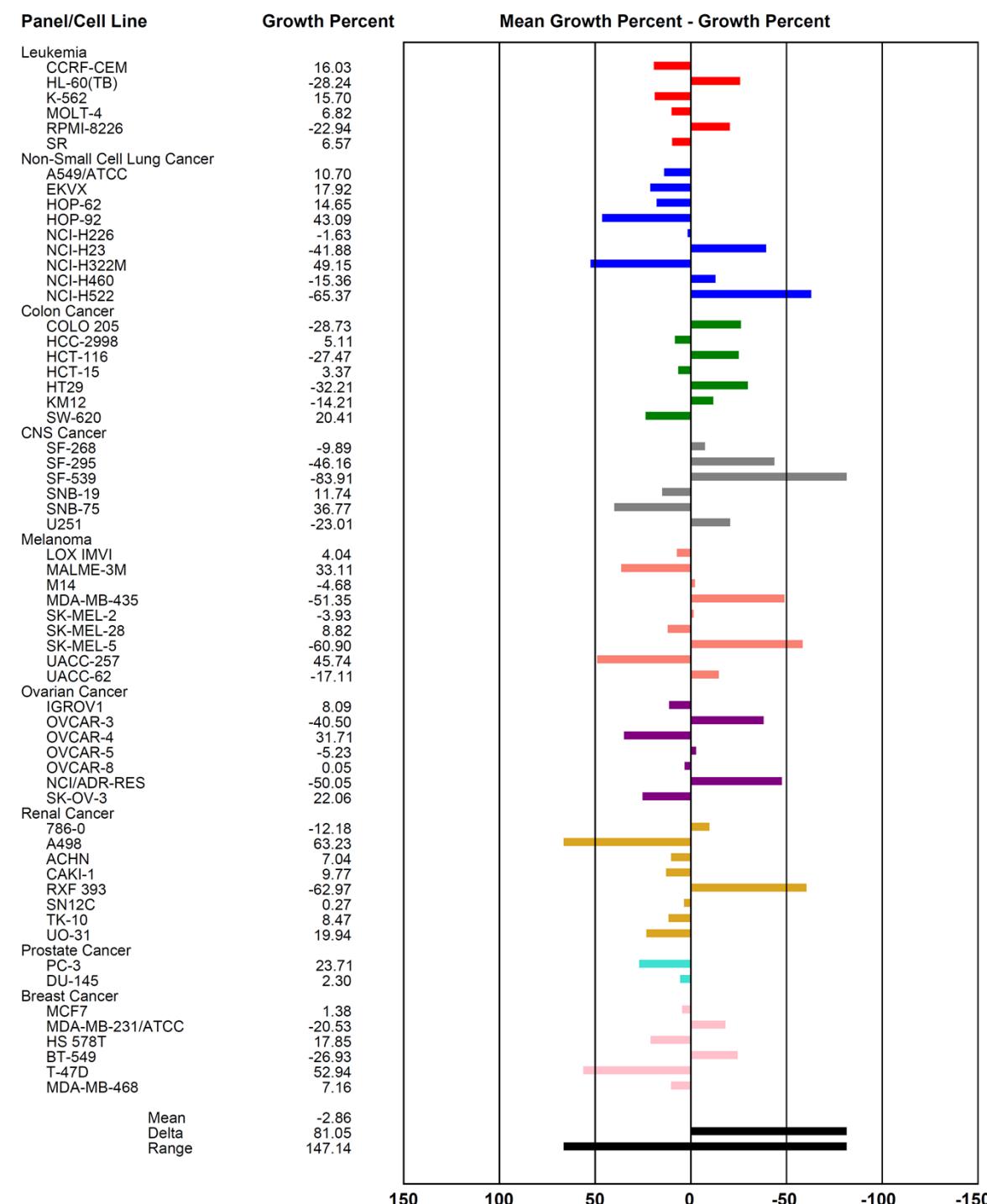
Developmental Therapeutics Program	NSC: D-834624 / 1	Conc: 1.00E-5 Molar	Test Date: Feb 07, 2022
One Dose Mean Graph	Experiment ID: 2202OS59	Report Date: Mar 02, 2022	



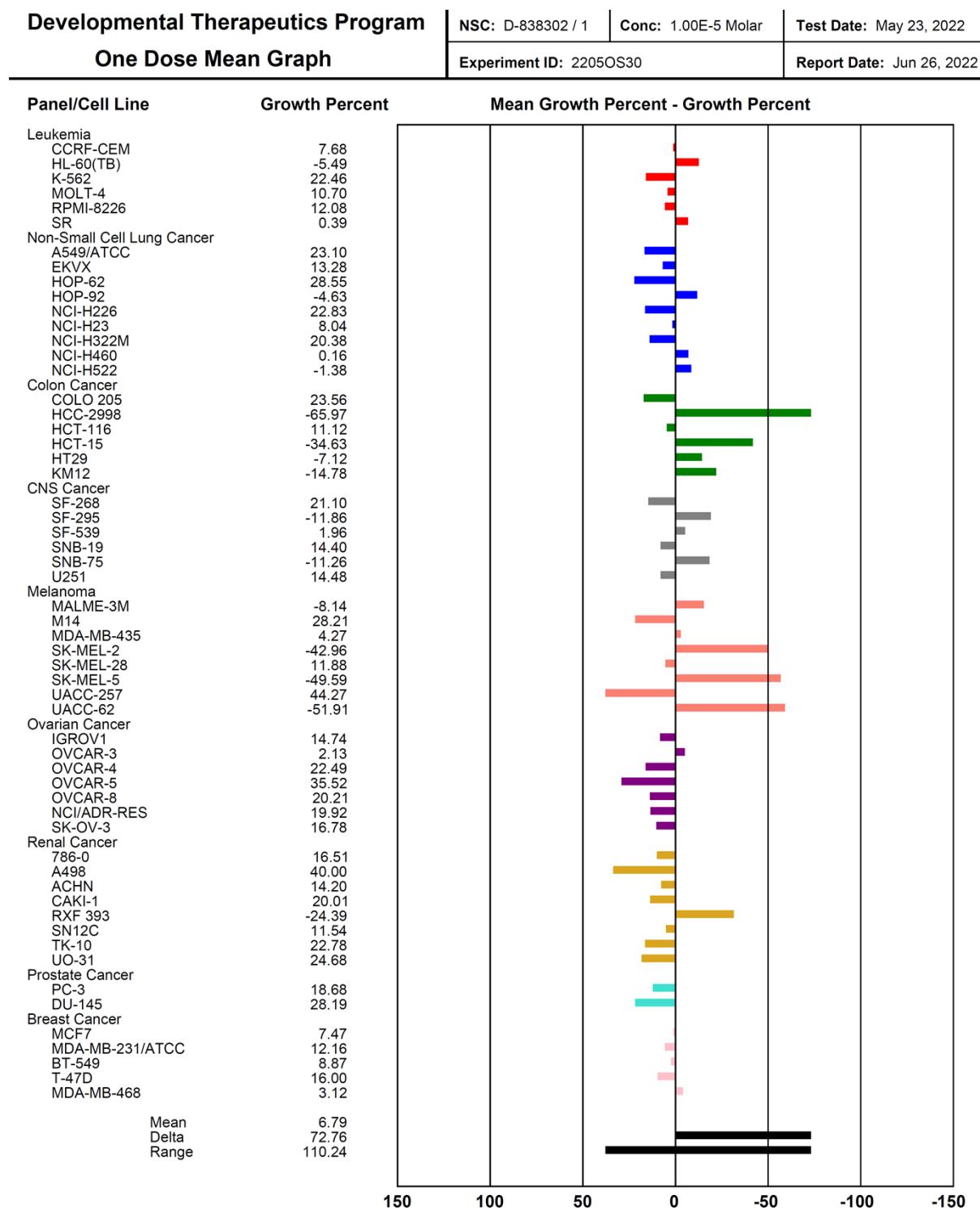
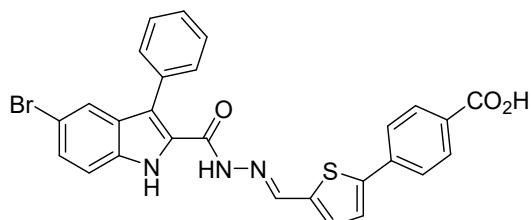
Compound 6l



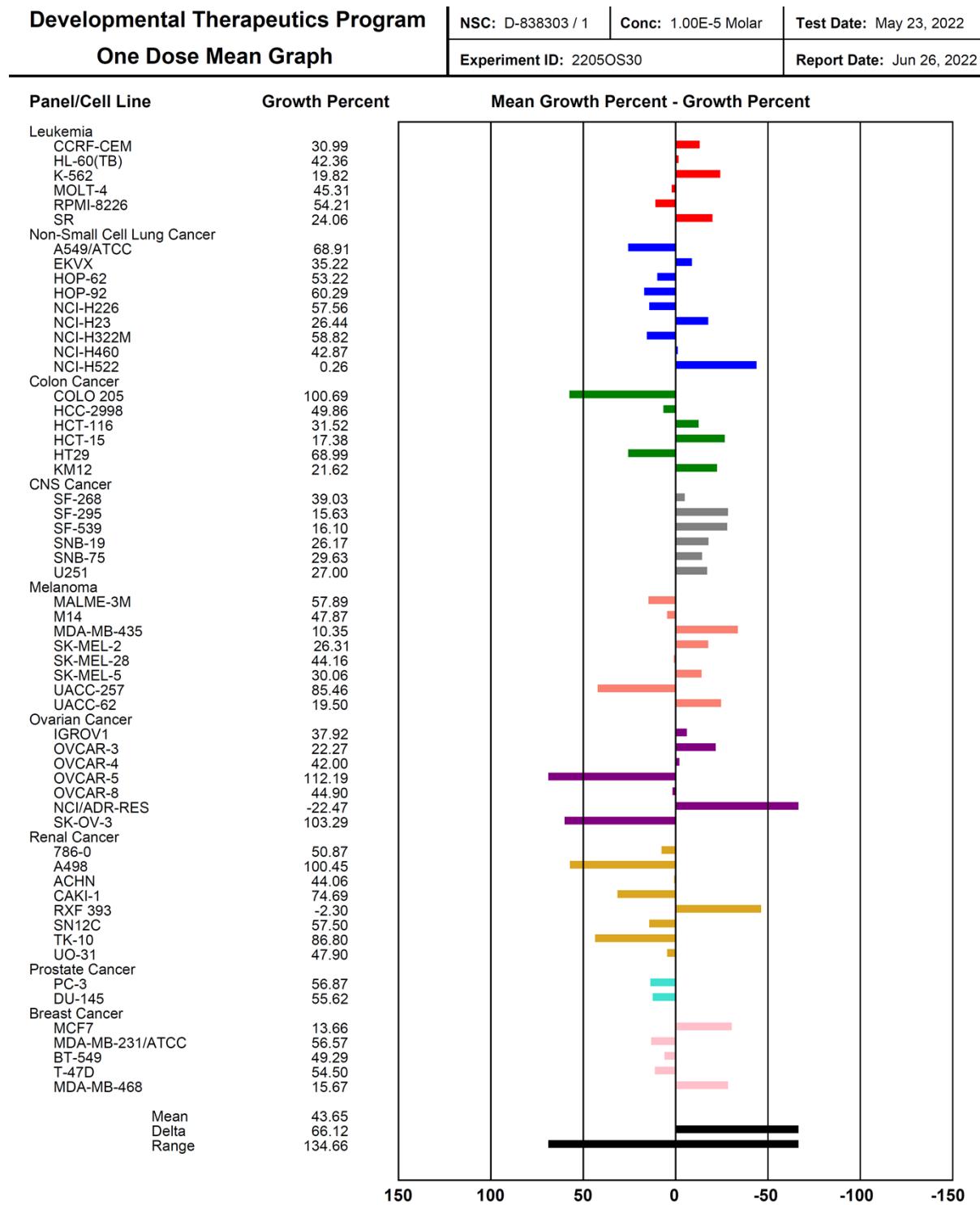
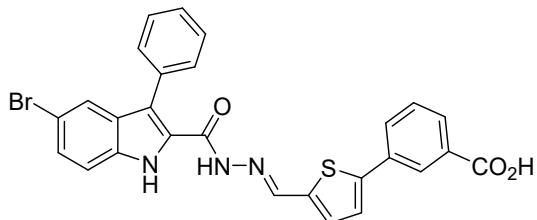
Developmental Therapeutics Program	NSC: D-834625 / 1	Conc: 1.00E-5 Molar	Test Date: Feb 07, 2022
One Dose Mean Graph	Experiment ID: 2202OS59	Report Date: Mar 02, 2022	



Compound 6m



Compound 6n



Compound 6o

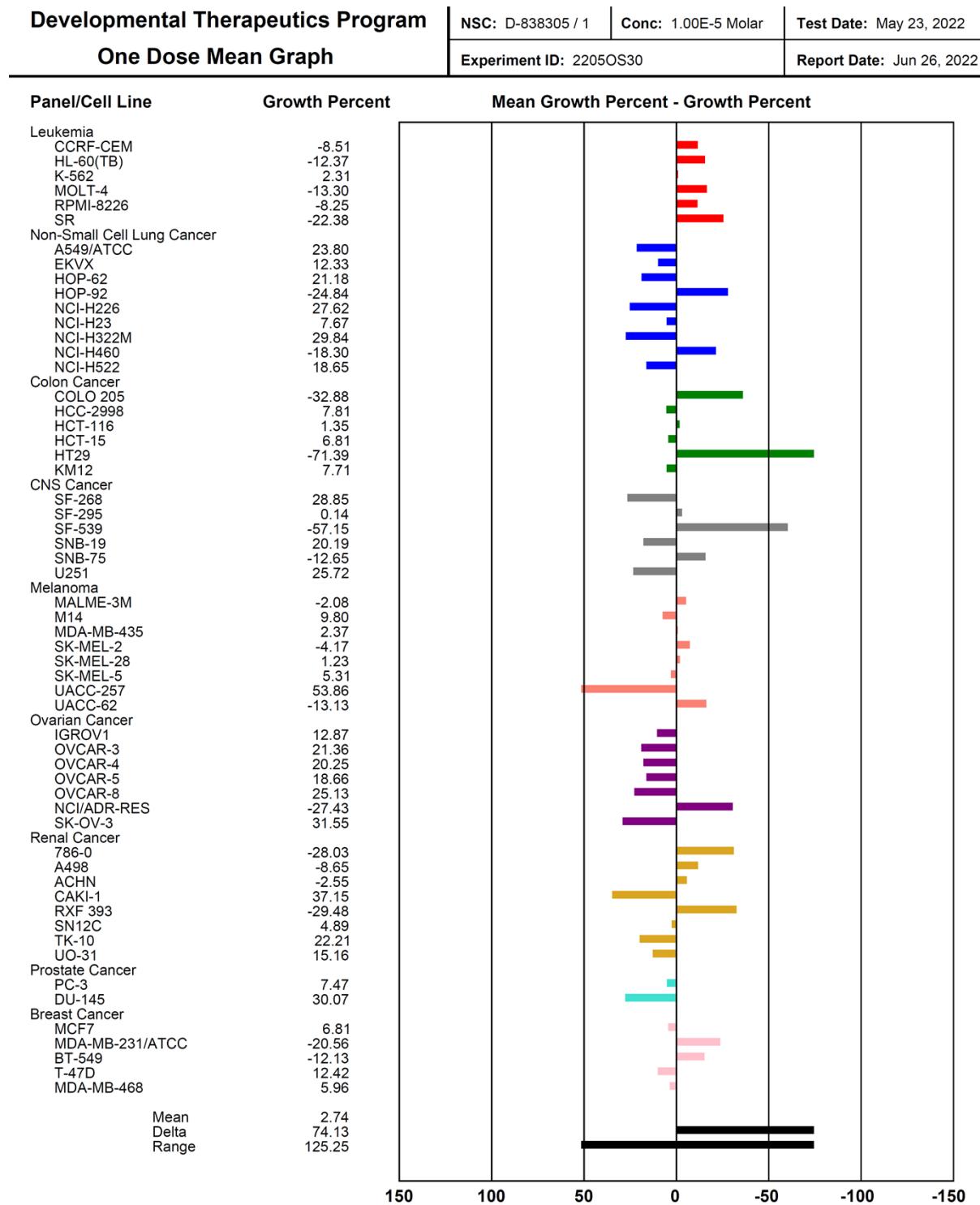
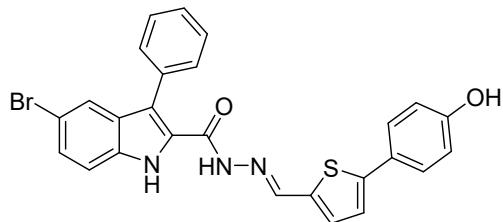


Table S1. GI₅₀ and LC₅₀ screen for compounds **5a–b, 5e–i, 5k, 6a–j, 6m, and 6o**

Disease	Cell line	GI ₅₀ , nM									
		5a	5b	5e	5f	5g	5h	5i	5k	6a	6b
leukemia	CCRF-CEM	167	44.1	265	387	2910	4190	19300	375	41.5	242
	HL-60 (TB)	88.4	30.6	206	237	1940	2210	12400	218	32.2	240
	K-562	40.7	47	69.2	54.3	3280	2890	20800	333	34.6	102
	MOLT-4	229	41.4	410	355	3450	3340	20300	398	60.3	447
	RPMI-8226	128	52.2	420	318	3310	3060	25900	435	43.4	146
	SR	41.5	54.8	143	95			11800	367	37.7	
NSC lung cancer	A549/ATCC	172	188	393	362	3660	3550	32300	460	160	512
	EKVK	2870	1950	452	2040	5740	6700	28800	3150	10700	490
	HOP-62	438	648	292	835	3490	3540	29500	577	174	437
	HOP-92	219	81.6	2870	342	46100	12800	10600	2600	111	1990
	NCI-H226	333	247	351	283	23500	10200	34500	1660	196	3210
	NCI-H23	551	292	333	478	4870	5230	34100	338	115	739
	NCI-H322M	405	408	797	478	8370	7500	28700	594	307	1380
	NCI-H460	111	218	347	315	3490	3260	21300	342	41	184
Colon cancer	NCI-H522	23.9	18.4	82.6	37.4	1730	2000	7640	225	19.7	196
	COLO 205	113	187	198	233	2750	2480	26400	1630	81.2	381
	HCC-2998	229	432	328	420	4630	4160	16100	428	10.1	399
	HCT-116	49.4	38.8	58.3	126	3040	3330	27700	326	34.5	209
	HCT-15	46.8	172	310	185	3590	3340	18600	318	31.9	276
	HT29	112	33.4	191	307	2580	2360	21900	1530	35.9	261
	KM12	201	308	307	401	3740	3970	22400	332	77.4	313
CNS cancer	SW-620	65.7	109	415	331	4500	4600	25400	422	43.7	242
	SF-268	552	408	521	605	5550	4940	20800	719	448	1340
	SF-295	46.4	112	315	138	3170	3160	20400	663	34	224
	SF-539	56.9	25.7	230	163	2340	2350	14700	228	25.2	203
	SNB-19	234	334	388	344	3480	3840	21600	419	109	2030
Melanoma	SNB-75	142	99.5	509	171	4560	2870	4020	813	202	204
	U251	192	320	330	312	3340	3440	20000	353	106	388
	LOX IMVI	64.7	33.3	222		3710	3840	20000	302	32.3	237
	MALME-3M	151	107	537	1030	3770	3720	19100	475	150	4850
	M14	135	265	217	289	3430	3490	29800	292	56.2	379
	MDA-MB-435	34	77.5	186	80.8	3200	2720	12500	248	27.3	78.9
	SK-MEL-2	240	73.9	289	412	2680	3040	14600	313	135	448
Ovarian Cancer	SK-MEL-28	536	117	841	921	6750	7180	15800	836	129	9230
	SK-MEL-5	88.7	139	231	213	2220	2940	15700	248	36.4	244
	UACC-257	465	97.4	1360	437	5790	6860	24500	1830	203	4250
	UACC-62	39.4	53.5	462	73.1	4460	4170	4980	489	37.6	295
	IGROV1	157	273	410	285	4330	4590	25300	401	61.4	695
	OVCAR-3	254	341	234	512	3470	2480	12200	299	68	185
	OVCAR-4	623	87.9	637	553	>1.0E5	26200	21100	1920	189	11300
Renal Cancer	OVCAR-5	264	87	436	383	3840	4310	36500	431	68.5	820
	OVCAR-8	121	84.5	209	184	2440	2390	20700	293	44.2	288
	NCI/ADR-RES	299	45.5	136	286	2530	2400			52.5	172
	SK-OV-3	408	360	764	669	3610	3610	28300	612	36.8	1980
	786-0	359	389	271	398	2760	2840	24200	1990	158	447
	A498	4290	13800	14800	2770	>1.0E5	93200	23600	6260	70100	21400
	ACHN	202	91.5	501	278	4760	5430	29300	514	66.4	639
Prostate Cancer	CAKI-1	89	181	648	224	30900	11400	22000	469	65.1	444
	RXF 393	348	1100	326	632	2650	2370	11300	296		224
	SN12C	135	59.9	388	268	3990	4130	24800	418	64.5	615
	TK-10	2820	3560	5140	2770	>1.0E5	29100	38700	5100	37700	13900
	UO-31	108	366	491	321			25000	653	64.7	614
	PC-3	232	288	562	348	4280	3960	25100	559	117	906
	DU-145	229	249	326	376	4200	4190	36400	393	49.3	506
Breast Cancer	MCF7	41.4	34.9	324	44.3	3560	3500	28300	327	33.1	108
	MDA-MB-231/ATCC	195	71.2	246	251			27900	306	128	976
	HS 578T	286	900	366	850	4250	3730	38700	291	66.8	201
	BT-549	181	166	192	227	2160	2800	20100	419	47.1	269
	T-47D	1760	2340	3500	2020	>1.0E5	7940	30900	3020	11000	52100
	MDA-MB-468	299	48.5	341	371	2280	2290	19500	225	122	995

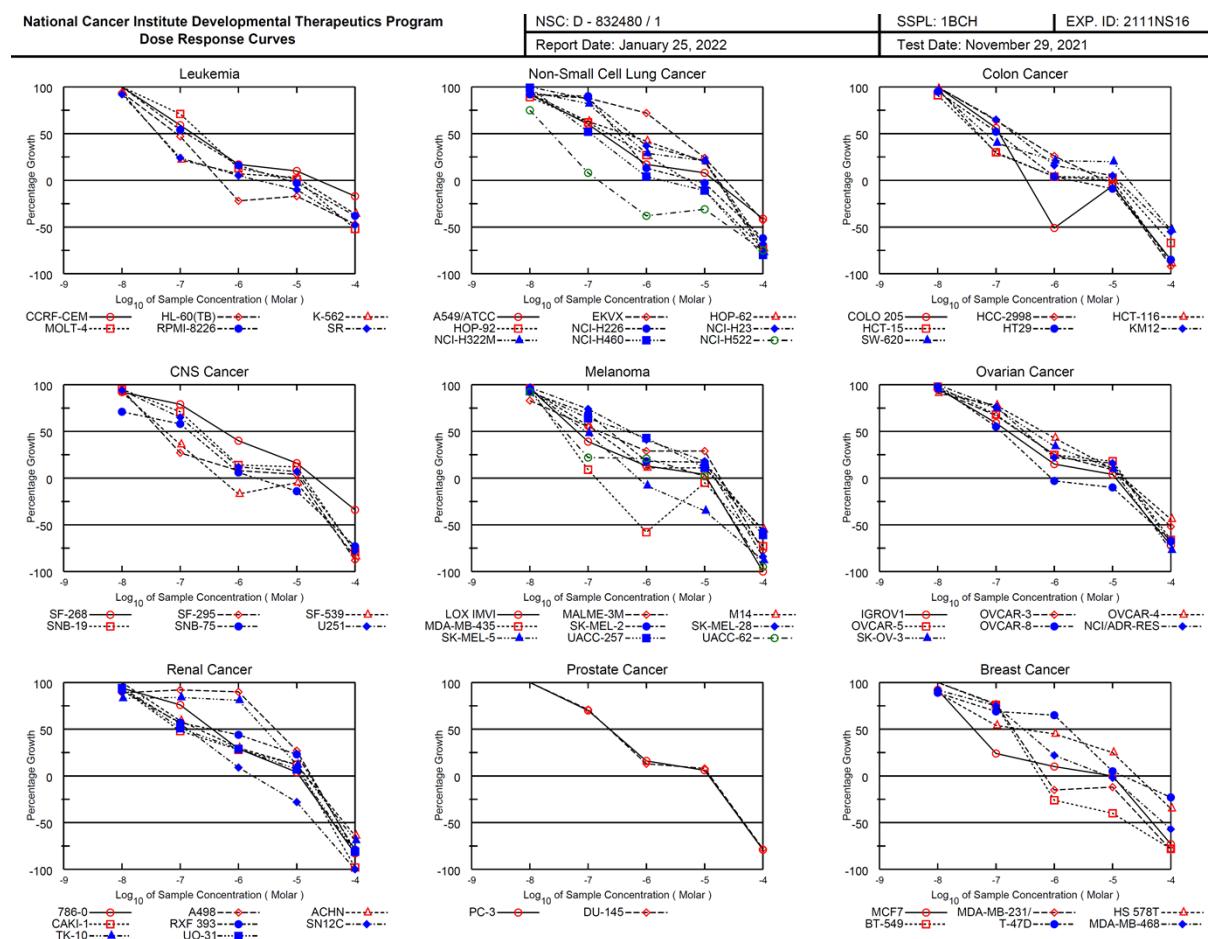
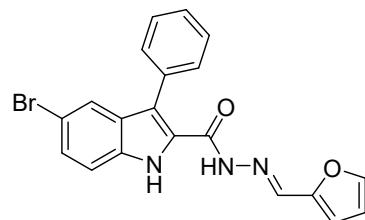
Disease	Cell line	GI ₅₀ , nM									
		6c	6d	6e	6f	6g	6h	6i	6j	6m	6o
leukemia	CCRF-CEM	311	412	66	399	357	37.7	27.1	345	4440	2460
	HL-60 (TB)	193	234	52.9	248	214	28.8	30.2	202	4310	2100
	K-562	152	330	37.5	216	348	35.8	28.8	312	6150	2940
	MOLT-4	289	439	190	383	473	44.4	53.7	405	6420	2030
	RPMB-8226	281	433	51.6	313	491	41.0	34.9	386	6050	3140
	SR	243	327	49.8	271		37.6	23.5		13700	2580
NSC lung cancer	A549/ATCC	364	372	317	357	412	65.3	44.3	628	13500	4280
	EKVK	2130	4830	1880	1100	422	19800	41.4	549	14400	4040
	HOP-62	1480	969	558	480	501	491	51.1	391	12300	6320
	HOP-92	287	383	383	322	1010	68.6	188	5680	4410	2980
	NCI-H226	233	259	278	230	936	35.8	23.1	2850	21000	5630
	NCI-H23	482	477	161	531	370	48.3	38	632	21700	3250
	NCI-H322M	421	477	495	874	666	204	56.4	859	17500	5180
	NCI-H460	328	338	319	326	352	182	37	382	12300	2720
Colon cancer	NCI-H522	27.3	31.2	23	47.3	226	19.3	<10	213	15900	3420
	COLO 205	204	224	195	203	244	191	19.1	435	16100	7120
	HCC-2998	465	404	378	251	362	348	28.7	831	11800	3160
	HCT-116	167	282	42.3	290	328	34.5	18.3	389	3700	3090
	HCT-15	238	310	49.7	285	338	62	28	426	5270	2720
	HT29	209	258	64.8	317	266	36.4	30.3	305	12700	2300
	KM12	377	416	377	382	360	257	32.3	449	15300	2770
CNS cancer	SW-620	370	411	89.6	349	417	56.3	42.9	416	13800	4140
	SF-268	569	782	907	939	555	578	50.4	947	13500	5160
	SF-295	249	306	41.4	290	325	35.3	25.8	317	7340	2200
	SF-539	67	209	32.1	191	242	27.1	20.9	271	6790	2760
	SNB-19	315	377	275	355	363	218	32.4	498	6760	4010
	SNB-75	245	208	219	197	276	54.9	68.9	311	11200	3270
Melanoma	U251	311	332	291	332	322	214	33.1	420	5980	3630
	LOX IMVI				260	369		29.6	553	25700	2000
	MALME-3M	352	498	333	406	531	50.5	52.2	704	16300	2410
	M14	341	405	161	269	336	56.4	29.2	316	6310	2750
	MDA-MB-435	163	188	36	181	250	25.3	19.1	240	6810	2990
	SK-MEL-2	327	372	355	291	380	39.3		308	15600	3450
	SK-MEL-28	420	731	318	383	856	91.6	2530	964	7170	3220
	SK-MEL-5	238	239	124	214	230	52.3	18.6	321	12000	1870
	UACC-257	316	445	187	706	961	80.3	2660	709	18700	10500
	UACC-62	246	439	45.1	213	408	46.7	52.9	314	11700	2650
Ovarian Cancer	IGROV1	314	363	84	423	402	39.5	38	736	7850	3450
	OVCAR-3	385	638	376	495	327	54.5	36.8	407	13700	3380
	OVCAR-4	410	484	253	721	7310	67.8	3900	9090	7680	3520
	OVCAR-5	344	396	306	392	417	51.1	50.8	825	17100	5150
	OVCAR-8	144	247	130	288	261	32.4	33.1	340	15900	4220
	NCI/ADR-RES	76.6	650	55.4	429	239	41		268		
Renal Cancer	SK-OV-3			583	532	881	77.1	39.3	499	20000	12200
	786-0	382	489	321	585	403	59.1	36.7	563	3130	2160
	A498	22000	16700	2430	12100	12800	21400	28200	16500	20700	5570
	ACHN	213	434	92.5	366	569	58.9	48	778	11400	2920
	CAKI-1	301	346	90.4	391	527	59.8	28.7	679	21100	3460
	RXF 393	1030	1270		266	301		97.5	230	13900	1920
	SN12C	260	346	83.2	330	381	44.5	32	632	9730	3480
	TK-10	16100	12900	2930	2670	12200	13300	10300	10200	26800	5050
Prostate Cancer	TK-30	402	480	98.6	478	134	63.4	60.2		10400	2700
	PC-3	367	399	213	320	464	127	34.2	427	4790	3170
	DU-145	316	410	235	389	403	50.5	34	478	24900	4480
	MCF7	199	295	37.5	293	363	37.6	21.7	358	18100	2570
	MDA-MB-231/ATCC	219	266	189	316	345	30.2	26.4		20600	3360
	HS 578T	672	791	1230	570	290	3770	27.5	429	6670	3020
	BT-549	236	233	259	257	272	29.4	32.3	973	1950	2950
Breast Cancer	T-47D	5510	3440	2160	800	5120	4890	4190	359	13900	4600
	MDA-MB-468	24800	334	293	308	216	38	23	277	19100	2670

Disease	Cell line	LC ₅₀ , nM									
		5a	5b	5e	5f	5g	5h	5i	5k	6a	6b
leukemia	CCRF-CEM	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	69900	>1.0E5	>1.0E5	>1.0E5	>1.0E5
	HL-60 (TB)	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	21700	>1.0E5	>1.0E5	>1.0E5	>1.0E5
	K-562	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5
	MOLT-4	91800	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5
	RPMI-8226	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	93200	>1.0E5	>1.0E5	>1.0E5	>1.0E5
NSC lung cancer	SR	>1.0E5	>1.0E5	>1.0E5	>1.0E5			>1.0E5	>1.0E5	>1.0E5	>1.0E5
	A549/ATCC	>1.0E5	>1.0E5	61500	>1.0E5	>1.0E5	82100	>1.0E5	90100	>1.0E5	>1.0E5
	EKVV	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	39400	>1.0E5	>1.0E5
	HOP-62	57000	47000	38700	>1.0E5	>1.0E5	54600	>1.0E5	52900	>1.0E5	63600
	HOP-92	42600	>1.0E5	97100	>1.0E5	>1.0E5	>1.0E5	>1.0E5	54700	>1.0E5	87300
	NCI-H226	63300	88400	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	84300	>1.0E5	>1.0E5
	NCI-H23	63000	>1.0E5	62900	>1.0E5	>1.0E5	>1.0E5	>1.0E5	38200	>1.0E5	>1.0E5
	NCI-H322M	52800	>1.0E5	46600	>1.0E5	>1.0E5	>1.0E5	>1.0E5	40600	>1.0E5	>1.0E5
	NCI-H460	36800	47700	38200	13100	>1.0E5	>1.0E5	>1.0E5	23600	>1.0E5	59000
	NCI-H522	27300	11600	48300	5390	9130	16600	>1.0E5	12900	>1.0E5	60600
Colon cancer	COLO 205	659	692	1790	56600	>1.0E5	>1.0E5	7210		20500	
	HCC-2998	33200	53700	50200	4700	>1.0E5	>1.0E5	58600	10000	>1.0E5	70000
	HCT-116	36500	10000	40500	34700	>1.0E5	62800	>1.0E5	24500	>1.0E5	45300
	HCT-15	57600	89800	80200	25700	>1.0E5	>1.0E5	>1.0E5	30700	>1.0E5	49100
	HT29	34700	49000	81200	35300	>1.0E5	31500	>1.0E5	35800	>1.0E5	36300
	KM12	82100	>1.0E5	35700	>1.0E5	>1.0E5	>1.0E5	>1.0E5	80100	>1.0E5	63800
	SW-620	91700	>1.0E5	76900	21300	>1.0E5	>1.0E5	>1.0E5	43900	>1.0E5	>1.0E5
CNS cancer	SF-268	>1.0E5	>1.0E5	85100	>1.0E5	>1.0E5	>1.0E5	>1.0E5	79000	>1.0E5	>1.0E5
	SF-295	38700	34900	52700	56700	>1.0E5	>1.0E5	>1.0E5	8090	>1.0E5	38700
	SF-539	37200	10600	29600	19400	62400	17100	91200	16800	>1.0E5	29600
	SNB-19	47600	>1.0E5	41000	>1.0E5	>1.0E5	>1.0E5	>1.0E5	37400	>1.0E5	>1.0E5
	SNB-75	40500	64400	68800	>1.0E5	>1.0E5	>1.0E5	>1.0E5	60900	>1.0E5	>1.0E5
Melanoma	U251	46800	47700	39000	11000	>1.0E5	41100	>1.0E5	47400	>1.0E5	57500
	LOX IMVI	33200	35200	36500		>1.0E5	68800	>1.0E5	21400	>1.0E5	37500
	MALME-3M	54800	52100	61400	8470	>1.0E5	>1.0E5	>1.0E5	37000	>1.0E5	85100
	M14	84000	>1.0E5	69500	15600	>1.0E5	>1.0E5	>1.0E5	37400	>1.0E5	48100
	MDA-MB-435		747		734	>1.0E5	>1.0E5	>1.0E5	25600		41300
	SK-MEL-2	80800	36100	49200	32200	>1.0E5	>1.0E5	95400	35200	>1.0E5	49900
	SK-MEL-28	46500	48700	85500	22300	>1.0E5	>1.0E5	>1.0E5	39400	>1.0E5	60500
	SK-MEL-5	19500	10200	15700	2620	36100	>1.0E5	69400	4140	>1.0E5	6970
	UACC-257	69400	>1.0E5	94100	>1.0E5	>1.0E5	>1.0E5	>1.0E5	48000	>1.0E5	>1.0E5
	UACC-62	34500	42300	62000	5290	>1.0E5	>1.0E5	>1.0E5	39100	>1.0E5	46500
Ovarian Cancer	IGROV1	51700	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	41600	>1.0E5	97200
	OVCAR-3	93700	38800	46000	75700	>1.0E5	>1.0E5	>1.0E5	33400	>1.0E5	53100
	OVCAR-4	>1.0E5	>1.0E5	87000	>1.0E5	>1.0E5	>1.0E5	>1.0E5	54500	>1.0E5	>1.0E5
	OVCAR-5	64100	77700	98700	>1.0E5	>1.0E5	>1.0E5	>1.0E5	34200	>1.0E5	>1.0E5
	OVCAR-8	50000	21500	29800	4190	>1.0E5	21100	>1.0E5	42800	>1.0E5	56600
	NCI/ADR-RES	59500	72300	32800	>1.0E5	>1.0E5	38500			>1.0E5	94700
	SK-OV-3	48700	>1.0E5	91300	>1.0E5	>1.0E5	>1.0E5	>1.0E5	48700	>1.0E5	>1.0E5
Renal Cancer	786-0	41700	63200	34600	64900	>1.0E5	45000	>1.0E5	23100	>1.0E5	>1.0E5
	A498	51300	77400	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	50100	>1.0E5	>1.0E5
	ACHN	64800	>1.0E5	38500	43500	>1.0E5	>1.0E5	>1.0E5	28800	>1.0E5	>1.0E5
	CAKI-1	36500	76300	60200	68200	>1.0E5	>1.0E5	>1.0E5	37700	>1.0E5	>1.0E5
	RXF 393	52000	61300	45200	9190	>1.0E5	88500	>1.0E5	23900	>1.0E5	>1.0E5
	SN12C	20400	31500	56200	4240	>1.0E5	90200	>1.0E5	24400	>1.0E5	38600
	TK-10	57700	>1.0E5	84100	>1.0E5	>1.0E5	>1.0E5	>1.0E5	47100	>1.0E5	>1.0E5
Prostate Cancer	UO-31	44200	98200	42100	>1.0E5			>1.0E5	34300	>1.0E5	>1.0E5
	PC-3	45900	>1.0E5	>1.0E5	56400	>1.0E5	>1.0E5	>1.0E5	90700	>1.0E5	>1.0E5
	DU-145	47000	>1.0E5	56200	>1.0E5	>1.0E5	>1.0E5	>1.0E5	32500	>1.0E5	>1.0E5
	MCF7	48600	45700	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	38300	>1.0E5	83400
	MDA-MB-231/ATCC	37000	40900	30000	37000			>1.0E5	32600	>1.0E5	58900
	HS 578T	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5
	BT-549	17900	26500	67500	6950	>1.0E5	29800	>1.0E5	26600	>1.0E5	31900
Breast Cancer	T-47D	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5
	MDA-MB-468	74200	>1.0E5	66400	>1.0E5	>1.0E5	>1.0E5	>1.0E5	17700	>1.0E5	>1.0E5

Disease	Cell line	LC ₅₀ , nM									
		6c	6d	6e	6f	6g	6h	6i	6j	6m	6o
leukemia	CCRF-CEM	>1.0E5	>1.0E5	>1.0E5	>1.0E5	70700	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5
	HL-60 (TB)	>1.0E5	98500	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	96600	>1.0E5
	K-562	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5
	MOLT-4	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5
	RPMI-8226	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5
	SR	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	94900	>1.0E5	>1.0E5	>1.0E5	>1.0E5
NSC lung cancer	A549/ATCC	>1.0E5	>1.0E5	44900	86800	38100	>1.0E5	>1.0E5	>1.0E5	>1.0E5	70500
	EKVX	>1.0E5	>1.0E5	95300	>1.0E5	33900	>1.0E5	>1.0E5	>1.0E5	>1.0E5	39000
	HOP-62	>1.0E5	>1.0E5	47200	55500	46900	>1.0E5	35100	>1.0E5	75200	73400
	HOP-92	>1.0E5	>1.0E5	82200	>1.0E5	31200	>1.0E5	>1.0E5	>1.0E5	79800	46100
	NCI-H226	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	64400
	NCI-H23	>1.0E5	>1.0E5	41400	>1.0E5	40900	>1.0E5	65600	>1.0E5	>1.0E5	35500
	NCI-H322M	>1.0E5	>1.0E5	>1.0E5	>1.0E5	43700	>1.0E5	>1.0E5	>1.0E5	>1.0E5	42700
Colon cancer	NCI-H460	>1.0E5	>1.0E5	38600	78300	42500	>1.0E5	79500	>1.0E5	80400	32100
	NCI-H522	>1.0E5	64500	26600	10800	33500	58500	42600	8560	70500	87800
	COLO 205				795	4980	719	70.8	5920	71400	63500
	HCC-2998	>1.0E5	>1.0E5	48000	66400	32300	>1.0E5	>1.0E5	>1.0E5	63200	33400
	HCT-116	>1.0E5	>1.0E5	38800	82600	28700	>1.0E5	21300	>1.0E5	38900	37700
	HCT-15	>1.0E5	>1.0E5	36600	78900	35600	>1.0E5	>1.0E5	>1.0E5	54100	33000
	HT29	>1.0E5	>1.0E5	41100	>1.0E5	44100	>1.0E5	11900	23000	72800	92400
CNS cancer	KM12	>1.0E5	>1.0E5	>1.0E5	95000	62800	>1.0E5	>1.0E5	>1.0E5	>1.0E5	47000
	SW-620	>1.0E5	>1.0E5	68700	>1.0E5	47900	>1.0E5	>1.0E5	>1.0E5	84200	49500
	SF-268	>1.0E5	>1.0E5	>1.0E5	>1.0E5	75100	>1.0E5	>1.0E5	>1.0E5	>1.0E5	59700
	SF-295	>1.0E5	>1.0E5	28600	>1.0E5	36500	>1.0E5	53000	56900	81100	16600
	SF-539	36500	48200	24100	9680	25300	44300	19100	34400	58900	28800
	SNB-19	>1.0E5	>1.0E5	77600	>1.0E5	37800	>1.0E5	>1.0E5	>1.0E5	49900	37400
Melanoma	SNB-75	>1.0E5	>1.0E5	>1.0E5	>1.0E5	66900	>1.0E5	>1.0E5	>1.0E5	>1.0E5	67000
	U251	>1.0E5	>1.0E5	45600	61400	39200	>1.0E5	51300	57500	62600	66000
	LOX IMVI				41700	35600		60400	58500	>1.0E5	19600
	MALME-3M	>1.0E5	>1.0E5	70600	24100	49100	>1.0E5	>1.0E5	>1.0E5	89300	31700
	M14	>1.0E5	>1.0E5	75400	45600	43400	>1.0E5	>1.0E5	59900	>1.0E5	33900
	MDA-MB-435		>1.0E5	861	34800	>1.0E5	259	98000	>1.0E5	37200	
	SK-MEL-2	>1.0E5	>1.0E5	71400	42700	66700	>1.0E5		36200	81800	47700
Ovarian Cancer	SK-MEL-28	>1.0E5	>1.0E5	52800	>1.0E5	44400	>1.0E5	>1.0E5	>1.0E5	53600	35400
	SK-MEL-5	52600	32800	4610	1870	2980	35000	74.9	15000	60700	9250
	UACC-257	>1.0E5	>1.0E5	73100	>1.0E5	44700	>1.0E5	>1.0E5	>1.0E5	>1.0E5	74300
	UACC-62	>1.0E5	>1.0E5	12500	18200	34000	>1.0E5	84700	51600	51700	32200
	IGROV1	>1.0E5	>1.0E5	34900	>1.0E5	48600	>1.0E5	>1.0E5	>1.0E5	60300	36200
	OVCAR-3	>1.0E5	>1.0E5	87000	>1.0E5	42900	86600	>1.0E5	58400	93300	39700
	OVCAR-4	>1.0E5	>1.0E5	>1.0E5	>1.0E5	86700	>1.0E5	>1.0E5	>1.0E5	>1.0E5	44000
Renal Cancer	OVCAR-5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	40700	>1.0E5	>1.0E5	>1.0E5	57900	41400
	OVCAR-8	>1.0E5	>1.0E5	22500	21700	52300	>1.0E5	>1.0E5	59900	>1.0E5	56300
	NCI/ADR-RES	>1.0E5	>1.0E5	76800	>1.0E5	>1.0E5	>1.0E5		>1.0E5		
	SK-OV-3	>1.0E5	>1.0E5	69700	>1.0E5	49100	>1.0E5	>1.0E5	>1.0E5	85000	63600
	786-0	>1.0E5	>1.0E5	60200	>1.0E5	35400	>1.0E5	>1.0E5	>1.0E5	42200	32500
	A498	>1.0E5	>1.0E5	>1.0E5	>1.0E5	51600	>1.0E5	>1.0E5	>1.0E5	48800	
Prostate Cancer	ACHN	>1.0E5	>1.0E5	30400	31500	38500	>1.0E5	>1.0E5	>1.0E5	>1.0E5	33100
	CAKI-1	>1.0E5	60900	36800	55400	45000	>1.0E5	>1.0E5	>1.0E5	>1.0E5	40200
	RXF 393	>1.0E5	>1.0E5	36700	>1.0E5	41300	>1.0E5	59800	>1.0E5	>1.0E5	12300
	SN12C	>1.0E5	>1.0E5	39200	12600	38300	>1.0E5	>1.0E5	41100	89200	36300
	TK-10	>1.0E5	>1.0E5	94400	>1.0E5	54400	>1.0E5	>1.0E5	>1.0E5	>1.0E5	56200
	UO-31	>1.0E5	>1.0E5	44400	>1.0E5	40400	>1.0E5	>1.0E5	>1.0E5	>1.0E5	36700
	PC-3	>1.0E5	>1.0E5	68900	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	73900
Breast Cancer	DU-145	>1.0E5	>1.0E5	62900	>1.0E5	38100	>1.0E5	>1.0E5	>1.0E5	>1.0E5	41200
	MCF7	>1.0E5	>1.0E5	30700	>1.0E5	50400	68600	>1.0E5	>1.0E5	>1.0E5	42300
	MDA-MB-231/ATCC	>1.0E5	>1.0E5	55200	>1.0E5	35300	>1.0E5	>1.0E5	>1.0E5	>1.0E5	35200
	HS 578T	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5
	BT-549	>1.0E5	>1.0E5	42000	85800	9210	>1.0E5	>1.0E5	31100	47100	35600
	T-47D	>1.0E5	>1.0E5	>1.0E5	>1.0E5	86300	>1.0E5	>1.0E5	>1.0E5	>1.0E5	>1.0E5
	MDA-MB-468	>1.0E5	>1.0E5	56600	>1.0E5	26100	>1.0E5	72400	>1.0E5	>1.0E5	26700

Figure S2. NCI60 five dose screen

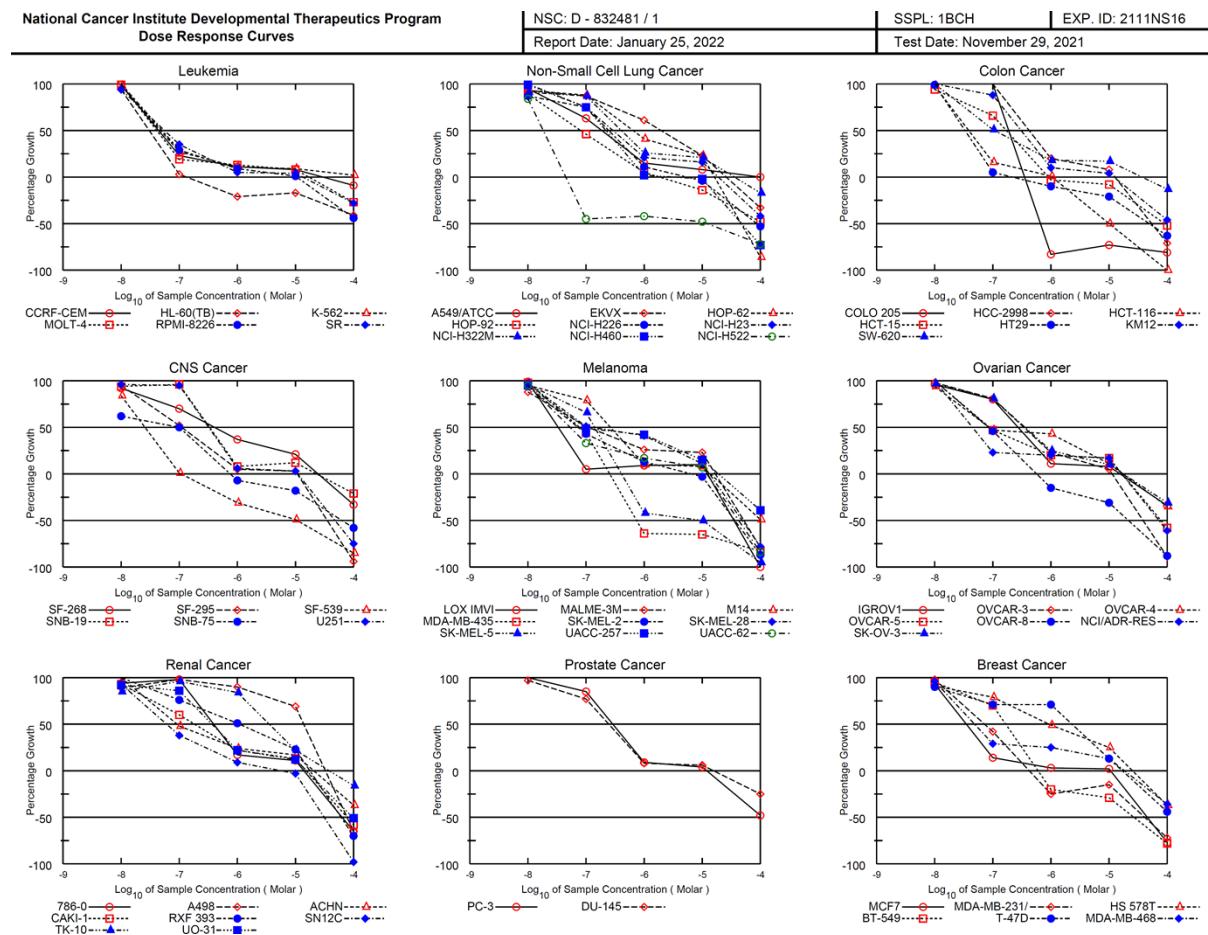
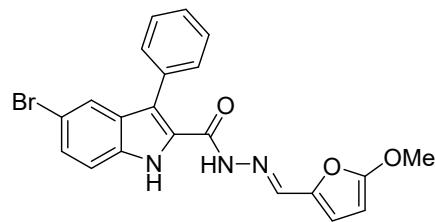
Compound 5a



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results

NSC : D - 832480 / 1				Experiment ID : 2111NS16								Test Type : 08			Units : Molar		
Report Date : January 25, 2022				Test Date : November 29, 2021								QNS :			MC :		
COMI : T07				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH					
Log10 Concentration																	
Panel/Cell Line		Time	Mean	Optical Densities				Percent Growth				GI50	TGI	LC50			
Leukemia	Zero	Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0					
CCRF-CEM	0.530	2.678	2.670	1.805	0.901	0.744	0.440	100	59	17	10	-17	1.67E-7	2.33E-5	> 1.00E-4		
HL-60(TB)	0.572	2.412	2.310	1.446	0.447	0.478	0.302	94	47	-22	-17	-47	8.84E-8	4.84E-7	> 1.00E-4		
K-562	0.154	1.652	1.569	0.477	0.263	0.193	0.098	94	22	7	3	-36	4.07E-8	1.17E-5	> 1.00E-4		
MOLT-4	0.590	2.454	2.484	1.909	0.834	0.605	0.284	102	71	13	1	-52	2.29E-7	1.03E-5	9.18E-5		
RPMI-8226	0.581	2.571	2.594	1.658	0.900	0.566	0.361	101	54	16	-3	-38	1.28E-7	7.26E-6	> 1.00E-4		
SR	0.371	1.750	1.634	0.705	0.435	0.334	0.195	92	24	5	-10	-48	4.15E-8	2.07E-6	> 1.00E-4		
Non-Small Cell Lung Cancer																	
A549/ATCC	0.337	2.059	1.930	1.375	0.627	0.470	0.201	92	60	17	8	-41	1.72E-7	1.45E-5	> 1.00E-4		
EKVX	1.027	1.958	1.882	1.850	1.697	1.251	0.591	92	88	72	24	-43	2.87E-6	2.30E-5	> 1.00E-4		
HOP-62	0.707	1.821	1.738	1.414	1.180	0.931	0.194	93	63	42	20	-73	4.38E-7	1.65E-5	5.70E-5		
HOP-92	1.244	1.858	1.794	1.624	1.411	1.109	0.336	89	62	27	-11	-73	2.19E-7	5.17E-6	4.26E-5		
NCI-H226	0.822	1.491	1.436	1.426	0.911	0.795	0.316	92	90	13	-3	-62	3.33E-7	6.32E-6	6.33E-5		
NCI-H23	0.419	1.441	1.460	1.311	0.797	0.636	0.135	102	87	37	21	-68	5.51E-7	1.73E-5	6.30E-5		
NCI-H322M	0.810	1.975	1.914	1.765	1.152	1.056	0.184	95	82	29	21	-77	4.05E-7	1.64E-5	5.28E-5		
NCI-H460	0.323	3.025	3.000	1.735	0.439	0.287	0.066	99	52	4	-11	-80	1.11E-7	1.89E-6	3.68E-5		
NCI-H522	1.038	2.400	2.065	1.151	0.642	0.719	0.261	75	8	-38	-31	-75	2.39E-8	1.51E-7	2.73E-5		
Colon Cancer																	
COLO 205	0.628	2.514	2.539	1.682	0.306	0.588	0.097	101	56	-51	-6	-85	1.13E-7	3.32E-7			
HCC-2998	0.495	1.550	1.546	1.166	0.768	0.474	0.040	100	64	26	-4	-92	2.29E-7	7.18E-6	3.32E-5		
HCT-116	0.226	2.409	2.366	0.854	0.309	0.228	0.025	98	29	4	0	-89	4.94E-8	1.00E-5	3.65E-5		
HCT-15	0.217	1.469	1.361	0.588	0.264	0.251	0.073	91	30	4	3	-67	4.68E-8	1.09E-5	5.76E-5		
HT29	0.373	2.353	2.263	1.409	0.444	0.340	0.066	95	52	4	-9	-85	1.12E-7	1.94E-6	3.47E-5		
KM12	0.833	3.351	3.340	2.461	1.246	0.947	0.374	100	65	16	5	-55	2.01E-7	1.19E-5	8.21E-5		
SW-620	0.333	2.610	2.512	1.240	0.819	0.778	0.158	96	40	21	20	-53	6.57E-8	1.86E-5	9.17E-5		
CNS Cancer																	
SF-268	1.079	2.925	2.772	2.528	1.819	1.375	0.716	92	79	40	16	-34	5.52E-7	2.10E-5	> 1.00E-4		
SF-295	0.472	1.957	1.883	0.880	0.588	0.536	0.057	95	27	8	4	-88	4.64E-8	1.11E-5	3.87E-5		
SF-539	0.563	1.811	1.713	1.017	0.467	0.536	0.090	92	36	-17	-5	-84	5.69E-8	4.79E-7	3.72E-5		
SNB-19	0.527	1.772	1.715	1.410	0.704	0.673	0.109	95	71	14	12	-79	2.34E-7	1.34E-5	4.76E-5		
SNB-75	2.216	3.128	2.864	2.744	2.269	1.901	0.597	71	58	6	-14	-73	1.42E-7	1.95E-6	4.05E-5		
U251	0.581	2.761	2.635	2.000	0.840	0.725	0.129	94	65	12	7	-78	1.92E-7	1.20E-5	4.68E-5		
Melanoma																	
LOX IMVI	0.163	1.237	1.199	0.584	0.302	0.211	-0.005	96	39	13	4	-100	6.47E-8	1.10E-5	3.32E-5		
MALME-3M	0.726	1.449	1.323	1.121	0.934	0.932	0.162	83	55	29	29	-78	1.51E-7	1.85E-5	5.48E-5		
M14	0.470	1.982	1.911	1.314	0.631	0.634	0.212	95	56	11	11	-55	1.35E-7	1.46E-5	8.40E-5		
MDA-MB-435	0.779	3.066	2.980	0.992	0.327	0.742	0.212	96	9	-58	-5	-73	3.40E-8	1.37E-7			
SK-MEL-2	1.232	2.690	2.572	2.244	1.499	1.484	0.532	92	69	18	17	-57	2.40E-7	1.71E-5	8.08E-5		
SK-MEL-28	0.523	1.757	1.716	1.433	1.031	0.739	0.086	97	74	41	18	-84	5.36E-7	1.49E-5	4.65E-5		
SK-MEL-5	0.640	2.748	2.648	1.642	0.586	0.419	0.078	95	48	-8	-35	-88	8.87E-8	7.07E-7	1.95E-5		
UACC-257	0.948	2.475	2.371	1.933	1.602	1.113	0.366	93	64	43	11	-61	4.65E-7	1.41E-5	6.94E-5		
UACC-62	0.837	2.801	2.642	1.262	1.244	0.876	0.045	92	22	21	2	-95	3.94E-8	1.05E-5	3.45E-5		
Ovarian Cancer																	
IGROV1	0.501	2.134	2.064	1.457	0.743	0.571	0.142	96	59	15	4	-72	1.57E-7	1.14E-5	5.17E-5		
OVCAR-3	1.057	2.873	2.772	2.275	1.511	1.215	0.511	94	67	25	9	-52	2.54E-7	1.39E-5	9.37E-5		
OVCAR-4	0.841	1.938	1.835	1.698	1.310	0.946	0.468	91	78	43	10	-44	6.23E-7	1.50E-5	> 1.00E-4		
OVCAR-5	0.567	1.722	1.702	1.355	0.856	0.781	0.191	98	68	25	18	-66	2.64E-7	1.65E-5	6.41E-5		
OVCAR-8	0.512	2.515	2.477	1.611	0.495	0.463	0.167	98	55	-3	-10	-67	1.21E-7	8.74E-7	5.00E-5		
NCI/ADR-RES	0.370	1.368	1.371	1.127	0.586	0.529	0.114	100	76	22	16	-69	2.99E-7	1.54E-5	5.95E-5		
SK-OV-3	0.967	1.861	1.817	1.634	1.274	1.059	0.218	95	75	34	10	-77	4.08E-7	1.31E-5	4.87E-5		
Renal Cancer																	
786-0	0.578	2.416	2.303	1.980	1.110	0.655	0.097	94	76	29	4	-83	3.59E-7	1.12E-5	4.17E-5		
A498	1.326	2.082	1.997	2.022	2.007	1.528	0.248	89	92	90	27	-81	4.29E-6	1.77E-5	5.13E-5		
ACHN	0.286	1.196	1.213	0.820	0.563	0.393	0.102	102	59	30	12	-64	2.02E-7	1.43E-5	6.48E-5		
CAKI-1	0.680	2.255	2.138	1.432	1.120	0.871	0.012	93	48	28	12	-98	8.90E-8	1.29E-5	3.65E-5		
RFX 393	0.651	1.234	1.181	0.985	0.906	0.787	0.137	91	57	44	23	-79	3.48E-7	1.69E-5	5.20E-5		
SN12C	0.520	1.838	1.764	1.260	0.638	0.377	-0.001	94	56	9	-28	-100	1.35E-7	1.76E-6	2.04E-5		
TK-10	1.216	2.065	1.922	1.928	1.907	1.315	0.373	83	84	81	12	-69	2.82E-6	1.39E-5	5.77E-5		
UO-31	0.500	2.119	2.023	1.321	0.963	0.606	0.095	94	51	29	7	-81	1.08E-7	1.19E-5	4.42E-5		
Prostate Cancer																	
PC-3	0.628	2.147	2.152	1.690	0.864	0.727	0.133	100	70	16	6	-79	2.32E-7	1.19E-5	4.59E-5		
DU-145	0.333	1.662	1.677	1.277	0.501	0.433	0.073	101	71	13	8	-78	2.29E-7	1.22E-5	4.70E-5		
Breast Cancer																	
MCF7	0.186	0.938	0.877	0.367	0.258	0.187	0.051	92	24	10	0	-73	4.14E-8	1.00E-5	4.86E-5		
MDA-MB-231/ATCC	0.554	1.317	1.323	1.139	0.470	0.489	0.116	101	77	-15	-12	-79	1.95E-7	6.84E-7	3.70E-5		
HS 57T	1.525	2.759	2.627	2.189	2.086	1.832	0.985	89	54	45	25	-35	2.86E-7	2.59E-5	> 1.00E-4		
BT-549	1.016	1.996	2.022	1.764	0.753	0.606	0.220	103	76	-26	-40	-78	1.81E-7	5.58E-7	1.79E-5		
T-47D	1.368	3.125	2.929	2.580	2.502	1.458	1.051	89	69	65	5	-23	1.76E-6	1.51E-5	> 1.00E-4		
MDA-MB-468	0.702	1.384	1.331	1.215	0.853	0.691	0.301	92	69	55	22	-2	-57	2.99E-7	8.53E-6	7.42E-5	

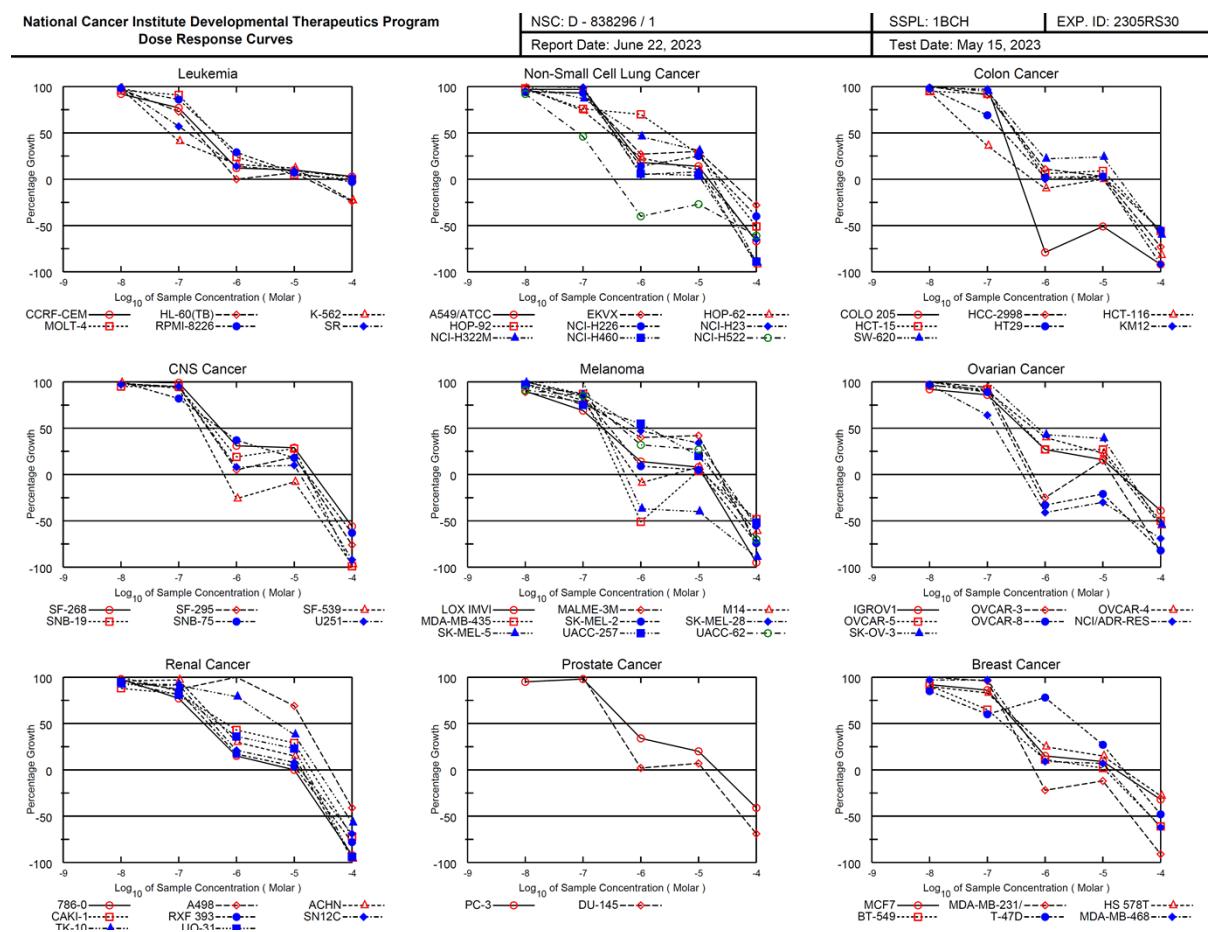
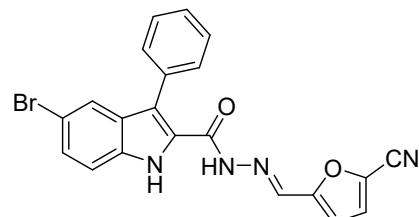
Compound 5b



**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

NSC : D - 832481 / 1				Experiment ID : 2111NS16								Test Type : 08		Units : Molar			
Report Date : January 25, 2022				Test Date : November 29, 2021								QNS :		MC :			
COMI : T08				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH					
Log10 Concentration																	
Panel/Cell Line	Time	Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0	GI50	TGI	LC50		
Leukemia																	
CCRF-CEM	0.530	2.620	2.597	1.012	0.750	0.704	0.483	99	23	11	8	-9	4.41E-8	3.05E-5	> 1.00E-4		
HL-60(TB)	0.572	2.349	2.242	0.633	0.454	0.472	0.335	94	3	-21	-17	-41	3.06E-8	1.39E-7	> 1.00E-4		
K-562	0.154	1.675	1.637	0.563	0.315	0.298	0.183	98	27	11	9	2	4.70E-8	> 1.00E-4	> 1.00E-4		
MOLT-4	0.590	2.468	2.452	0.955	0.832	0.747	0.430	99	19	13	8	-27	4.14E-8	1.72E-5	> 1.00E-4		
RPMI-8226	0.581	2.511	2.569	1.143	0.763	0.602	0.323	103	29	9	1	-44	5.22E-8	1.06E-5	> 1.00E-4		
SR	0.371	1.788	1.701	0.860	0.448	0.422	0.267	94	35	5	4	-28	5.48E-8	1.30E-5	> 1.00E-4		
Non-Small Cell Lung Cancer																	
A549/ATCC	0.337	1.990	1.902	1.383	0.579	0.464	0.344	95	63	15	8	0	1.88E-7	> 1.00E-4	> 1.00E-4		
EKVV	1.027	1.961	1.893	1.842	1.597	1.242	0.687	93	87	61	23	-33	1.95E-6	2.57E-5	> 1.00E-4		
HOP-62	0.707	1.803	1.730	1.674	1.158	0.962	0.101	93	88	41	23	-86	6.48E-7	1.63E-5	4.70E-5		
HOP-92	1.244	1.838	1.771	1.519	1.273	1.076	0.650	89	46	5	-14	-48	8.16E-8	1.83E-6	> 1.00E-4		
NCI-H226	0.822	1.512	1.420	1.340	0.900	0.790	0.390	87	75	11	-4	-53	2.47E-7	5.54E-6	8.84E-5		
NCI-H23	0.419	1.352	1.388	1.122	0.613	0.566	0.243	104	75	21	16	-42	2.92E-7	1.87E-5	> 1.00E-4		
NCI-H322M	0.810	2.006	1.896	1.855	1.123	1.063	0.670	91	87	26	21	-17	4.08E-7	3.55E-5	> 1.00E-4		
NCI-H460	0.323	3.021	2.990	2.339	0.367	0.318	0.088	99	75	2	-2	-73	2.18E-7	3.06E-6	4.77E-5		
NCI-H522	1.038	2.368	2.159	0.573	0.599	0.535	0.292	84	-45	-42	-48	-72	1.84E-8	4.50E-8	1.16E-5		
Colon Cancer																	
COLO 205	0.628	2.391	2.385	2.388	0.106	0.173	0.119	100	100	-83	-73	-81	1.87E-7	3.51E-7	6.59E-7		
HCC-2998	0.495	1.563	1.558	1.597	0.704	0.580	0.142	100	103	20	8	-71	4.32E-7	1.26E-5	5.37E-5		
HCT-116	0.226	2.367	2.324	0.578	0.249	0.113	-0.010	98	16	1	-50	-100	3.88E-8	1.05E-6	1.00E-5		
HCT-15	0.217	1.430	1.352	1.021	0.210	0.200	0.104	94	66	-3	-8	-52	1.72E-7	8.99E-7	8.98E-5		
HT29	0.373	2.217	2.199	0.474	0.335	0.296	0.138	99	5	-10	-21	-63	3.34E-8	2.22E-7	4.90E-5		
KM12	0.833	3.331	3.333	3.034	1.084	0.942	0.453	100	88	10	4	-46	3.08E-7	1.22E-5	> 1.00E-4		
SW-620	0.333	2.442	2.458	1.414	0.717	0.702	0.291	101	51	18	17	-13	1.09E-7	3.78E-5	> 1.00E-4		
CNS Cancer																	
SF-268	1.079	2.902	2.751	2.356	1.758	1.455	0.724	92	70	37	21	-33	4.08E-7	2.43E-5	> 1.00E-4		
SF-295	0.472	1.907	1.829	1.222	0.544	0.512	0.027	95	52	5	3	-94	1.12E-7	1.07E-5	3.49E-5		
SF-539	0.563	1.808	1.611	0.574	0.390	0.287	0.084	84	1	-31	-49	-85	2.57E-8	1.07E-7	1.06E-5		
SNB-19	0.527	1.789	1.711	1.738	0.632	0.681	0.414	94	96	8	12	-21	3.34E-7	2.30E-5	> 1.00E-4		
SNB-75	2.216	3.142	2.787	2.679	2.055	1.824	0.939	62	50	-7	-18	-58	9.95E-8	7.47E-7	6.44E-5		
U251	0.581	2.752	2.667	2.642	0.711	0.653	0.144	96	95	6	3	-75	3.20E-7	1.10E-5	4.77E-5		
Melanoma																	
LOX IMVI	0.163	1.172	1.167	0.212	0.251	0.266	-0.007	99	5	9	10	-100	3.33E-8	1.24E-5	3.52E-5		
MALME-3M	0.726	1.419	1.339	1.078	0.909	0.882	0.155	88	51	26	23	-79	1.07E-7	1.67E-5	5.21E-5		
M14	0.470	1.990	1.917	1.672	0.629	0.598	0.241	95	79	10	8	-49	2.65E-7	1.40E-5	> 1.00E-4		
MDA-MB-435	0.779	3.068	3.015	1.787	0.284	0.274	0.136	98	44	-64	-65	-83	7.75E-8	2.57E-7	7.47E-7		
SK-MEL-2	1.232	2.648	2.559	1.846	1.410	1.190	0.161	94	43	13	-3	-87	7.39E-8	6.12E-6	3.61E-5		
SK-MEL-28	0.523	1.696	1.658	1.117	1.004	0.649	0.117	97	51	41	11	-78	1.17E-7	1.32E-5	4.87E-5		
SK-MEL-5	0.640	2.703	2.615	1.992	0.369	0.323	0.034	96	66	-42	-50	-95	1.39E-7	4.05E-7	1.02E-5		
UACC-257	0.948	2.514	2.437	1.723	1.606	1.176	0.574	95	49	42	15	-39	9.74E-8	1.86E-5	> 1.00E-4		
UACC-62	0.837	2.788	2.684	1.487	1.167	0.967	0.135	95	33	17	7	-84	5.35E-8	1.18E-5	4.23E-5		
Ovarian Cancer																	
IGROV1	0.501	2.132	2.071	1.802	0.689	0.636	0.331	96	80	11	8	-34	2.73E-7	1.57E-5	> 1.00E-4		
OVCAr-3	1.057	2.785	2.756	2.456	1.452	1.148	0.121	98	81	23	5	-89	3.41E-7	1.14E-5	3.88E-5		
OVCAr-4	0.841	1.916	1.846	1.351	1.299	0.962	0.551	94	47	43	11	-35	8.79E-8	1.76E-5	> 1.00E-4		
OVCAr-5	0.567	1.670	1.667	1.084	0.788	0.752	0.237	100	47	20	17	-58	8.70E-8	1.67E-5	7.77E-5		
OVCAr-8	0.512	2.538	2.543	1.445	0.437	0.354	0.060	100	46	-15	-31	-88	8.45E-8	5.72E-7	2.15E-5		
NCI/ADR-RES	0.370	1.339	1.363	0.591	0.568	0.532	0.145	102	23	20	17	-61	4.55E-8	1.64E-5	7.23E-5		
SK-OV-3	0.967	1.787	1.763	1.631	1.174	1.045	0.666	97	81	25	10	-31	3.60E-7	1.71E-5	> 1.00E-4		
Renal Cancer																	
786-0	0.578	2.417	2.298	2.383	0.883	0.783	0.201	94	98	17	11	-65	3.89E-7	1.40E-5	6.32E-5		
A498	1.326	2.081	1.999	2.069	2.007	1.847	0.466	89	98	90	69	-65	1.38E-5	3.27E-5	7.74E-5		
ACHN	0.286	1.147	1.174	0.698	0.490	0.433	0.181	103	48	24	17	-37	9.15E-8	2.07E-5	> 1.00E-4		
CAKI-1	0.680	2.241	2.126	1.614	1.016	0.889	0.283	93	60	22	13	-58	1.81E-7	1.55E-5	7.63E-5		
RXF 393	0.651	1.194	1.194	1.062	0.927	0.778	0.197	100	76	51	23	-70	1.10E-6	1.78E-5	6.13E-5		
SN12C	0.520	1.847	1.753	1.021	0.645	0.507	0.013	93	38	9	-3	-98	5.99E-8	6.08E-6	3.15E-5		
TK-10	1.216	2.007	1.887	1.978	1.881	1.392	1.016	85	96	84	22	-16	3.56E-6	3.76E-5	> 1.00E-4		
UO-31	0.500	2.104	1.983	1.877	0.856	0.699	0.248	92	86	22	12	-51	3.66E-7	1.57E-5	9.82E-5		
Prostate Cancer																	
PC-3	0.628	2.141	2.140	1.910	0.767	0.686	0.324	100	85	9	4	-48	2.88E-7	1.18E-5	> 1.00E-4		
DU-145	0.333	1.647	1.607	1.349	0.443	0.407	0.250	97	77	8	6	-25	2.49E-7	1.52E-5	> 1.00E-4		
Breast Cancer																	

Compound 5e

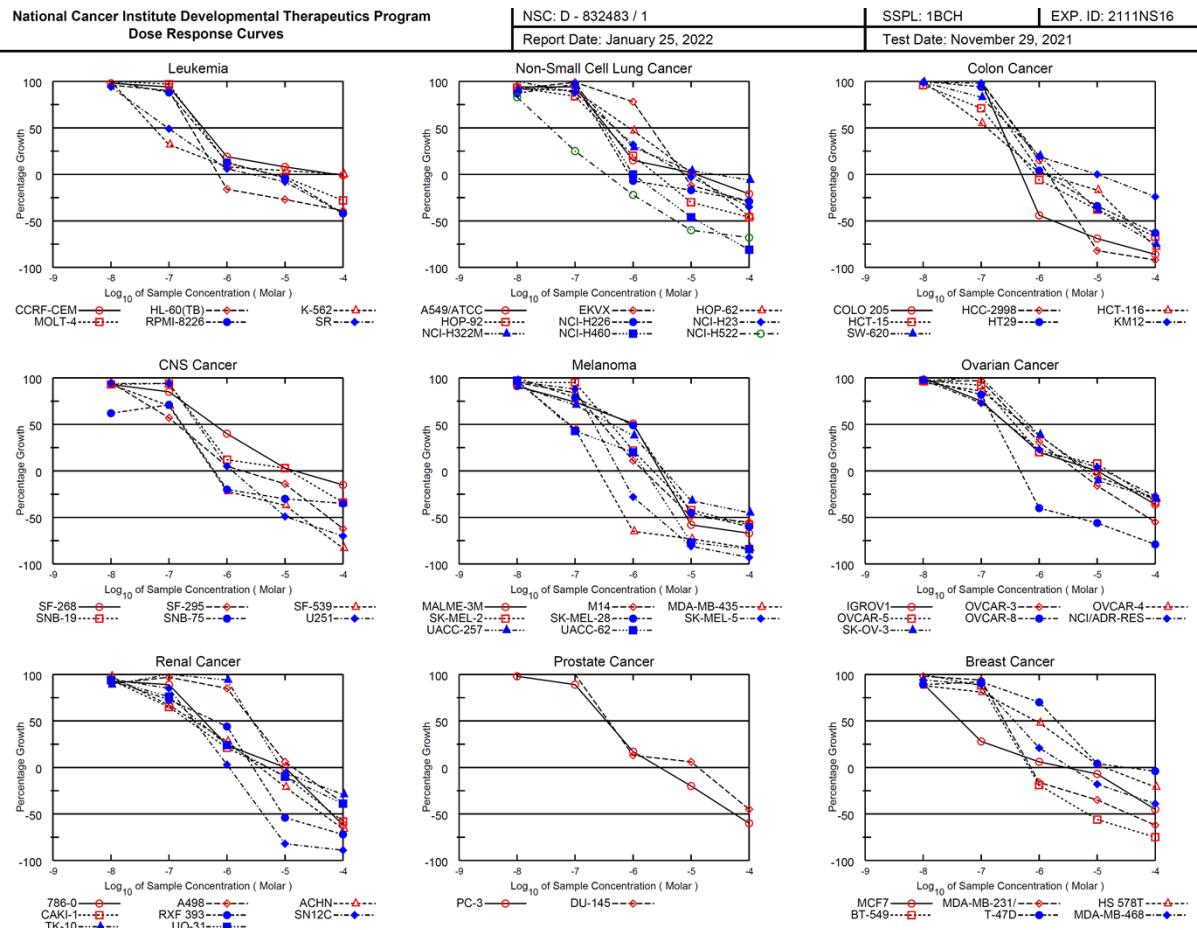
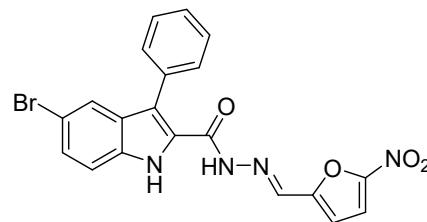


National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results

NSC : D - 838296 / 1	Experiment ID : 2305RS30	Test Type : 08	Units : Molar
Report Date : June 22, 2023	Test Date : May 15, 2023	QNS :	MC :
COMI : TO25	Stain Reagent : SRB Dual-Pass Related	SSPL : 1BCH	

Log10 Concentration																	
Panel/Cell Line	Time	Zero	Mean Optical Densities						Percent Growth						GI50	TGI	LC50
			Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0				
Leukemia	CCRF-CEM	0.413	2.527	2.358	2.050	0.677	0.622	0.476	92	77	12	10	3	2.65E-7	> 1.00E-4	> 1.00E-4	
	HL-60(TB)	0.657	2.218	2.173	1.794	0.661	0.761	0.501	97	73	0	7	-24	2.06E-7	1.65E-5	> 1.00E-4	
	K-562	0.182	1.793	1.758	0.841	0.443	0.371	0.140	98	41	16	12	-23	6.92E-8	2.17E-5	> 1.00E-4	
	MOLT-4	0.574	2.633	2.560	2.453	1.066	0.671	0.571	96	91	24	5	0	4.10E-7	7.67E-5	> 1.00E-4	
	RPMI-8226	0.836	2.801	2.764	2.516	1.397	0.969	0.813	98	86	29	7	-3	4.20E-7	5.14E-5	> 1.00E-4	
	SR	0.216	1.152	1.139	0.745	0.352	0.303	0.235	99	57	14	9	2	1.43E-7	> 1.00E-4	> 1.00E-4	
Non-Small Cell Lung Cancer	A549/ATCC	0.276	1.921	1.877	1.868	0.572	0.513	0.091	97	97	18	14	-67	3.93E-7	1.50E-5	6.15E-5	
	EKVX	0.969	2.457	2.379	2.356	1.375	1.415	0.694	95	93	27	30	-28	4.52E-7	3.26E-5	> 1.00E-4	
	HOP-62	0.630	1.962	1.942	1.615	0.931	0.765	0.050	98	74	23	10	-92	2.92E-7	1.26E-5	3.87E-5	
	HOP-92	1.221	1.921	1.909	1.754	1.708	1.410	0.599	98	76	70	27	-51	2.87E-6	2.22E-5	9.71E-5	
	NCI-H226	1.449	2.895	2.803	2.798	1.650	1.808	0.869	94	93	14	25	-40	3.51E-7	2.41E-5	> 1.00E-4	
	NCI-H23	0.527	1.785	1.791	1.769	0.596	0.623	0.187	100	99	5	8	-65	3.33E-7	1.27E-5	6.29E-5	
	NCI-H322M	0.462	1.558	1.631	1.412	0.966	0.805	0.045	107	87	46	31	-90	7.97E-7	1.81E-5	4.66E-5	
	NCI-H460	0.320	2.910	3.036	2.960	0.469	0.423	0.036	105	102	6	4	-89	3.47E-7	1.10E-5	3.82E-5	
	NCI-H522	1.140	2.757	2.633	1.887	0.681	0.832	0.449	92	46	-40	-27	-61	8.26E-8	3.42E-7	4.83E-5	
Colon Cancer	COLO 205	0.501	2.023	2.103	2.097	0.103	0.247	0.042	105	105	-79	-51	-92	1.98E-7	3.71E-7	6.92E-7	
	HCC-2998	0.609	2.260	2.325	2.118	0.794	0.661	0.166	104	91	11	3	-73	3.28E-7	1.10E-5	5.02E-5	
	HCT-116	0.357	2.770	2.626	1.238	0.323	0.365	0.063	94	36	-10	0	-82	5.83E-8	4.05E-5	8.02E-5	
	HCT-15	0.297	2.404	2.304	2.234	0.434	0.485	0.130	95	92	6	9	-56	3.10E-7	1.37E-5	8.12E-5	
	HT29	0.201	1.536	1.510	1.119	0.229	0.235	0.090	98	69	2	3	-55	1.91E-7	1.11E-5	8.12E-5	
	KM12	0.493	2.558	2.542	2.503	0.497	0.542	0.038	99	97	0	2	-92	3.07E-7	1.06E-5	3.57E-5	
	SW-620	0.292	2.155	2.210	2.062	0.705	0.748	0.118	103	95	22	24	-60	4.15E-7	1.95E-5	7.69E-5	
CNS Cancer	SF-268	0.699	2.074	2.106	2.063	1.119	1.094	0.308	102	99	31	29	-56	5.21E-7	2.18E-5	8.51E-5	
	SF-295	0.865	2.624	2.597	2.535	0.950	1.193	0.204	98	95	5	19	-76	3.15E-7	1.57E-5	5.27E-5	
	SF-539	0.600	2.014	1.999	1.921	0.442	0.553	0.017	99	93	-26	-8	-97	2.30E-7	6.02E-7	2.96E-5	
	SNB-19	0.390	1.462	1.409	1.408	0.590	0.691	0.003	95	95	19	28	-99	3.88E-7	1.66E-5	4.10E-5	
	SNB-75	1.575	2.691	2.893	2.489	1.986	1.780	0.579	118	82	37	18	-63	5.09E-7	1.68E-5	6.88E-5	
	U251	0.312	1.702	1.656	1.630	0.430	0.456	0.026	97	95	8	10	-92	3.30E-7	1.26E-5	3.90E-5	
Melanoma	LOX IMVI	0.388	2.507	2.290	1.857	0.677	0.550	0.020	90	69	14	8	-95	2.22E-7	1.19E-5	3.65E-5	
	MALME-3M	0.537	1.249	1.172	1.092	0.820	0.833	0.137	89	78	40	42	-75	5.37E-7	2.28E-5	6.14E-5	
	M14	0.479	1.584	1.564	1.360	0.438	0.567	0.188	98	80	-9	8	-61	2.17E-7	-	6.95E-5	
	MDA-MB-435	0.492	2.647	2.636	2.366	0.244	0.581	0.258	100	87	-51	4	-48	1.86E-7	-	-	
	SK-MEL-2	0.108	2.499	2.492	2.274	1.158	1.086	0.262	100	85	9	5	-74	2.89E-7	1.14E-5	4.92E-5	
	SK-MEL-28	0.538	1.709	1.665	1.553	0.898	0.935	0.236	96	87	47	34	-56	8.41E-7	2.38E-5	8.55E-5	
	SK-MEL-5	1.129	3.336	3.318	3.330	0.712	0.673	0.120	99	100	-37	-40	-89	2.31E-7	5.36E-7	1.57E-5	
	UACC-257	0.944	2.190	2.150	1.874	1.625	1.196	0.454	97	75	55	20	-52	1.36E-6	1.91E-5	9.41E-5	
	UACC-62	0.783	2.342	2.201	2.106	1.289	1.209	0.233	91	85	32	27	-70	4.62E-7	1.90E-5	6.20E-5	
Ovarian Cancer	IGROV1	0.375	2.208	2.055	1.948	0.877	0.663	0.229	92	86	27	16	-39	4.10E-7	1.94E-5	> 1.00E-4	
	OVCAR-3	0.595	1.902	1.897	1.825	0.445	0.791	0.101	100	94	-25	15	-83	2.34E-7	4.60E-5	-	
	OVCAR-4	0.639	1.738	1.737	1.624	1.083	0.891	0.290	100	90	40	23	-55	6.37E-7	1.97E-5	8.70E-5	
	OVCAR-5	0.455	1.234	1.199	1.169	0.662	0.664	0.226	96	92	27	27	-50	4.36E-7	2.22E-5	9.87E-5	
	OVCAR-8	0.416	2.260	2.209	2.058	0.280	0.329	0.075	97	89	-33	-21	-82	2.09E-7	5.39E-7	2.98E-5	
	NCI/ADR-RES	0.420	1.609	1.572	1.178	0.250	0.296	0.130	97	64	-41	-30	-69	1.36E-7	4.08E-7	3.28E-5	
	SK-OV-3	1.211	2.171	2.181	2.173	1.628	1.589	0.561	101	100	43	39	-54	7.64E-7	2.65E-5	9.13E-5	
Renal Cancer	786-0	0.839	2.687	2.655	2.264	1.108	0.837	0.064	98	77	15	0	-92	2.71E-7	9.55E-6	3.46E-5	
	A498	1.844	2.494	2.469	2.408	2.574	2.291	1.097	96	87	112	69	-41	1.48E-5	4.26E-5	> 1.00E-4	
	ACHN	0.360	1.715	1.657	1.678	0.764	0.563	0.015	96	97	30	15	-96	5.01E-7	1.36E-5	3.85E-5	
	CAKI-1	0.667	2.166	1.991	1.899	1.305	1.099	0.185	88	82	43	29	-72	6.48E-7	1.93E-5	6.02E-5	
	RFX 393	1.213	1.966	1.977	1.852	1.341	1.243	0.262	101	85	17	4	-78	3.26E-7	1.12E-5	4.52E-5	
	SN12C	0.986	3.016	2.877	2.844	1.413	1.142	0.304	93	92	21	8	-69	3.88E-7	1.26E-5	5.62E-5	
	TK-10	1.156	2.466	2.367	2.354	2.193	1.656	0.495	92	91	79	38	-57	5.14E-6	2.51E-5	8.41E-5	
	UO-31	0.340	1.380	1.330	1.178	0.718	0.581	0.021	95	81	36	23	-94	4.91E-7	1.58E-5	4.21E-5	
Prostate Cancer	PC-3	0.715	2.344	2.256	2.319	1.266	1.042	0.425	95	98	34	20	-41	5.62E-7	2.14E-5	> 1.00E-4	
	DU-145	0.393	1.765	1.803	1.768	0.425	0.486	0.122	103	100	2	7	-69	3.26E-7	1.23E-5	5.62E-5	
Breast Cancer	MCF7	0.445	2.551	2.389	2.257	0.771	0.630	0.304	92	86	15	9	-32	3.24E-7	1.64E-5	> 1.00E-4	
	MDA-MB-231/ATCC	0.533	1.131	1.137	1.107	0.418	0.468	0.046	101	96	-22	-12	-91	2.46E-7	6.55E-7	3.00E-5	
	HS 578T	1.396	2.486	2.373	2.297	1.666	1.558	1.006	90	83	25	15	-28	3.66E-7	2.22E-5	> 1.00E-4	
	BT-549	1.037	1.988	1.900	1.659	1.142	1.055	0.408	91	65	11	2	-61	1.92E-7	1.07E-5	6.75E-5	
	T-47D	0.638	1.478	1.350	1.146	1.292	0.862	0.333	85	60	78	27	-48	3.50E-6	2.28E-5	> 1.00E-4	
	MDA-MB-468	1.036	2.440	2.405	2.396	1.161	1.141	0.390	97	97	9	7	-62	3.41E-7	1.28E-5	6.64E-5	

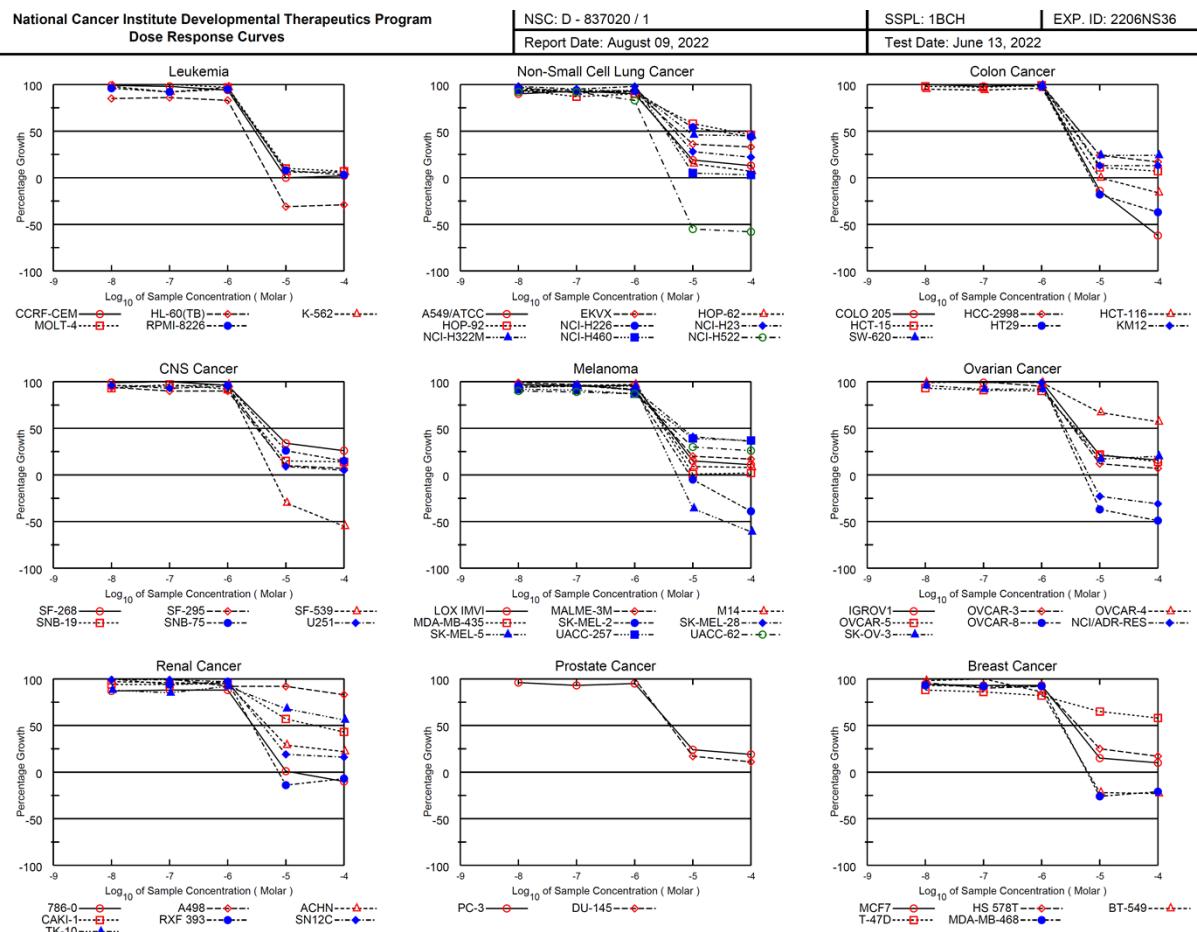
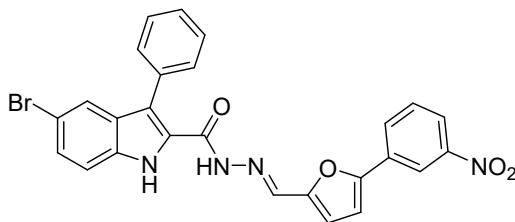
Compound 5f



**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

NSC : D - 832483 / 1				Experiment ID : 2111NS16								Test Type : 08			Units : Molar	
Report Date : January 25, 2022				Test Date : November 29, 2021								QNS :			MC :	
COMI : TO9				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH				
Log10 Concentration																
Panel/Cell Line	Time	Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0	GI50	TGI	LC50	
Leukemia																
CCRF-CEM	0.530	2.665	2.625	2.544	0.933	0.698	0.523	98	94	19	8	-1	3.87E-7	7.18E-5	> 1.00E-4	
HL-60(TB)	0.572	2.569	2.495	2.367	0.479	0.419	0.352	96	90	-16	-27	-39	2.37E-7	7.02E-7	> 1.00E-4	
K-562	0.154	1.747	1.741	0.665	0.282	0.211	0.156	100	32	8	4	0	5.43E-8	> 1.00E-4	> 1.00E-4	
MOLT-4	0.590	2.391	2.467	2.335	0.801	0.575	0.427	104	97	12	-3	-28	3.55E-7	6.56E-6	> 1.00E-4	
RPMI-8226	0.581	2.656	2.667	2.405	0.841	0.555	0.339	101	88	13	-4	-42	3.18E-7	5.46E-6	> 1.00E-4	
SR	0.371	1.711	1.626	1.028	0.450	0.342	0.214	94	49	6	-8	-42	9.50E-8	2.66E-6	> 1.00E-4	
Non-Small Cell Lung Cancer																
A549/ATCC	0.337	2.057	1.959	1.953	0.601	0.367	0.267	94	94	15	2	-21	3.62E-7	1.20E-5	> 1.00E-4	
EKVX	1.027	1.899	1.827	1.893	1.707	0.904	0.733	92	99	78	-12	-29	2.04E-6	7.36E-6	> 1.00E-4	
HOP-62	0.707	1.861	1.765	1.747	1.245	0.727	0.388	92	90	47	2	-45	8.35E-7	1.09E-5	> 1.00E-4	
HOP-92	1.244	2.003	1.948	1.885	1.396	0.877	0.668	93	84	20	-30	-46	3.42E-7	2.53E-6	> 1.00E-4	
NCI-H226	0.822	1.484	1.398	1.463	0.767	0.681	0.582	87	97	-7	-17	-29	2.83E-7	8.62E-7	> 1.00E-4	
NCI-H23	0.419	1.409	1.439	1.293	0.736	0.406	0.273	103	88	32	-3	-35	4.78E-7	8.16E-6	> 1.00E-4	
NCI-H322M	0.810	2.031	1.922	1.976	1.159	0.859	0.758	91	95	29	4	-6	4.78E-7	2.42E-5	> 1.00E-4	
NCI-H460	0.323	2.981	3.001	2.969	0.323	0.175	0.060	101	100	0	-46	-81	3.15E-7	1.00E-6	1.31E-5	
NCI-H522	1.038	2.415	2.188	1.383	0.815	0.411	0.333	83	25	-22	-60	-68	3.74E-8	3.45E-7	5.39E-6	
Colon Cancer																
COLO 205	0.628	2.581	2.588	2.671	0.354	0.197	0.087	100	105	-44	-69	-86	2.33E-7	5.07E-7	1.79E-6	
HCC-2998	0.495	1.572	1.575	1.653	0.659	0.090	0.039	100	107	15	-82	-92	4.20E-7	1.44E-6	4.70E-6	
HCT-116	0.226	2.512	2.560	1.492	0.276	0.187	0.051	102	55	2	-17	-78	1.26E-7	1.29E-6	3.47E-5	
HCT-15	0.217	1.407	1.363	1.057	0.204	0.134	0.073	96	71	-6	-38	-67	1.85E-7	8.30E-7	2.57E-5	
HT29	0.373	2.425	2.433	2.298	0.455	0.247	0.137	100	94	4	-34	-63	3.07E-7	1.27E-6	3.53E-5	
KM12	0.833	3.358	3.344	3.297	1.305	0.838	0.630	99	98	19	0	-24	4.01E-7	1.02E-5	> 1.00E-4	
SW-620	0.333	2.474	2.456	2.112	0.751	0.207	0.084	99	83	20	-38	-75	3.31E-7	2.19E-6	2.13E-5	
CNS Cancer																
SF-268	1.079	2.928	2.798	2.654	1.822	1.131	0.915	93	85	40	3	-15	6.05E-7	1.43E-5	> 1.00E-4	
SF-295	0.472	1.839	1.765	1.257	0.539	0.407	0.180	95	57	5	-14	-62	1.38E-6	1.83E-6	5.67E-5	
SF-539	0.563	1.841	1.747	1.453	0.437	0.356	0.097	93	70	-22	-37	-83	1.63E-7	5.71E-7	1.94E-5	
SNB-19	0.527	1.876	1.785	1.799	0.686	0.572	0.346	93	94	12	3	-34	3.44E-7	1.22E-5	> 1.00E-4	
SNB-75	2.216	3.125	2.784	2.863	1.775	1.547	1.437	62	71	-20	-30	-35	1.71E-7	6.05E-7	> 1.00E-4	
U251	0.581	2.759	2.626	2.625	0.695	0.296	0.177	94	94	5	-49	-70	3.12E-7	1.25E-6	1.10E-5	
Melanoma																
MALME-3M	0.726	1.503	1.434	1.305	1.125	0.306	0.242	91	74	51	-58	-67	1.03E-6	2.95E-6	8.47E-6	
M14	0.470	2.111	2.024	1.844	0.645	0.241	0.212	95	84	11	-49	-55	2.89E-7	1.51E-6	1.56E-5	
MDA-MB-435	0.779	3.069	3.002	1.814	0.275	0.209	0.133	97	45	-65	-73	-83	8.08E-8	2.58E-7	7.34E-7	
SK-MEL-2	1.232	2.623	2.553	2.551	1.538	0.717	0.518	95	95	22	-42	-58	4.12E-7	2.21E-6	3.22E-5	
SK-MEL-28	0.523	1.735	1.743	1.475	1.118	0.289	0.210	101	79	49	-45	-60	9.21E-7	3.33E-6	2.23E-5	
SK-MEL-5	0.640	2.714	2.623	2.464	0.464	0.121	0.043	96	88	-28	-81	-93	2.13E-7	5.77E-7	2.62E-6	
UACC-257	0.948	2.541	2.397	2.074	1.560	0.644	0.517	91	71	38	-32	-45	4.37E-7	3.50E-6	> 1.00E-4	
UACC-62	0.837	2.882	2.812	1.709	1.247	0.194	0.136	97	43	20	-77	-84	7.31E-8	1.61E-6	5.29E-6	
Ovarian Cancer																
IGROV1	0.501	2.168	2.161	1.755	0.832	0.502	0.322	100	75	20	0	-36	2.85E-7	1.00E-5	> 1.00E-4	
OVCAR-3	1.057	2.887	2.815	2.835	1.618	0.888	0.479	96	97	31	-16	-55	5.12E-7	4.53E-6	7.57E-5	
OVCAR-4	0.841	1.929	1.877	1.773	1.251	0.793	0.596	95	86	38	6	-29	5.53E-7	7.36E-6	> 1.00E-4	
OVCAR-5	0.567	1.795	1.753	1.703	0.808	0.664	0.381	97	92	20	8	-33	3.83E-7	1.56E-5	> 1.00E-4	
OVCAR-8	0.512	2.597	2.557	2.231	0.307	0.225	0.109	98	82	-40	-56	-79	1.84E-7	4.71E-7	4.19E-6	
NCI/ADR-RES	0.370	1.334	1.316	1.071	0.592	0.404	0.269	98	73	23	4	-27	2.86E-7	1.30E-5	> 1.00E-4	
SK-OV-3	0.967	1.814	1.787	1.839	1.296	0.870	0.677	97	103	39	-10	-30	6.69E-7	6.23E-6	> 1.00E-4	
Renal Cancer																
786-0	0.578	2.526	2.395	2.312	1.044	0.580	0.222	93	89	24	0	-62	3.98E-7	1.00E-5	6.49E-6	
A498	1.326	2.058	1.988	2.035	1.950	1.367	0.824	90	97	85	6	-38	2.77E-6	1.35E-5	> 1.00E-4	
ACHN	0.266	1.214	1.200	0.912	0.547	0.225	0.097	98	67	28	-21	-66	2.78E-7	3.70E-6	4.35E-5	
CAKI-1	0.680	2.232	2.135	1.696	1.012	0.622	0.284	94	65	21	-9	-58	2.24E-7	5.17E-6	6.82E-5	
RFX 393	0.651	1.199	1.160	1.052	0.894	0.302	0.181	93	73	44	-54	-72	6.32E-7	2.83E-6	9.19E-6	
SN12C	0.520	2.052	1.974	1.822	0.569	0.096	0.058	95	85	3	-82	-89	2.68E-7	1.09E-6	4.24E-6	
TK-10	1.216	2.054	1.959	2.112	2.005	1.147	0.868	89	107	94	-6	-29	2.77E-6	8.77E-6	> 1.00E-4	
UO-31	0.500	2.114	2.011	1.732	0.895	0.452	0.307	94	76	24	-10	-39	3.21E-7	5.22E-6	> 1.00E-4	
Prostate Cancer																
PC-3	0.628	2.262	2.234	2.087	0.901	0.505	0.251	98	89	17	-20	-60	3.48E-7	2.88E-6	5.64E-5	
DU-145	0.333	1.680	1.708	1.683	0.507	0.408	0.183	102	100	13	6	-45	3.76E-7	1.29E-5	> 1.00E-4	
Breast Cancer																
MCF7	0.186	0.934	0.856	0.398	0.232	0.173	0									

Compound 5g

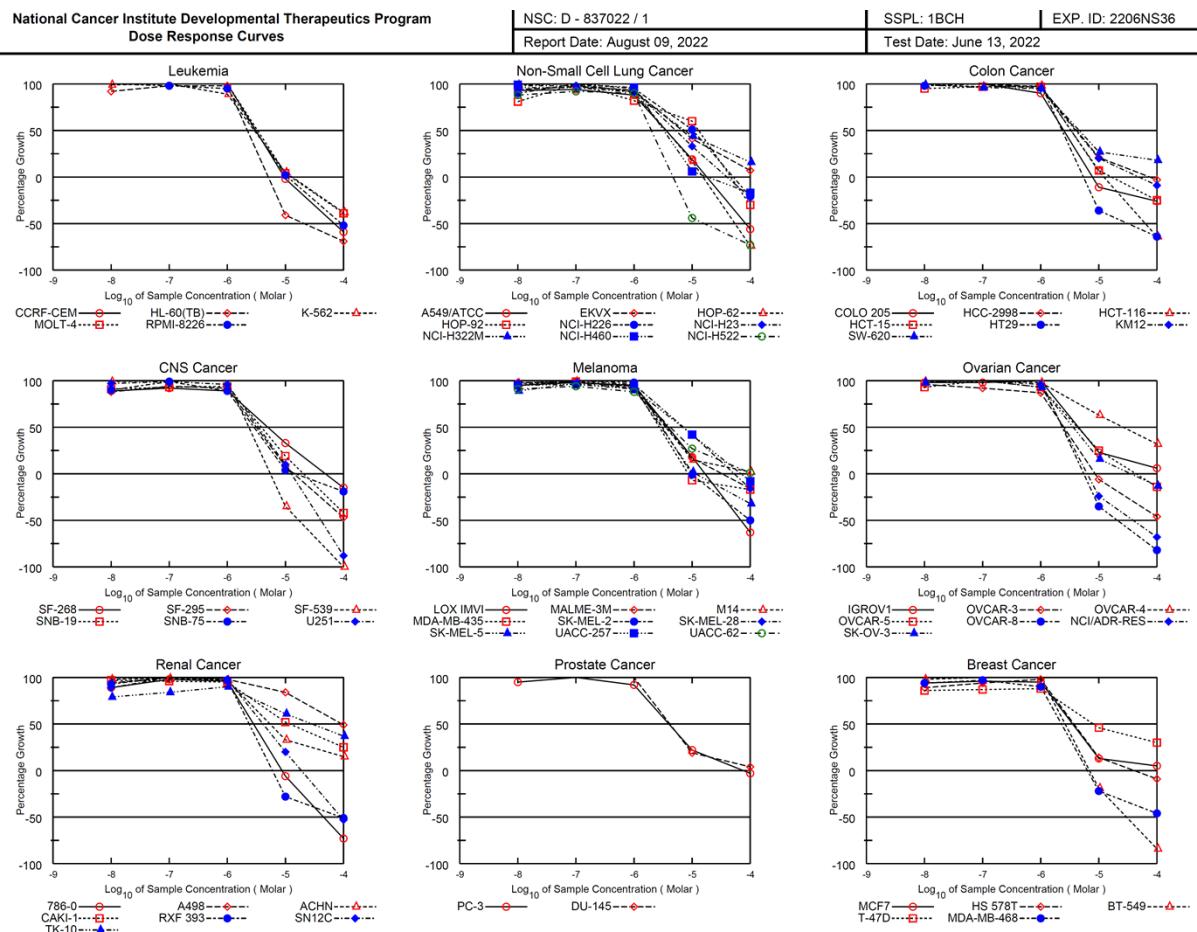
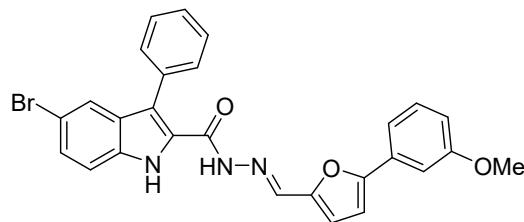


**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

NSC : D - 837020 / 1				Experiment ID : 2206NS36								Test Type : 08			Units : Molar	
Report Date : August 09, 2022				Test Date : June 13, 2022								QNS :			MC :	
COMI : TO29				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH				

Panel/Cell Line	Time	Ctrl	Log10 Concentration							Percent Growth							G150	TGI	LC50
			-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0	G150	TGI	LC50				
Leukemia																			
CCRF-CEM	0.312	1.284	1.274	1.267	1.223	0.310	0.328	99	98	94	0	2	2.91E-6	-	> 1.00E-4				
HL-60(TB)	0.547	2.566	2.268	2.274	2.219	0.376	0.388	85	86	83	-31	-29	1.94E-6	5.32E-6	> 1.00E-4				
K-562	0.189	1.791	1.763	1.668	1.750	0.278	0.286	98	92	97	6	6	3.28E-6	> 1.00E-4	> 1.00E-4				
MOLT-4	0.602	2.287	2.325	2.292	2.238	0.763	0.715	102	100	97	10	7	3.45E-6	> 1.00E-4	> 1.00E-4				
RPMI-8226	0.698	2.204	2.150	2.076	2.134	0.818	0.745	96	92	95	8	3	3.31E-6	> 1.00E-4	> 1.00E-4				
Non-Small Cell Lung Cancer																			
A549/ATCC	0.528	2.431	2.236	2.306	2.242	0.890	0.781	90	93	90	19	13	3.66E-6	> 1.00E-4	> 1.00E-4				
EKVX	0.666	2.096	2.051	1.965	1.990	1.188	1.137	97	91	93	36	33	5.74E-6	> 1.00E-4	> 1.00E-4				
HOP-62	0.813	2.527	2.420	2.385	2.388	0.166	0.931	94	92	92	15	7	3.49E-6	> 1.00E-4	> 1.00E-4				
HOP-92	0.979	1.654	1.613	1.568	1.588	1.368	1.291	94	87	90	58	46	4.61E-5	> 1.00E-4	> 1.00E-4				
NCI-H226	0.679	1.733	1.681	1.668	1.663	1.245	1.140	95	94	93	54	44	2.35E-5	> 1.00E-4	> 1.00E-4				
NCI-H23	0.517	1.608	1.583	1.553	1.582	0.827	0.755	98	95	98	28	22	4.87E-6	> 1.00E-4	> 1.00E-4				
NCI-H322M	0.710	1.994	1.898	1.895	1.923	1.304	1.284	93	92	94	46	45	8.37E-6	> 1.00E-4	> 1.00E-4				
NCI-H460	0.286	2.758	2.923	2.889	2.860	0.398	0.348	107	105	104	5	3	3.49E-6	> 1.00E-4	> 1.00E-4				
NCI-H522	1.062	2.891	2.743	2.744	2.581	0.473	0.450	92	92	83	-55	-58	1.73E-6	3.98E-6	9.13E-6				
Colon Cancer																			
COLO 205	0.647	2.130	2.136	2.104	2.137	0.554	0.248	100	98	100	-14	-62	2.75E-6	7.49E-6	5.66E-5				
HCC-2988	0.726	2.392	2.412	2.425	2.422	1.126	1.015	101	102	102	24	17	4.63E-6	> 1.00E-4	> 1.00E-4				
HCT-116	0.298	2.692	2.570	2.555	2.608	0.305	0.250	95	94	96	0	-16	3.04E-6	1.04E-5	> 1.00E-4				
HCT-15	0.333	2.300	2.255	2.235	2.284	0.542	0.473	98	97	99	11	7	3.59E-6	> 1.00E-4	> 1.00E-4				
HT29	0.393	2.205	2.235	2.248	2.164	0.322	0.250	102	102	98	-18	-37	2.58E-6	6.97E-6	> 1.00E-4				
KM12	0.609	2.975	3.043	3.046	2.972	0.915	0.912	103	103	100	13	13	3.74E-6	> 1.00E-4	> 1.00E-4				
SW-620	0.390	2.799	2.850	2.803	2.782	0.963	0.980	102	100	99	24	24	4.50E-6	> 1.00E-4	> 1.00E-4				
CNS Cancer																			
SF-268	0.744	2.412	2.391	2.422	2.348	1.313	1.182	99	101	96	34	26	5.55E-6	> 1.00E-4	> 1.00E-4				
SF-295	0.622	2.278	2.177	2.105	2.115	0.788	0.731	94	90	90	10	7	3.17E-6	> 1.00E-4	> 1.00E-4				
SF-539	0.692	2.223	2.155	2.146	2.170	0.486	0.310	96	95	97	-30	-55	2.34E-6	5.81E-6	6.24E-5				
SNB-19	0.533	1.856	1.764	1.821	1.744	0.729	0.718	93	97	92	15	14	3.48E-6	> 1.00E-4	> 1.00E-4				
SNB-75	2.142	3.125	3.167	3.147	3.090	2.398	2.287	104	102	96	26	15	4.56E-6	> 1.00E-4	> 1.00E-4				
U251	0.448	1.885	1.834	1.780	1.810	0.582	0.521	96	93	95	9	5	3.34E-6	> 1.00E-4	> 1.00E-4				
Melanoma																			
LOX IMVI	0.365	1.979	1.936	1.902	1.907	0.615	0.548	97	95	96	15	11	3.71E-6	> 1.00E-4	> 1.00E-4				
MALME-3M	0.664	1.599	1.587	1.567	1.512	0.852	0.827	99	97	91	20	17	3.77E-6	> 1.00E-4	> 1.00E-4				
M14	0.490	1.945	1.881	1.882	1.902	0.622	0.608	96	96	97	9	8	3.43E-6	> 1.00E-4	> 1.00E-4				
MDA-MB-435	0.679	3.071	3.124	3.140	3.062	0.714	0.737	102	103	100	1	2	3.20E-6	> 1.00E-4	> 1.00E-4				
SK-MEL-2	1.159	2.034	1.978	1.998	1.954	1.105	0.712	94	96	91	-5	-39	2.68E-6	8.93E-6	> 1.00E-4				
SK-MEL-28	0.727	2.043	2.006	1.997	1.933	1.272	1.195	97	96	92	41	36	6.75E-6	> 1.00E-4	> 1.00E-4				
SK-MEL-5	0.821	3.032	2.908	2.910	2.927	0.529	0.317	94	95	95	-36	-61	2.22E-6	5.34E-6	3.61E-5				
UACC-257	1.131	2.410	2.305	2.291	2.244	1.624	1.603	92	91	87	39	37	5.79E-6	> 1.00E-4	> 1.00E-4				
UACC-62	0.900	2.610	2.437	2.428	2.382	1.417	1.350	90	89	87	30	26	4.46E-6	> 1.00E-4	> 1.00E-4				
Ovarian Cancer																			
IGROV1	0.765	2.454	2.488	2.439	2.454	1.127	1.044	102	99	100	21	16	4.33E-6	> 1.00E-4	> 1.00E-4				
VVCAR-3	0.386	1.486	1.683	1.556	1.435	0.513	0.463	118	106	95	12	7	3.47E-6	> 1.00E-4	> 1.00E-4				
VVCAR-4	1.052	2.436	2.427	2.463	2.428	1.973	1.836	99	102	99	67	57	> 1.00E-4	> 1.00E-4	> 1.00E-4				
VVCAR-5	0.769	1.713	1.651	1.625	1.618	0.972	0.902	93	91	90	22	14	3.84E-6	> 1.00E-4	> 1.00E-4				
VVCAR-8	0.427	1.792	1.846	1.814	1.856	0.271	0.219	104	102	105	-37	-49	2.44E-6	5.50E-6	> 1.00E-4				
NCI/ADR-RES	0.388	1.321	1.334	1.317	1.314	0.299	0.266	101	100	99	-23	-31	2.53E-6	6.49E-6	> 1.00E-4				
SK-OV-3	1.252	2.415	2.364	2.326	2.320	1.448	1.485	96	92	92	17	20	3.61E-6	> 1.00E-4	> 1.00E-4				
Renal Cancer																			
786-0	0.745	2.584	2.343	2.365	2.368	0.770	0.674	87	88	88	1	-10	2.76E-6	1.33E-5	> 1.00E-4				
A498	1.866	2.657	2.681	2.658	2.591	2.597	2.522	103	100	92	92	83	> 1.00E-4	> 1.00E-4	> 1.00E-4				
ACHN	0.559	2.248	2.203	2.185	2.159	1.045	0.933	97	96	95	29	22	4.76E-6	> 1.00E-4	> 1.00E-4				
CAKI-1	0.733	2.937	2.798	2.808	2.835	1.990	1.674	94	94	95	57	43	3.09E-5	> 1.00E-4	> 1.00E-4				
RFX 393	0.743	1.349	1.349	1.314	1.332	0.637	0.689	100	94	97	-14	-7	2.65E-6	7.45E-6	> 1.00E-4				
SN12C	0.731	2.400	2.389	2.387	2.344	1.049	1.006	99	99	97	19	16	3.99E-6	> 1.00E-4	> 1.00E-4				
TK-10	1.146	2.160	2.042	2.0															

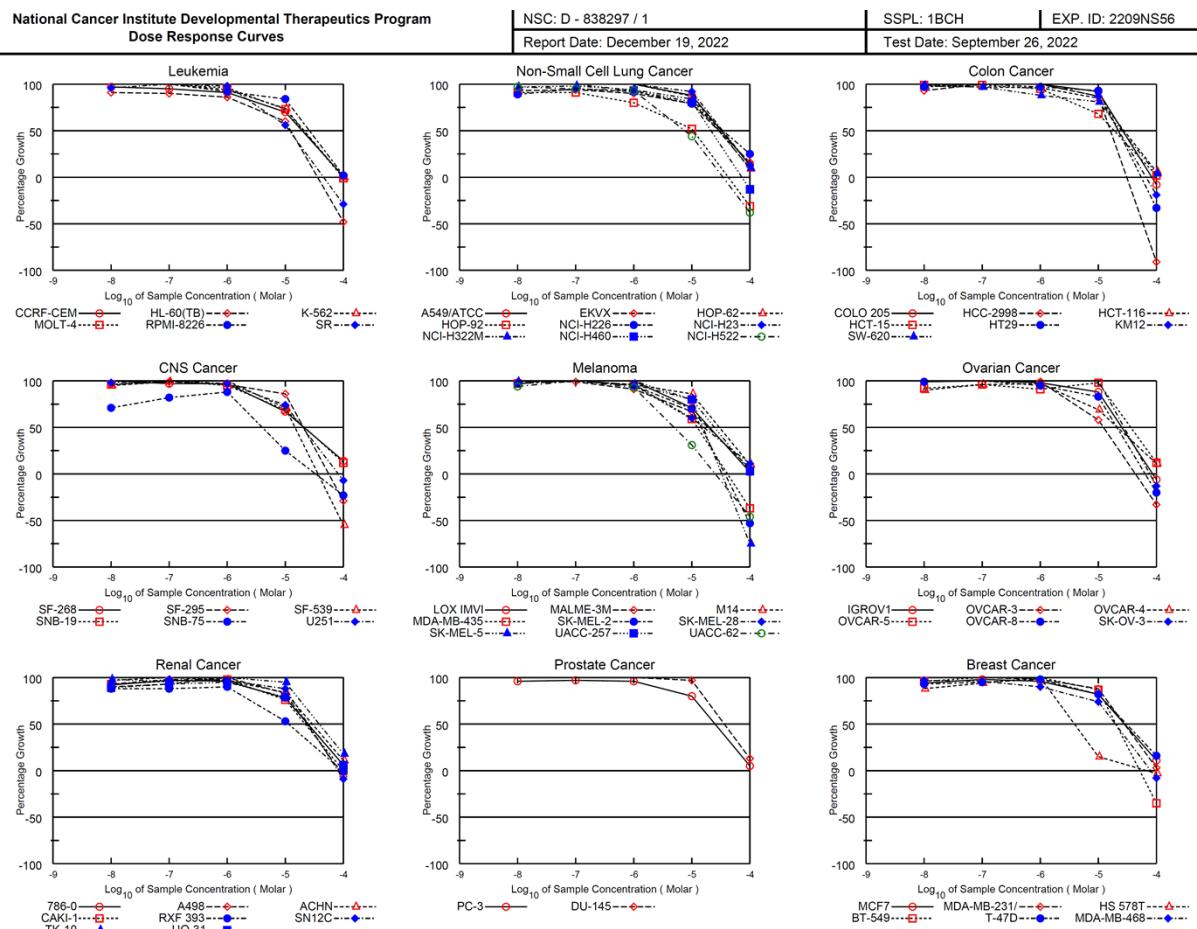
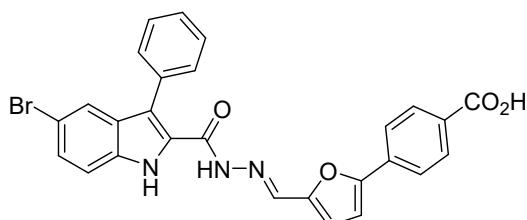
Compound 5h



**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

NSC : D - 837022 / 1				Experiment ID : 2206NS36								Test Type : 08		Units : Molar			
Report Date : August 09, 2022				Test Date : June 13, 2022								QNS :		MC :			
COMI : TO30				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH					
Log10 Concentration																	
Panel/Cell Line	Time	Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0	GI50	TGI	LC50		
Leukemia																	
CCRF-CEM	0.312	1.284	1.388	1.319	1.631	0.306	0.129	111	104	136	-2	-59	4.19E-6	9.66E-6	6.99E-5		
HL-60(TB)	0.547	2.566	2.405	2.523	2.516	0.325	0.172	92	98	98	-41	-69	2.21E-6	5.08E-6	2.17E-5		
K-562	0.189	1.791	1.769	1.842	1.610	0.263	0.118	99	103	89	5	-38	2.89E-6	1.29E-5	> 1.00E-4		
MOLT-4	0.602	2.287	2.341	2.503	2.300	0.668	0.370	103	113	101	4	-39	3.34E-6	1.23E-5	> 1.00E-4		
RPMI-8226	0.698	2.204	2.228	2.168	2.132	0.728	0.338	102	98	95	2	-52	3.06E-6	1.09E-5	9.32E-5		
Non-Small Cell Lung Cancer																	
A549/ATCC	0.528	2.431	2.304	2.324	2.212	0.882	0.230	93	94	88	19	-56	3.55E-6	1.77E-5	8.21E-5		
EKVX	0.666	2.096	2.007	2.057	2.001	1.251	0.764	94	97	93	41	7	6.70E-6	> 1.00E-4	> 1.00E-4		
HOP-62	0.813	2.527	2.513	2.561	2.369	1.097	0.214	99	102	91	17	-74	3.54E-6	1.53E-5	5.46E-5		
HOP-92	0.979	1.654	1.528	1.654	1.531	1.381	0.683	81	100	82	60	-30	1.28E-5	4.60E-5	> 1.00E-4		
NCI-H226	0.679	1.733	1.624	1.730	1.678	1.213	0.535	90	100	95	51	-21	1.02E-5	5.06E-5	> 1.00E-4		
NCI-H23	0.517	1.608	1.588	1.586	1.535	0.878	0.406	98	98	93	33	-22	5.23E-6	4.03E-5	> 1.00E-4		
NCI-H322M	0.710	1.994	1.941	1.946	1.879	1.277	0.922	96	96	91	44	16	7.50E-6	> 1.00E-4	> 1.00E-4		
NCI-H460	0.286	2.758	2.725	2.773	2.668	0.434	0.236	99	101	96	6	-17	3.26E-6	1.80E-5	> 1.00E-4		
NCI-H522	1.062	2.891	2.675	2.751	2.716	0.599	0.292	88	92	90	-44	-73	2.00E-6	4.73E-6	1.66E-5		
Colon Cancer																	
COLO 205	0.647	2.130	2.173	2.175	1.981	0.574	0.476	103	103	90	-11	-26	2.48E-6	7.74E-6	> 1.00E-4		
HCC-2998	0.726	2.392	2.402	2.399	2.337	1.080	0.702	101	100	97	21	-3	4.16E-6	7.29E-5	> 1.00E-4		
HCT-116	0.298	2.692	2.657	2.621	2.640	0.449	0.107	99	97	98	6	-64	3.33E-6	1.23E-5	6.28E-5		
HCT-15	0.333	2.300	2.207	2.239	2.242	0.475	0.251	95	97	97	7	-25	3.34E-6	1.69E-5	> 1.00E-4		
HT29	0.393	2.205	2.175	2.225	2.227	0.252	0.141	98	101	101	-36	-64	2.36E-6	5.47E-6	3.15E-5		
KM12	0.609	2.975	3.095	2.976	2.860	0.105	0.557	105	100	95	20	-9	3.97E-6	4.96E-5	> 1.00E-4		
SW-620	0.390	2.799	2.769	2.713	2.684	1.041	0.814	99	96	95	27	18	4.60E-6	> 1.00E-4	> 1.00E-4		
CNS Cancer																	
SF-268	0.744	2.412	2.236	2.279	2.223	1.294	0.631	89	92	89	33	-15	4.94E-6	4.83E-5	> 1.00E-4		
SF-295	0.622	2.278	2.072	2.186	2.141	0.759	0.327	88	94	92	8	-47	3.16E-6	1.41E-5	> 1.00E-4		
SF-539	0.692	2.223	2.206	2.253	2.221	0.451	0.002	99	102	100	-35	-100	2.35E-6	5.51E-6	1.71E-5		
SNB-19	0.533	1.856	1.734	1.761	1.781	0.778	0.309	91	93	94	19	-42	3.84E-6	2.02E-5	> 1.00E-4		
SNB-75	2.142	3.125	3.028	3.116	3.013	2.183	1.733	90	99	89	4	-19	2.87E-6	1.51E-5	> 1.00E-4		
U251	0.448	1.885	1.842	1.874	1.832	0.593	0.055	97	99	96	10	-88	3.44E-6	1.27E-5	4.11E-5		
Melanoma																	
LOX IMVI	0.365	1.979	1.903	1.948	1.901	0.652	0.135	95	98	95	18	-63	3.84E-6	1.66E-5	6.88E-5		
MALME-3M	0.664	1.599	1.580	1.584	1.542	0.823	0.557	98	98	94	17	-16	3.72E-6	3.26E-5	> 1.00E-4		
M14	0.490	1.945	1.907	1.928	1.832	0.701	0.524	97	99	92	15	2	3.49E-6	> 1.00E-4	> 1.00E-4		
MDA-MB-435	0.679	3.071	3.065	3.047	2.919	0.634	0.566	100	99	94	-7	-17	2.72E-6	8.57E-6	> 1.00E-4		
SK-MEL-2	1.159	2.034	1.989	2.077	2.014	1.147	0.580	95	105	98	-1	-50	3.04E-6	9.76E-6	> 1.00E-4		
SK-MEL-28	0.727	2.043	2.002	2.070	1.991	1.283	0.610	97	102	96	42	-16	7.18E-6	5.29E-5	> 1.00E-4		
SK-MEL-5	0.821	3.032	2.783	2.972	2.863	0.862	0.560	89	97	92	2	-32	2.94E-6	1.13E-5	> 1.00E-4		
UACC-257	1.131	2.410	2.352	2.360	2.298	1.668	1.041	95	96	91	42	-8	6.86E-6	6.92E-5	> 1.00E-4		
UACC-62	0.900	2.610	2.448	2.509	2.401	1.359	0.911	91	94	88	27	1	4.17E-6	> 1.00E-4	> 1.00E-4		
Ovarian Cancer																	
IGROV1	0.765	2.454	2.427	2.418	2.496	1.158	0.865	98	98	102	23	6	4.59E-6	> 1.00E-4	> 1.00E-4		
OVCA-3	0.386	1.486	1.440	1.401	1.339	0.363	0.208	96	92	87	-6	-46	2.48E-6	8.60E-6	> 1.00E-4		
OVCA-4	1.052	2.436	2.428	2.457	2.412	1.928	1.488	99	102	98	63	32	2.62E-5	> 1.00E-4	> 1.00E-4		
OVCA-5	0.769	1.713	1.651	1.727	1.645	1.009	0.665	93	102	93	25	-14	4.31E-6	4.49E-5	> 1.00E-4		
OVCA-8	0.427	1.792	1.833	1.894	1.815	0.279	0.077	103	107	102	-35	-82	2.39E-6	5.57E-6	2.11E-5		
NCI/ADR-RES	0.388	1.321	1.346	1.347	1.282	0.293	0.124	103	103	96	-24	-68	2.40E-6	6.26E-6	3.85E-5		
SK-OV-3	1.252	2.415	2.394	2.472	2.331	1.438	1.094	98	105	93	16	-13	3.61E-6	3.62E-5	> 1.00E-4		
Renal Cancer																	
786-0	0.745	2.584	2.388	2.545	2.517	0.700	0.199	89	98	96	-6	-73	2.84E-6	8.73E-6	4.50E-5		
A498	1.866	2.657	2.608	2.668	2.641	2.534	2.253	94	101	98	84	49	9.32E-5	> 1.00E-4	> 1.00E-4		
ACHN	0.559	2.248	2.216	2.223	2.206	1.114	0.810	98	99	97	33	15	5.43E-6	> 1.00E-4	> 1.00E-4		
CAKI-1	0.733	2.937	2.864	2.850	2.832	1.869	1.283	97	96	95	52	25	1.14E-5	> 1.00E-4	> 1.00E-4		
RFX 393	0.743	1.349	1.306	1.368	1.331	0.532	0.363	93	103	97	-28	-51	2.37E-6	5.93E-6	8.85E-5		
SN12C	0.731	2.400	2.223	2.441	2.361	1.069	0.342	89	102	98	20	-53	4.13E-6	1.89E-5	9.02E-5		
TK-10	1.146	2.160	1.948	2.001	2.060	1.769	1.520	79	84	90	61	37	2.91E-5	> 1.00E-4	> 1.00E-4		
Prostate Cancer																	
PC-3	0.653	2.459	2.377	2.486	2.306	1.051	0.633	95	101	92	22	-3	3.96E-6	7.50E-5	> 1.00E-4		
DU-145	0.439	1.919	1.918	1.963	1.930	0.722	0.498	100	103	101	19	4	4.19E-6	> 1.00E-4	> 1.00E-4		
Breast Cancer																	
MCF7	0.391	2.018	1.928	1.959	1.929	0.596	0.465	94</									

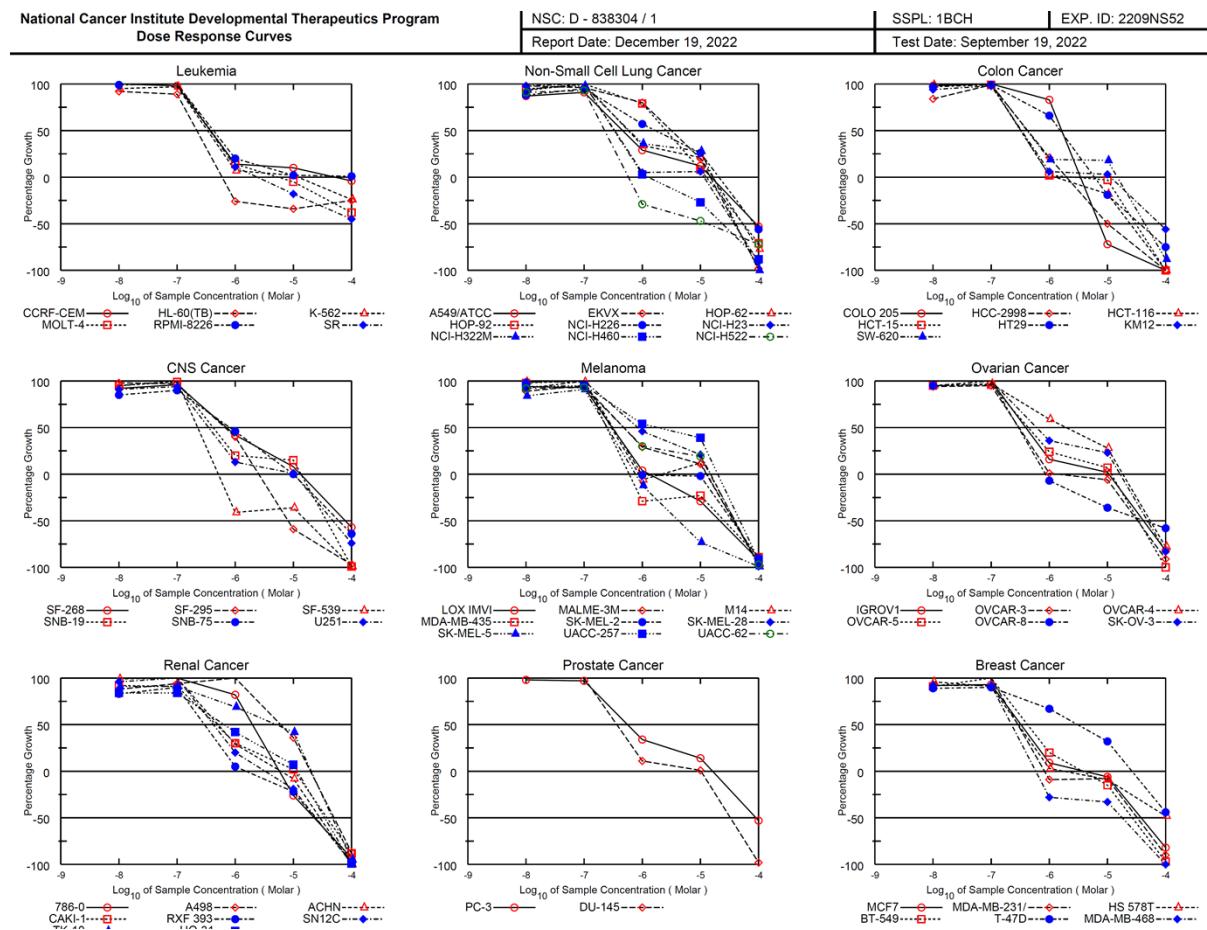
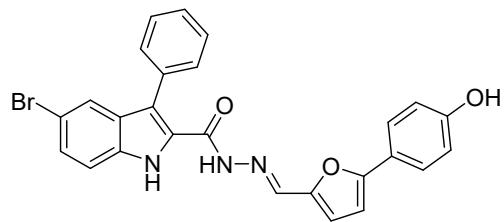
Compound 5i



**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

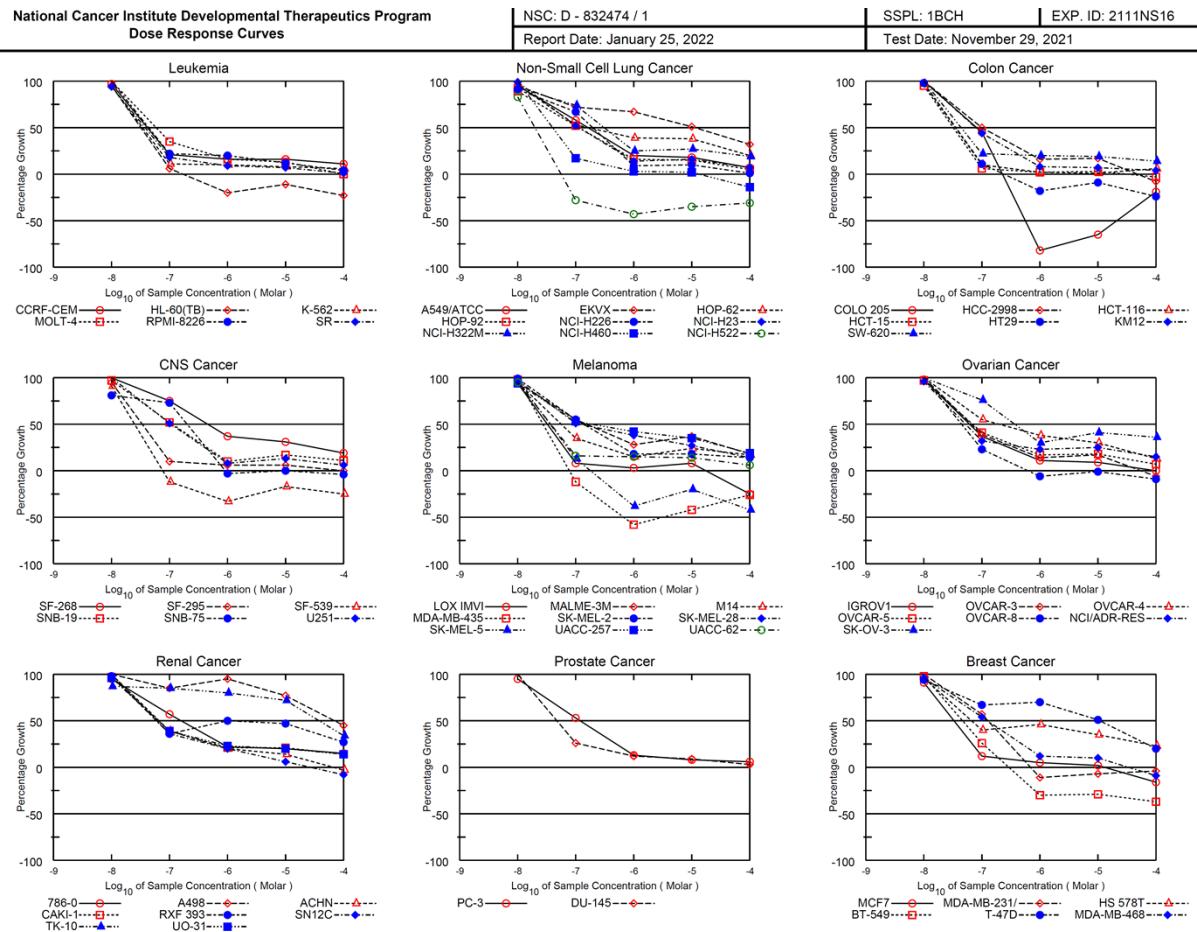
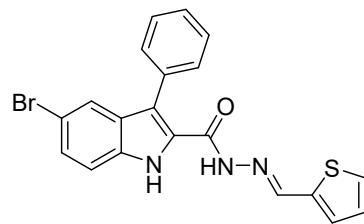
NSC : D - 838297 / 1				Experiment ID : 2209NS56								Test Type : 08		Units : Molar		
Report Date : December 19, 2022				Test Date : September 26, 2022								QNS :		MC :		
COMI : TO32				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH				
Log10 Concentration																
Panel/Cell Line	Time	Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0	GI50	TGI	LC50	
Leukemia																
CCRf-CEM	0.400	2.031	1.990	1.957	1.890	1.534	0.421	97	95	91	70	1	1.93E-5	> 1.00E-4	> 1.00E-4	
HL-60(TB)	0.429	1.745	1.625	1.610	1.566	1.221	0.225	91	90	86	60	-48	1.24E-5	3.61E-5	> 1.00E-4	
K-562	0.188	1.621	1.642	1.656	1.542	1.242	0.187	101	102	94	74	0	2.08E-5	9.84E-5	> 1.00E-4	
MOLT-4	0.400	1.713	1.753	1.737	1.655	1.356	0.396	103	102	96	73	-1	2.03E-5	9.66E-5	> 1.00E-4	
RPMM-8226	0.462	2.335	2.343	2.343	2.184	2.037	0.494	100	100	92	84	2	2.59E-5	> 1.00E-4	> 1.00E-4	
SR	0.207	0.584	0.567	0.591	0.578	0.418	0.147	96	102	98	56	-29	1.18E-5	4.56E-5	> 1.00E-4	
Non-Small Cell Lung Cancer																
A549/ATCC	0.300	1.819	1.827	2.008	1.826	1.637	0.505	101	112	100	88	13	3.23E-5	> 1.00E-4	> 1.00E-4	
EKVX	0.620	2.122	2.013	2.029	1.976	1.801	0.867	93	94	90	79	16	2.88E-5	> 1.00E-4	> 1.00E-4	
HOP-62	0.629	2.036	2.133	2.279	2.271	1.849	0.750	107	117	117	87	9	2.95E-5	> 1.00E-4	> 1.00E-4	
HOP-92	1.277	1.787	1.740	1.744	1.684	1.542	0.879	91	91	80	52	-31	1.08E-5	4.22E-5	> 1.00E-4	
NCI-H226	0.708	1.875	1.751	1.812	1.781	1.632	1.000	89	95	92	79	25	3.45E-5	> 1.00E-4	> 1.00E-4	
NCI-H23	0.490	1.635	1.662	1.697	1.645	1.545	0.639	102	105	101	92	13	3.41E-5	> 1.00E-4	> 1.00E-4	
NCI-H322M	0.801	2.137	2.103	2.117	2.054	1.917	0.938	97	98	94	84	10	2.87E-5	> 1.00E-4	> 1.00E-4	
NCI-H460	0.224	2.053	2.046	2.067	1.933	1.702	0.195	100	101	93	81	-13	2.13E-5	7.28E-5	> 1.00E-4	
NCI-H522	0.898	2.711	2.656	2.617	2.588	1.701	0.555	97	95	93	44	-38	7.64E-6	3.44E-5	> 1.00E-4	
Colon Cancer																
COLO 205	0.562	2.096	2.163	2.200	2.090	1.973	0.519	104	107	100	92	-8	2.64E-5	8.38E-5	> 1.00E-4	
HCC-2998	1.039	3.116	2.968	3.114	3.161	2.843	0.090	93	100	102	87	-91	1.61E-5	3.07E-5	5.88E-5	
HCT-116	0.260	2.522	2.486	2.452	2.443	2.187	0.389	98	97	96	85	6	2.77E-5	> 1.00E-4	> 1.00E-4	
HCT-15	0.372	2.487	2.465	2.468	2.372	1.806	0.412	99	99	95	68	2	1.86E-5	> 1.00E-4	> 1.00E-4	
HT29	0.484	2.848	2.776	2.878	2.783	2.676	0.325	97	101	97	93	-33	2.19E-5	5.47E-5	> 1.00E-4	
KM12	0.473	2.256	2.241	2.319	2.266	2.028	0.383	99	104	101	87	-19	2.24E-5	6.62E-5	> 1.00E-4	
SV-620	0.330	2.130	2.088	2.079	1.916	1.788	0.410	98	97	88	81	4	2.54E-5	> 1.00E-4	> 1.00E-4	
CNS Cancer																
SF-268	0.665	2.205	2.205	2.164	2.154	1.694	0.877	100	97	97	67	14	2.08E-5	> 1.00E-4	> 1.00E-4	
SF-295	0.856	2.871	2.784	2.859	2.781	2.581	0.607	96	99	96	86	-29	2.04E-5	5.58E-5	> 1.00E-4	
SF-539	0.766	2.260	2.181	2.240	2.285	1.831	0.345	95	99	102	71	-55	1.47E-5	3.67E-5	9.12E-5	
SNB-19	0.521	1.853	1.794	1.867	1.781	1.439	0.684	96	101	95	69	12	2.16E-5	> 1.00E-4	> 1.00E-4	
SNB-75	1.299	2.245	1.968	2.075	2.127	1.540	0.998	71	82	88	25	-23	4.02E-6	3.33E-5	> 1.00E-4	
U251	0.284	1.437	1.414	1.457	1.403	1.142	0.266	98	102	97	74	-7	2.00E-5	8.31E-5	> 1.00E-4	
Melanoma																
LOX IMVI	0.198	1.266	1.288	1.313	1.261	0.954	0.221	102	104	100	71	2	2.00E-5	> 1.00E-4	> 1.00E-4	
MALME-3M	0.681	1.368	1.358	1.358	1.306	1.142	0.725	99	99	91	67	6	1.91E-5	> 1.00E-4	> 1.00E-4	
M14	0.451	1.866	1.863	1.868	1.812	1.671	0.590	100	100	96	86	10	2.98E-5	> 1.00E-4	> 1.00E-4	
MDA-MB-435	0.595	2.549	2.496	2.556	2.460	1.753	0.373	97	100	95	59	-37	1.25E-5	4.11E-5	> 1.00E-4	
SK-MEL-2	1.479	2.966	2.921	2.961	2.884	2.523	0.703	97	100	95	70	-53	1.46E-5	3.73E-5	9.54E-5	
SK-MEL-28	0.488	1.387	1.409	1.462	1.352	1.024	0.590	102	108	96	60	11	1.58E-5	> 1.00E-4	> 1.00E-4	
SK-MEL-5	0.911	3.361	3.333	3.356	3.254	2.879	0.232	99	100	96	80	-75	1.57E-5	3.30E-5	6.94E-5	
UACC-257	1.111	2.543	2.560	2.747	2.604	2.255	1.155	101	114	104	80	3	2.45E-5	> 1.00E-4	> 1.00E-4	
UACC-62	0.783	2.562	2.461	2.586	2.442	1.338	0.419	94	101	93	31	-46	4.98E-6	2.52E-5	> 1.00E-4	
Ovarian Cancer																
IGROV1	0.835	2.528	2.507	2.589	2.500	2.323	0.784	99	104	98	88	-6	2.53E-5	8.61E-5	> 1.00E-4	
OVCA-3	0.555	1.786	1.796	1.814	1.771	1.268	0.370	101	102	99	58	-33	1.22E-5	4.31E-5	> 1.00E-4	
OVCA-4	1.008	2.188	2.073	2.140	2.150	1.818	1.141	90	96	97	69	11	2.11E-5	> 1.00E-4	> 1.00E-4	
OVCA-5	0.709	1.565	1.500	1.531	1.484	1.550	0.816	92	96	91	98	12	3.65E-5	> 1.00E-4	> 1.00E-4	
OVCA-8	0.464	2.214	2.197	2.311	2.135	1.909	0.370	99	106	95	83	-20	2.07E-5	6.34E-5	> 1.00E-4	
SK-OV-3	0.994	2.153	2.310	2.497	2.602	2.181	0.862	114	130	139	102	-13	2.83E-5	7.67E-5	> 1.00E-4	
Renal Cancer																
786-0	0.583	2.510	2.347	2.450	2.426	2.081	0.692	92	97	96	78	6	2.42E-5	> 1.00E-4	> 1.00E-4	
A498	1.209	1.827	1.766	1.782	1.835	1.724	1.137	90	93	101	83	-6	2.36E-5	8.57E-5	> 1.00E-4	
ACHN	0.375	1.653	1.609	1.712	1.611	1.453	0.513	97	105	97	84	11	2.93E-5	> 1.00E-4	> 1.00E-4	
CAKI-1	0.550	2.140	2.030	2.081	2.110	1.764	0.548	93	96	98	76	0	2.20E-5	9.86E-5	> 1.00E-4	
RFX 393	0.898	1.904	1.788	1.788	1.799	1.430	0.888	88	88	90	53	-1	1.13E-5	9.51E-5	> 1.00E-4	
SN12C	1.086	3.183	3.026	3.148	3.127	2.939	0.988	93	98	97	88	-9	2.48E-5	8.08E-5	> 1.00E-4	
TK-10	1.345	2.988	2.957	2.930	2.987	2.914	1.642	98	96	100	95	18	3.87E-5	> 1.00E-4	> 1.00E-4	
UO-31	0.743	2.252	2.082	2.153	2.171	1.940	0.827	89	93	95	79	6	2.50E-5	> 1.00E-4	> 1.00E-4	
Prostate Cancer																
PC-3	0.557	2.298	2.233	2.253	2.220	1.954	0.638	96	97	96	80	5	2.51E-5	> 1.00E-4	> 1.00E-4	
DU-145	0.455	1.918	2.036	2.036	1.979	1.871	0.652	108	108	104	97	13	3.64E-5	> 1.00E-4	> 1.00E-4	
Breast Cancer																

Compound 5k



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results

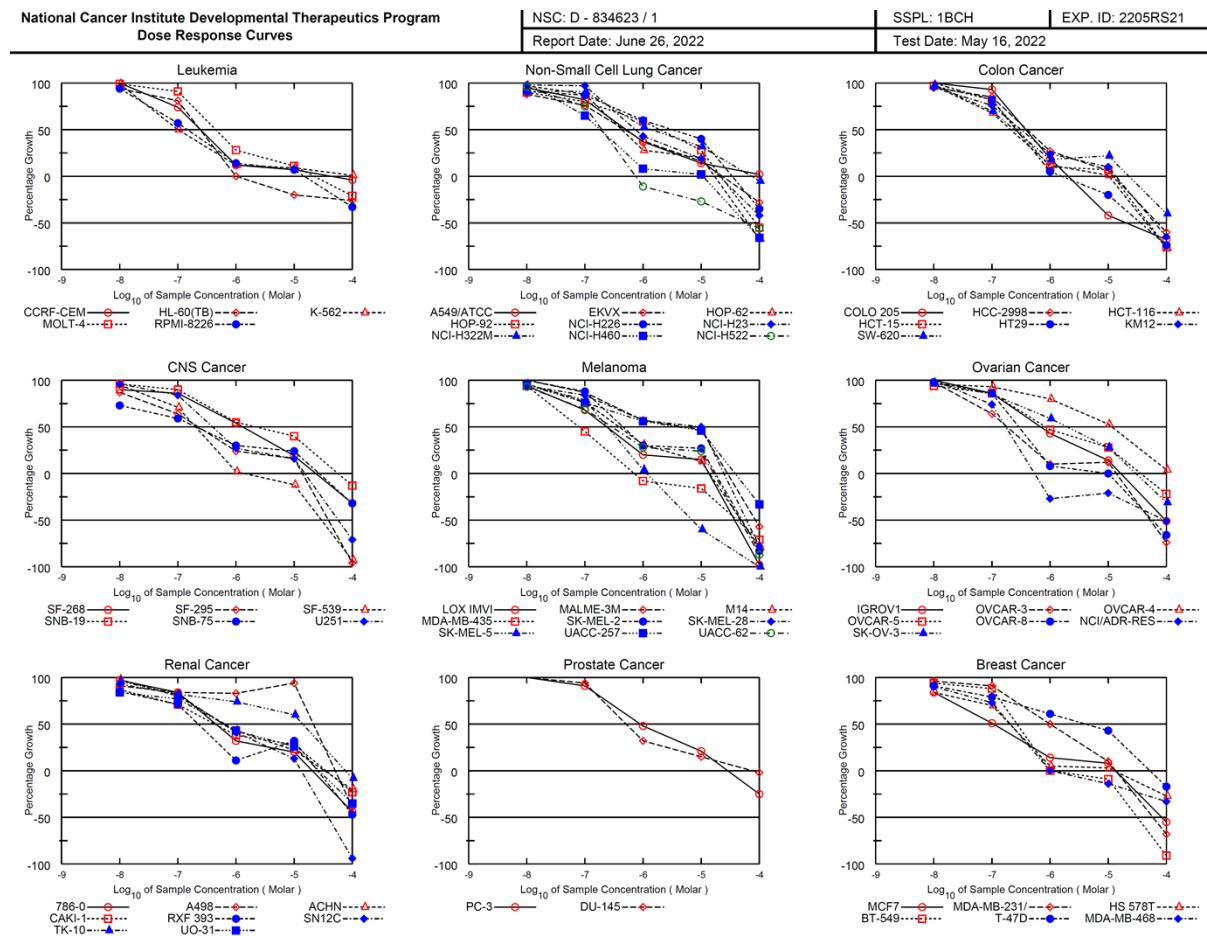
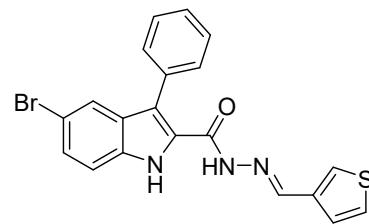
Compound 6a



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results

NSC : D - 832474 / 1				Experiment ID : 2111NS16								Test Type : 08			Units : Molar			
Report Date : January 25, 2022				Test Date : November 29, 2021								QNS :			MC :			
COMI : T01				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH						
Log10 Concentration																		
Panel/Cell Line	Time	Ctrl	Mean	Optical Densities				Percent Growth				GI50	TGI	LC50				
Leukemia	Zero	-8.0	-7.0	-6.0	-5.0	-4.0		-8.0	-7.0	-6.0	-5.0							
CCRF-CEM	0.530	2.620	2.562	0.966	0.858	0.865	0.760	97	21	16	16	11	4.15E-8	> 1.00E-4	> 1.00E-4			
HL-60(TB)	0.572	2.349	2.264	0.684	0.459	0.508	0.438	95	6	-20	-11	-23	3.22E-8	1.74E-7	> 1.00E-4			
K-562	0.154	1.675	1.600	0.328	0.311	0.283	0.250	95	11	10	8	6	3.46E-8	> 1.00E-4	> 1.00E-4			
MOLT-4	0.590	2.468	2.520	1.251	0.897	0.841	0.592	103	35	16	13	0	6.03E-8	> 1.00E-4	> 1.00E-4			
RPMI-8226	0.581	2.511	2.513	0.997	0.969	0.813	0.659	100	22	20	12	4	4.34E-8	> 1.00E-4	> 1.00E-4			
SR	0.371	1.788	1.699	0.625	0.496	0.467	0.390	94	18	9	7	1	3.77E-8	> 1.00E-4	> 1.00E-4			
Non-Small Cell Lung Cancer																		
A549/ATCC	0.337	1.990	1.901	1.293	0.661	0.640	0.453	95	58	20	18	7	1.60E-7	> 1.00E-4	> 1.00E-4			
EKVX	1.027	1.961	1.917	1.700	1.655	1.499	1.328	95	72	67	51	32	1.07E-5	> 1.00E-4	> 1.00E-4			
HOP-62	0.707	1.803	1.756	1.292	1.139	1.120	0.926	96	53	39	38	20	1.74E-7	> 1.00E-4	> 1.00E-4			
HOP-92	1.244	1.838	1.773	1.551	1.336	1.335	1.273	89	52	16	15	5	1.11E-7	> 1.00E-4	> 1.00E-4			
NCI-H226	0.822	1.512	1.449	1.285	0.882	0.889	0.831	91	67	9	10	1	1.96E-7	> 1.00E-4	> 1.00E-4			
NCI-H23	0.419	1.352	1.341	0.907	0.550	0.568	0.485	99	52	14	16	7	1.15E-7	> 1.00E-4	> 1.00E-4			
NCI-H322M	0.810	2.006	1.926	1.693	1.109	1.129	1.042	93	74	25	27	19	3.07E-7	> 1.00E-4	> 1.00E-4			
NCI-H460	0.323	3.021	3.074	0.787	0.411	0.385	0.277	102	17	3	2	-14	4.10E-8	1.37E-5	> 1.00E-4			
NCI-H522	1.038	2.368	2.136	0.745	0.588	0.676	0.716	83	-28	-43	-35	-31	1.97E-8	5.56E-8	> 1.00E-4			
Colon Cancer																		
COLO 205	0.628	2.391	2.430	1.418	0.111	0.222	0.509	102	45	-82	-65	-19	8.12E-8	2.25E-7	> 1.00E-4			
HCC-2998	0.495	1.563	1.586	1.031	0.666	0.678	0.458	102	50	16	17	-8	1.01E-7	4.94E-5	> 1.00E-4			
HCT-116	0.226	2.367	2.300	0.435	0.269	0.249	0.344	97	10	2	1	6	3.45E-8	> 1.00E-4	> 1.00E-4			
HCT-15	0.217	1.430	1.372	0.284	0.236	0.259	0.210	95	6	2	3	-3	3.19E-8	3.27E-5	> 1.00E-4			
HT29	0.373	2.217	2.185	0.584	0.306	0.338	0.285	98	11	-18	-9	-24	3.59E-8	2.44E-7	> 1.00E-4			
KM12	0.833	3.331	3.366	1.921	1.037	1.005	0.934	101	44	8	7	4	7.74E-8	> 1.00E-4	> 1.00E-4			
SW-620	0.333	2.442	2.440	0.796	0.755	0.739	0.624	100	22	20	19	14	4.37E-8	> 1.00E-4	> 1.00E-4			
CNS Cancer																		
SF-268	1.079	2.902	2.908	2.448	1.746	1.643	1.422	100	75	37	31	19	4.48E-7	> 1.00E-4	> 1.00E-4			
SF-295	0.472	1.907	1.842	0.614	0.552	0.564	0.471	95	10	6	6	0	3.40E-8	8.96E-5	> 1.00E-4			
SF-539	0.563	1.808	1.702	0.495	0.378	0.468	0.425	91	-12	-33	-17	-25	2.52E-8	7.64E-8	> 1.00E-4			
SNB-19	0.527	1.789	1.746	1.178	0.653	0.745	0.670	97	52	10	17	11	1.09E-7	> 1.00E-4	> 1.00E-4			
SNB-75	2.216	3.142	2.967	2.896	2.142	2.209	2.135	81	73	-3	0	-4	2.02E-7	9.04E-7	> 1.00E-4			
U251	0.581	2.752	2.756	1.692	0.762	0.860	0.708	100	51	8	13	6	1.06E-7	> 1.00E-4	> 1.00E-4			
Melanoma																		
LOX IMVI	0.163	1.172	1.109	0.241	0.192	0.244	0.122	94	8	3	8	-25	3.23E-8	1.74E-5	> 1.00E-4			
MALME-3M	0.726	1.419	1.386	1.105	0.922	0.979	0.853	95	55	28	37	18	1.50E-7	> 1.00E-4	> 1.00E-4			
M14	0.470	1.990	1.915	1.001	0.701	0.832	0.731	95	35	15	24	17	5.62E-8	> 1.00E-4	> 1.00E-4			
MDA-MB-435	0.779	3.068	3.016	0.688	0.325	0.450	0.576	98	-12	-58	-42	-26	2.73E-8	7.81E-8	> 1.00E-4			
SK-MEL-2	1.232	2.648	2.637	2.007	1.492	1.484	1.425	99	55	18	18	14	1.35E-7	> 1.00E-4	> 1.00E-4			
SK-MEL-28	0.523	1.696	1.659	1.127	0.970	0.837	0.690	97	51	38	27	14	1.29E-7	> 1.00E-4	> 1.00E-4			
SK-MEL-5	0.640	2.703	2.637	0.918	0.400	0.512	0.374	97	13	-38	-20	-42	3.64E-8	1.84E-7	> 1.00E-4			
UACC-257	0.948	2.514	2.422	1.785	1.609	1.489	1.239	94	53	42	35	19	2.03E-7	> 1.00E-4	> 1.00E-4			
UACC-62	0.837	2.788	2.698	1.158	1.121	1.114	0.962	95	16	15	14	6	3.76E-8	> 1.00E-4	> 1.00E-4			
Ovarian Cancer																		
IGROV1	0.501	2.132	2.105	1.104	0.687	0.649	0.507	98	37	11	9	0	6.14E-8	> 1.00E-4	> 1.00E-4			
OVCAR-3	1.057	2.785	2.886	1.727	1.298	1.345	0.991	106	39	14	17	-6	6.80E-8	5.32E-5	> 1.00E-4			
OVCAR-4	0.841	1.916	1.917	1.427	1.252	1.161	0.979	100	55	38	30	13	1.89E-7	> 1.00E-4	> 1.00E-4			
OVCAR-5	0.567	1.670	1.636	1.017	0.756	0.767	0.646	97	41	17	18	7	6.85E-8	> 1.00E-4	> 1.00E-4			
OVCAR-8	0.512	2.538	2.535	0.969	0.480	0.506	0.466	100	23	-6	-1	-9	4.42E-8	6.07E-7	> 1.00E-4			
NCI/ADR-RES	0.370	1.339	1.301	0.681	0.594	0.612	0.511	96	32	23	25	15	5.25E-8	> 1.00E-4	> 1.00E-4			
SK-OV-3	0.967	1.787	1.827	1.587	1.216	1.307	1.265	105	76	30	41	36	3.68E-7	> 1.00E-4	> 1.00E-4			
Renal Cancer																		
786-0	0.578	2.417	2.322	1.623	0.988	0.940	0.849	95	57	22	20	15	1.58E-7	> 1.00E-4	> 1.00E-4			
A498	1.326	2.081	2.104	1.970	2.042	1.908	1.667	103	85	95	77	45	7.01E-5	> 1.00E-4	> 1.00E-4			
ACHN	0.286	1.147	1.170	0.618	0.458	0.410	0.278	103	39	20	14	-3	6.64E-8	6.87E-5	> 1.00E-4			
CAKI-1	0.680	2.241	2.190	1.294	1.005	1.009	0.906	97	39	21	21	14	6.51E-8	> 1.00E-4	> 1.00E-4			
RFX 393	0.651	1.194	1.184	0.846	0.924	0.909	0.800	98	36	50	47	27	4.00E-8	> 1.00E-4	> 1.00E-4			
SN12C	0.520	1.847	1.951	1.003	0.788	0.595	0.480	108	36	20	6	-8	6.45E-8	2.62E-5	> 1.00E-4			
TK-10	1.216	2.007	1.904	1.886	1.852	1.782	1.486	87	85	80	72	34	3.77E-5	> 1.00E-4	> 1.00E-4			

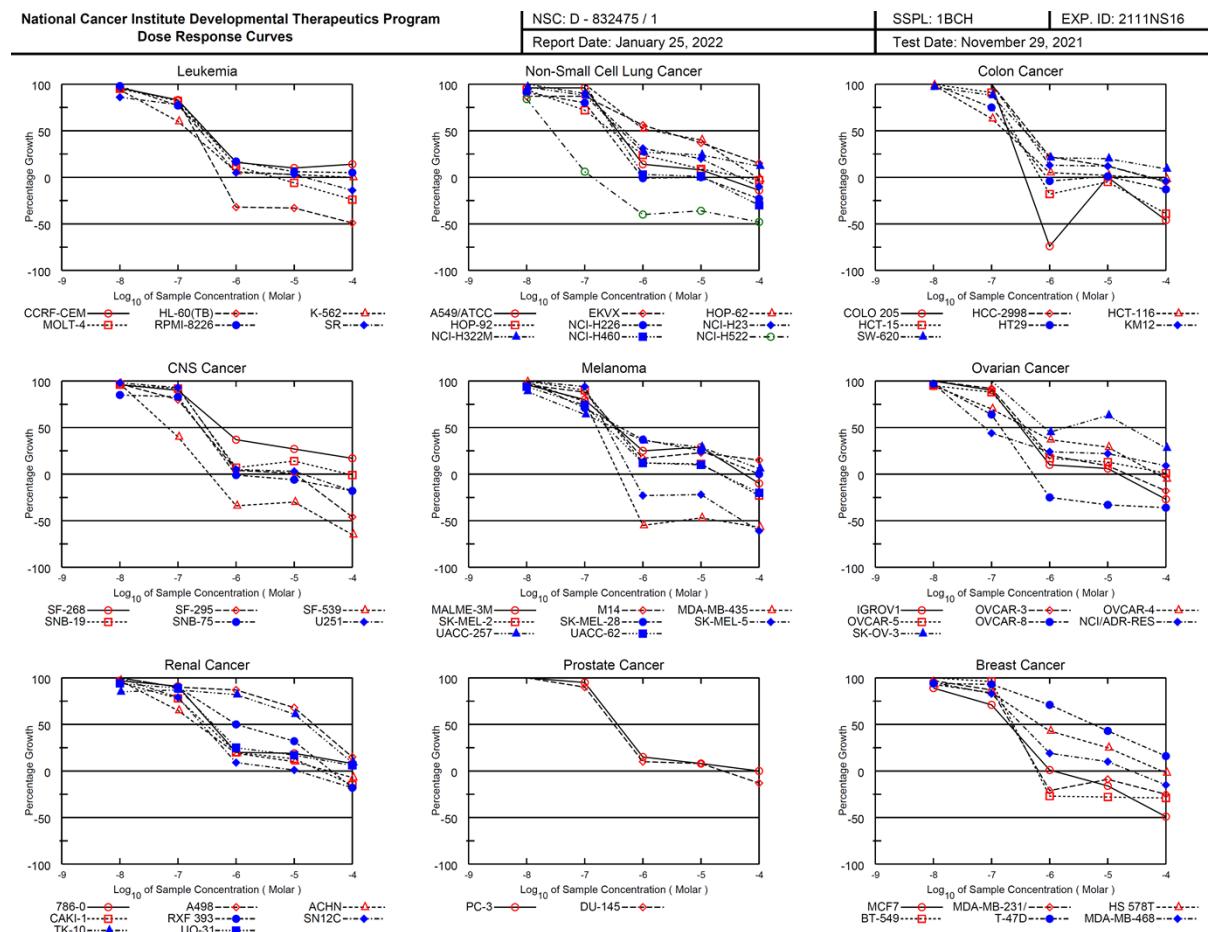
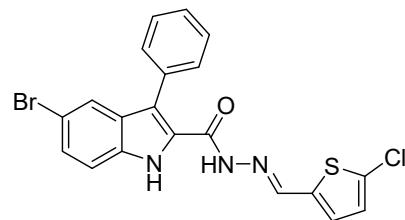
Compound 6b



**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

NSC : D - 834623 / 1				Experiment ID : 2205RS21								Test Type : 08		Units : Molar		
Report Date : June 26, 2022				Test Date : May 16, 2022								QNS :		MC :		
COMI : TO16				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH				
Log10 Concentration																
Panel/Cell Line	Time	Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0	GI50	TGI	LC50	
Leukemia																
CCRF-CEM	0.530	2.317	2.332	1.845	0.748	0.648	0.509	101	74	12	7	-4	2.42E-7	4.21E-5	> 1.00E-4	
HL-60(TB)	0.688	2.534	2.426	2.190	0.682	0.548	0.511	94	81	0	-20	-26	2.40E-7	9.74E-7	> 1.00E-4	
K-562	0.176	1.686	1.667	0.935	0.359	0.310	0.194	99	50	12	9	-1	1.02E-7	> 1.00E-4	> 1.00E-4	
MOLT-4	0.657	2.725	2.699	2.533	1.239	0.876	0.517	99	91	28	11	-21	4.47E-7	2.14E-5	> 1.00E-4	
RPMI-8226	0.614	2.617	2.506	1.759	0.888	0.754	0.412	94	57	14	7	-33	1.46E-7	1.50E-5	> 1.00E-4	
Non-Small Cell Lung Cancer																
A549/ATCC	0.494	2.297	2.213	1.974	1.159	0.755	0.533	95	82	37	14	2	5.12E-7	> 1.00E-4	> 1.00E-4	
EKVV	0.607	1.942	1.780	1.621	1.119	0.819	0.439	88	76	38	16	-28	4.90E-7	2.31E-5	> 1.00E-4	
HOP-62	0.777	2.486	2.430	2.289	1.262	1.122	0.255	97	88	28	20	-67	4.37E-7	1.70E-5	6.36E-5	
HOP-92	1.219	1.908	1.837	1.768	1.627	1.415	0.550	90	80	59	28	-55	1.99E-6	2.19E-5	8.73E-5	
NCI-H226	0.799	1.949	1.846	1.796	1.494	1.257	0.522	91	87	60	40	-35	3.21E-6	3.43E-5	> 1.00E-4	
NCI-H23	0.592	1.833	1.803	1.795	1.125	0.822	0.346	98	97	43	19	-42	7.39E-7	2.03E-5	> 1.00E-4	
NCI-H322M	0.872	2.203	2.084	2.088	1.577	1.292	0.827	91	91	53	32	-5	1.38E-6	7.21E-5	> 1.00E-4	
NCI-H460	0.272	2.585	2.590	1.776	0.462	0.330	0.094	100	65	8	2	-66	1.84E-7	1.09E-5	5.90E-5	
NCI-H522	1.467	3.187	3.113	2.761	1.305	1.066	0.641	96	75	-11	-27	-56	1.96E-7	7.44E-7	6.06E-5	
Colon Cancer																
COLO 205	0.668	2.310	2.418	2.197	0.978	0.388	0.215	107	93	19	-42	-68	3.81E-7	2.04E-6	2.05E-5	
HCC-2998	0.612	2.185	2.111	1.956	1.029	0.707	0.243	95	85	27	6	-60	3.99E-7	1.23E-5	7.00E-5	
HCT-116	0.286	2.766	2.692	1.967	0.585	0.314	0.067	97	68	12	1	-77	2.09E-7	1.03E-5	4.53E-5	
HCT-15	0.504	2.740	2.666	2.333	0.722	0.672	0.123	97	82	10	7	-76	2.76E-7	1.23E-5	4.91E-5	
HT29	0.322	1.895	1.968	1.613	0.400	0.259	0.084	105	82	5	-20	-74	2.61E-7	1.59E-6	3.63E-5	
KM12	0.525	2.762	2.661	2.225	1.053	0.759	0.186	95	76	24	10	-65	3.13E-7	1.38E-5	6.38E-5	
SV-620	0.282	1.969	1.935	1.461	0.586	0.661	0.169	98	70	18	22	-40	2.42E-7	2.29E-5	> 1.00E-4	
CNS Cancer																
SF-268	0.997	2.726	2.557	2.489	1.939	1.331	0.673	90	86	54	19	-32	1.34E-6	2.36E-5	> 1.00E-4	
SF-295	0.729	2.513	2.284	1.867	1.164	0.103	0.028	87	64	24	16	-96	2.24E-7	1.39E-5	3.87E-5	
SP-539	0.595	2.031	1.958	1.619	0.625	0.527	0.041	95	71	2	-12	-93	2.03E-7	1.42E-6	2.96E-5	
SNB-19	0.778	2.140	2.084	2.005	1.521	1.320	0.678	96	90	55	40	-13	2.03E-6	5.70E-5	> 1.00E-4	
SNB-75	1.350	2.418	2.132	1.982	1.666	1.608	0.920	73	59	30	24	-32	2.04E-7	2.70E-5	> 1.00E-4	
U251	0.364	1.769	1.716	1.539	0.737	0.593	0.106	96	84	27	16	-71	3.88E-7	1.54E-5	5.75E-5	
Melanoma																
LOX IMVI	0.358	2.419	2.286	1.760	0.767	0.676	0.006	94	68	20	15	-98	2.37E-7	1.37E-5	3.75E-5	
MALME-3M	0.613	1.313	1.312	1.223	1.014	0.940	0.262	100	87	57	47	-57	4.85E-6	2.81E-5	8.51E-5	
M14	0.419	1.769	1.712	1.452	0.833	0.591	0.087	96	77	31	13	-79	3.79E-7	1.38E-5	4.81E-5	
MDA-MB-435	0.621	2.668	2.536	1.542	0.573	0.523	0.178	94	45	-8	-16	-71	7.89E-8	7.14E-7	4.13E-5	
SK-MEL-2	0.850	2.428	2.456	2.239	1.319	1.271	0.144	102	88	30	27	-83	4.48E-7	1.75E-5	4.99E-5	
SK-MEL-28	0.690	1.933	1.860	1.734	1.402	1.308	0.153	94	84	57	50	-78	9.23E-6	2.45E-5	6.05E-5	
SK-MEL-5	1.042	3.177	3.067	2.724	1.138	0.416	0.002	95	79	4	-60	-100	2.44E-7	1.17E-6	6.97E-6	
UACC-257	1.034	2.343	2.281	2.034	1.769	1.641	0.692	95	76	56	46	-33	4.25E-6	3.83E-5	> 1.00E-4	
UACC-62	0.758	2.383	2.273	1.884	1.218	1.151	0.099	93	69	28	24	-87	2.95E-7	1.65E-5	4.65E-5	
Ovarian Cancer																
IGROV1	0.808	2.532	2.551	2.291	1.553	1.057	0.398	101	86	43	14	-51	6.95E-7	1.66E-5	9.72E-5	
OVCA-3	0.282	1.131	1.113	0.828	0.371	0.386	0.075	98	64	10	12	-74	1.85E-7	1.39E-5	5.31E-5	
OVCA-4	0.639	1.748	1.701	1.671	1.522	1.222	0.682	96	93	80	53	4	1.13E-5	> 1.00E-4	> 1.00E-4	
OVCA-5	0.622	1.507	1.455	1.382	1.035	0.866	0.483	94	86	47	28	-22	8.20E-7	3.56E-5	> 1.00E-4	
OVCA-8	0.494	2.210	2.172	1.967	0.630	0.498	0.166	98	86	8	0	-66	2.88E-7	1.01E-5	5.66E-5	
NCI/ADR-RES	0.568	1.855	1.903	1.515	0.415	0.450	0.280	104	74	-27	-21	-51	1.72E-7	5.39E-7	9.47E-5	
SK-OV-3	0.943	2.258	2.219	2.062	1.725	1.306	0.655	97	85	59	28	-31	1.98E-6	2.98E-5	> 1.00E-4	
Renal Cancer																
786-0	0.851	2.948	2.894	2.604	1.521	1.262	0.481	97	84	32	20	-44	4.47E-7	2.04E-5	> 1.00E-4	
A498	1.410	2.082	2.020	1.975	1.967	2.041	0.858	91	84	83	94	-39	2.14E-5	5.08E-5	> 1.00E-4	
ACHN	0.397	1.749	1.715	1.478	0.975	0.700	0.317	98	80	43	22	-20	6.39E-7	3.35E-5	> 1.00E-4	
CAKI-1	0.555	2.201	1.992	1.725	1.189	1.009	0.427	87	71	38	28	-23	4.44E-7	3.50E-5	> 1.00E-4	
RFX-393	1.247	1.754	1.680	1.608	1.301	1.409	0.667	85	71	11	32	-47	2.24E-7	2.55E-5	> 1.00E-4	
SN12C	0.894	2.898	2.758	2.544	1.723	1.154	0.050	93	82	41	13	-94	6.15E-7	1.32E-5	3.86E-5	
TK-10	1.145	2.222	2.184	2.030	1.940	1.788	1.056	96	82	74	60	-8	1.39E-5	7.67E-5	> 1.00E-4	
UO-31	0.917	2.413	2.175	2.068	1.557	1.311	0.599	84	77	43	26	-35	6.14E-7	2.70E-5	> 1.00E-4	
Prostate Cancer																
PC-3	0.603	2.378	2.386	2.211	1.458	0.971	0.452	100	91	48	21	-25	9.06E-7	2.84E-5	> 1.00E-4	
DU-145	0.347	1.592	1.604	1.514	0.741	0.528	0.339	101	94	32	15	-2	5.06E-7	7.30E-5	> 1.00E-4	
Breast Cancer																
MCF7	0.579	2.435	2.143	1.530	0.831	0.722	0.261	8								

Compound 6c

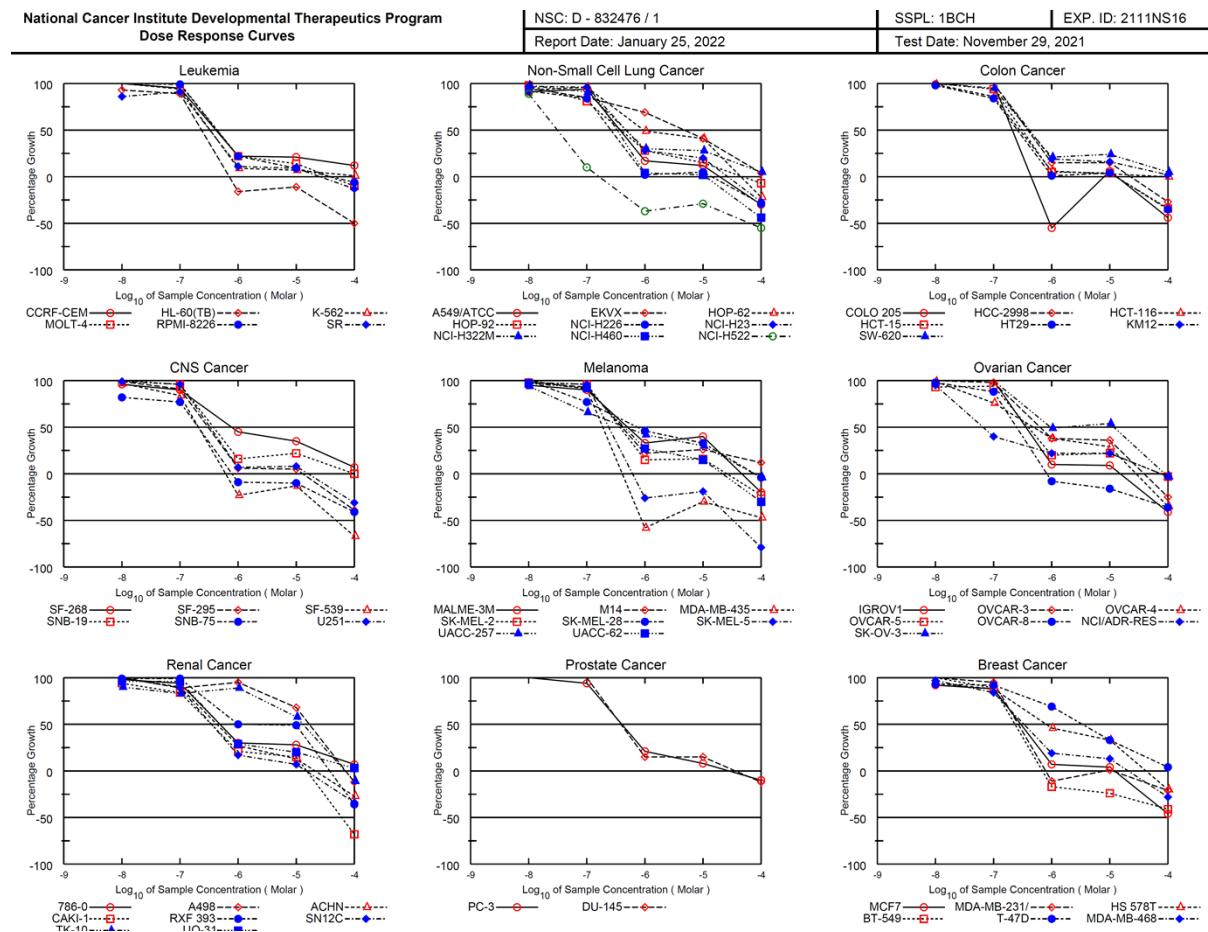
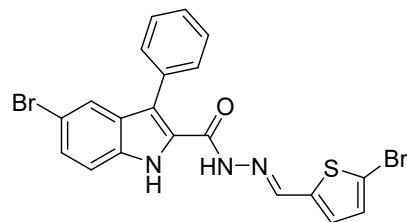


National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results

NSC : D - 832475 / 1	Experiment ID : 2111NS16	Test Type : 08	Units : Molar
Report Date : January 25, 2022	Test Date : November 29, 2021	QNS :	MC :
COMI : TO2	Stain Reagent : SRB Dual-Pass Related	SSPL : 1BCH	

Log10 Concentration																
Panel/Cell Line	Time	Mean Optical Densities						Percent Growth					GI50	TGI	LC50	
		Zero	Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0			
Leukemia																
CCRF-CEM	0.530	2.659	2.566	2.300	0.868	0.754	0.821	96	83	16	10	14	3.11E-7	> 1.00E-4	> 1.00E-4	
HL-60(TB)	0.572	2.467	2.389	2.142	0.388	0.386	0.293	96	83	-32	-33	-49	1.93E-7	5.25E-7	> 1.00E-4	
K-562	0.154	1.604	1.521	1.019	0.247	0.194	0.153	94	60	6	3	0	1.52E-7	5.45E-5	> 1.00E-4	
MOLT-4	0.590	2.502	2.402	2.159	0.829	0.553	0.448	95	82	12	-6	-24	2.89E-7	4.60E-6	> 1.00E-4	
RPMI-8226	0.581	2.538	2.502	2.085	0.915	0.701	0.688	98	77	17	6	5	2.81E-7	> 1.00E-4	> 1.00E-4	
SR	0.371	1.648	1.465	1.367	0.439	0.407	0.319	86	78	5	3	-14	2.43E-7	1.46E-5	> 1.00E-4	
Non-Small Cell Lung Cancer																
A549/ATCC	0.337	1.965	1.906	1.899	0.565	0.471	0.289	96	96	14	8	-14	3.64E-7	2.32E-5	> 1.00E-4	
EKVX	1.027	1.933	1.811	1.811	1.538	1.362	1.159	87	87	56	37	15	2.13E-6	> 1.00E-4	> 1.00E-4	
HOP-62	0.707	1.862	1.874	1.860	1.308	1.168	0.690	101	100	52	40	-2	1.48E-6	8.74E-5	> 1.00E-4	
HOP-92	1.244	1.993	1.945	1.785	1.421	1.315	1.201	94	72	24	9	-3	2.87E-7	5.41E-5	> 1.00E-4	
NCI-H226	0.822	1.472	1.416	1.342	0.810	0.818	0.635	91	80	-1	0	-23	2.33E-7	9.60E-7	> 1.00E-4	
NCI-H23	0.419	1.403	1.400	1.305	0.728	0.613	0.379	100	90	31	20	-10	4.82E-7	4.71E-5	> 1.00E-4	
NCI-H322M	0.810	1.999	1.959	1.860	1.130	1.098	0.954	97	88	27	24	12	4.21E-7	> 1.00E-4	> 1.00E-4	
NCI-H460	0.323	2.970	3.058	2.967	0.406	0.337	0.228	103	100	3	1	-30	3.28E-7	1.04E-5	> 1.00E-4	
NCI-H522	1.038	2.406	2.191	1.115	0.623	0.663	0.536	84	6	-40	-36	-48	2.73E-8	1.33E-7	> 1.00E-4	
Colon Cancer																
COLO 205	0.628	2.549	2.631	2.650	0.166	0.625	0.337	104	105	-74	0	-46	2.04E-7	3.88E-7		
HCC-2998	0.495	1.567	1.659	1.630	0.732	0.624	0.470	109	106	22	12	-5	4.65E-7	5.06E-5	> 1.00E-4	
HCT-116	0.226	2.341	2.313	1.556	0.334	0.275	0.223	99	63	5	2	-2	1.67E-7	3.95E-5	> 1.00E-4	
HCT-15	0.217	1.390	1.409	1.283	0.179	0.206	0.133	102	91	-18	-5	-39	2.38E-7	6.89E-7	> 1.00E-4	
HT29	0.373	2.402	2.412	1.902	0.359	0.397	0.326	101	75	-4	1	-13	2.09E-7		> 1.00E-4	
KM12	0.833	3.303	3.313	3.301	1.164	1.125	0.796	100	100	13	12	-4	3.77E-7	5.33E-5	> 1.00E-4	
SW-620	0.333	2.473	2.399	2.217	0.784	0.757	0.532	97	88	21	20	9	3.70E-7	> 1.00E-4	> 1.00E-4	
CNS Cancer																
SF-268	1.079	2.821	2.747	2.644	1.725	1.546	1.376	96	90	37	27	17	5.69E-7	> 1.00E-4	> 1.00E-4	
SF-295	0.472	1.855	1.821	1.582	0.525	0.482	0.256	97	80	4	1	-46	2.49E-7	1.04E-5	> 1.00E-4	
SF-539	0.563	1.803	1.766	1.061	0.373	0.394	0.195	97	40	-34	-30	-65	6.70E-8	3.49E-7	3.65E-5	
SNB-19	0.527	1.831	1.781	1.733	0.622	0.704	0.520	96	92	7	14	-1	3.15E-7	8.15E-5	> 1.00E-4	
SNB-75	2.216	3.169	3.030	3.003	2.193	2.073	1.808	85	83	-1	-6	-18	2.45E-7	9.71E-7	> 1.00E-4	
U251	0.581	2.702	2.664	2.561	0.693	0.647	0.476	98	93	5	3	-18	3.11E-7	1.40E-5	> 1.00E-4	
Melanoma																
MALME-3M	0.726	1.496	1.465	1.342	0.920	0.950	0.653	96	80	25	29	-10	3.52E-7	5.53E-5	> 1.00E-4	
M14	0.470	1.952	1.891	1.772	0.720	0.814	0.690	96	88	17	23	15	3.41E-7	> 1.00E-4	> 1.00E-4	
MDA-MB-435	0.779	3.105	3.073	2.597	0.349	0.411	0.335	99	78	-55	-47	-57	1.63E-7	3.86E-7		
SK-MEL-2	1.232	2.635	2.633	2.496	1.403	1.393	0.945	100	90	12	11	-23	3.27E-7	2.14E-5	> 1.00E-4	
SK-MEL-28	0.523	1.655	1.684	1.328	0.945	0.809	0.528	103	71	37	25	0	4.20E-7	> 1.00E-4	> 1.00E-4	
SK-MEL-5	0.640	2.672	2.694	2.555	0.493	0.501	0.250	101	94	-23	-22	-61	2.38E-7	6.36E-7	5.26E-5	
UACC-257	0.948	2.488	2.311	1.932	1.503	1.396	1.035	89	64	36	29	6	3.16E-7	> 1.00E-4	> 1.00E-4	
UACC-62	0.837	2.767	2.653	2.270	1.072	1.025	0.670	94	74	12	10	-20	2.46E-7	2.13E-5	> 1.00E-4	
Ovarian Cancer																
IGROV1	0.501	2.086	2.087	1.924	0.657	0.603	0.365	100	90	10	6	-27	3.14E-7	1.55E-5	> 1.00E-4	
OVCAR-3	1.057	2.747	2.774	2.618	1.395	1.212	0.870	102	92	20	9	-18	3.85E-7	2.20E-5	> 1.00E-4	
OVCAR-4	0.841	1.961	1.909	1.624	1.261	1.165	0.800	95	70	37	29	-5	4.10E-7	7.15E-5	> 1.00E-4	
OVCAR-5	0.567	1.731	1.670	1.588	0.771	0.724	0.575	95	88	17	13	1	3.44E-7	> 1.00E-4	> 1.00E-4	
OVCAR-8	0.512	2.531	2.468	1.804	0.386	0.342	0.327	97	64	-25	-33	-36	1.44E-7	5.27E-7	> 1.00E-4	
NCI/ADR-RES	0.370	1.281	1.250	0.770	0.585	0.573	0.453	97	44	24	22	9	7.66E-8	> 1.00E-4	> 1.00E-4	
SK-OV-3	0.967	1.810	1.871	1.928	1.347	1.498	1.201	107	114	45	63	28	> 1.00E-4	> 1.00E-4	> 1.00E-4	
Renal Cancer																
786-0	0.578	2.410	2.352	2.252	0.951	0.925	0.722	97	91	20	19	8	3.82E-7	> 1.00E-4	> 1.00E-4	
A498	1.326	2.033	2.088	1.963	1.938	1.810	1.430	108	90	87	68	15	2.20E-5	> 1.00E-4	> 1.00E-4	
ACHN	0.286	1.184	1.161	0.870	0.461	0.372	0.266	97	65	19	10	-7	2.13E-7	3.78E-5	> 1.00E-4	
CAKI-1	0.680	2.302	2.214	1.938	1.004	0.897	0.579	95	78	20	13	-15	3.01E-7	2.98E-5	> 1.00E-4	
RFX 393	0.651	1.167	1.226	1.115	0.910	0.815	0.532	111	90	50	32	-18	1.03E-6	4.31E-5	> 1.00E-4	
SN12C	0.520	1.772	1.810	1.509	0.635	0.533	0.425	103	79	9	1	-18	2.60E-7	1.13E-5	> 1.00E-4	
TK-10	1.216	1.994	1.878	1.892	1.853	1.689	1.284	85	87	82	61	9	1.61E-5	> 1.00E-4	> 1.00E-4	
UO-31	0.500	2.080	1.984	1.903	0.889	0.776	0.593	94	89	25	17	6	4.02E-7	> 1.00E-4	> 1.00E-4	
Prostate Cancer																
PC-3	0.628	2.131	2.133	2.059	0.856	0.743	0.629	100	95	15	8	0	3.67E-7	> 1.00E-4	> 1.00E-4	
DU-145	0.333	1.648	1.706	1.512	0.469	0.434	0.289	104	90	10	8	-13	3.16E-7	2.32E-5	> 1.00E-4	
Breast Cancer																
MCF7	0.186	0.915	0.836	0.702	0.194	0.157	0.094	89	71	1	-16	-49	1.99E-7	1.16E-6	> 1.00E-4	
MDA-MB-231/ATCC	0.554	1.342	1.319	1.237	0.438	0.502	0.415	97	87	-21	-9	-25	2.19E-7	6.38E-7	> 1.00E-4	
HS 578T	1.525	2.677	2.602	2.493	2.019	1.815	1.489	93	84	43	25	-2	6.72E-7	8.19E-5	> 1.00E-4	
BT-549	1.016	2.120	2.124	2.076	0.737	0.732	0.722	100	96	-27	-28	-29	2.36E-7	5.99E-7	> 1.00E-4	
T-47D	1.368	3.127	3.027	3.007	2.622	2.117	1.645	94	93	71	43	16	5.51E-6	> 1.00E-4	> 1.00E-4	
MDA-MB-468	0.702	1.356	1.323	1.248	0.823	0.766	0.597	95	83	19	10	-15	3.27E-7	2.48E-5	> 1.00E-4	

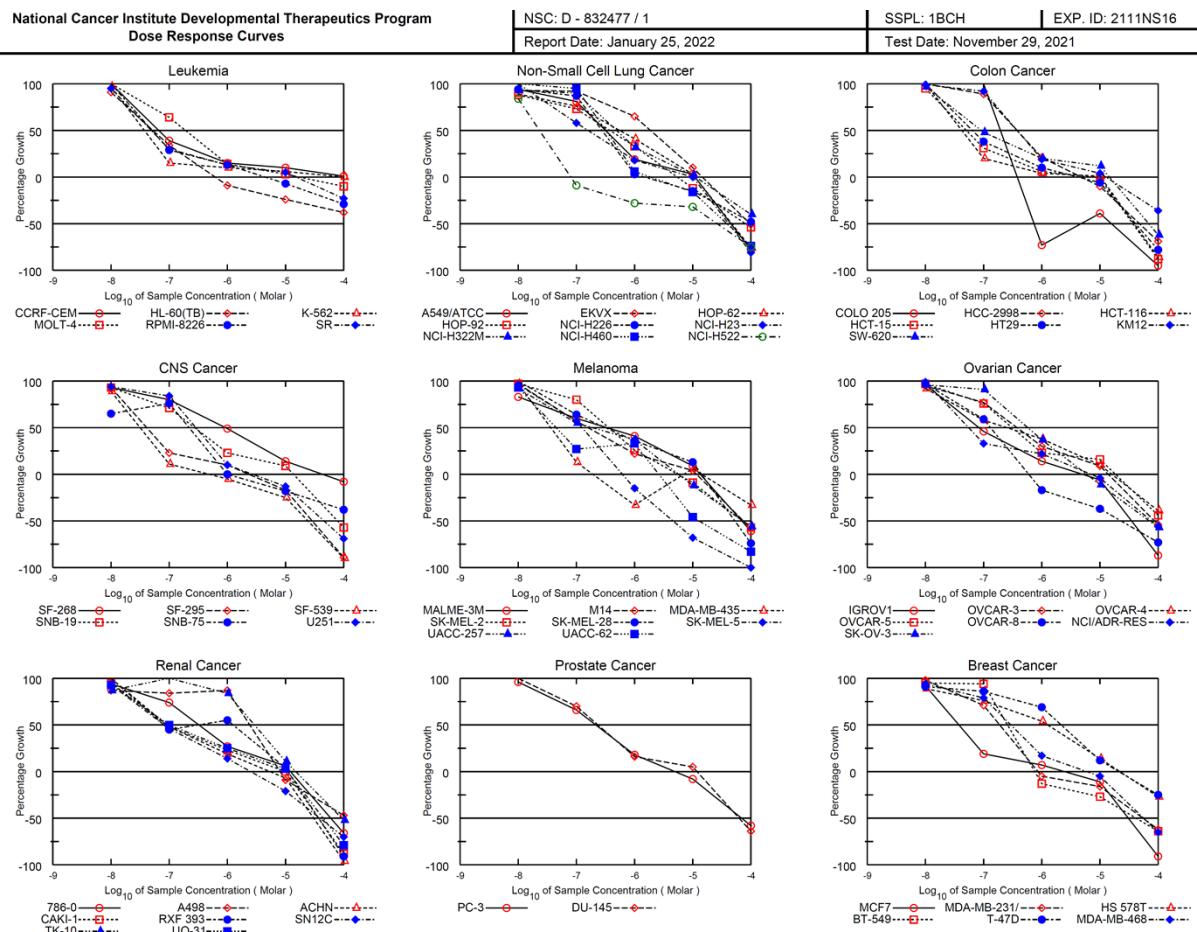
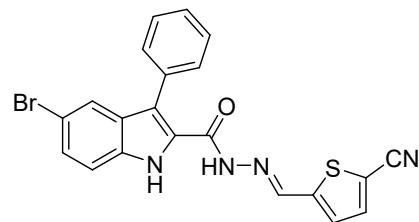
Compound 6d



**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

NSC : D - 832476 / 1				Experiment ID : 2111NS16								Test Type : 08			Units : Molar		
Report Date : January 25, 2022				Test Date : November 29, 2021								QNS :			MC :		
COMI : TO3				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH					
Log10 Concentration																	
Panel/Cell Line	Time	Zero	Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0	G150	TGI	LC50	
Leukemia																	
CCRF-CEM	0.530	2.665	2.663	2.563	0.992	0.978	0.785		100	95	22	21	12	4.12E-7	> 1.00E-4	> 1.00E-4	
HL-60(TB)	0.572	2.569	2.428	2.340	0.483	0.508	0.285		93	89	-16	-11	-50	2.34E-7	7.08E-7	9.85E-5	
K-562	0.154	1.747	1.776	1.655	0.298	0.273	0.173		102	94	9	7	1	3.30E-7	> 1.00E-4	> 1.00E-4	
MOLT-4	0.590	2.391	2.431	2.393	0.988	0.842	0.532		102	100	22	14	-10	4.39E-7	3.85E-5	> 1.00E-4	
RPMI-8226	0.581	2.656	2.676	2.639	1.037	0.773	0.544		101	99	22	9	-6	4.33E-7	3.91E-5	> 1.00E-4	
SR	0.371	1.711	1.519	1.588	0.524	0.487	0.323		86	91	11	9	-13	3.27E-7	2.51E-5	> 1.00E-4	
Non-Small Cell Lung Cancer																	
A549/ATCC	0.337	2.057	1.905	1.961	0.621	0.545	0.236		91	94	17	12	-30	3.72E-7	1.93E-5	> 1.00E-4	
EKVX	1.027	1.899	1.854	1.767	1.626	1.388	1.063		95	85	69	41	4	4.83E-6	> 1.00E-4	> 1.00E-4	
HOP-62	0.707	1.861	1.781	1.813	1.277	1.175	0.553		93	96	49	41	-22	9.69E-7	4.47E-5	> 1.00E-4	
HOP-92	1.244	2.003	1.989	1.862	1.453	1.361	1.154		98	81	28	15	-7	3.83E-7	4.78E-5	> 1.00E-4	
NCI-H226	0.822	1.484	1.430	1.377	0.837	0.852	0.588		92	84	2	5	-29	2.59E-7	1.37E-5	> 1.00E-4	
NCI-H23	0.419	1.409	1.384	1.374	0.696	0.616	0.307		97	96	28	20	-27	4.77E-7	2.67E-5	> 1.00E-4	
NCI-H322M	0.810	2.031	2.013	1.924	1.182	1.147	0.876		98	91	30	28	5	4.77E-7	> 1.00E-4	> 1.00E-4	
NCI-H460	0.323	2.981	3.073	3.032	0.425	0.387	0.182		103	102	4	2	-44	3.38E-7	1.13E-5	> 1.00E-4	
NCI-H522	1.038	2.415	2.266	1.176	0.650	0.740	0.467		89	10	-37	-29	-55	3.12E-8	1.62E-7	6.45E-5	
Colon Cancer																	
COLO 205	0.628	2.581	2.557	2.718	0.280	0.736	0.351		99	107	-55	6	-44	2.24E-7			
HCC-2998	0.495	1.572	1.563	1.617	0.655	0.652	0.363		99	104	15	15	-27	4.04E-7	2.25E-5	> 1.00E-4	
HCT-116	0.226	2.512	2.498	2.196	0.362	0.294	0.233		99	86	6	3	0	2.82E-7	> 1.00E-4		
HCT-15	0.217	1.407	1.402	1.332	0.272	0.271	0.143		100	94	5	4	-34	3.10E-7	1.31E-5	> 1.00E-4	
HT29	0.373	2.425	2.380	2.098	0.402	0.460	0.243		98	84	1	4	-35	2.58E-7	1.28E-5	> 1.00E-4	
KM12	0.833	3.358	3.346	3.369	1.313	1.236	0.892		100	100	19	16	2	4.16E-7	> 1.00E-4	> 1.00E-4	
SW-620	0.333	2.474	2.467	2.375	0.792	0.850	0.437		100	95	21	24	5	4.11E-7	> 1.00E-4		
CNS Cancer																	
SF-268	1.079	2.928	2.858	2.745	1.915	1.726	1.210		96	90	45	35	7	7.82E-7	> 1.00E-4	> 1.00E-4	
SF-295	0.472	1.839	1.820	1.722	0.556	0.534	0.290		99	91	6	5	-39	3.06E-7	1.27E-5	> 1.00E-4	
SF-539	0.563	1.841	1.802	1.642	0.431	0.492	0.184		97	84	-23	-13	-67	2.09E-7	6.06E-7	4.82E-5	
SNB-19	0.527	1.876	1.880	1.818	0.749	0.821	0.523		100	96	16	22	0	3.77E-7	9.17E-5	> 1.00E-4	
SNB-75	2.216	3.125	2.961	2.918	2.028	1.989	1.303		82	77	-9	-10	-41	2.08E-7	7.96E-7	> 1.00E-4	
U251	0.581	2.759	2.730	2.678	0.744	0.753	0.399		99	96	7	8	-31	3.32E-7	1.59E-5	> 1.00E-4	
Melanoma																	
MALME-3M	0.726	1.503	1.468	1.425	0.980	1.040	0.580		95	90	33	40	-20	4.98E-7	4.64E-5	> 1.00E-4	
M14	0.470	2.111	2.073	1.992	0.839	0.900	0.666		98	93	22	26	12	4.05E-7	> 1.00E-4		
MDA-MB-435	0.779	3.069	3.063	2.856	0.328	0.545	0.409		100	91	-58	-30	-47	1.88E-7	4.08E-7		
SK-MEL-2	1.232	2.623	2.601	2.572	1.442	1.449	0.950		98	96	15	16	-23	3.72E-7	2.54E-5	> 1.00E-4	
SK-MEL-28	0.523	1.735	1.733	1.451	1.078	0.920	0.502		100	77	46	33	-4	7.31E-7	7.74E-5	> 1.00E-4	
SK-MEL-5	0.640	2.714	2.675	2.639	0.472	0.517	0.135		98	96	-26	-19	-79	2.39E-7	6.11E-7	3.28E-5	
UACC-257	0.948	2.541	2.447	1.993	1.610	1.425	0.914		94	66	42	30	-4	4.45E-7	7.79E-5	> 1.00E-4	
UACC-62	0.837	2.882	2.820	2.712	1.386	1.141	0.582		97	92	27	15	-30	4.39E-7	2.13E-5	> 1.00E-4	
Ovarian Cancer																	
IGROV1	0.501	2.168	2.216	2.178	0.674	0.657	0.295		103	101	10	9	-41	3.63E-7	1.53E-5	> 1.00E-4	
OVCA-3	1.057	2.887	2.916	2.847	1.760	1.707	0.790		102	98	38	36	-25	6.38E-7	3.84E-5		
OVCA-4	0.841	1.929	1.915	1.668	1.255	1.152	0.546		99	76	38	29	-35	4.84E-7	2.81E-5	> 1.00E-4	
OVCA-5	0.567	1.795	1.707	1.723	0.817	0.843	0.548		93	94	20	22	-3	3.96E-7	7.42E-5		
OVCA-8	0.512	2.597	2.549	2.342	0.470	0.432	0.329		98	88	-8	-16	-36	2.47E-7	8.20E-7	> 1.00E-4	
NCI/ADR-RES	0.370	1.334	1.290	0.751	0.586	0.582	0.360		95	40	22	22	-3	6.50E-8	7.69E-5	> 1.00E-4	
SK-OV-3	0.967	1.814	1.861	1.895	1.382	1.429	0.937		105	109	49	54	-3		8.83E-5	> 1.00E-4	
Renal Cancer																	
786-0	0.578	2.526	2.487	2.401	1.170	1.119	0.711		98	94	30	28	7	4.89E-7	> 1.00E-4	> 1.00E-4	
A498	1.326	2.058	2.070	1.975	2.022	1.822	1.168		102	89	95	68	-12	1.67E-5	7.08E-5	> 1.00E-4	
ACHN	0.286	1.214	1.233	1.120	0.540	0.403	0.208		102	90	27	13	-27	4.34E-7	2.07E-5	> 1.00E-4	
CAKI-1	0.680	2.232	2.142	1.984	1.004	0.917	0.218		94	84	21	15	-68	3.46E-7	1.52E-5	6.09E-5	
RFX 393	0.651	1.199	1.197	1.193	0.926	0.918	0.414		99	99	50	49	-36	1.27E-6	3.73E-5	> 1.00E-4	
SN12C	0.520	2.052	2.062	1.880	0.780	0.623	0.342		101	89	17	7	-34	3.46E-7	1.46E-5	> 1.00E-4	
TK-10	1.216	2.054	1.971	1.909	1.961	1.698	1.079		90	83	89	58	-11	1.29E-5	6.85E-5	> 1.00E-4	
UO-31	0.500	2.114	2.057	2.042	0.964	0.823	0.547		96	96	29	20	3	4.80E-7	> 1.00E-4	> 1.00E-4	
Prostate Cancer																	
PC-3	0.628	2.262	2.267	2.164	0.967	0.753	0.567		100	94	21	8	-10	3.99E-7	2.74E-5	> 1.00E-4	
DU-145	0.333	1.680	1.807	1.747	0.538	0.541	0.292		109	105	15	15	-12	4.10E-7	3.57E-5	> 1.00E-4	

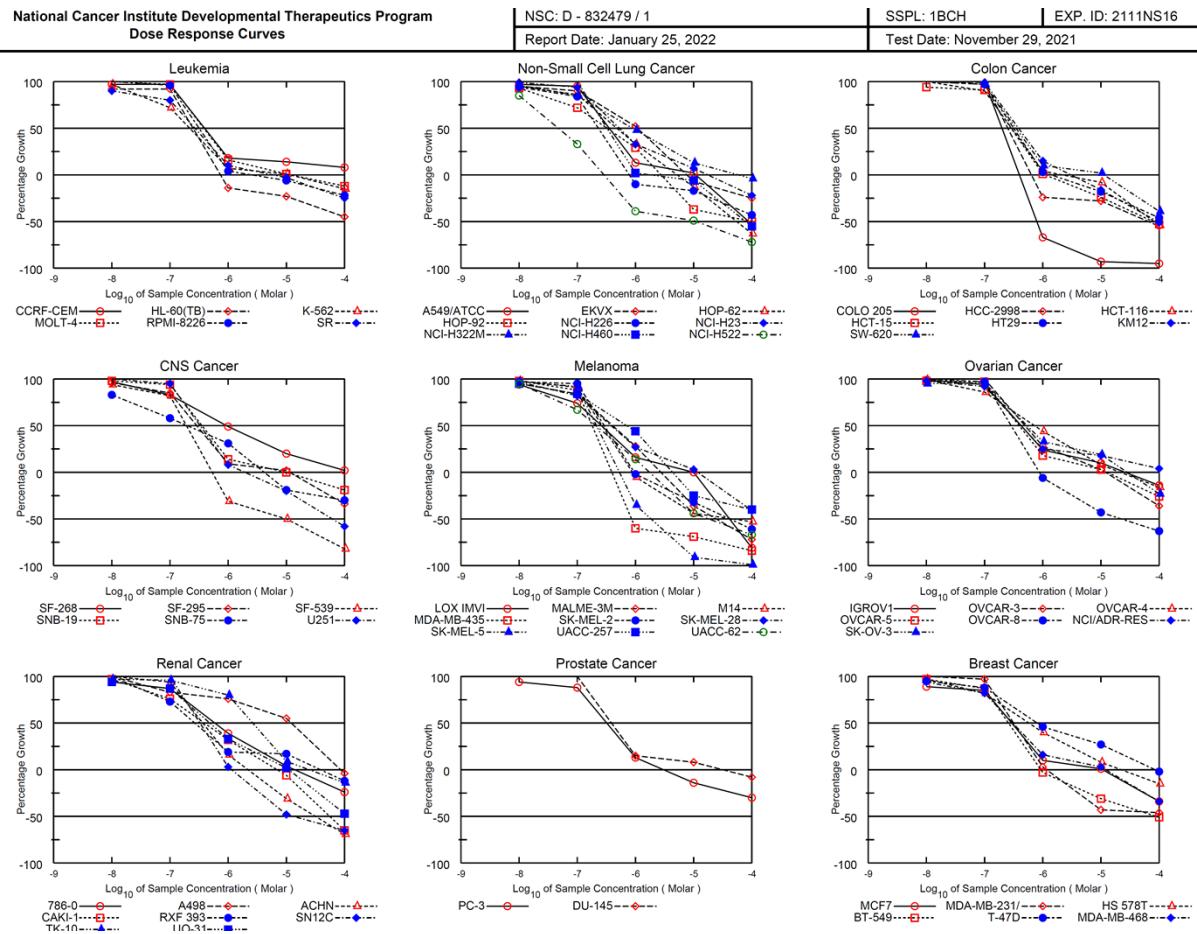
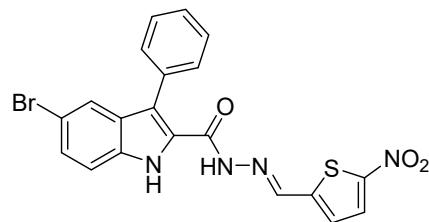
Compound 6e



**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

NSC : D - 832477 / 1				Experiment ID : 2111NS16								Test Type : 08		Units : Molar	
Report Date : January 25, 2022				Test Date : November 29, 2021								QNS :		MC :	
COMI : TO4				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH			
Log10 Concentration															
Panel/Cell Line	Time	Ctrl	Mean	Optical	Densities	Percent	Growth	GI50	TGI	LC50					
	Zero	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0				
Leukemia															
CCR-CEM	0.530	2.745	2.738	1.396	0.865	0.747	0.562	100	39	15	10	1	6.60E-8	> 1.00E-4	> 1.00E-4
HL-60(TB)	0.572	2.714	2.527	1.305	0.520	0.434	0.358	91	34	-9	-24	-38	5.29E-8	6.17E-7	> 1.00E-4
K-562	0.154	1.827	1.785	0.401	0.320	0.251	0.159	97	15	10	6	0	3.75E-8	> 1.00E-4	> 1.00E-4
MOLT-4	0.590	2.547	2.573	1.843	0.860	0.652	0.534	101	64	14	3	-10	1.90E-7	1.77E-5	> 1.00E-4
RPMM-8226	0.581	2.611	2.654	1.170	0.843	0.539	0.410	102	29	13	-7	-29	5.18E-8	4.35E-6	> 1.00E-4
SR	0.371	1.871	1.797	0.827	0.559	0.445	0.287	95	30	13	5	-23	4.98E-8	1.51E-5	> 1.00E-4
Non-Small Cell Lung Cancer															
A549/ATCC	0.337	2.048	1.938	1.724	0.663	0.393	0.073	94	81	19	3	-78	3.17E-7	1.10E-5	4.49E-5
EKVX	1.027	1.947	1.878	1.876	1.627	1.119	0.501	93	92	65	10	-51	1.88E-6	1.45E-5	9.53E-5
HOP-62	0.707	1.884	1.759	1.605	1.191	0.745	0.172	89	76	41	3	-76	5.58E-7	1.10E-5	4.72E-5
HOP-92	1.244	1.989	1.898	1.789	1.494	1.096	0.578	88	73	33	-12	-54	3.83E-7	5.47E-6	8.22E-5
NCI-H226	0.822	1.486	1.443	1.401	0.845	0.700	0.432	94	87	3	-15	-48	2.78E-7	1.53E-6	> 1.00E-4
NCI-H23	0.419	1.346	1.353	0.961	0.582	0.423	0.079	101	58	18	0	-81	1.61E-7	1.01E-5	4.14E-5
NCI-H322M	0.810	2.085	1.991	1.958	1.223	0.837	0.489	93	90	32	2	-40	4.95E-7	1.12E-5	> 1.00E-4
NCI-H460	0.323	3.049	3.049	2.910	0.481	0.271	0.085	100	95	6	-16	-74	3.19E-7	1.84E-6	3.86E-5
NCI-H522	1.038	2.400	2.177	0.941	0.744	0.708	0.264	84	-9	-28	-32	-75	2.30E-8	7.93E-8	2.66E-5
Colon Cancer															
COLO 205	0.628	2.492	2.580	2.494	0.172	0.382	0.033	105	100	-73	-39	-95	1.95E-7	3.80E-7	
HCC-2998	0.495	1.553	1.590	1.441	0.720	0.447	0.155	104	89	21	-10	-69	3.78E-7	4.83E-6	4.80E-5
HCT-116	0.226	2.512	2.536	0.672	0.321	0.257	0.032	101	20	4	1	-86	4.23E-8	1.04E-5	3.88E-5
HCT-15	0.217	1.485	1.418	0.605	0.288	0.215	0.027	95	31	6	-1	-88	4.97E-8	6.73E-6	3.66E-5
HT29	0.373	2.406	2.405	1.155	0.576	0.352	0.083	100	38	10	-6	-78	6.48E-8	4.36E-6	4.11E-5
KM12	0.833	3.378	3.363	3.168	1.325	0.939	0.535	99	92	19	4	-36	3.77E-7	1.27E-5	> 1.00E-4
SW-620	0.333	2.526	2.449	1.378	0.773	0.591	0.127	97	48	20	12	-62	8.96E-8	1.44E-5	6.87E-5
CNS Cancer															
SF-268	1.079	2.945	2.807	2.573	1.987	1.340	0.989	93	80	49	14	-8	9.07E-7	4.21E-5	> 1.00E-4
SF-295	0.472	1.993	1.890	0.825	0.623	0.392	0.051	93	23	10	-17	-89	4.14E-8	2.33E-6	2.86E-5
SF-539	0.563	1.927	1.784	0.720	0.534	0.423	0.054	89	11	-5	-25	-90	3.21E-8	4.90E-7	2.41E-5
SNB-19	0.527	1.904	1.808	1.507	0.843	0.651	0.225	93	71	23	9	-57	2.75E-7	1.37E-5	7.76E-5
SNB-75	2.216	3.116	2.805	2.901	2.209	1.820	1.373	65	76	0	-18	-38	2.19E-7	9.90E-7	> 1.00E-4
U251	0.581	2.791	2.662	2.442	0.811	0.506	0.179	94	84	10	-13	-69	2.91E-7	2.78E-6	4.56E-5
Melanoma															
MALME-3M	0.726	1.561	1.418	1.227	1.067	0.804	0.287	83	60	41	9	-61	3.33E-7	1.36E-5	7.06E-5
M14	0.470	2.096	2.040	1.400	0.835	0.534	0.200	97	57	22	4	-58	1.61E-7	1.16E-5	7.54E-5
MDA-MB-435	0.779	3.129	3.060	1.075	0.523	0.914	0.525	97	13	-33	6	-33	3.60E-8		> 1.00E-4
SK-MEL-2	1.232	2.632	2.589	2.346	1.594	1.118	0.530	97	80	26	-9	-57	3.55E-7	5.45E-6	7.14E-5
SK-MEL-28	0.523	1.765	1.798	1.324	0.966	0.681	0.136	103	64	36	13	-74	3.18E-7	1.40E-5	5.28E-5
SK-MEL-5	0.640	2.710	2.618	1.815	0.544	0.207	-0.005	96	57	-15	-68	-100	1.24E-7	6.18E-7	4.61E-6
UACC-257	0.948	2.554	2.430	1.828	1.544	0.834	0.418	92	55	37	-12	-56	1.87E-7	5.68E-6	7.31E-5
UACC-62	0.837	2.910	2.769	1.401	1.514	0.448	0.143	93	27	33	-46	-83	4.51E-8	2.59E-6	1.25E-5
Ovarian Cancer															
IGROV1	0.501	2.240	2.168	1.305	0.748	0.469	0.067	96	46	14	-6	-87	8.40E-8	4.86E-6	3.49E-5
OVCA-3	1.057	2.855	2.773	2.439	1.599	1.218	0.489	95	77	30	9	-54	3.76E-7	1.39E-5	8.70E-5
OVCA-4	0.841	1.989	1.895	1.506	1.282	0.960	0.515	92	58	38	10	-39	2.53E-7	1.62E-5	> 1.00E-4
OVCA-5	0.567	1.826	1.795	1.523	0.851	0.765	0.320	97	76	23	16	-44	3.06E-7	1.84E-5	> 1.00E-4
OVCA-8	0.512	2.614	2.544	1.744	0.423	0.322	0.136	97	59	-17	-37	-73	1.30E-7	5.89E-7	2.25E-5
NCI/ADR-RES	0.370	1.338	1.325	0.692	0.583	0.355	0.163	99	33	22	-4	-56	5.54E-8	6.92E-6	7.68E-5
SK-OV-3	0.967	1.800	1.768	1.728	1.278	0.863	0.413	96	91	37	-11	-57	5.83E-7	5.98E-6	6.97E-5
Renal Cancer															
786-0	0.578	2.492	2.382	1.990	1.092	0.689	0.198	94	74	27	6	-66	3.21E-7	1.20E-5	6.02E-5
A498	1.326	2.133	2.028	2.005	2.029	1.206	0.704	87	84	87	-9	-47	2.43E-6	8.05E-6	> 1.00E-4
ACHN	0.286	1.240	1.238	0.747	0.464	0.267	0.011	100	48	19	-7	-96	9.25E-8	5.39E-6	3.04E-5
CAKI-1	0.680	2.290	2.214	1.452	1.047	0.679	0.080	95	48	23	0	-88	9.04E-8	9.85E-6	3.68E-5
RFX 393	0.651	1.203	1.207	0.899	0.956	0.672	0.057	101	45	55	4	-91		1.09E-5	3.67E-5
SN12C	0.520	2.030	1.921	1.219	0.730	0.409	0.158	93	46	14	-21	-70	8.32E-8	2.47E-6	3.92E-5
TK-10	1.216	2.105	1.992	2.118	1.967	1.311	0.589	87	101	84	11	-52	2.93E-6	1.48E-5	9.44E-5
UO-31	0.500	2.239	2.110	1.365	0.927	0.557	0.105	93	50	25	3	-79	9.86E-8	1.10E-5	4.44E-5
Prostate Cancer															
PC-3	0.628	2.254	2.193	1.700	0.915	0.576	0.264	96	66	18	-8	-58	2.13E-7	4.79E-6	6.89E-5
DU-145	0.333	1.692	1.709	1.285	0.552	0.398	0.121	101	70	16	5	-64	2.35E-7	1.17E-5	6.29E-5
Breast Cancer															
MCF7	0.186	0.973	0.910	0.334	0.241	0.166	0.017	92	19	7	-11	-91	3.75E-8	2.43E-6	3.07E-5
MDA-MB-231/ATCC	0.554	1.455	1.437	1.194	0.526	0.465	0.212	98	71						

Compound 6f

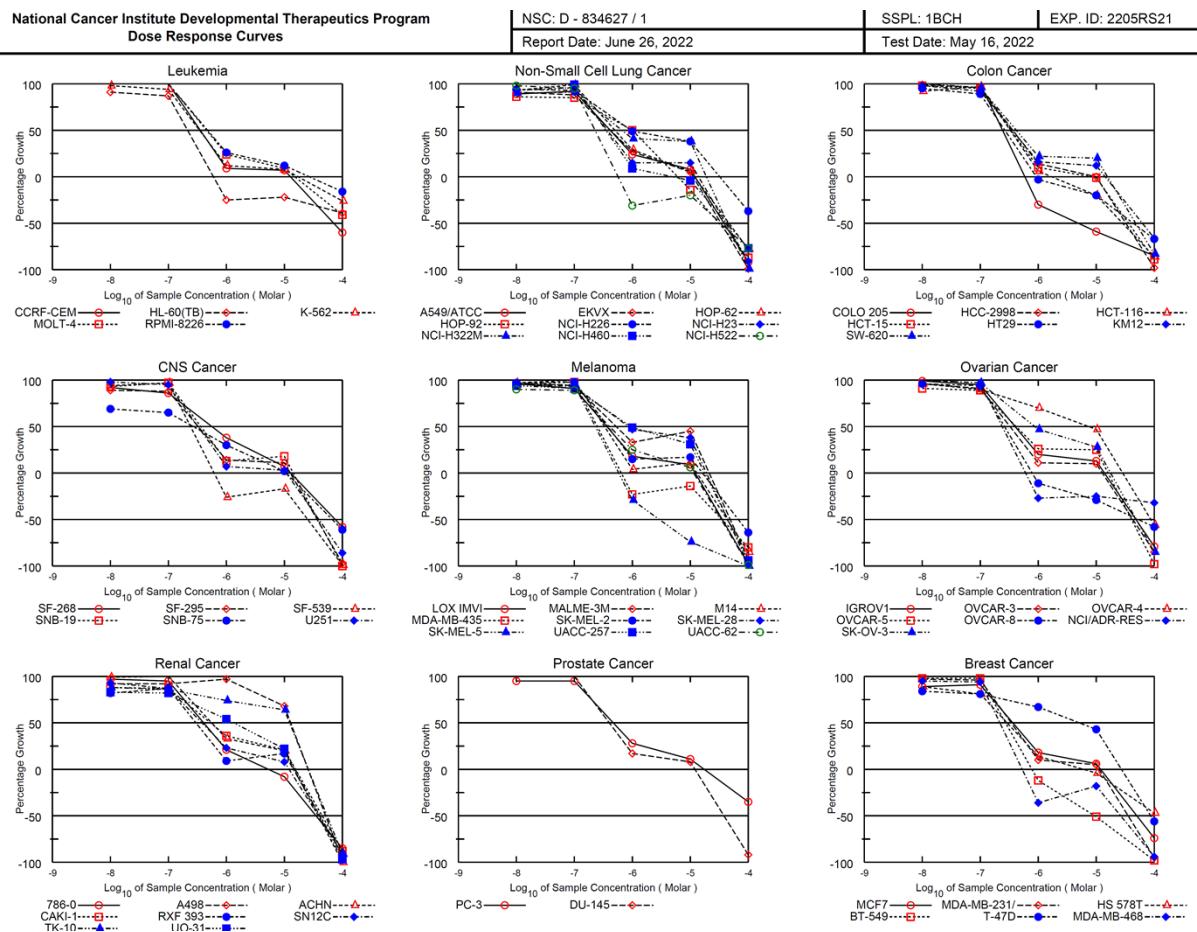
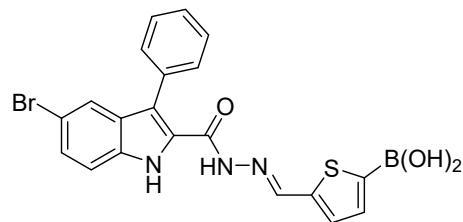


**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

NSC : D - 832479 / 1	Experiment ID : 2111NS16	Test Type : 08	Units : Molar
Report Date : January 25, 2022	Test Date : November 29, 2021	QNS :	MC :
COMI : TO6	Stain Reagent : SRB Dual-Pass Related	SSPL : 1BCH	

Panel/Cell Line	Time	Log10 Concentration												G150	TGI	LC50			
		Mean Optical Densities						Percent Growth											
		Zero	Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0						
Leukemia																			
CCRF-CEM	0.530	2.680	2.616	2.626	0.927	0.824	0.699	97	97	18	14	8	3.99E-7	> 1.00E-4	> 1.00E-4				
HL-60(TB)	0.572	2.394	2.255	2.241	0.492	0.443	0.313	92	92	-14	-23	-45	2.48E-7	7.37E-7	> 1.00E-4				
K-562	0.154	1.692	1.640	1.260	0.254	0.174	0.132	97	72	7	1	-15	2.16E-7	1.21E-5	> 1.00E-4				
MOLT-4	0.590	2.420	2.430	2.362	0.892	0.600	0.517	101	97	16	1	-12	3.83E-7	1.10E-5	> 1.00E-4				
RPMI-8226	0.581	2.545	2.581	2.459	0.653	0.544	0.453	102	96	4	-6	-22	3.13E-7	2.31E-6	> 1.00E-4				
SR	0.371	1.699	1.564	1.438	0.508	0.361	0.277	90	80	10	-3	-25	2.71E-7	6.09E-6	> 1.00E-4				
Non-Small Cell Lung Cancer																			
A549/ATCC	0.337	2.002	1.947	1.926	0.558	0.373	0.157	97	95	13	2	-53	3.57E-7	1.09E-5	8.68E-5				
EKVX	1.027	1.946	1.901	1.857	1.509	0.957	0.773	95	90	52	-7	-25	1.10E-6	7.67E-6	> 1.00E-4				
HOP-62	0.707	1.761	1.709	1.618	1.055	0.613	0.265	95	86	33	-13	-63	4.80E-7	5.16E-6	5.55E-5				
HOP-92	1.244	1.884	1.837	1.705	1.428	0.784	0.627	93	72	29	-37	-50	3.22E-7	2.73E-6	> 1.00E-4				
NCI-H226	0.822	1.469	1.432	1.365	0.742	0.679	0.472	94	84	-10	-17	-43	2.30E-7	7.87E-7	> 1.00E-4				
NCI-H23	0.419	1.454	1.441	1.388	0.765	0.493	0.325	99	94	33	7	-22	5.31E-7	1.74E-5	> 1.00E-4				
NCI-H322M	0.810	2.060	2.010	1.875	1.408	0.976	0.774	96	85	48	13	-4	8.74E-7	5.61E-5	> 1.00E-4				
NCI-H460	0.323	3.092	3.133	3.096	0.390	0.305	0.145	101	100	2	-6	-55	3.26E-7	1.98E-6	7.83E-5				
NCI-H522	1.038	2.287	2.105	1.450	0.634	0.527	0.295	85	33	-39	-49	-72	4.73E-8	2.87E-7	1.08E-5				
Colon Cancer																			
COLO 205	0.628	2.417	2.455	2.454	0.209	0.044	0.033	102	102	-67	-93	-95	2.03E-7	4.02E-7	7.95E-7				
HCC-2998	0.495	1.603	1.636	1.596	0.377	0.359	0.224	103	99	-24	-28	-55	2.51E-7	6.39E-7	6.64E-5				
HCT-116	0.226	2.551	2.562	2.309	0.321	0.207	0.105	100	90	4	-8	-54	2.90E-7	2.12E-6	8.26E-5				
HCT-15	0.217	1.541	1.458	1.422	0.227	0.165	0.102	94	91	1	-24	-53	2.85E-7	1.07E-6	7.89E-5				
HT29	0.373	2.184	2.187	2.137	0.425	0.307	0.203	100	97	3	-18	-46	3.17E-7	1.38E-6	> 1.00E-4				
KM12	0.833	3.339	3.351	3.324	1.199	0.699	0.410	100	99	15	-16	-51	3.82E-7	2.99E-6	9.50E-5				
SV-620	0.333	2.633	2.640	2.576	0.564	0.373	0.204	100	97	10	2	-39	3.49E-7	1.10E-5	> 1.00E-4				
CNS Cancer																			
SF-268	1.079	2.978	2.913	2.655	2.011	1.454	1.119	97	83	49	20	2	9.39E-7	> 1.00E-4	> 1.00E-4				
SF-295	0.472	1.981	1.924	1.755	0.613	0.504	0.310	96	85	9	2	-34	2.90E-7	1.14E-5	> 1.00E-4				
SF-539	0.563	1.741	1.676	1.528	0.387	0.280	0.101	94	82	-31	-50	-82	1.91E-7	5.29E-7	9.68E-6				
SNB-19	0.527	1.817	1.797	1.735	0.712	0.532	0.426	98	94	14	0	-19	3.55E-7	1.04E-5	> 1.00E-4				
SNB-75	2.216	3.142	2.983	2.753	2.502	1.799	1.543	83	58	31	-19	-30	1.97E-7	4.18E-6	> 1.00E-4				
U251	0.581	2.715	2.768	2.617	0.759	0.464	0.244	102	95	8	-20	-58	3.32E-7	1.96E-6	6.14E-5				
Melanoma																			
LOX IMVI	0.163	1.272	1.210	0.985	0.340	0.163	0.032	94	74	16	0	-81	2.60E-7	1.00E-5	4.17E-5				
MALME-3M	0.726	1.434	1.399	1.317	0.928	0.463	0.202	95	84	28	-36	-72	4.06E-7	2.75E-6	2.41E-5				
M14	0.470	2.002	1.975	1.870	0.448	0.262	0.221	98	91	-5	-44	-53	2.69E-7	8.92E-7	4.56E-5				
MDA-MB-435	0.779	3.098	3.062	2.820	0.315	0.239	0.127	98	88	-60	-69	-84	1.81E-7	3.95E-7	8.61E-7				
SK-MEL-2	1.232	2.583	2.536	2.516	1.207	0.841	0.484	97	95	-2	-32	-61	2.91E-7	9.53E-7	4.27E-5				
SK-MEL-28	0.523	1.753	1.714	1.529	0.858	0.561	0.306	97	82	27	3	-41	3.83E-7	1.17E-5	> 1.00E-4				
SK-MEL-5	0.640	2.747	2.686	2.572	0.419	0.057	0.004	97	92	-35	-91	-99	2.14E-7	5.32E-7	1.87E-6				
UACC-257	0.948	2.460	2.387	2.218	1.613	0.712	0.565	95	84	44	-25	-40	7.06E-7	4.35E-6	> 1.00E-4				
UACC-62	0.837	2.854	2.761	2.197	1.128	0.468	0.280	95	67	14	-44	-67	2.13E-7	1.76E-6	1.82E-5				
Ovarian Cancer																			
IGROV1	0.501	2.222	2.204	2.120	0.909	0.667	0.433	99	94	24	10	-14	4.23E-7	2.59E-5	> 1.00E-4				
OVCAR-3	1.057	2.862	2.896	2.858	1.565	1.118	0.681	102	100	28	3	-36	4.95E-7	1.22E-5	> 1.00E-4				
OVCAR-4	0.841	1.927	1.920	1.776	1.319	0.932	0.707	99	86	44	8	-16	7.21E-7	2.20E-5	> 1.00E-4				
OVCAR-5	0.567	1.661	1.635	1.624	0.765	0.600	0.419	98	97	18	3	-26	3.92E-7	1.27E-5	> 1.00E-4				
OVCAR-8	0.512	2.503	2.512	2.450	0.483	0.290	0.189	100	97	-6	-43	-63	2.88E-7	8.79E-7	2.17E-5				
NCI/ADR-RES	0.370	1.347	1.328	1.271	0.619	0.547	0.414	98	92	25	18	4	4.29E-7	> 1.00E-4	> 1.00E-4				
SK-OV-3	0.967	1.799	1.755	1.762	1.240	1.129	0.744	95	96	33	19	-23	5.32E-7	2.87E-5	> 1.00E-4				
Renal Cancer																			
786-0	0.578	2.478	2.370	2.237	1.313	0.653	0.441	94	87	39	4	-24	5.85E-7	1.39E-5	> 1.00E-4				
A498	1.326	2.077	2.118	1.947	1.898	1.738	1.270	105	83	76	55	-4	1.21E-5	8.48E-5	> 1.00E-4				
ACHN	0.286	1.150	1.164	1.102	0.422	0.198	0.088	102	94	16	-31	-69	3.66E-7	2.17E-6	3.15E-5				
CAKI-1	0.680	2.202	2.156	1.844	1.164	0.637	0.238	97	76	32	-6	-65	3.91E-7	6.82E-6	5.54E-5				
RFX 393	0.651	1.232	1.233	1.073	0.764	0.752	0.576	100	73	19	-17	-12	2.66E-7	4.00E-5	> 1.00E-4				
SMN12C	0.520	1.842	1.854	1.856	0.554	0.269	0.183	101	101	3	-48	-65	3.30E-7	1.12E-6	1.26E-5				
TK-10	1.216	1.970	1.948	1.942	1.821	1.287	1.042	97	96	80	9	-14	2.67E-6	2.48E-5	> 1.00E-4				
UO-31	0.500	2.110	2.011	1.898	1.026	0.537	0.267	94	87	33	2	-47	4.78E-7	1.11E-5	> 1.00E-4				
Prostate Cancer																			
PC-3	0.628	2.219	2.127	2.021	0.838	0.540	0.441	94	88	13	-14	-30	3.20E-7	3.04E-6	> 1.00E-4				
DU-145	0.333	1.686	1.748	1.691	0.537	0.441	0.305	105	100	15	8	-8	3.89E-7	3.07E-5	> 1.00E-4				
Breast Cancer																			
MCF7	0.186	0.972	0.888	0.856	0.262	0.192	0.123	89	85	10	1	-34	2.93E-7	1.05E-5	> 1.00E-4				
MDA-MB-231/ATCC	0.554	1.361	1.394	1.338	0.577	0.318	0.299	104	97	3	-43	-46	3.16E-7	1.16E-6	> 1.00E-4				
HS 578T	1.525	2.778	2.737	2.547	2.024	1.621	1.299	97	82	40	8	-15	5.70E-7	2.19E-5	> 1.00E-4				
BT-549	1.016	2.122	2.087	1.979	0.985	0.698	0.495	97	87	-3	-31	-51	2.57E-7	9.24E-7	8.58E-5				
T-47D	1.368	3.118	3.032	2.905	2.172	1.8													

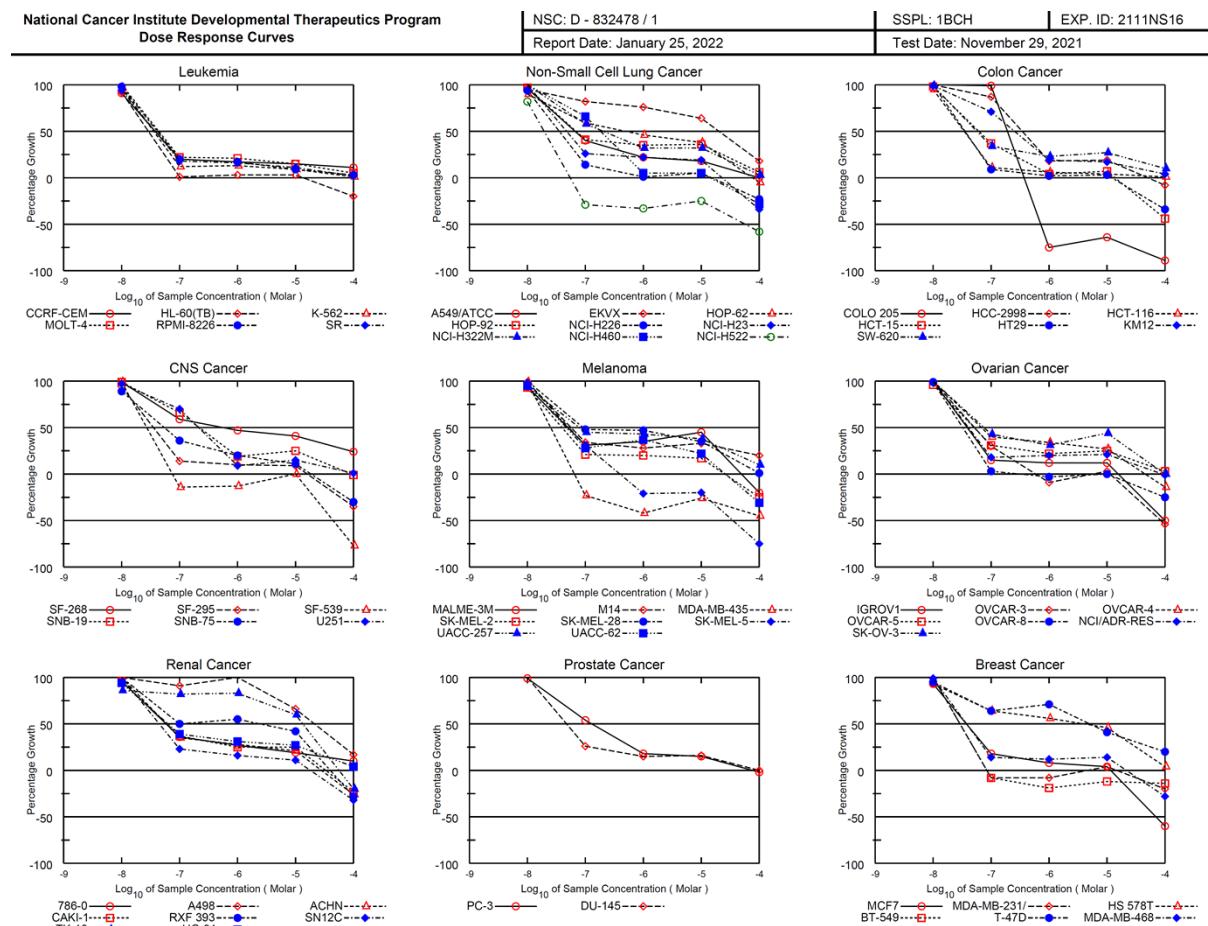
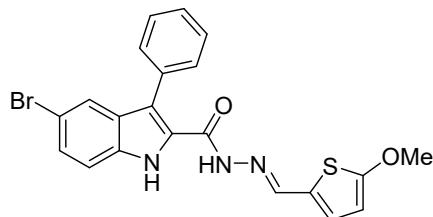
Compound 6g



**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

NSC : D - 834627 / 1				Experiment ID : 2205RS21								Test Type : 08		Units : Molar			
Report Date : June 26, 2022				Test Date : May 16, 2022								QNS :		MC :			
COMI : TO20				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH					
Log10 Concentration																	
Panel/Cell Line	Time	Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0	GI50	TGI	LC50		
Leukemia																	
CCRF-CEM	0.530	2.258	2.278	2.265	0.690	0.650	0.212	101	100	9	7	-60	3.57E-7	1.27E-5	7.07E-5		
HL-60(TB)	0.688	2.670	2.493	2.412	0.517	0.535	0.418	91	87	-25	-22	-39	2.14E-7	5.99E-7	> 1.00E-4		
K-562	0.176	1.788	1.757	1.697	0.376	0.310	0.130	98	94	12	8	-26	3.48E-7	1.74E-5	> 1.00E-4		
MOLT-4	0.657	2.549	2.661	2.622	1.112	0.832	0.386	106	104	24	9	-41	4.73E-7	1.52E-5	> 1.00E-4		
RPMI-8226	0.614	2.544	2.632	2.598	1.123	0.848	0.519	105	103	26	12	-16	4.91E-7	2.74E-5	> 1.00E-4		
Non-Small Cell Lung Cancer																	
A549/ATCC	0.494	2.413	2.204	2.256	0.950	0.647	0.040	89	92	24	8	-92	4.12E-7	1.20E-5	3.81E-5		
EKVX	0.607	1.950	1.831	1.792	0.971	0.679	0.006	91	88	27	5	-99	4.22E-7	1.12E-5	3.39E-5		
HOP-62	0.777	2.505	2.392	2.484	1.280	0.886	0.175	93	99	29	6	-78	5.01E-7	1.19E-5	4.69E-5		
HOP-92	1.219	1.767	1.692	1.687	1.495	1.046	0.163	86	85	50	-14	-87	1.01E-6	6.03E-6	3.12E-5		
NCI-H226	0.799	1.945	1.872	1.860	1.358	1.237	0.500	94	93	49	38	-37	9.36E-7	3.20E-5	> 1.00E-4		
NCI-H23	0.592	1.848	1.765	1.798	0.780	0.778	0.053	93	96	15	15	-91	3.70E-7	1.38E-5	4.09E-5		
NCI-H322M	0.872	2.256	2.113	2.129	1.443	1.400	0.005	90	91	41	38	-99	6.66E-7	1.89E-5	4.37E-5		
NCI-H460	0.272	2.581	2.593	2.555	0.491	0.261	0.062	101	99	9	-4	-77	3.52E-7	5.02E-6	4.25E-5		
NCI-H522	1.467	3.253	3.210	3.157	1.009	1.173	0.336	98	95	-31	-20	-77	2.26E-7	5.64E-7	3.35E-5		
Colon Cancer																	
COLO 205	0.668	2.316	2.344	2.332	0.465	0.277	0.099	102	101	-30	-59	-85	2.44E-7	5.87E-7	4.98E-6		
HCC-2998	0.612	2.183	2.173	2.121	0.825	0.610	0.013	99	96	14	0	-98	3.62E-7	9.47E-6	3.23E-5		
HCT-116	0.286	2.765	2.578	2.693	0.429	0.229	0.041	92	97	6	-20	-86	3.28E-7	1.68E-6	2.87E-5		
HCT-15	0.504	2.784	2.738	2.668	0.733	0.497	0.054	98	95	10	-1	-89	3.38E-7	7.43E-6	3.56E-5		
HT29	0.322	2.078	1.988	1.888	0.312	0.259	0.107	95	89	-3	-20	-67	2.66E-7	9.25E-7	4.41E-5		
KM12	0.525	2.895	2.845	2.706	0.916	0.800	0.181	98	92	16	12	-66	3.60E-7	1.41E-5	6.28E-5		
SW-620	0.282	1.969	1.967	1.902	0.651	0.618	0.049	100	96	22	20	-83	4.17E-7	1.56E-5	4.79E-5		
CNS Cancer																	
SF-268	0.997	2.758	2.611	2.505	1.662	1.115	0.418	92	86	38	7	-58	5.55E-7	1.27E-5	7.51E-5		
SF-295	0.729	2.481	2.280	2.276	0.967	0.916	0.020	89	88	14	11	-97	3.25E-7	1.26E-5	3.65E-5		
SF-539	0.595	1.973	1.891	1.931	0.443	0.495	0.005	94	97	-26	-17	-99	2.42E-7	6.19E-7	2.53E-5		
SNB-19	0.778	2.196	2.090	2.159	0.958	1.030	0.003	93	97	13	18	-100	3.63E-7	1.42E-5	3.78E-5		
SNB-75	1.350	2.344	2.039	2.000	1.653	1.366	0.528	69	65	30	2	-61	2.76E-7	1.06E-5	6.69E-5		
U251	0.364	1.785	1.761	1.713	0.457	0.407	0.050	98	95	7	3	-86	3.22E-7	1.08E-5	3.92E-5		
Melanoma																	
LOX IMVI	0.358	2.385	2.300	2.212	0.731	0.550	0.006	96	91	18	9	-98	3.69E-7	1.22E-5	3.56E-5		
MALME-3M	0.613	1.361	1.337	1.320	0.861	0.953	0.045	97	94	33	45	-93	5.31E-7	2.13E-5	4.91E-5		
M14	0.419	1.638	1.606	1.645	0.473	0.553	0.064	97	101	4	11	-85	3.36E-7	1.30E-5	4.34E-5		
MDA-MB-435	0.621	2.650	2.558	2.613	0.479	0.531	0.124	95	98	-23	-14	-80	2.50E-7	6.46E-7	3.48E-5		
SK-MEL-2	0.850	2.488	2.440	2.454	1.101	1.121	0.305	97	98	15	17	-64	3.80E-7	1.60E-5	6.67E-5		
SK-MEL-28	0.690	1.916	1.870	1.829	1.265	1.153	0.016	96	93	47	38	-98	8.56E-7	1.90E-5	4.44E-5		
SK-MEL-5	1.042	3.190	3.078	3.074	0.744	0.275	0.002	95	95	-29	-74	-100	2.30E-7	5.86E-7	2.98E-6		
UACC-257	1.034	2.377	2.298	2.258	1.696	1.450	0.066	94	91	49	31	-94	9.61E-7	1.77E-5	4.47E-5		
UACC-62	0.758	2.407	2.239	2.219	1.177	0.859	0.005	90	89	25	6	-99	4.08E-7	1.14E-5	3.40E-5		
Ovarian Cancer																	
IGROV1	0.808	2.604	2.579	2.521	1.172	1.038	0.173	99	95	20	13	-79	4.02E-7	1.38E-5	4.86E-5		
OVCAR-3	0.282	1.202	1.161	1.124	0.382	0.375	0.043	96	91	11	10	-85	3.27E-7	1.28E-5	4.29E-5		
OVCAR-4	0.639	1.743	1.699	1.631	1.415	1.156	0.279	96	90	70	47	-56	7.31E-6	2.84E-5	8.67E-5		
OVCAR-5	0.622	1.513	1.437	1.411	0.858	0.849	0.010	91	89	26	25	-98	4.17E-7	1.61E-5	4.07E-5		
OVCAR-8	0.494	2.247	2.172	2.134	0.441	0.349	0.207	96	94	-11	-29	-58	2.61E-7	7.87E-7	5.23E-5		
NCI/ADR-RES	0.568	1.907	1.939	1.864	0.415	0.429	0.385	102	97	-27	-25	-32	2.39E-7	6.06E-7	> 1.00E-4		
SK-OV-3	0.943	2.154	2.184	2.114	1.516	1.282	0.143	102	97	47	28	-85	8.81E-7	1.77E-5	4.91E-5		
Renal Cancer																	
786-0	0.851	2.847	2.791	2.748	1.262	0.786	0.130	97	95	21	-8	-85	4.03E-7	5.34E-6	3.54E-5		
A498	1.410	2.087	2.031	2.036	2.070	1.868	0.035	92	92	97	68	-98	1.28E-5	2.57E-5	5.16E-5		
ACHN	0.397	1.716	1.703	1.755	0.831	0.667	-0.002	99	103	33	20	-100	5.69E-7	1.48E-5	3.85E-5		
CAKI-1	0.555	2.214	2.007	2.003	1.146	0.909	0.067	88	87	36	21	-88	5.27E-7	1.57E-5	4.50E-5		
RXF 393	1.247	1.757	1.667	1.693	1.295	1.336	0.099	82	87	9	17	-92	3.01E-7	1.44E-5	4.13E-5		
SN12C	0.894	2.900	2.767	2.638	1.364	1.046	0.080	93	87	23	8	-91	3.81E-7	1.19E-5	3.83E-5		
TK-10	1.145	2.314	2.171	2.150	2.008	1.888	0.105	88	86	74	64	-91	1.22E-5	2.58E-5	5.44E-5		
UO-31	0.917	2.477	2.218	2.201	1.760	1.261	0.030	83	82	54	22	-97	1.34E-6	1.53E-5	4.04E-5		
Prostate Cancer																	
PC-3	0.603	2.251	2.164	2.165	1.058	0.792	0.391	95	95	28	11	-35	4.64E-7	1.76E-5	> 1.00E-4		
DU-145	0.347	1.608	1.647	1.611	0.564	0.448	0.029	103	100	17	8	-92	4.03E-7	1.20E-5	3.81E-5		
Breast Cancer																	
MCF7	0.579	2.420	2.223	2.256	0.904	0.696	0										

Compound 6h

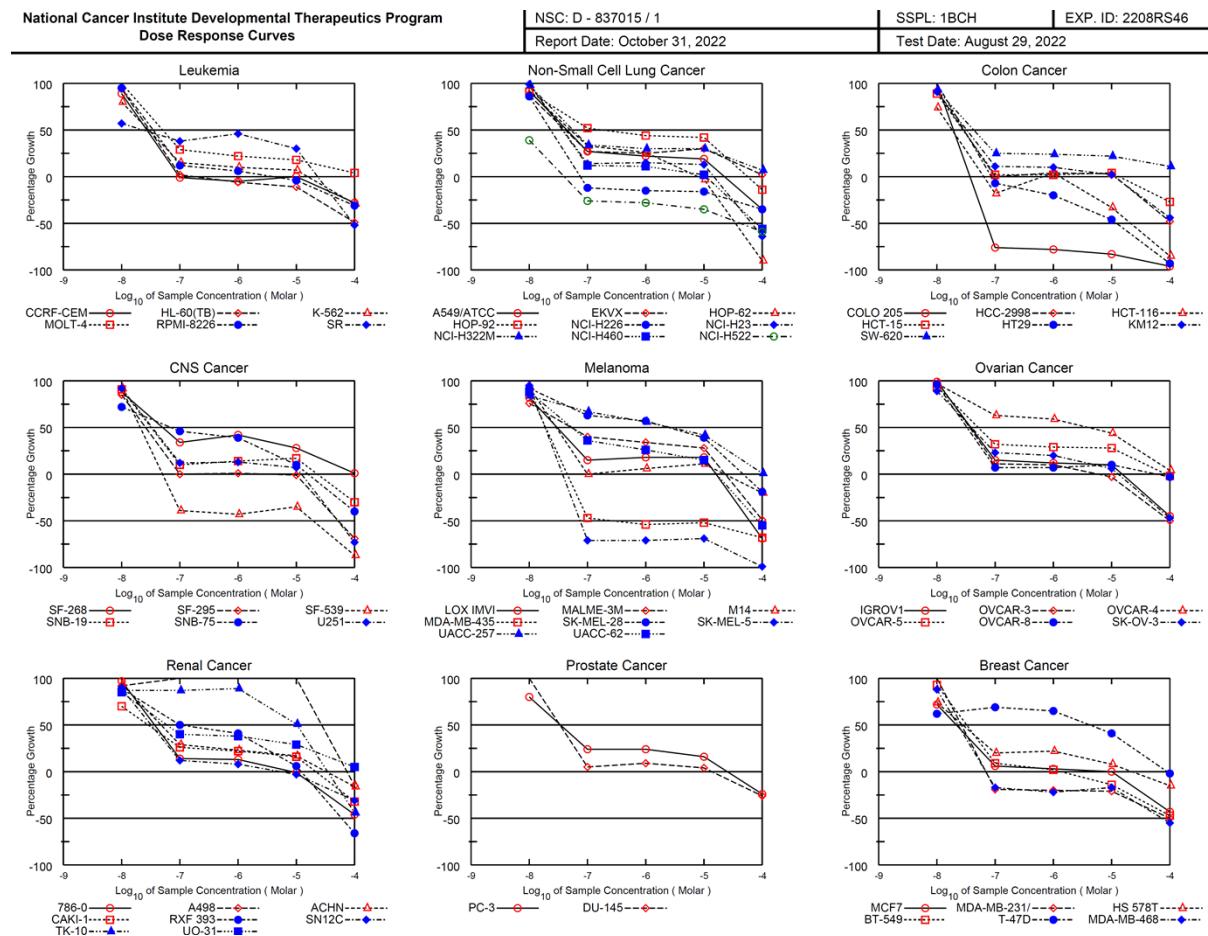
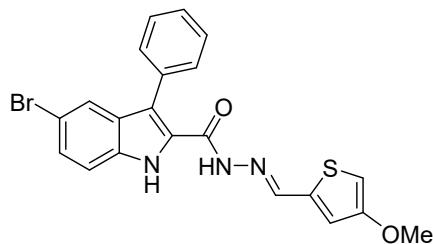


National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results

NSC : D - 832478 / 1	Experiment ID : 2111NS16	Test Type : 08	Units : Molar
Report Date : January 25, 2022	Test Date : November 29, 2021	QNS :	MC :
COMI : TO5	Stain Reagent : SRB Dual-Pass Related	SSPL : 1BCH	

Panel/Cell Line	Time	Ctrl	Log10 Concentration												G150	TGI	LC50			
			Mean Optical Densities						Percent Growth											
			-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0						
Leukemia																				
CCRF-CEM	0.530	2.745	2.555	0.965	0.912	0.859	0.768	91	20	17	15	11	3.77E-8	> 1.00E-4	> 1.00E-4					
HL-60(TB)	0.572	2.714	2.542	0.589	0.634	0.634	0.460	92	1	3	3	-20	2.88E-8	1.34E-5	> 1.00E-4					
K-562	0.154	1.827	1.778	0.358	0.374	0.309	0.167	97	12	13	9	1	3.58E-8	> 1.00E-4	> 1.00E-4					
MOLT-4	0.590	2.547	2.580	1.018	0.996	0.890	0.695	102	22	21	15	5	4.44E-8	> 1.00E-4	> 1.00E-4					
RPMI-8226	0.581	2.611	2.568	0.983	0.917	0.755	0.650	98	20	17	9	3	4.10E-8	> 1.00E-4	> 1.00E-4					
SR	0.371	1.871	1.779	0.635	0.611	0.529	0.402	94	18	16	11	2	3.76E-8	> 1.00E-4	> 1.00E-4					
Non-Small Cell Lung Cancer																				
A549/ATCC	0.337	2.048	1.975	1.015	0.712	0.643	0.343	96	40	22	18	0	6.53E-8	> 1.00E-4	> 1.00E-4					
EKVX	1.027	1.947	1.898	1.781	1.730	1.613	1.189	95	82	76	64	18	1.98E-5	> 1.00E-4	> 1.00E-4					
HOP-62	0.707	1.884	1.763	1.403	1.248	1.150	0.673	90	59	46	38	-5	4.91E-7	7.70E-5	> 1.00E-4					
HOP-92	1.244	1.989	1.964	1.549	1.508	1.514	1.286	97	41	35	36	6	6.86E-8	> 1.00E-4	> 1.00E-4					
NCI-H226	0.822	1.486	1.448	0.917	0.830	0.857	0.632	94	14	1	5	-23	3.58E-8	1.52E-5	> 1.00E-4					
NCI-H23	0.419	1.346	1.361	0.662	0.619	0.595	0.276	102	26	22	19	-34	4.83E-8	2.27E-5	> 1.00E-4					
NCI-H322M	0.810	2.085	2.098	1.550	1.219	1.213	0.851	101	58	32	32	3	2.04E-7	> 1.00E-4	> 1.00E-4					
NCI-H460	0.323	3.049	3.104	2.115	0.463	0.450	0.233	102	66	5	5	-28	1.82E-7	1.39E-5	> 1.00E-4					
NCI-H522	1.038	2.400	2.153	0.733	0.700	0.776	0.441	82	-29	-33	-25	-58	1.93E-8	5.44E-8	5.85E-5					
Colon Cancer																				
COLO 205	0.628	2.492	2.602	2.473	0.158	0.224	0.070	106	99	-75	-64	-89	1.91E-7	3.71E-7	7.19E-7					
HCC-2998	0.495	1.553	1.609	1.420	0.688	0.699	0.456	105	87	18	19	-8	3.48E-7	5.12E-5	> 1.00E-4					
HCT-116	0.226	2.512	2.407	0.476	0.365	0.328	0.259	95	11	6	4	1	3.45E-8	> 1.00E-4	> 1.00E-4					
HCT-15	0.217	1.485	1.458	0.692	0.269	0.304	0.123	98	37	4	7	-44	6.20E-8	1.37E-5	> 1.00E-4					
HT29	0.373	2.406	2.469	0.548	0.411	0.425	0.245	103	9	2	3	-34	3.64E-8	1.17E-5	> 1.00E-4					
KM12	0.833	3.378	3.356	2.648	1.326	1.277	0.927	99	71	19	17	4	2.57E-7	> 1.00E-4	> 1.00E-4					
SW-620	0.333	2.526	2.503	1.073	0.836	0.927	0.556	99	34	23	27	10	5.63E-8	> 1.00E-4	> 1.00E-4					
CNS Cancer																				
SF-268	1.079	2.945	2.922	2.184	1.958	1.841	1.524	99	59	47	41	24	5.78E-7	> 1.00E-4	> 1.00E-4					
SF-295	0.472	1.993	1.896	0.686	0.631	0.611	0.309	94	14	10	9	-35	3.53E-8	1.62E-5	> 1.00E-4					
SF-539	0.563	1.927	1.908	0.486	0.488	0.558	0.131	99	-14	-13	0	-77	2.71E-8	7.54E-8	4.43E-5					
SNB-19	0.527	1.904	1.891	1.435	0.787	0.878	0.521	99	66	19	25	-1	2.18E-7	9.06E-5	> 1.00E-4					
SNB-75	2.216	3.116	3.013	2.544	2.398	2.317	1.555	89	36	20	11	-30	5.49E-8	1.87E-5	> 1.00E-4					
U251	0.581	2.791	2.725	2.131	0.783	0.918	0.604	97	70	9	15	1	2.14E-7	> 1.00E-4	> 1.00E-4					
Melanoma																				
MALME-3M	0.726	1.561	1.511	0.988	1.018	1.105	0.581	94	31	35	45	-20	5.05E-8	4.94E-5	> 1.00E-4					
M14	0.470	2.096	2.086	1.017	0.928	1.001	0.801	99	34	28	33	20	5.64E-8	> 1.00E-4	> 1.00E-4					
MDA-MB-435	0.779	3.129	3.114	0.601	0.448	0.576	0.427	99	-23	-42	-26	-45	2.53E-8	6.50E-8	> 1.00E-4					
SK-MEL-2	1.232	2.632	2.536	1.521	1.512	1.469	0.920	93	21	20	17	-25	3.93E-8	2.51E-5	> 1.00E-4					
SK-MEL-28	0.523	1.765	1.774	1.119	1.102	0.961	0.533	101	48	47	35	1	9.16E-8	> 1.00E-4	> 1.00E-4					
SK-MEL-5	0.640	2.710	2.673	1.285	0.507	0.511	0.160	98	31	-21	-20	-75	5.23E-8	3.97E-7	3.50E-5					
UACC-257	0.948	2.554	2.450	1.677	1.641	1.563	1.116	94	45	43	38	10	8.03E-8	> 1.00E-4	> 1.00E-4					
UACC-62	0.837	2.910	2.796	1.417	1.609	1.303	0.581	95	28	37	22	-31	4.67E-8	2.65E-5	> 1.00E-4					
Ovarian Cancer																				
IGROV1	0.501	2.240	2.268	0.763	0.709	0.717	0.253	102	15	12	12	-50	3.95E-8	1.58E-5	> 1.00E-4					
OVCAR-3	1.057	2.855	2.959	1.597	0.964	1.118	0.491	106	30	-9	3	-54	5.45E-8		8.66E-5					
OVCAR-4	0.841	1.989	2.002	1.296	1.236	1.156	0.725	101	40	34	27	-14	6.78E-8	4.62E-5	> 1.00E-4					
OVCAR-5	0.567	1.826	1.778	0.958	0.848	0.881	0.602	96	31	22	25	3	5.11E-8	> 1.00E-4	> 1.00E-4					
OVCAR-8	0.512	2.614	2.586	0.583	0.497	0.507	0.382	99	3	-3	0	-25	3.24E-8	3.37E-7	> 1.00E-4					
NCI/ADR-RES	0.370	1.338	1.348	0.542	0.568	0.577	0.365	101	18	20	21	-1	4.10E-8	8.61E-5	> 1.00E-4					
SK-OV-3	0.967	1.800	1.856	1.324	1.222	1.331	0.965	107	43	31	44	0	7.71E-8	9.89E-5	> 1.00E-4					
Renal Cancer																				
786-0	0.578	2.492	2.421	1.273	1.090	0.948	0.778	96	36	27	19	10	5.91E-8	> 1.00E-4	> 1.00E-4					
A498	1.326	2.133	2.133	2.058	2.131	1.860	1.466	100	91	100	66	17	2.14E-5	> 1.00E-4	> 1.00E-4					
ACHN	0.286	1.240	1.249	0.618	0.551	0.487	0.211	101	35	28	21	-26	5.89E-8	2.78E-5	> 1.00E-4					
CAKI-1	0.680	2.290	2.230	1.271	1.083	1.084	0.521	96	37	25	25	-23	5.98E-8	3.29E-5	> 1.00E-4					
RXF 393	0.651	1.203	1.220	0.926	0.957	0.883	0.468	103	50	55	42	-28		3.97E-5	> 1.00E-4					
SN12C	0.520	2.030	2.036	0.863	0.762	0.679	0.354	100	23	16	11	-32	4.45E-8	1.77E-5	> 1.00E-4					
TK-10	1.216	2.105	1.981	1.948	1.957	1.748	0.975	86	82	83	60	-20	1.33E-5	5.63E-5	> 1.00E-4					
UO-31	0.500	2.239	2.134	1.181	1.033	0.964	0.563	94	39	31	27	4	6.34E-8	> 1.00E-4	> 1.00E-4					
Prostate Cancer																				
PC-3	0.628	2.254	2.242	1.500	0.927	0.868	0.618	99	54	18	15	-2	1.27E-7	7.99E-5	> 1.00E-4					
DU-145	0.333	1.692	1.789	0.686	0.531	0.549	0.330	107	26	15	16	0	5.05E-8	8.84E-5	> 1.00E-4					
Breast Cancer																				
MCF7	0.186	0.973	0.921	0.327	0.252	0.215	0.074	93	18	8	4	-60	3.76E-8	1.14E-5	6.86E-5					
MDA-MB-231/ATCC	0.554	1.455	1.486	0.510	0.508	0.593	0.443	103	-8	-8	4	-20	3.02E-8		> 1.00E-4					
HS 578T	1.525	2.787	2.704	2.328	2.231	2.101	1.574	93	64	56	46	4	3.77E-6	> 1.00E-4	> 1.00E-4					
BT-549</																				

Compound 6i

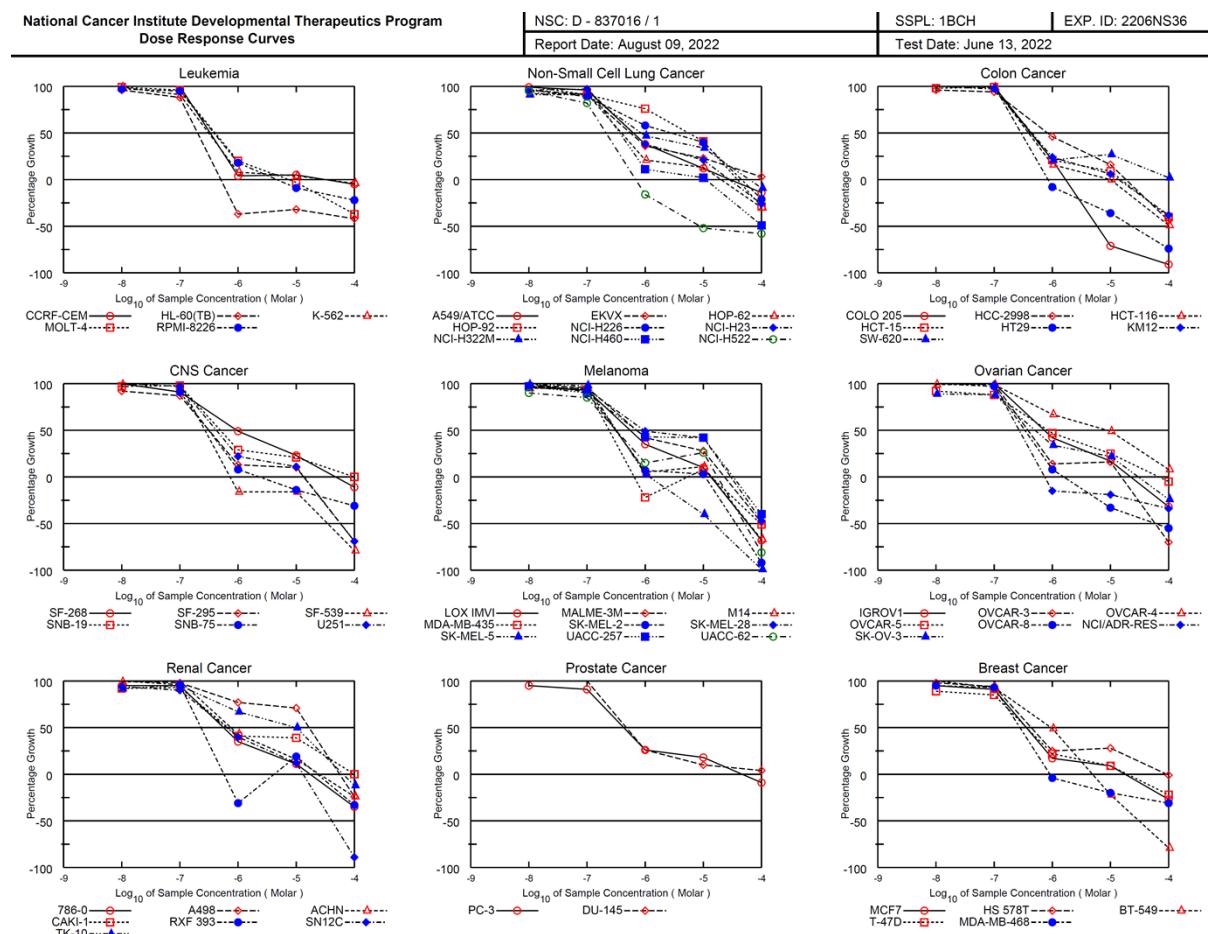
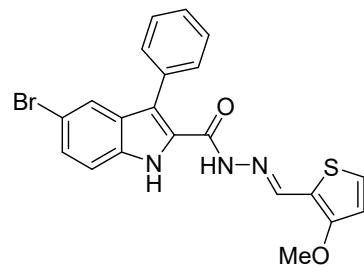


**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

NSC : D - 837015 / 1				Experiment ID : 2208RS46								Test Type : 08			Units : Molar	
Report Date : October 31, 2022				Test Date : August 29, 2022								QNS :			MC :	
COMI : TO23				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH				

Panel/Cell Line	Time	Ctrl	Log10 Concentration							Percent Growth				GI50	TGI	LC50
			-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0	-4.0			
Leukemia																
CCRF-CEM	0.553	1.672	1.549	0.547	0.528	0.548	0.398	89	-1	-5	0	-28	2.71E-8	9.70E-8	> 1.00E-4	
HL-60(TB)	0.546	1.820	1.745	0.574	0.512	0.485	0.277	94	2	-6	-11	-49	3.02E-8	1.80E-7	> 1.00E-4	
K-562	0.179	1.850	1.510	0.431	0.352	0.299	0.128	80	15	10	7	-29	2.88E-8	1.58E-5	> 1.00E-4	
MOLT-4	0.467	1.948	2.048	0.897	0.800	0.730	0.530	107	29	22	18	4	5.37E-8	> 1.00E-4	> 1.00E-4	
RPMI-8226	0.800	2.566	2.475	1.017	0.903	0.770	0.556	95	12	6	-4	-31	3.49E-8	4.06E-6	> 1.00E-4	
SR	0.162	0.591	0.406	0.326	0.360	0.292	0.078	57	38	46	30	-52	2.35E-8	2.33E-5	9.49E-5	
Non-Small Cell Lung Cancer																
A549/ATCC	0.325	2.673	2.481	0.961	0.848	0.773	0.211	92	27	22	19	-35	4.43E-8	2.24E-5	> 1.00E-4	
EKVX	0.567	1.556	1.430	0.834	0.811	0.862	0.588	87	27	25	30	2	4.14E-8	> 1.00E-4	> 1.00E-4	
HOP-62	0.661	2.022	1.904	1.110	1.021	0.644	0.069	91	33	26	-3	-90	5.11E-8	8.15E-6	3.51E-5	
HOP-92	1.060	1.609	1.559	1.347	1.302	1.290	0.916	91	52	44	42	-14	1.88E-7	5.69E-5	> 1.00E-4	
NCI-H226	0.764	1.324	1.244	0.671	0.651	0.645	0.500	86	-12	-15	-16	-35	2.31E-8	7.51E-8	> 1.00E-4	
NCI-H23	0.445	1.449	1.440	0.590	0.592	0.573	0.160	99	14	15	13	-64	3.80E-8	1.46E-5	6.56E-5	
NCI-H322M	0.809	1.984	1.957	1.211	1.163	1.163	0.887	98	34	30	30	7	5.64E-8	> 1.00E-4	> 1.00E-4	
NCI-H460	0.233	2.707	2.718	0.520	0.499	0.288	0.103	100	12	11	2	-56	3.70E-8	1.09E-5	7.95E-5	
NCI-H522	1.421	3.135	2.089	1.054	1.018	0.923	0.586	39	-26	-28	-35	-59	< 1.00E-8	3.99E-8	4.26E-5	
Colon Cancer																
COLO 205	0.548	1.867	1.862	0.130	0.121	0.095	0.022	100	-76	-78	-83	-96	1.91E-8	3.68E-8	7.08E-8	
HCC-2998	0.493	1.969	1.851	0.496	0.550	0.533	0.255	92	0	4	3	-48	2.87E-8	1.13E-5	> 1.00E-4	
HCT-116	0.256	1.859	1.449	0.209	0.321	0.172	0.039	74	-18	4	-33	-85	1.83E-8		2.13E-5	
HCT-15	0.301	1.997	1.805	0.337	0.327	0.366	0.219	89	2	2	4	-27	2.80E-8	1.33E-5	> 1.00E-4	
HT29	0.284	1.677	1.713	0.265	0.227	0.152	0.019	103	-7	-20	-46	-93	3.03E-8	8.68E-8	1.19E-5	
KM12	0.636	2.762	2.561	0.871	0.849	0.680	0.355	91	11	10	2	-44	3.23E-8	1.11E-5	> 1.00E-4	
SV-620	0.303	2.558	2.411	0.861	0.837	0.791	0.541	93	25	24	22	11	4.29E-8	> 1.00E-4	> 1.00E-4	
CNS Cancer																
SF-268	0.975	2.607	2.418	1.525	1.654	1.429	0.994	88	34	42	28	1	5.04E-8	> 1.00E-4	> 1.00E-4	
SF-295	0.553	2.074	1.840	0.560	0.573	0.546	0.174	85	0	1	-1	-69	2.58E-8	3.19E-6	5.30E-5	
SF-539	0.717	2.044	1.941	0.435	0.410	0.463	0.094	92	-39	-43	-35	-87	2.09E-8	5.02E-8	1.91E-5	
SNB-19	0.698	2.088	1.968	0.841	0.891	0.933	0.490	91	10	14	17	-30	3.24E-8	2.30E-5	> 1.00E-4	
SNB-75	1.462	2.384	2.127	1.884	1.823	1.553	0.883	72	46	39	10	-40	6.89E-8	1.58E-5	> 1.00E-4	
U251	0.218	1.640	1.520	0.383	0.401	0.315	0.059	92	12	13	7	-73	3.31E-8	1.22E-5	5.13E-5	
Melanoma																
LOX IMVI	0.237	1.570	1.326	0.431	0.471	0.484	0.073	82	15	18	18	-69	2.96E-8	1.62E-5	6.04E-5	
MALME-3M	0.748	1.353	1.208	0.989	0.953	0.918	0.379	76	40	34	28	-49	5.22E-8	2.30E-5	> 1.00E-4	
M14	0.527	1.781	1.696	0.532	0.596	0.666	0.420	93	0	6	11	-20	2.92E-8	2.25E-5	> 1.00E-4	
MDA-MB-435	0.487	2.324	2.101	0.257	0.225	0.234	0.156	88	-47	-54	-52	-68	1.91E-8	4.47E-8	2.59E-7	
SK-MEL-28	0.680	1.816	1.722	1.394	1.330	1.126	0.550	92	63	57	39	-19	2.53E-6	4.71E-5	> 1.00E-4	
SK-MEL-5	0.802	3.133	3.010	0.234	0.236	0.246	0.008	95	-71	-71	-69	-99	1.86E-8	3.73E-8	7.49E-8	
UACC-257	0.522	2.287	2.009	1.699	1.503	1.272	0.542	84	67	56	42	1	2.66E-6	> 1.00E-4	> 1.00E-4	
UACC-62	1.153	2.696	2.510	1.701	1.557	1.381	0.519	88	36	26	15	-55	5.29E-8	1.63E-5	8.47E-5	
Ovarian Cancer																
IGROV1	0.680	2.339	2.315	0.926	0.876	0.849	0.375	99	15	12	10	-45	3.80E-8	1.53E-5	> 1.00E-4	
OVCAR-3	0.478	1.650	1.661	0.606	0.596	0.464	0.241	101	11	10	-3	-50	3.68E-8	5.87E-6	> 1.00E-4	
OVCAR-4	0.635	1.635	1.602	1.267	1.228	1.071	0.677	97	63	59	44	4	3.90E-6	> 1.00E-4	> 1.00E-4	
OVCAR-5	0.814	1.548	1.502	1.047	1.026	1.020	0.800	94	32	29	28	-2	5.08E-8	8.72E-5	> 1.00E-4	
OVCAR-8	0.297	2.371	2.294	0.450	0.442	0.504	0.290	96	7	7	10	-3	3.31E-8	6.28E-5	> 1.00E-4	
SK-OV-3	1.133	2.119	2.010	1.365	1.332	1.189	0.605	89	23	20	6	-47	3.93E-8	1.28E-5	> 1.00E-4	
Renal Cancer																
786-0	0.827	2.588	2.529	1.075	1.060	0.816	0.445	97	14	13	-1	-46	3.67E-8	8.03E-6	> 1.00E-4	
A498	1.575	2.228	2.174	2.415	2.377	2.246	1.347	92	129	123	103	-15	2.82E-5	7.52E-5	> 1.00E-4	
ACHN	0.493	1.954	1.867	0.923	0.827	0.746	0.412	94	29	23	17	-16	4.80E-8	3.26E-5	> 1.00E-4	
CAKI-1	0.761	2.605	2.060	1.238	1.174	1.064	0.515	70	26	22	16	-32	2.87E-8	2.17E-5	> 1.00E-4	
RFX 393	0.978	1.513	1.456	1.243	1.199	1.009	0.333	89	50	41	6	-66	9.75E-8	1.20E-5	5.98E-5	
SN12C	0.714	2.467	2.272	0.921	0.853	0.690	0.494	89	12	8	-3	-31	3.20E-8	5.03E-6	> 1.00E-4	
TK-10	1.630	2.626	2.493	2.494	2.517	2.138	0.908	87	87	89	51	-44	1.03E-5	3.43E-5	> 1.00E-4	
UO-31	0.829	2.219	2.010	1.387	1.355	1.230	0.899	85	40	38	29	5	6.02E-8	> 1.00E-4	> 1.00E-4	
Prostate Cancer																
PC-3	0.606	1.720	1.498	0.871	0.872	0.784	0.462	80	24	24	16	-24	3.42E-8	2.51E-5	> 1.00E-4	
DU-145	0.268	1.220	1.225	0.320	0.355	0.302	0.199	101	5	9	4	-26	3.40E-8	1.32E-5	> 1.00E-4	
Breast Cancer																
MCF7	0.350	1.850	1.437	0.438	0.395	0.348	0.200	72	6	3	0	-43	2.17E-8	6.92E-6	> 1.00E-4	
MDA-MB-231/ATCC	0.612	1.241	1.243	0.496	0.487	0.481	0.309	100	-19	-20	-21	-50	2.64E-8	6.93E-8	> 1.00E-4	
HS 578T	1.388	2.541	2.237	1.616	1.645	1.482	1.177	74	20	22	8	-15	2.75E-8	2.23E-5	> 1.00E-4	
BT-549	1.283															

Compound 6j

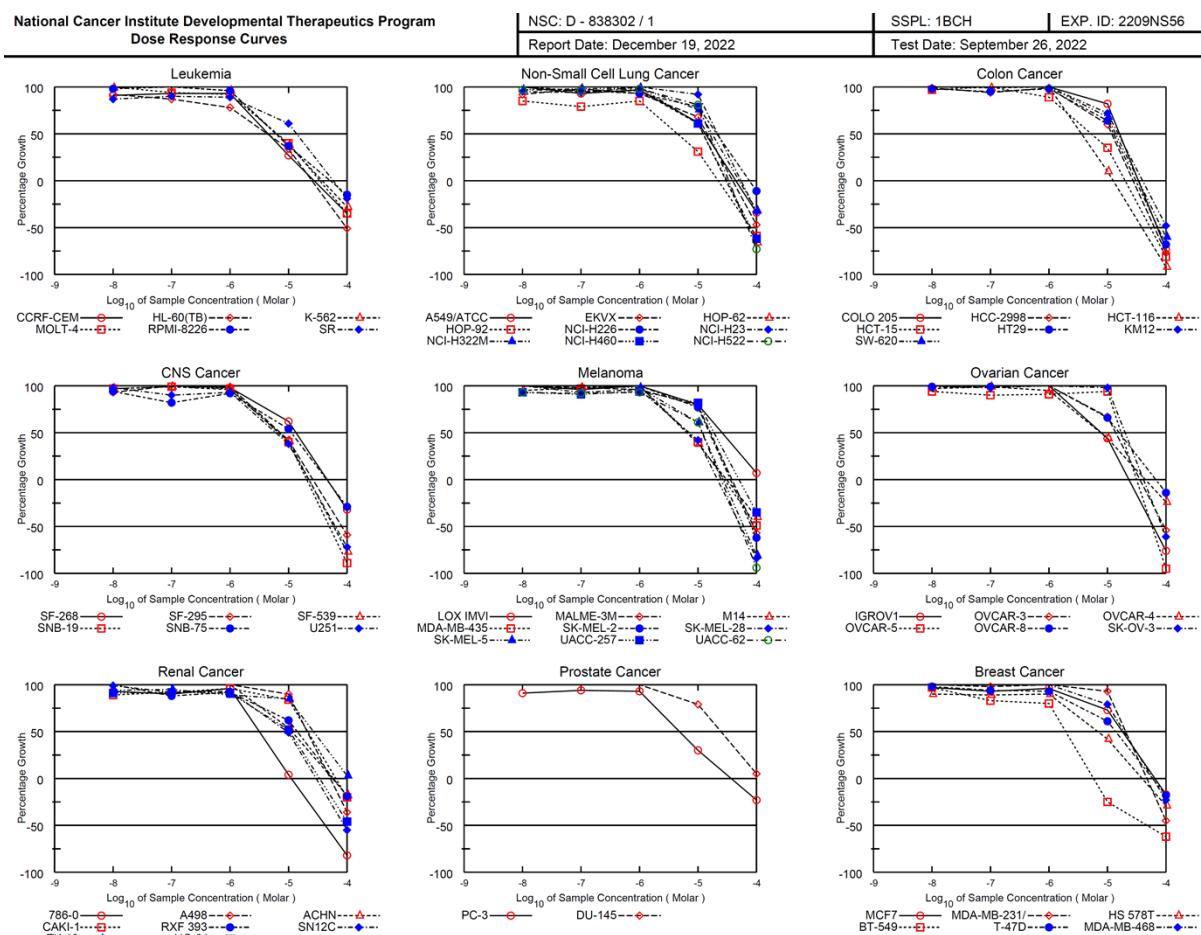
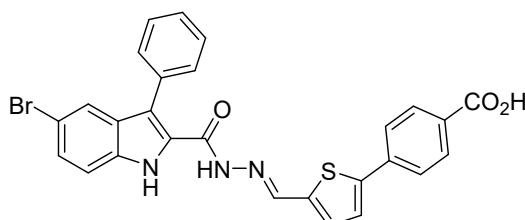


National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results

NSC : D - 837016 / 1	Experiment ID : 2206NS36	Test Type : 08	Units : Molar
Report Date : August 09, 2022	Test Date : June 13, 2022	QNS :	MC :
COMI : TO24	Stain Reagent : SRB Dual-Pass Related	SSPL : 1BCH	

Log10 Concentration																		
Panel/Cell Line	Time Zero	Ctrl	Mean Optical Densities						Percent Growth						GI50	TGI	LC50	
			-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0						
Leukemia																		
CCRF-CEM	0.312	1.342	1.370	1.375	0.357	0.361	0.296	103	103	4	5	-5	3.45E-7	2.98E-5	> 1.00E-4			
HL-60(TB)	0.547	2.586	2.500	2.346	0.343	0.372	0.319	96	88	-37	-32	-42	2.02E-7	5.05E-7	> 1.00E-4			
K-562	0.189	1.853	1.840	1.703	0.325	0.262	0.181	99	91	8	4	-4	3.12E-7	3.11E-5	> 1.00E-4			
MOLT-4	0.602	2.459	2.436	2.383	0.980	0.584	0.381	99	96	20	-3	-37	4.05E-7	7.39E-6	> 1.00E-4			
RPMI-8226	0.698	2.207	2.167	2.127	0.977	0.633	0.544	97	95	18	-9	-22	3.86E-7	4.62E-6	> 1.00E-4			
Non-Small Cell Lung Cancer																		
A549/ATCC	0.528	2.412	2.393	2.334	1.251	0.760	0.454	99	96	38	12	-14	6.28E-7	2.93E-5	> 1.00E-4			
EKVX	0.666	2.113	2.050	1.978	1.182	1.002	0.705	96	91	36	23	3	5.49E-7	> 1.00E-4				
HOP-62	0.813	2.489	2.356	2.357	1.165	1.033	0.573	92	92	21	13	-30	3.91E-7	2.03E-5	> 1.00E-4			
HOP-92	0.979	1.668	1.685	1.609	1.506	1.264	0.698	103	91	76	41	-29	5.68E-6	3.89E-5	> 1.00E-4			
NCI-H226	0.679	1.808	1.760	1.685	1.335	1.134	0.536	96	89	58	40	-21	2.85E-6	4.54E-5	> 1.00E-4			
NCI-H23	0.517	1.697	1.655	1.663	0.969	0.766	0.382	96	97	38	21	-26	6.32E-7	2.80E-5	> 1.00E-4			
NCI-H322M	0.710	2.037	1.922	1.915	1.335	1.160	0.645	91	91	47	34	-9	8.59E-7	6.11E-5	> 1.00E-4			
NCI-H460	0.286	2.726	2.819	2.833	0.553	0.336	0.147	104	104	11	2	-49	3.82E-7	1.10E-5	> 1.00E-4			
NCI-H522	1.062	2.856	2.767	2.532	0.897	0.505	0.444	95	82	-16	-52	-58	2.13E-7	6.92E-7	8.56E-6			
Colon Cancer																		
COLO 205	0.647	2.126	2.141	2.136	0.962	0.188	0.059	101	101	21	-71	-91	4.35E-7	1.70E-6	5.92E-6			
HCC-2998	0.726	2.536	2.462	2.436	1.561	1.016	0.408	96	94	46	16	-44	8.31E-7	1.85E-5	> 1.00E-4			
HCT-116	0.298	2.695	2.709	2.672	0.680	0.297	0.151	101	99	16	0	-49	3.89E-7	9.32E-6	> 1.00E-4			
HCT-15	0.333	2.277	2.239	2.251	0.747	0.511	0.201	98	99	21	9	-40	4.26E-7	1.54E-5	> 1.00E-4			
HT29	0.393	2.160	2.169	2.235	0.362	0.251	0.101	101	104	-8	-36	-74	3.05E-7	8.50E-7	2.30E-5			
KM12	0.609	2.919	2.921	2.883	1.168	0.758	0.377	100	98	24	6	-38	4.49E-7	1.39E-5	> 1.00E-4			
SW-620	0.390	2.761	2.893	2.692	0.888	1.021	0.447	106	97	21	27	2	4.16E-7	> 1.00E-4	> 1.00E-4			
CNS Cancer																		
SF-268	0.744	2.409	2.471	2.262	1.560	1.132	0.662	104	91	49	23	-11	9.47E-7	4.77E-5	> 1.00E-4			
SF-295	0.622	2.267	2.138	2.049	0.843	0.788	0.190	92	87	13	10	-69	3.17E-7	1.34E-5	5.69E-5			
SF-539	0.692	2.187	2.176	2.188	0.584	0.579	0.145	99	100	-16	-16	-79	2.71E-7	7.33E-7	3.44E-5			
SNB-19	0.533	1.789	1.754	1.763	0.899	0.795	0.538	97	98	29	21	0	4.98E-7	> 1.00E-4	> 1.00E-4			
SNB-75	2.142	3.144	3.162	3.052	2.221	1.837	1.470	102	91	8	-14	-31	3.11E-7	2.26E-6	> 1.00E-4			
U251	0.448	1.923	1.949	1.880	0.767	0.611	0.138	102	97	22	11	-69	4.20E-7	1.37E-5	5.75E-5			
Melanoma																		
LOX IMVI	0.365	2.032	1.972	1.907	0.953	0.525	0.117	96	93	35	10	-68	5.53E-7	1.33E-5	5.85E-5			
MALME-3M	0.664	1.609	1.588	1.570	1.059	0.926	0.337	98	96	42	28	-49	7.04E-7	2.29E-5	> 1.00E-4			
M14	0.490	1.945	1.879	1.871	0.562	0.644	0.160	95	95	5	11	-67	3.16E-7	1.37E-5	5.99E-5			
MDA-MB-435	0.679	3.059	2.996	2.919	0.530	0.860	0.336	97	94	-22	8	-51	2.40E-7	.	9.80E-5			
SK-MEL-2	1.159	2.047	2.044	1.967	1.221	1.183	0.097	100	91	7	3	-92	3.08E-7	1.07E-5	3.62E-5			
SK-MEL-28	0.727	2.031	1.996	1.959	1.370	1.277	0.386	97	94	49	42	-47	9.64E-7	2.97E-5	> 1.00E-4			
SK-MEL-5	0.821	3.048	3.030	3.011	0.881	0.496	0.008	99	98	3	-40	-99	3.21E-7	1.16E-6	1.50E-5			
UACC-257	1.131	2.416	2.384	2.285	1.684	1.668	0.678	97	90	43	42	-40	7.09E-7	3.24E-5	> 1.00E-4			
UACC-62	0.900	2.606	2.427	2.344	1.154	1.347	0.174	90	85	15	26	-81	3.14E-7	1.76E-5	5.16E-5			
Ovarian Cancer																		
IGROV1	0.765	2.474	2.539	2.480	1.488	1.054	0.523	104	100	42	17	-32	7.36E-7	2.23E-5	> 1.00E-4			
OVCAR-3	0.386	1.411	1.463	1.482	0.525	0.548	0.116	105	107	14	16	-70	4.07E-7	1.53E-5	5.84E-5			
OVCAR-4	1.052	2.410	2.402	2.392	1.966	1.721	1.157	99	99	67	49	8	9.09E-6	> 1.00E-4	> 1.00E-4			
OVCAR-5	0.769	1.722	1.650	1.607	1.213	1.003	0.727	92	88	47	25	-5	8.25E-7	6.57E-5	> 1.00E-4			
OVCAR-8	0.427	1.786	1.788	1.750	0.539	0.287	0.193	100	97	8	-33	-55	3.40E-7	1.59E-6	5.99E-5			
NCI/ADR-RES	0.388	1.357	1.398	1.344	0.330	0.315	0.257	104	99	-15	-19	-34	2.68E-7	7.39E-7	> 1.00E-4			
SK-OV-3	1.252	2.413	2.285	2.273	1.643	1.512	0.949	89	88	34	22	-24	4.99E-7	3.02E-5	> 1.00E-4			
Renal Cancer																		
786-O	0.745	2.558	2.472	2.469	1.380	0.940	0.482	95	95	35	11	-35	5.63E-7	1.71E-5	> 1.00E-4			
A498	1.866	2.639	2.688	2.624	2.459	2.411	1.424	106	98	77	71	-24	1.65E-5	5.60E-5	> 1.00E-4			
ACHN	0.559	2.214	2.200	2.275	1.278	0.822	0.424	99	104	43	16	-24	7.78E-7	2.49E-5	> 1.00E-4			
CAKI-1	0.733	2.885	2.712	2.736	1.622	1.582	0.740	92	93	41	39	0	6.79E-7	> 1.00E-4	> 1.00E-4			
RFX 393	0.743	1.383	1.437	1.358	0.513	0.867	0.500	109	96	-31	19	-33	2.30E-7	.	> 1.00E-4			
SN12C	0.731	2.463	2.366	2.284	1.426	0.945	0.079	94	90	40	12	-89	6.32E-7	1.32E-5	4.11E-5			
TK-10	1.146	2.150	2.071	2.105	1.823	1.653	1.011	92	95	67	50	-12	1.02E-5	6.46E-5	> 1.00E-4			
Prostate Cancer																		
PC-3	0.653	2.496	2.411	2.335	1.129	0.989	0.594	95	91	26	18	-9	4.27E-7	4.64E-5	> 1.00E-4			
DU-145	0.439	1.902	2.011	1.925	0.815	0.589	0.496	107	102	26	10	4	4.78E-7	> 1.00E-4	> 1.00E-4			
Breast Cancer																		
MCF7	0.391	2.014	1.928	1.865	0.668	0.535	0.284	95	91	17	9	-27	3.58E-7	1.76E-5	> 1.00E-4			
HS 578T	1.525	2.719	2.690	2.642	1.820	1.859	1.509	98	94	25	28	-1	4.29E-7	9.20E-5	> 1.00E-4			
BT-549	1.401	2.562	2.572	2.478	1.976	1.092	0.298	101	93	49	-22	-79	9.73E-7	4.91E-6	3.11E-5			
T-47D	1.345	2.845	2.680	2.619	1.675	1.484	1.050	89	85	22	9	-22	3.59E-7	1.98E-5	> 1.00E-4			
MDA-MB-468	0.867	1.975	1.925	1.893	0.836	0.690	0.600	95	93	-4	-20	-31	2.77E-7	9.18E-7	1.00E-4			

Compound 6m

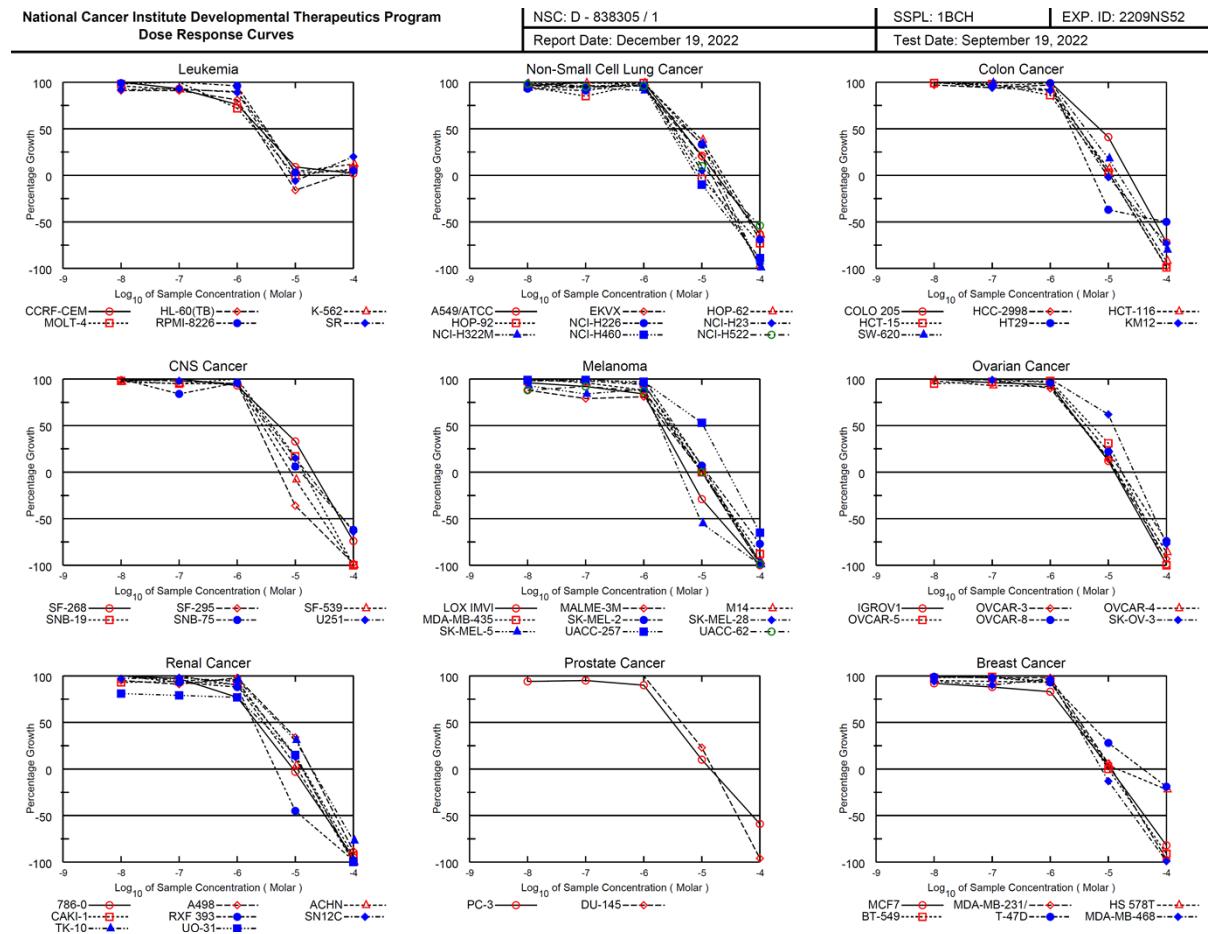
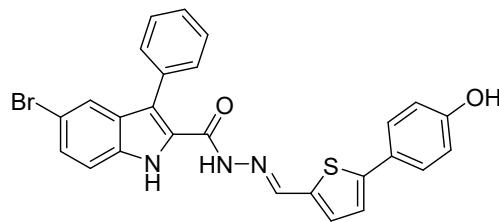


**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

NSC : D - 838302 / 1				Experiment ID : 2209NS56								Test Type : 08			Units : Molar	
Report Date : December 19, 2022				Test Date : September 26, 2022								QNS :			MC :	
COMI : TO37				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH				

Panel/Cell Line	Time	Ctrl	Log10 Concentration							Percent Growth						
			-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0	G150	TGI	LC50	
Leukemia																
CCRF-CEM	0.400	2.003	1.860	1.898	1.892	0.825	0.259	91	93	93	27	-35	4.44E-6	2.69E-5	> 1.00E-4	
HL-60(TB)	0.429	1.804	1.692	1.631	1.503	0.894	0.209	92	87	78	34	-51	4.31E-6	2.50E-5	9.66E-5	
K-562	0.188	1.711	1.698	1.728	1.657	0.760	0.135	99	101	96	38	-28	6.15E-6	3.71E-5	> 1.00E-4	
MOLT-4	0.400	1.851	1.854	1.762	1.731	0.981	0.260	100	94	92	40	-35	6.42E-6	3.42E-5	> 1.00E-4	
RPMI-8226	0.462	2.371	2.331	2.370	2.293	1.172	0.392	98	100	96	37	-15	6.05E-6	5.13E-5	> 1.00E-4	
SR	0.207	0.639	0.582	0.597	0.593	0.470	0.168	87	90	89	61	-19	1.37E-5	5.80E-5	> 1.00E-4	
Non-Small Cell Lung Cancer																
A549/ATCC	0.300	2.029	2.084	1.902	1.977	1.379	0.199	103	93	97	62	-34	1.35E-5	4.46E-5	> 1.00E-4	
EKVX	0.620	1.997	1.890	1.973	1.907	1.557	0.330	92	98	93	68	-47	1.44E-5	3.91E-5	> 1.00E-4	
HOP-62	0.629	2.138	2.142	2.067	2.074	1.553	0.216	100	95	96	61	-66	1.23E-5	3.04E-5	7.52E-5	
HOP-92	1.277	1.743	1.675	1.644	1.673	1.420	0.527	85	79	85	31	-59	4.41E-6	2.20E-5	7.98E-5	
NCI-H226	0.708	1.822	1.851	1.775	1.739	1.588	0.631	103	96	93	79	-11	2.10E-5	7.55E-5	> 1.00E-4	
NCI-H23	0.490	1.705	1.645	1.637	1.726	1.610	0.328	95	94	102	92	-33	2.17E-5	5.44E-5	> 1.00E-4	
NCI-H322M	0.801	2.140	2.097	2.107	2.129	1.825	0.542	97	98	99	76	-32	1.75E-5	5.04E-5	> 1.00E-4	
NCI-H460	0.224	2.137	2.230	2.176	2.188	1.394	0.086	105	102	103	61	-62	1.23E-5	3.15E-5	8.04E-5	
NCI-H522	0.898	2.708	2.646	2.645	2.664	2.362	0.239	97	96	98	81	-73	1.59E-5	3.34E-5	7.05E-5	
Colon Cancer																
COLO 205	0.562	2.166	2.260	2.207	2.327	1.879	0.154	106	103	110	82	-73	1.61E-5	3.39E-5	7.14E-5	
HCC-2998	1.039	3.189	3.175	3.061	3.167	2.321	0.236	99	94	99	60	-77	1.18E-5	2.72E-5	6.32E-5	
HCT-116	0.260	2.386	2.384	2.357	2.434	0.479	0.021	100	99	102	10	-92	3.70E-6	1.26E-5	3.89E-5	
HCT-15	0.372	2.452	2.390	2.448	2.227	1.098	0.071	97	100	89	35	-81	5.27E-6	2.00E-5	5.41E-5	
HT29	0.484	2.892	2.839	2.778	2.840	2.021	0.154	98	95	98	64	-68	1.27E-5	3.04E-5	7.28E-5	
KM12	0.473	2.293	2.338	2.425	2.406	1.787	0.244	102	107	106	72	-48	1.53E-5	3.97E-5	> 1.00E-4	
SW-620	0.330	2.104	2.212	2.222	2.217	1.536	0.134	106	107	106	68	-60	1.38E-5	3.41E-5	8.42E-5	
CNS Cancer																
SF-268	0.665	2.194	2.295	2.347	2.170	1.618	0.454	107	110	98	62	-32	1.35E-5	4.60E-5	> 1.00E-4	
SF-295	0.856	2.789	2.648	2.830	2.763	1.677	0.349	93	102	99	42	-59	7.34E-6	2.62E-5	8.11E-5	
SF-539	0.766	2.261	2.219	2.243	2.195	1.376	0.176	97	99	96	41	-77	6.79E-6	2.22E-5	5.89E-5	
SNB-19	0.521	1.836	1.802	1.825	1.801	1.051	0.057	97	99	97	40	-89	6.76E-6	2.05E-5	4.99E-5	
SNB-75	1.299	2.184	2.130	2.027	2.113	1.778	0.923	94	82	92	54	-29	1.12E-5	4.48E-5	> 1.00E-4	
U251	0.284	1.636	1.613	1.506	1.542	0.793	0.079	98	90	93	38	-72	5.98E-6	2.20E-5	6.26E-5	
Melanoma																
LOX IMVI	0.198	1.377	1.549	1.333	1.425	1.141	0.279	115	96	104	80	7	2.57E-5	> 1.00E-4	> 1.00E-4	
MALME-3M	0.681	1.386	1.386	1.375	1.360	1.237	0.295	100	98	96	79	-57	1.63E-5	3.82E-5	8.93E-5	
M14	0.451	1.753	1.691	1.725	1.754	0.940	0.269	95	98	100	38	-40	6.31E-6	3.03E-5	> 1.00E-4	
MDA-MB-435	0.595	2.555	2.595	2.495	2.546	1.381	0.304	102	97	100	40	-49	6.81E-6	2.82E-5	> 1.00E-4	
SK-MEL-2	1.479	2.984	3.058	3.008	3.004	2.637	0.561	105	102	101	77	-62	1.56E-5	3.57E-5	8.18E-5	
SK-MEL-28	0.488	1.445	1.449	1.375	1.403	0.893	0.077	100	93	96	42	-84	7.17E-6	2.16E-5	5.36E-5	
SK-MEL-5	0.911	3.390	3.391	3.390	3.339	2.431	0.175	100	100	98	61	-81	1.20E-5	2.70E-5	6.07E-5	
UACC-257	1.111	2.786	2.663	2.629	2.684	2.480	0.723	93	91	94	82	-35	1.87E-5	5.02E-5	> 1.00E-4	
UACC-62	0.783	2.512	2.382	2.370	2.393	1.830	0.045	93	92	93	61	-94	1.17E-5	2.46E-5	5.17E-5	
Ovarian Cancer																
IGROV1	0.835	2.556	2.582	2.578	2.641	1.585	0.198	101	101	105	44	-76	7.85E-6	2.31E-5	6.03E-5	
OVCAR-3	0.555	1.855	2.012	1.919	1.858	1.421	0.258	112	105	100	67	-54	1.37E-5	3.58E-5	9.33E-5	
OVCAR-4	1.008	2.149	2.117	2.133	2.087	1.513	0.771	97	99	95	44	-24	7.68E-6	4.49E-5	> 1.00E-4	
OVCAR-5	0.709	1.572	1.519	1.485	1.493	1.521	0.037	94	90	91	94	-95	1.71E-5	3.15E-5	5.79E-5	
OVCAR-8	0.464	2.421	2.397	2.398	2.440	1.759	0.399	99	99	101	66	-14	1.59E-5	6.69E-5	> 1.00E-4	
SK-OV-3	0.994	2.149	2.141	2.127	2.241	2.125	0.386	99	98	108	98	-61	2.00E-5	4.12E-5	8.50E-5	
Renal Cancer																
786-0	0.583	2.360	2.227	2.176	2.281	0.646	0.105	93	90	96	4	-82	3.13E-6	1.10E-5	4.22E-5	
A498	1.209	1.855	1.885	1.870	1.867	1.789	0.779	105	102	102	90	-36	2.07E-5	5.20E-5	> 1.00E-4	
ACHN	0.375	1.662	1.675	1.695	1.690	1.071	0.306	101	103	102	54	-18	1.14E-5	5.57E-5	> 1.00E-4	
CAKI-1	0.550	2.128	1.960	2.006	2.064	1.871	0.440	89	92	96	84	-20	2.11E-5	6.41E-5	> 1.00E-4	
RFX 393	0.898	1.857	1.861	1.745	1.783	1.489	0.725	100	88	92	62	-19	1.39E-5	5.77E-5	> 1.00E-4	
SN12C	1.086	3.182	3.153	3.017	3.037	2.123	0.487	99	92	93	49	-55	9.73E-6	2.97E-5	8.92E-5	
TK-10	1.345	3.000	2.897	2.916	2.822	2.755	1.395	94	95	89	85	3	2.68E-5	> 1.00E-4	> 1.00E-4	
UO-31	0.743	2.247	2.116	2.133	2.114	1.521	0.402	91	92	91	52	-46	1.04E-5	3.39E-5	> 1.00E-4	
Prostate Cancer																
PC-3	0.557	2.330	2.168	2.216	2.200	1.089	0.430	91	94	93	30	-23	4.79E-6	3.70E-5	> 1.00E-4	
DU-145	0.455	1.941	1.998	1.963	1.940	1.635	0.530	104	101	100	79	5	2.49E-5	> 1.00E-4	> 1.00E-4	

Compound 60



**National Cancer Institute Developmental Therapeutics Program
In-Vitro Testing Results**

NSC : D - 838305 / 1				Experiment ID : 2209NS52								Test Type : 08		Units : Molar			
Report Date : December 19, 2022				Test Date : September 19, 2022								QNS :		MC :			
COMI : TO40				Stain Reagent : SRB Dual-Pass Related								SSPL : 1BCH					
Log10 Concentration																	
Panel/Cell Line	Time	Zero	Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0	GI50	TGI	LC50	
Leukemia																	
CCRF-CEM	0.482	2.216	2.253	2.090	1.804	0.639	0.514		102	93	76	9	2	2.46E-6	> 1.00E-4	> 1.00E-4	
HL-60(TB)	0.593	2.036	1.902	1.913	1.766	0.498	0.664		91	91	81	-16	5	2.10E-6		> 1.00E-4	
K-562	0.227	2.093	2.024	1.944	1.913	0.308	0.445		96	92	90	4	12	2.94E-6	> 1.00E-4	> 1.00E-4	
MOLT-4	0.570	2.163	2.129	2.325	1.723	0.568	0.677		98	110	72	0	7	2.03E-6		> 1.00E-4	
RPMI-8226	0.778	2.819	2.798	2.842	2.741	0.846	0.874		99	101	96	3	5	3.14E-6	> 1.00E-4	> 1.00E-4	
SR	0.428	2.103	1.970	1.978	1.919	0.404	0.757		92	93	89	-6	20	2.58E-6		> 1.00E-4	
Non-Small Cell Lung Cancer																	
A549/ATCC	0.360	2.484	2.396	2.605	2.496	0.796	0.135		96	106	101	21	-63	4.28E-6	1.77E-5	7.05E-5	
EKVX	0.599	1.788	1.739	1.723	1.743	0.838	0.009		96	95	96	20	-98	4.04E-6	1.48E-5	3.90E-5	
HOP-62	0.661	2.510	2.471	2.493	2.483	1.362	0.241		98	99	99	38	-64	6.32E-6	2.36E-5	7.34E-5	
HOP-92	1.343	1.836	1.813	1.763	1.830	1.288	0.360		95	85	99	-4	-73	2.98E-6	9.12E-6	4.61E-5	
NCI-H226	0.921	1.863	1.801	1.778	1.886	1.228	0.281		93	91	102	33	-69	5.63E-6	2.09E-5	6.44E-5	
NCI-H23	0.586	1.736	1.722	1.690	1.702	0.645	0.029		99	96	97	5	-95	3.25E-6	1.12E-5	3.55E-5	
NCI-H322M	0.694	1.940	1.871	1.862	1.829	1.112	0.007		94	94	91	34	-99	5.18E-6	1.79E-5	4.27E-5	
NCI-H460	0.245	2.707	2.793	2.858	2.620	0.220	0.028		103	106	96	-10	-89	2.72E-6	7.99E-6	3.21E-5	
NCI-H522	0.878	2.779	2.739	2.676	2.704	1.066	0.408		98	95	96	10	-54	3.42E-6	1.43E-5	8.78E-5	
Colon Cancer																	
COLO 205	0.361	1.677	1.761	1.721	1.707	0.900	0.100		106	103	102	41	-72	7.12E-6	2.30E-5	6.35E-5	
HCC-2998	0.725	2.611	2.560	2.504	2.563	0.775	0.015		97	94	97	3	-98	3.16E-6	1.06E-5	3.34E-5	
HCT-116	0.310	2.869	2.904	2.801	2.658	0.479	0.026		101	97	92	7	-92	3.09E-6	1.17E-5	3.77E-5	
HCT-15	0.403	2.394	2.375	2.362	2.122	0.456	0.005		99	98	86	3	-99	2.72E-6	1.06E-5	3.30E-5	
HT29	0.322	2.413	2.459	2.333	2.401	0.203	0.160		102	96	99	-37	-50	2.30E-6	5.36E-6	9.24E-5	
KM12	0.460	2.313	2.374	2.196	2.150	0.451	0.122		103	94	91	-2	-73	2.77E-6	9.53E-6	4.70E-5	
SW-620	0.252	2.228	2.317	2.208	2.272	0.601	0.051		105	99	102	18	-80	4.14E-6	1.52E-5	4.95E-5	
CNS Cancer																	
SF-268	0.976	2.746	2.707	2.771	2.618	1.556	0.255		98	101	93	33	-74	5.16E-6	2.03E-5	5.97E-5	
SF-295	0.762	2.406	2.391	2.378	2.322	0.484	0.014		99	98	95	-36	-98	2.20E-6	5.28E-6	1.66E-5	
SF-539	0.981	2.607	2.553	2.523	2.533	0.906	0.002		97	95	95	-8	-100	2.76E-6	8.43E-6	2.88E-5	
SNB-19	0.760	2.232	2.203	2.160	2.236	1.010	0.002		98	95	100	17	-100	4.01E-6	1.40E-5	3.74E-5	
SNB-75	1.280	2.168	2.171	2.029	2.134	1.338	0.488		100	84	96	6	-62	3.27E-6	1.24E-5	6.70E-5	
U251	0.321	1.865	1.937	1.827	1.780	0.553	0.115		105	98	95	15	-64	3.63E-6	1.55E-5	6.60E-5	
Melanoma																	
LOX IMVI	0.420	2.355	2.280	2.204	2.048	0.297	-0.002		96	92	84	-29	-100	2.00E-6	5.51E-6	1.96E-5	
MALME-3M	0.720	1.500	1.409	1.337	1.356	0.714	0.007		88	79	81	0	-99	2.41E-6	9.77E-6	3.17E-5	
M14	0.451	1.785	1.781	1.738	1.621	0.478	0.018		100	96	88	2	-96	2.75E-6	1.05E-5	3.39E-5	
MDA-MB-435	0.514	2.330	2.289	2.328	2.236	0.523	0.062		98	100	95	0	-88	2.99E-6	1.01E-5	3.72E-5	
SK-MEL-2	1.139	2.569	2.563	2.569	2.563	1.246	0.260		100	100	100	7	-77	3.45E-6	1.22E-5	4.77E-5	
SK-MEL-28	0.644	1.854	1.833	1.827	1.781	0.734	0.018		98	98	94	7	-97	3.22E-6	1.18E-5	3.54E-5	
SK-MEL-5	0.853	2.969	2.814	2.638	2.738	0.385	0.008		93	84	89	-55	-99	1.87E-6	4.16E-6	9.25E-6	
UACC-257	0.935	2.570	2.547	2.548	2.529	1.796	0.325		99	99	97	53	-65	1.05E-5	2.80E-5	7.43E-5	
UACC-62	0.971	2.818	2.593	2.663	2.573	0.972	0.014		88	92	87	0	-99	2.65E-6	1.00E-5	3.22E-5	
Ovarian Cancer																	
IGROV1	0.756	2.558	2.554	2.495	2.446	0.981	0.006		100	96	94	12	-99	3.45E-6	1.29E-5	3.62E-5	
OVCAR-3	0.390	1.519	1.600	1.511	1.406	0.552	0.027		107	99	90	14	-93	3.38E-6	1.36E-5	3.97E-5	
OVCAR-4	1.095	2.367	2.343	2.282	2.269	1.285	0.155		98	93	92	15	-86	3.52E-6	1.41E-5	4.40E-5	
OVCAR-5	0.558	1.372	1.333	1.347	1.354	0.807	-0.006		95	97	98	31	-100	5.15E-6	1.72E-5	4.14E-5	
OVCAR-8	0.462	2.447	2.499	2.460	2.377	0.902	0.120		103	101	96	22	-74	4.22E-6	1.70E-5	5.63E-5	
SK-OV-3	0.783	2.098	2.143	2.082	2.169	1.596	0.177		103	99	105	62	-77	1.22E-5	2.78E-5	6.36E-5	
Renal Cancer																	
786-0	0.895	2.834	2.847	2.777	2.379	0.869	0.046		101	97	77	-3	-95	2.16E-6	9.19E-6	3.25E-5	
A498	1.295	2.029	1.991	1.967	2.013	1.543	0.157		95	91	98	34	-88	5.57E-6	1.89E-5	4.88E-5	
ACHN	0.707	2.654	2.655	2.677	2.458	0.786	-0.003		100	101	90	4	-100	2.92E-6	1.09E-5	3.31E-5	
CAKI-1	0.596	2.178	2.064	2.086	2.031	0.836	0.044		93	94	91	15	-93	3.46E-6	1.38E-5	4.02E-5	
RFX 393	1.184	1.835	1.832	1.789	1.754	0.649	0.020		100	93	88	-45	-98	1.92E-6	4.56E-6	1.23E-5	
SN12C	1.270	3.291	3.235	3.244	3.176	1.525	0.011		97	98	94	13	-99	3.48E-6	1.30E-5	3.63E-5	
TK-10	0.988	2.746	2.762	2.662	2.672	1.528	0.228		101	95	96	31	-77	5.05E-6	1.93E-5	5.62E-5	
UO-31	0.786	2.406	2.102	2.067	2.029	1.026	-0.002		81	79	77	15	-100	2.70E-6	1.35E-5	3.67E-5	
Prostate Cancer																	
PC-3	0.720	2.499	2.388	2.410	2.327	0.895	0.295		94	95	90	10	-59	3.17E-6	1.39E-5	7.39E-5	
DU-145	0.503	2.101	2.170	2.151	2.100	0.875	0.021		104	103	100	23	-96	4.48E-6	1.57E-5	4.12E-5	
Breast Cancer																	
MCF7	0.508	2.253	2.119	2.043	1.950	0.564</td											

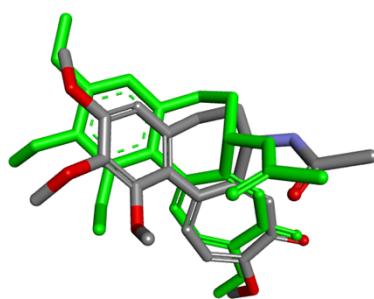


Figure S3. Overlay between co-crystallised colchicine (green) and top scoring re-docked colchicine conformation using the GoldScore scoring function. The RMSD of heavy atoms was calculated to be 1.33 Å.

Table S2. The best docking scores of potent anti-tubulin furanyl- and thiophenyl-3-phenyl-1*H*-indole-2-carbohydrazide derivatives calculated using the GoldScore scoring function.

Compound	Colchicine site	Maytansine site	Vinca alkaloid site
Colchicine	59.20	-	-
5a	58.02	43.43	53.79
5b	62.35	47.56	58.17
5f	61.49	44.53	56.45
5k	71.03	53.00	57.79
6h	64.32	45.11	61.38
6j	62.76	52.40	59.34

Table S3. The physicochemical properties of the newly synthesised furanyl- and thiophenyl-3-phenyl-1*H*-indole-2-carbohydrazide derivatives.

Derivatives	Molecular weight (g/mol)	MlogP	Hydrogen bond donor	Hydrogen bond acceptor	Polar surface area (Å ²)	Rotatable bond count
5e	433.28	2.754	2	5	94.18	4
5f	453.27	3.605	2	6	116.21	5
5g	529.37	4.236	2	6	116.21	6
5h	514.4	3.842	2	5	79.62	6
5i	528.38	3.827	3	6	107.69	6
5j	528.38	3.827	3	6	107.69	6
5k	500.37	3.645	3	5	90.62	5
6b	424.34	3.9	2	3	85.49	4
6c	458.78	4.384	2	3	85.49	4
6d	503.23	4.491	2	3	85.49	4
6e	449.35	3.526	2	4	109.28	4
6f	469.34	3.947	2	5	131.31	5
6g	468.16	2.608	4	5	125.95	5
6h	454.37	3.597	2	4	94.72	5
6i	454.37	3.597	2	4	94.72	5
6j	454.37	3.597	2	4	94.72	5
6k	545.44	4.984	2	5	131.31	6
6l	530.47	4.614	2	4	94.72	6
6m	544.45	4.586	3	5	122.79	6
6n	544.45	4.586	3	5	122.79	6
6o	516.44	4.417	3	4	105.72	5