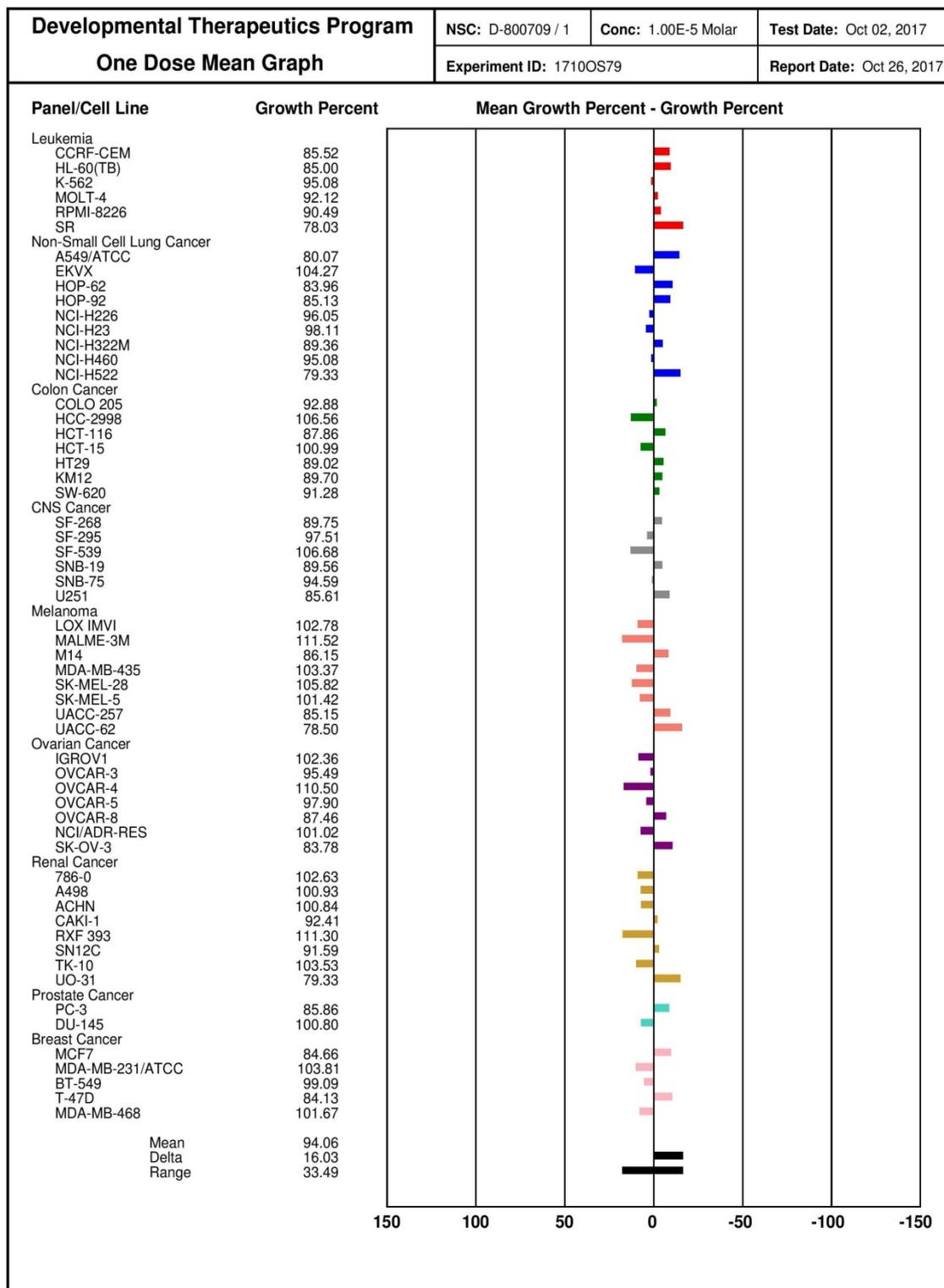
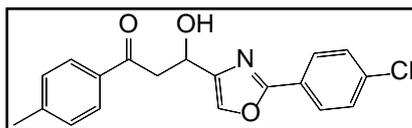


Appendix

Anticancer activity results

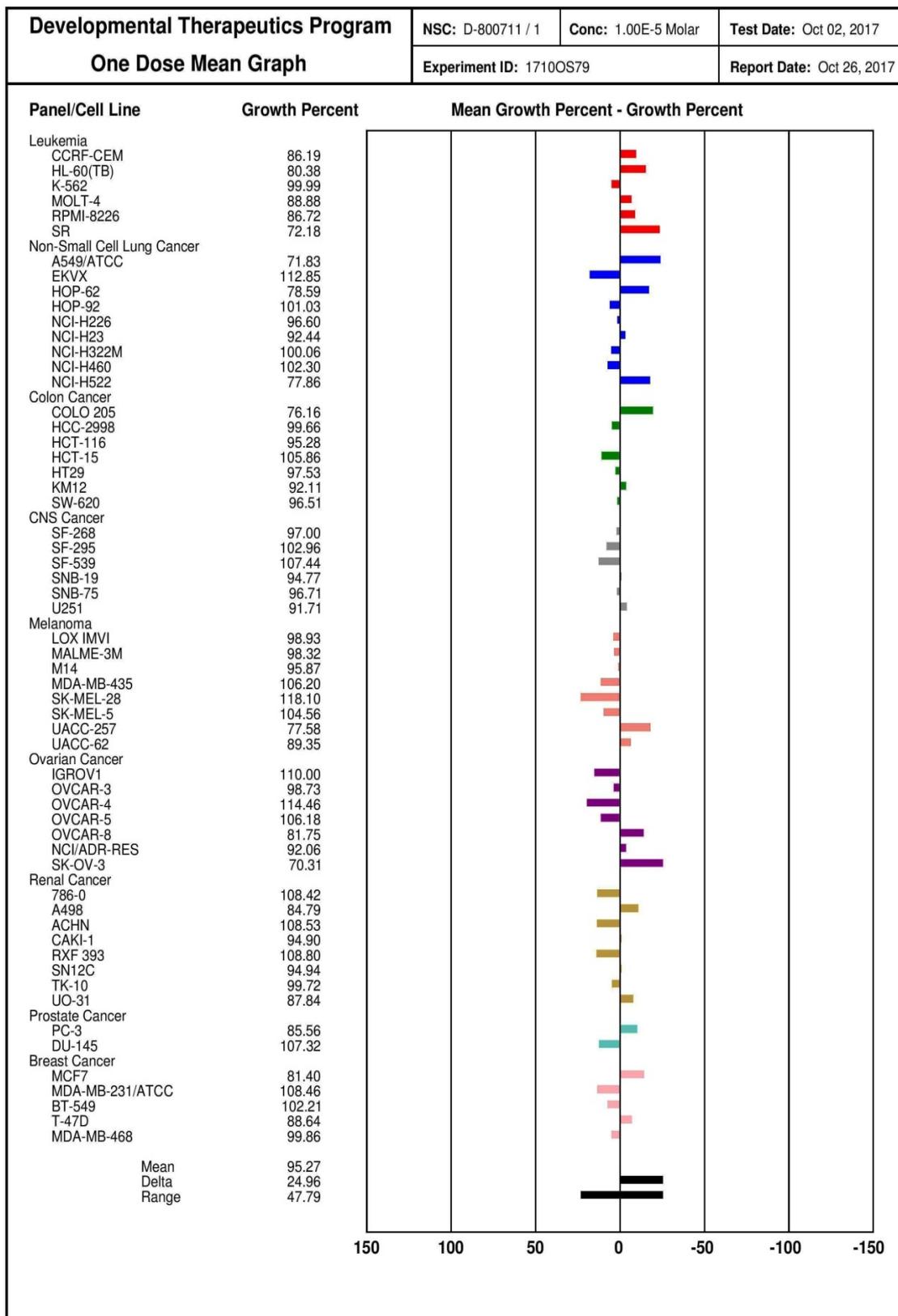
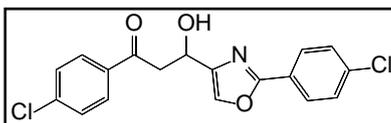
Appendix

Single Dose Anticancer Activity Results (Chapter-2):



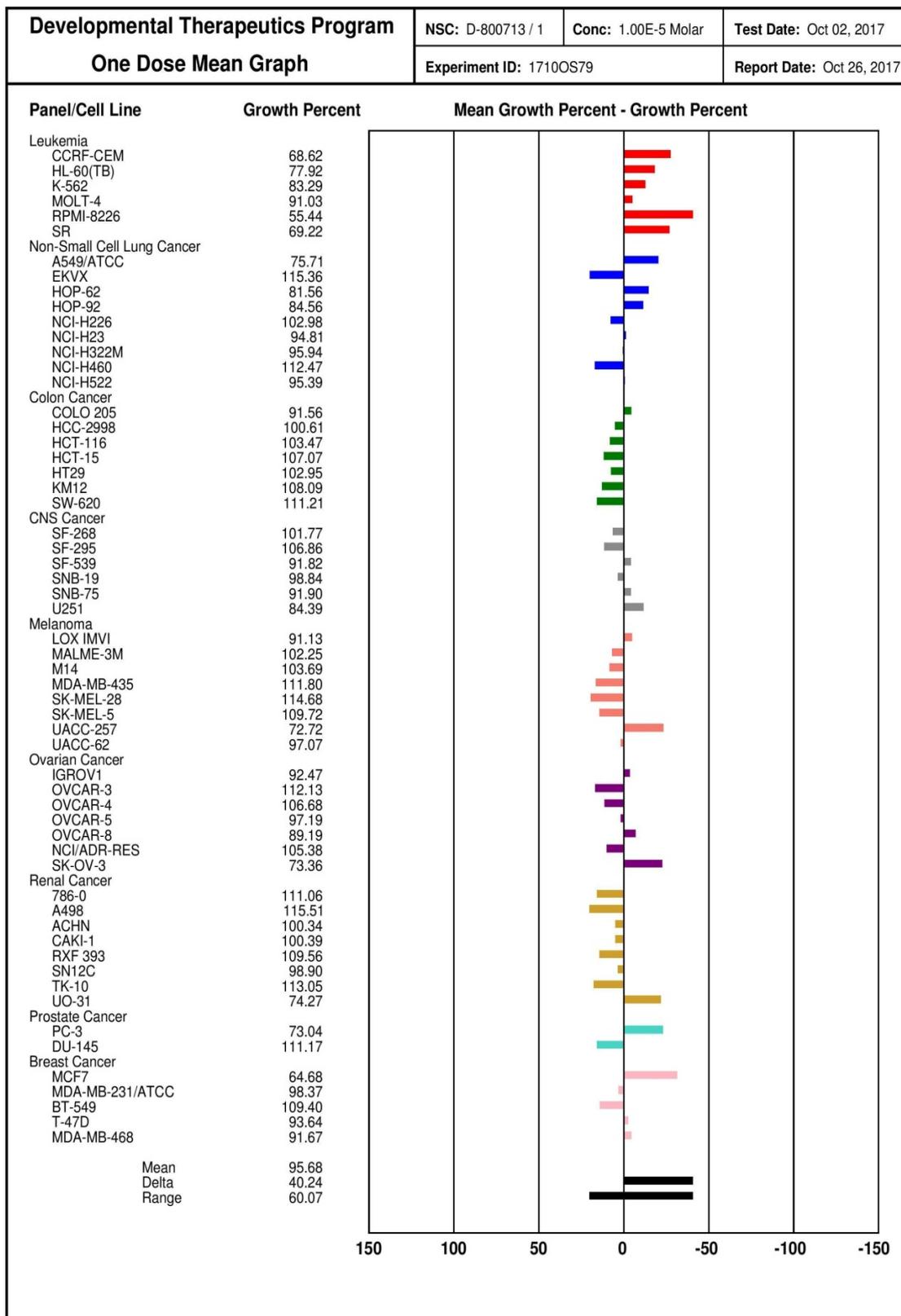
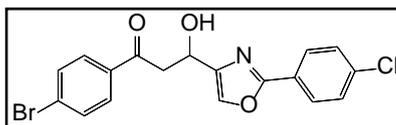
Sheet 1. One Dose Mean Graph of Compound 54g.

Appendix



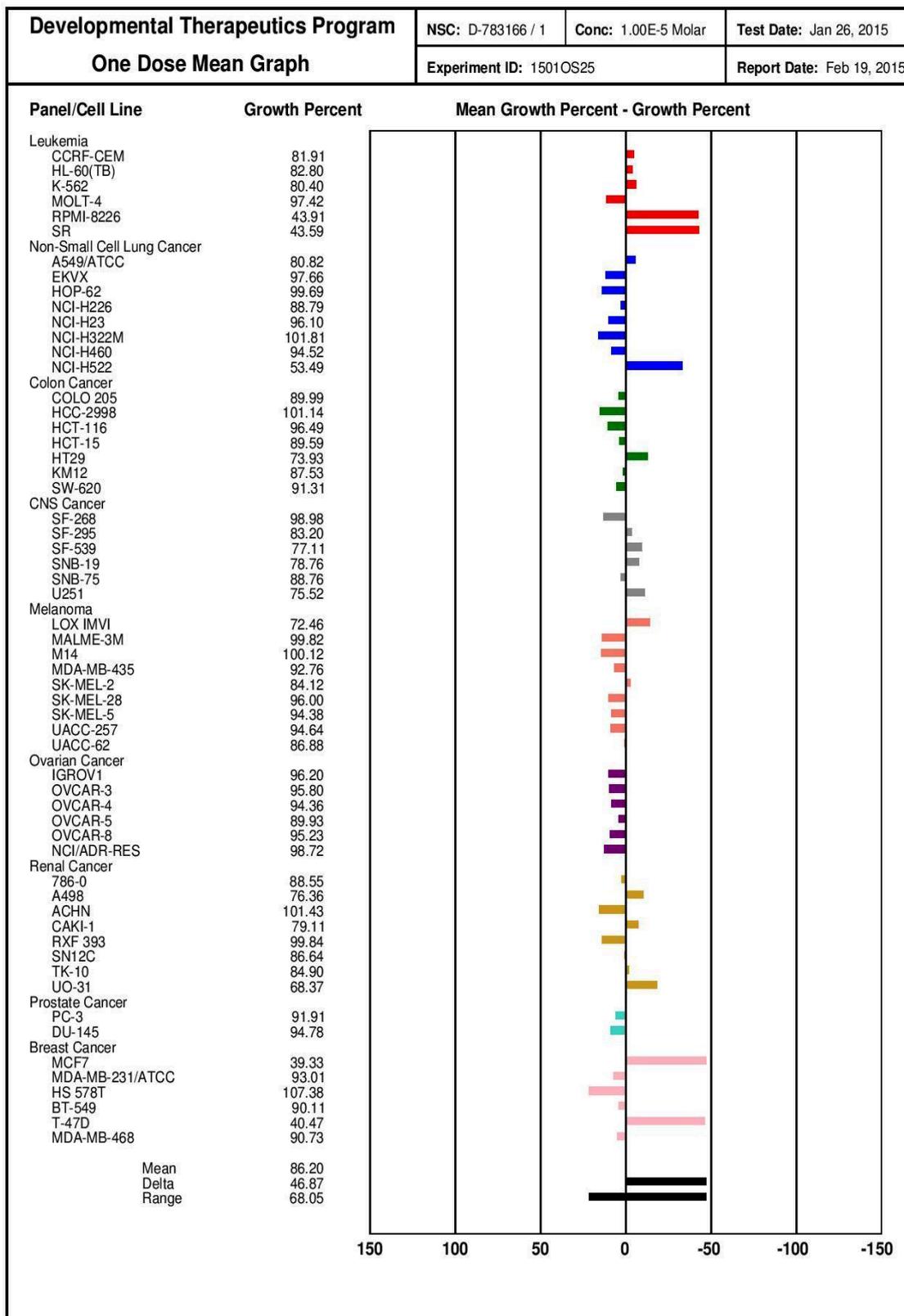
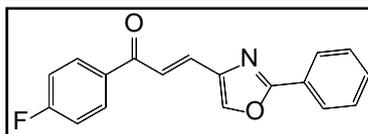
Sheet 2. One Dose Mean Graph of Compound 54h.

Appendix



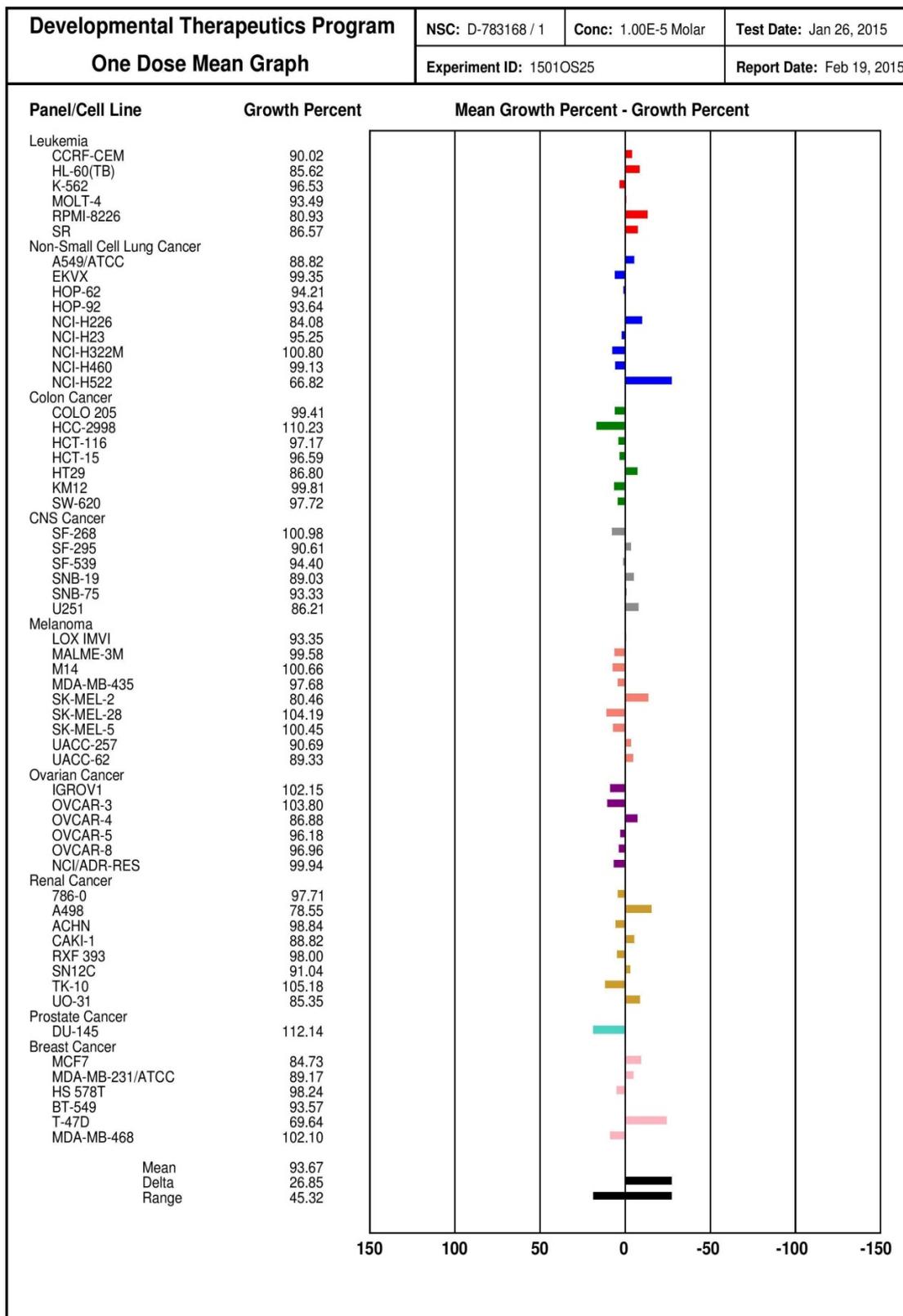
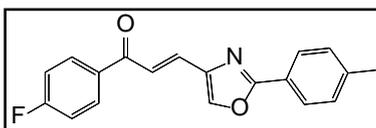
Sheet 3. One Dose Mean Graph of Compound 54i.

Appendix



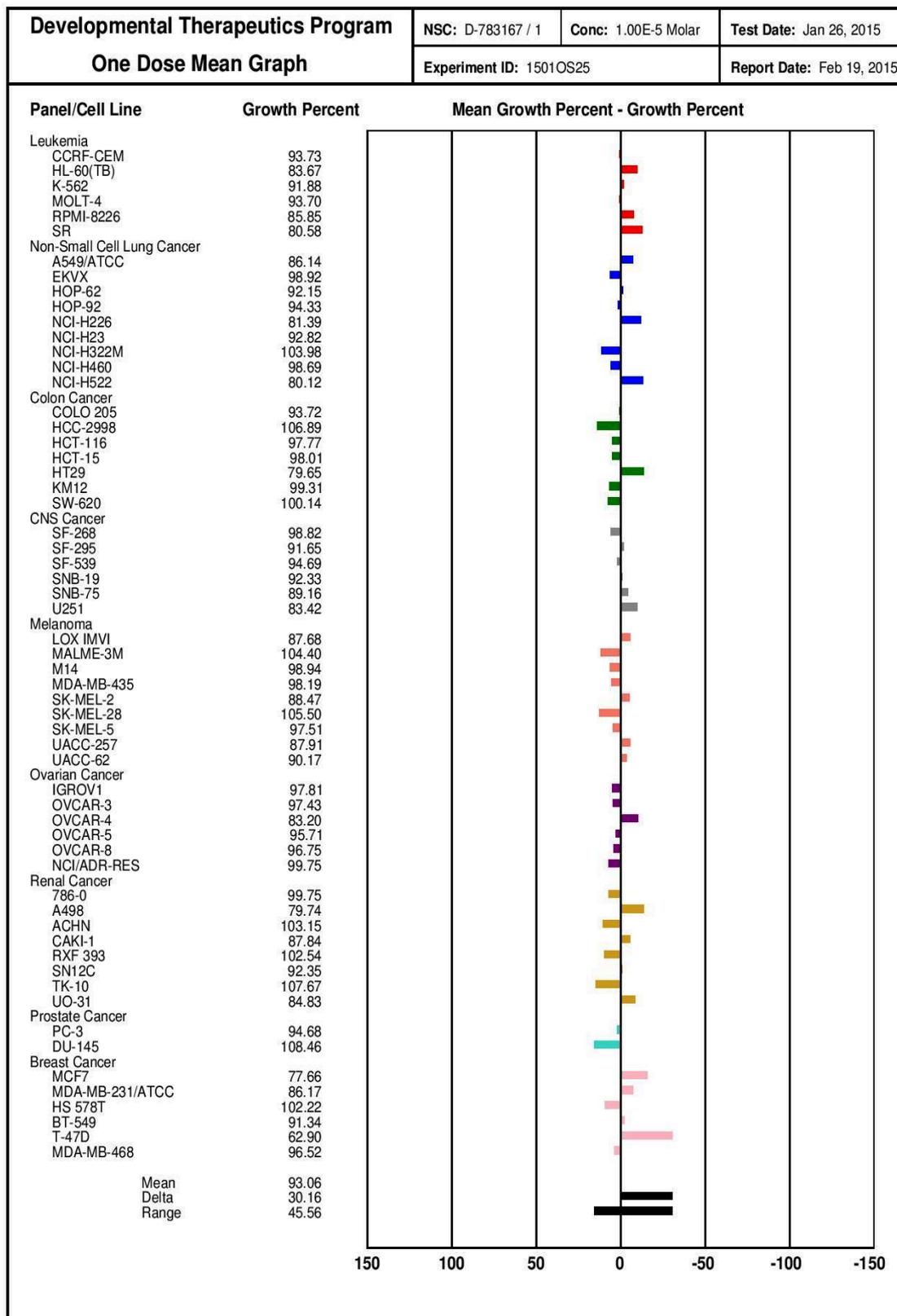
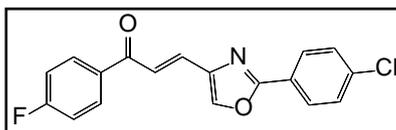
Sheet 4. One Dose Mean Graph of Compound 55a.

Appendix



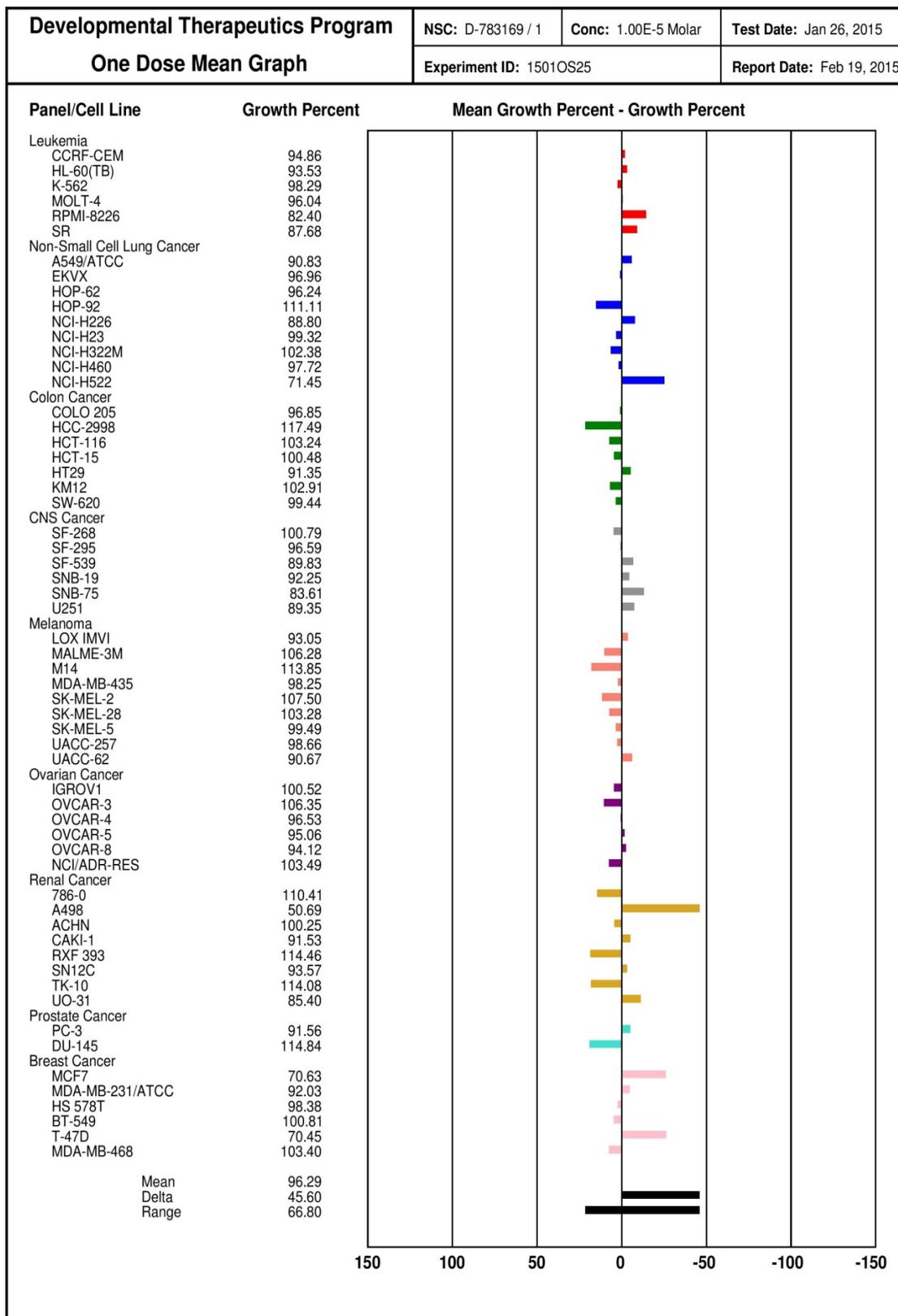
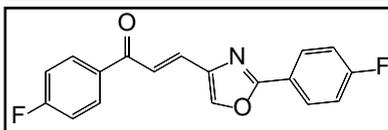
Sheet 5. One Dose Mean Graph of Compound 55b.

Appendix



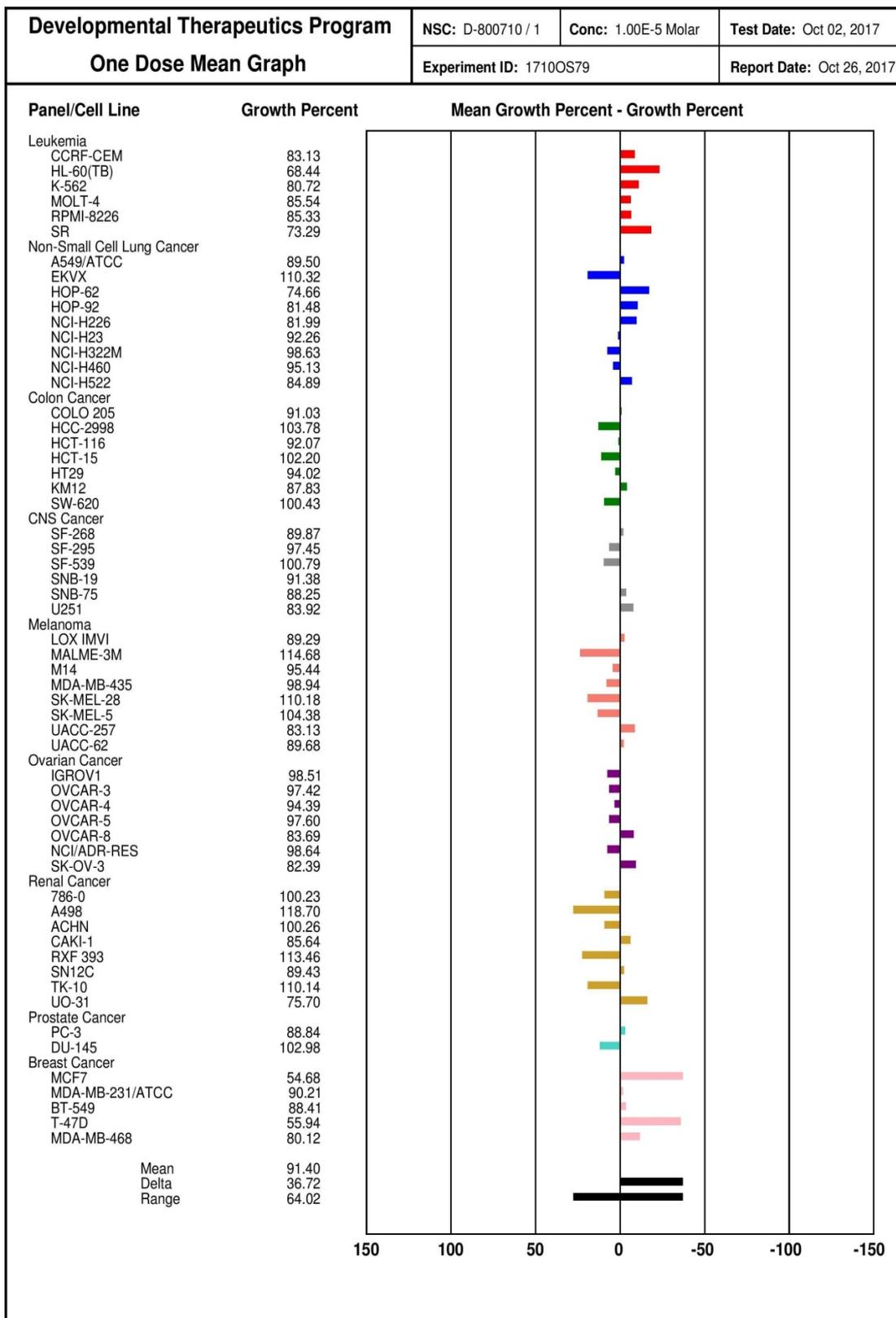
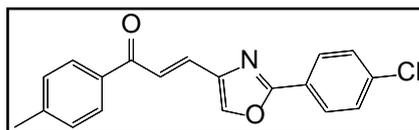
Sheet 6. One Dose Mean Graph of Compound 55c.

Appendix



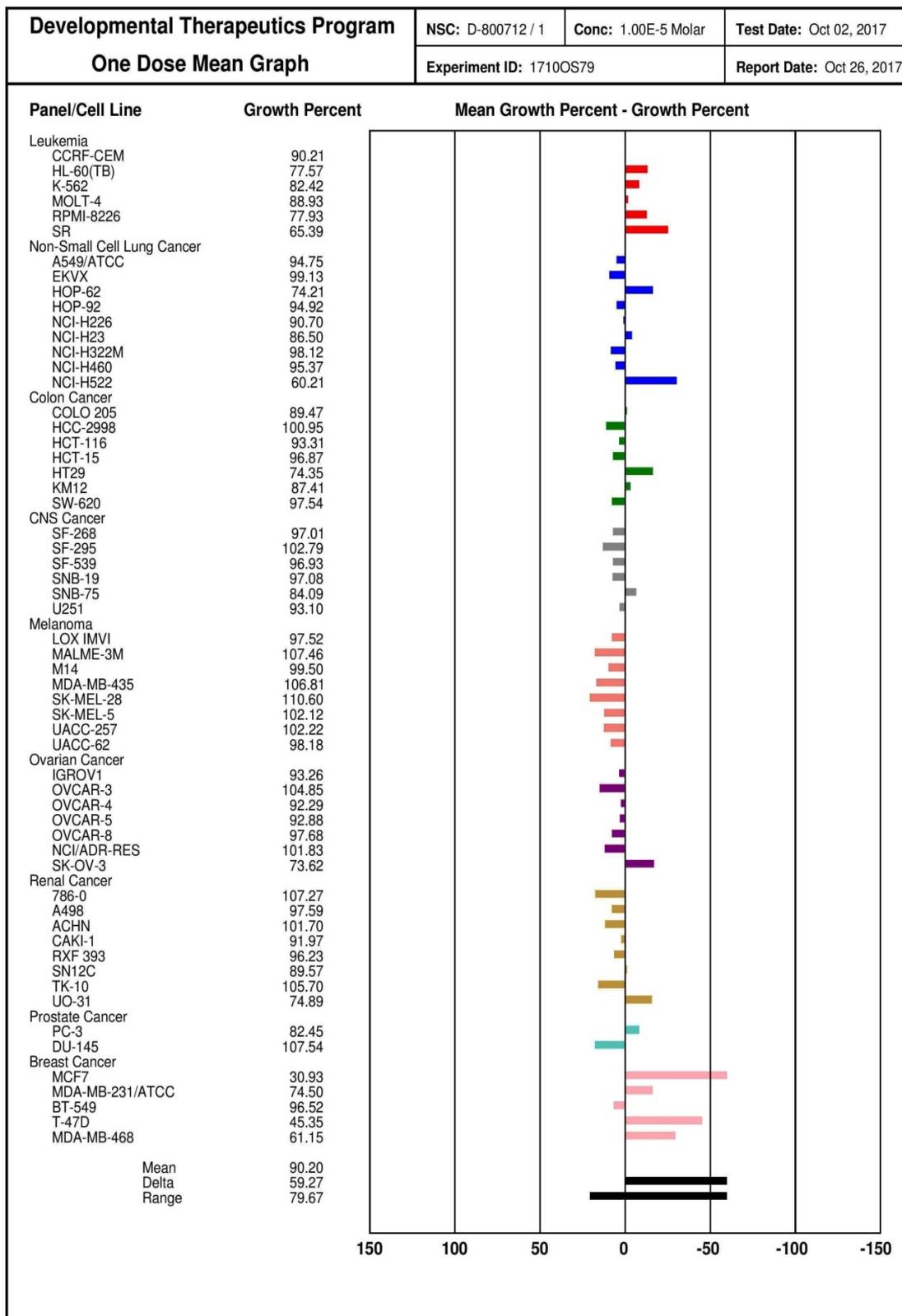
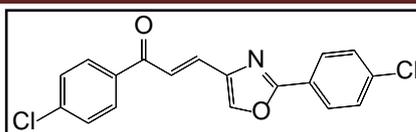
Sheet 7. One Dose Mean Graph of Compound 55e.

Appendix



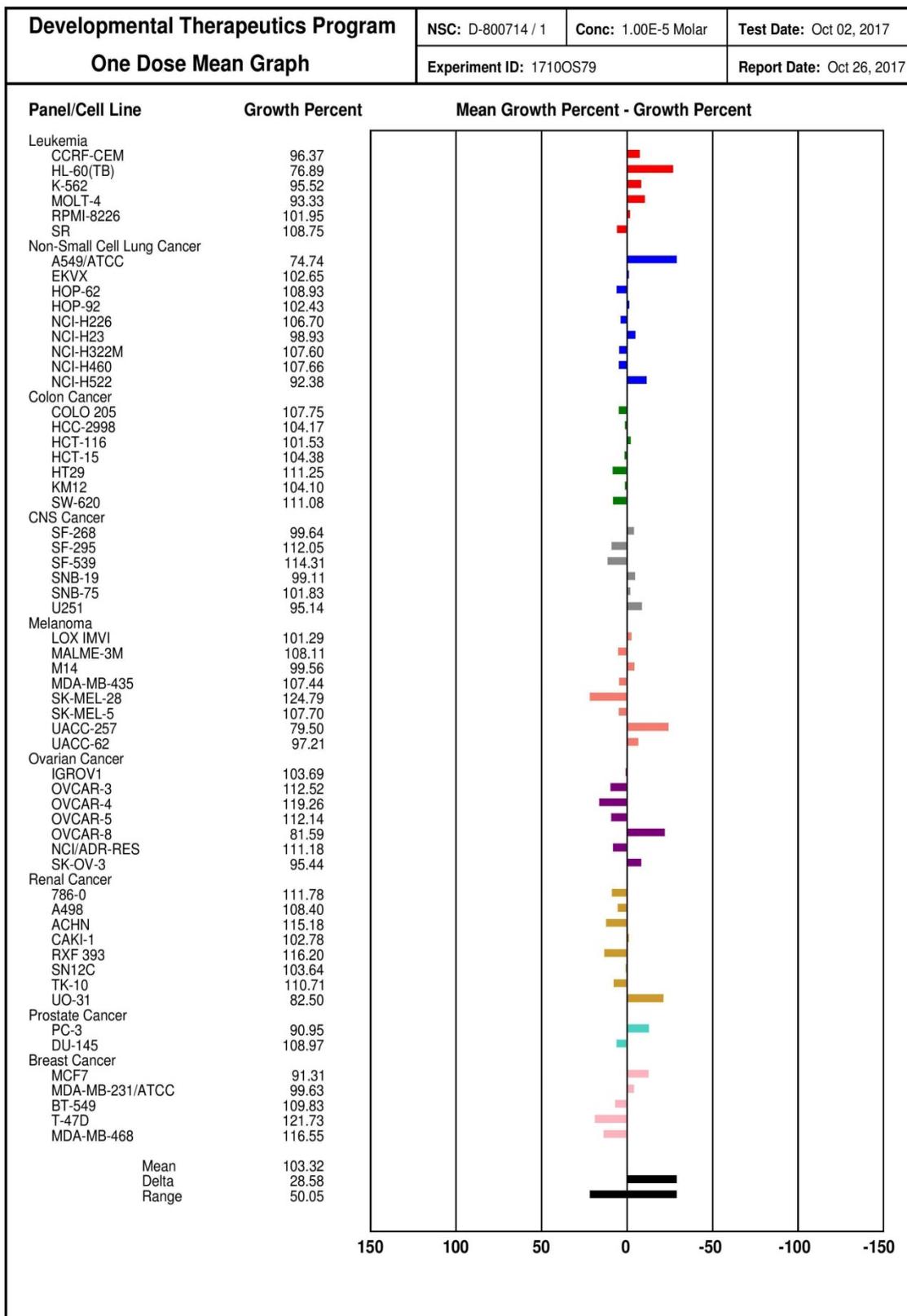
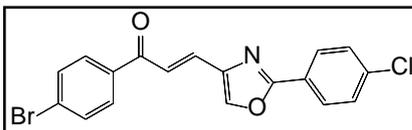
Sheet 8. One Dose Mean Graph of Compound 55g.

Appendix



Sheet 9. One Dose Mean Graph of Compound 55h.

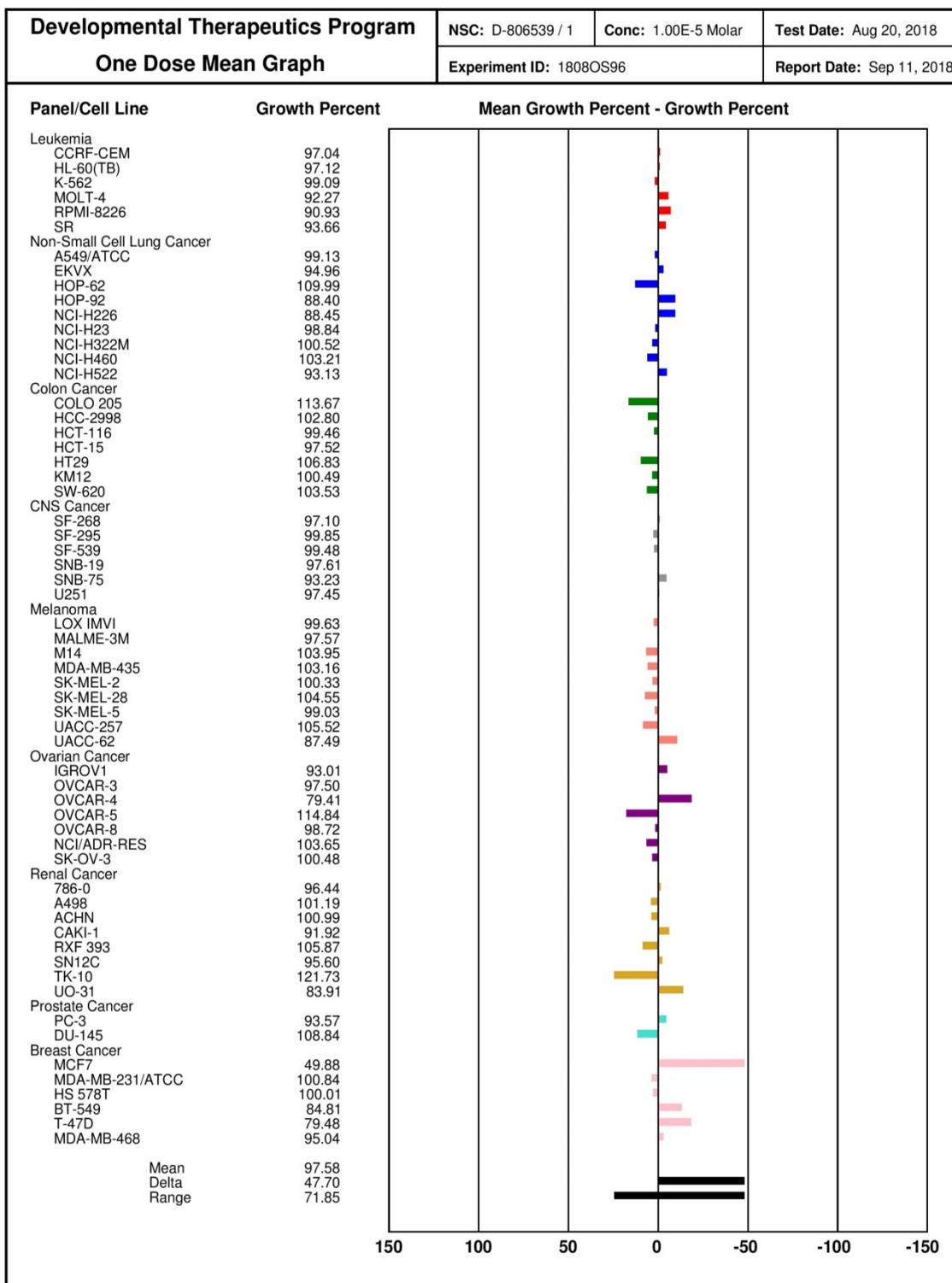
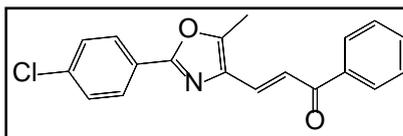
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Sheet 10. One Dose Mean Graph of Compound 55i.

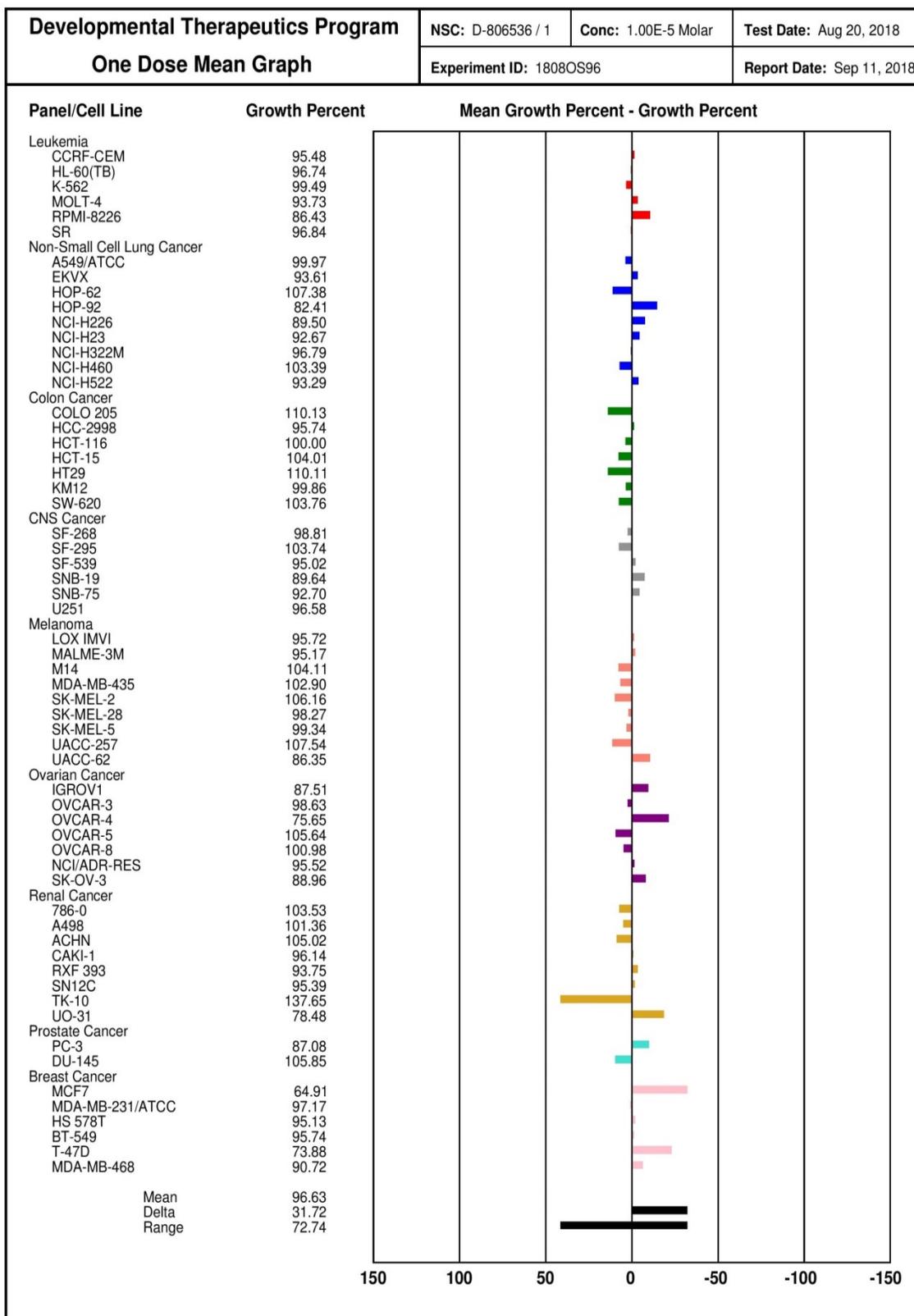
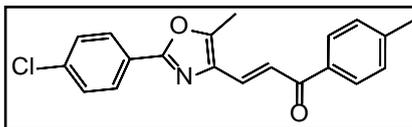
Appendix

Single Dose Anticancer Activity Results (Chapter-4):



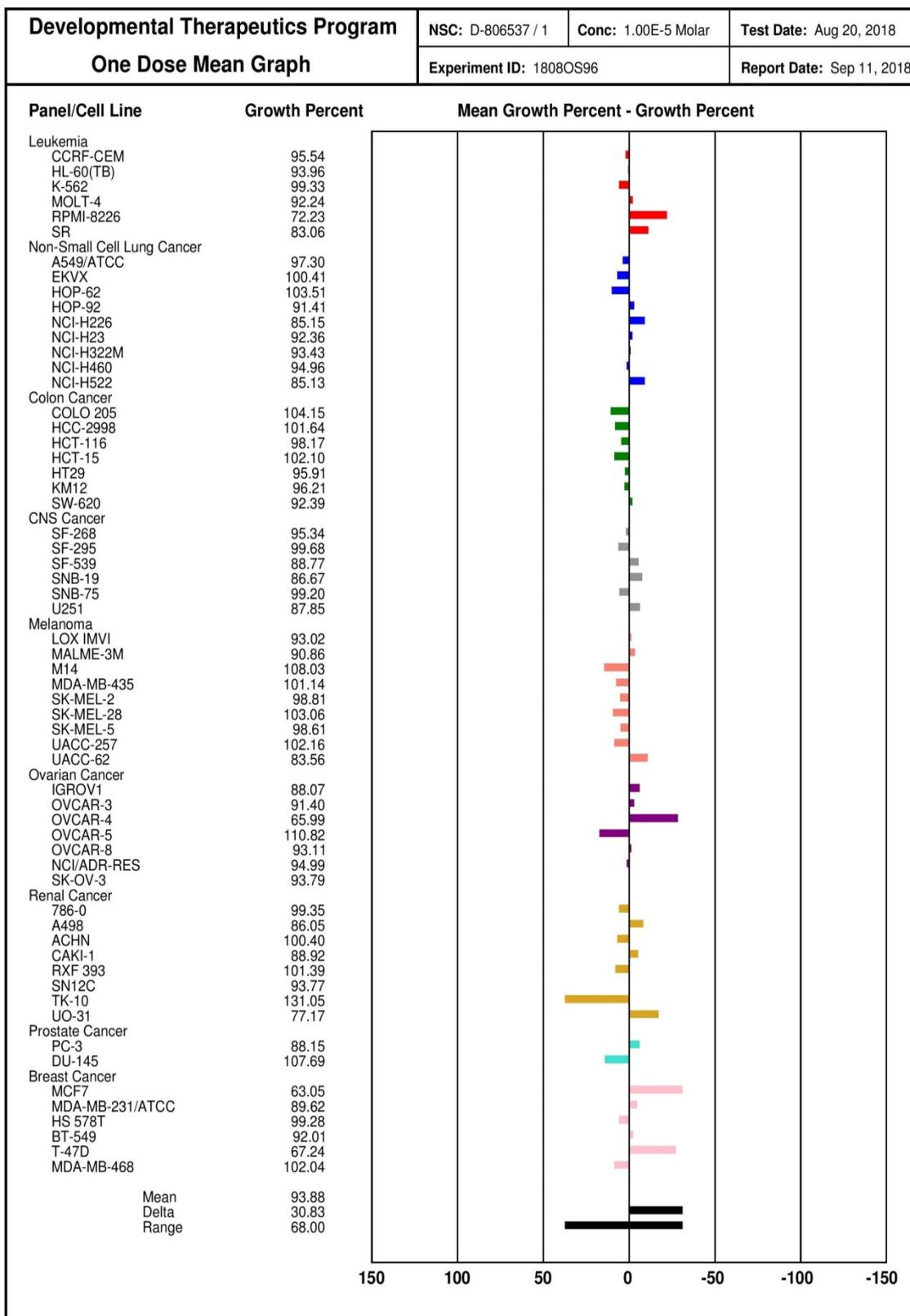
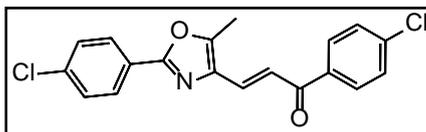
Sheet 11. One Dose Mean Graph of Compound 63a.

Appendix



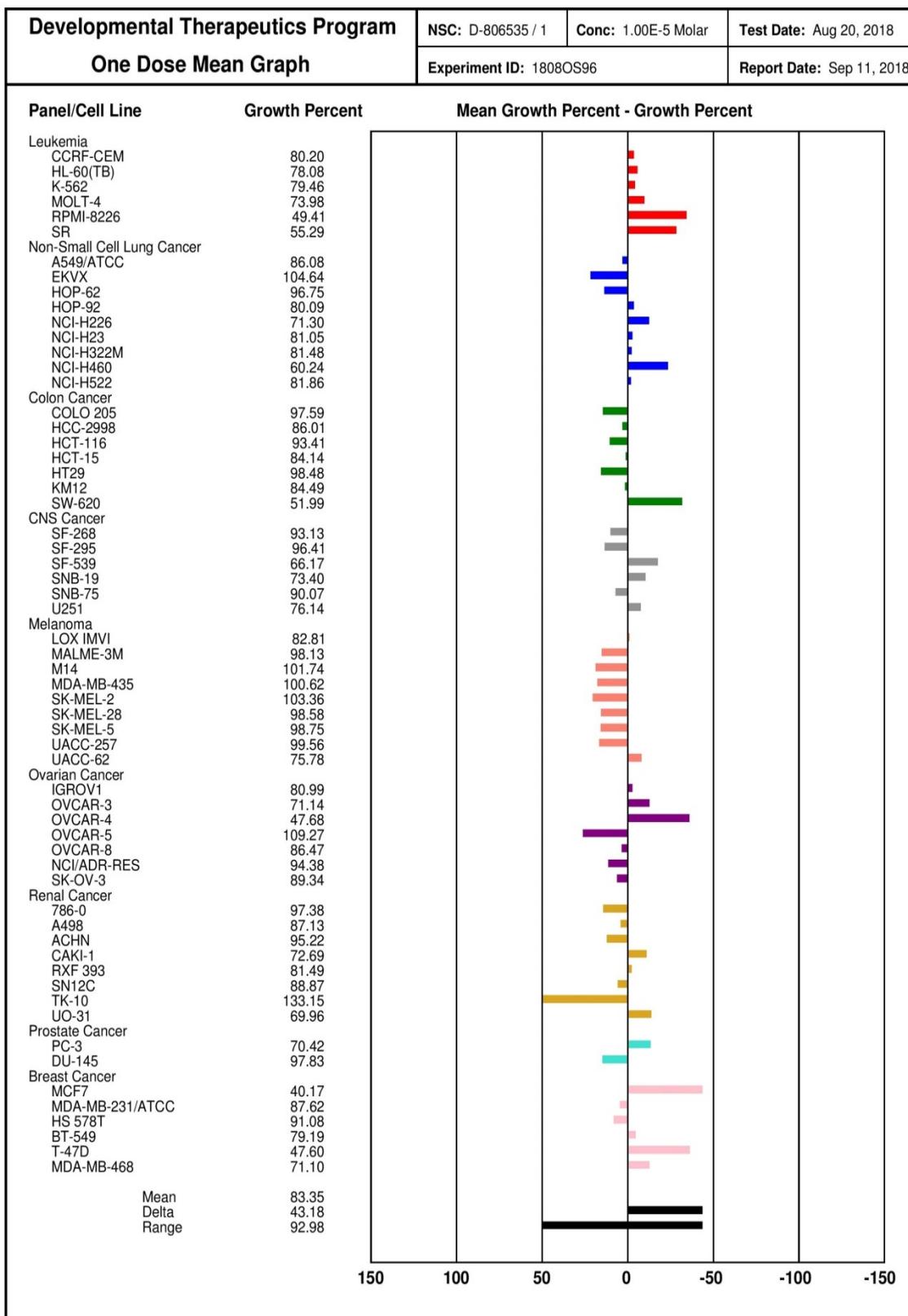
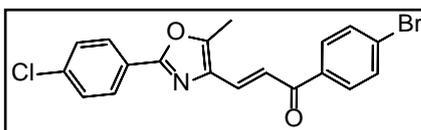
Sheet 12. One Dose Mean Graph of Compound 63b.

Appendix



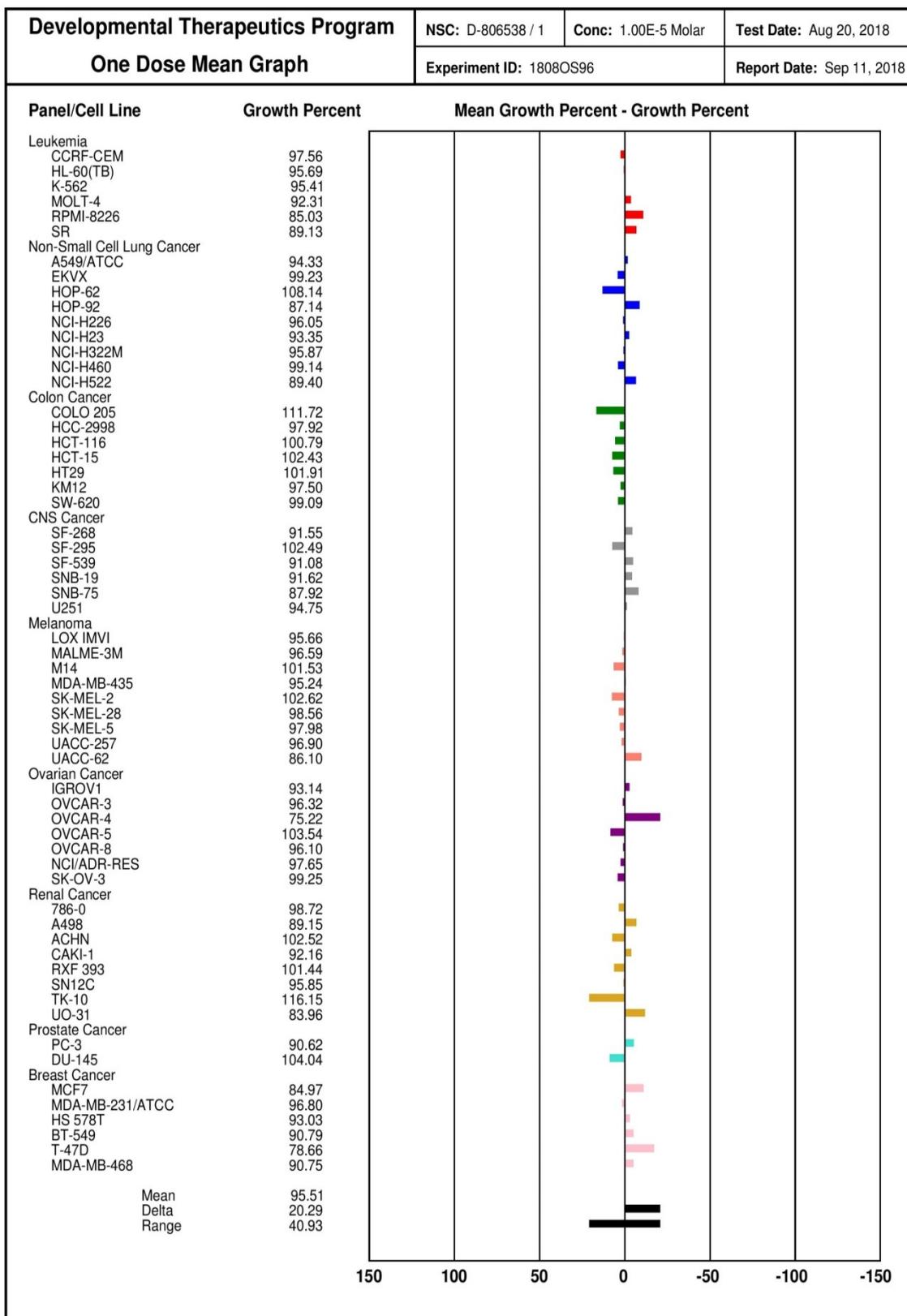
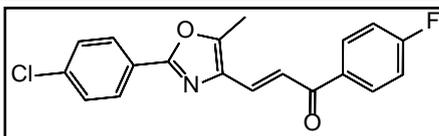
Sheet 13. One Dose Mean Graph of Compound 63c.

Appendix



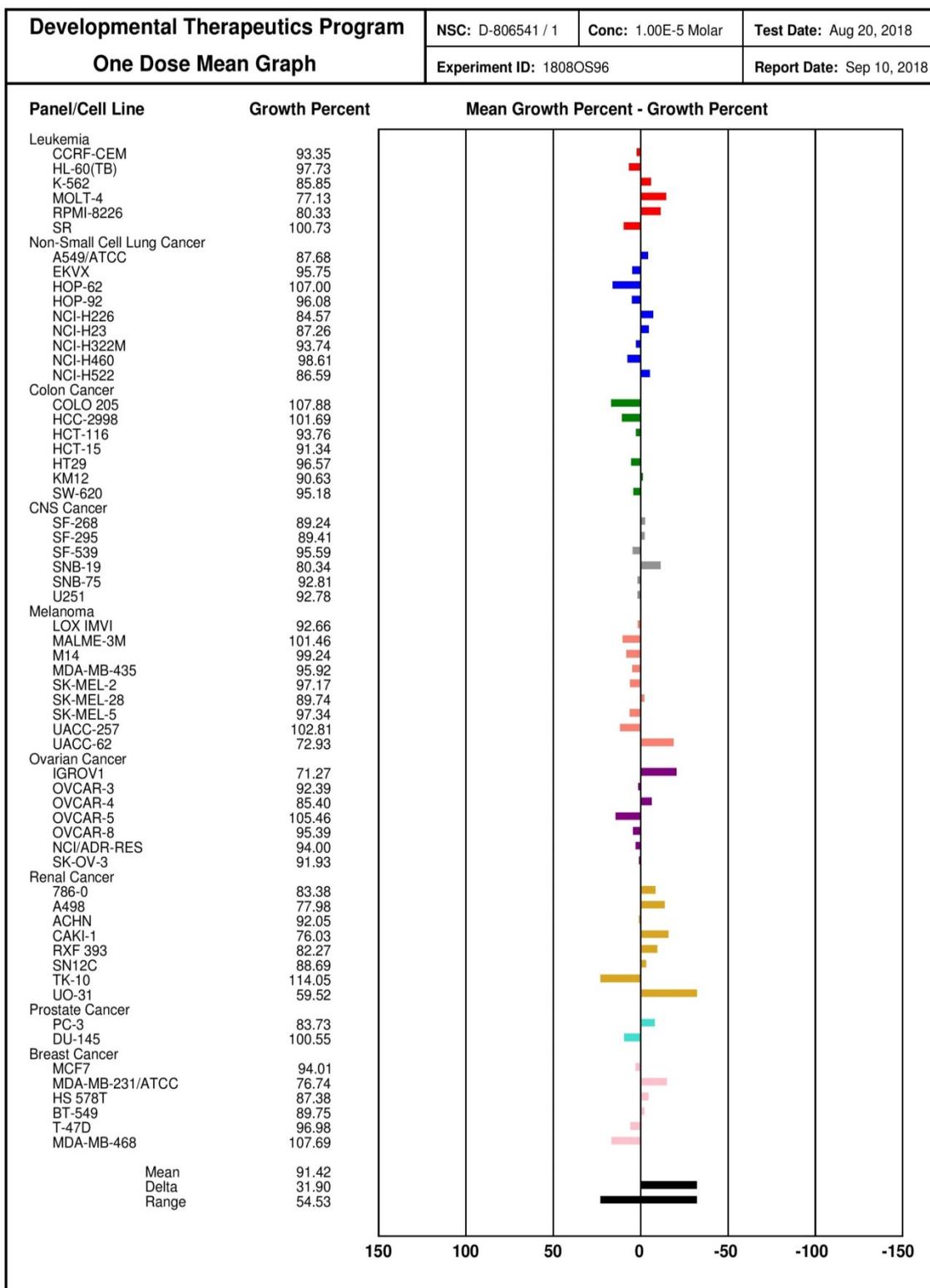
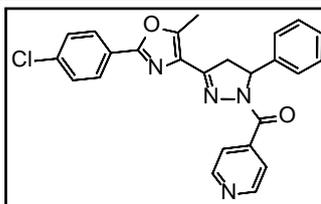
Sheet 14. One Dose Mean Graph of Compound 63d.

Appendix



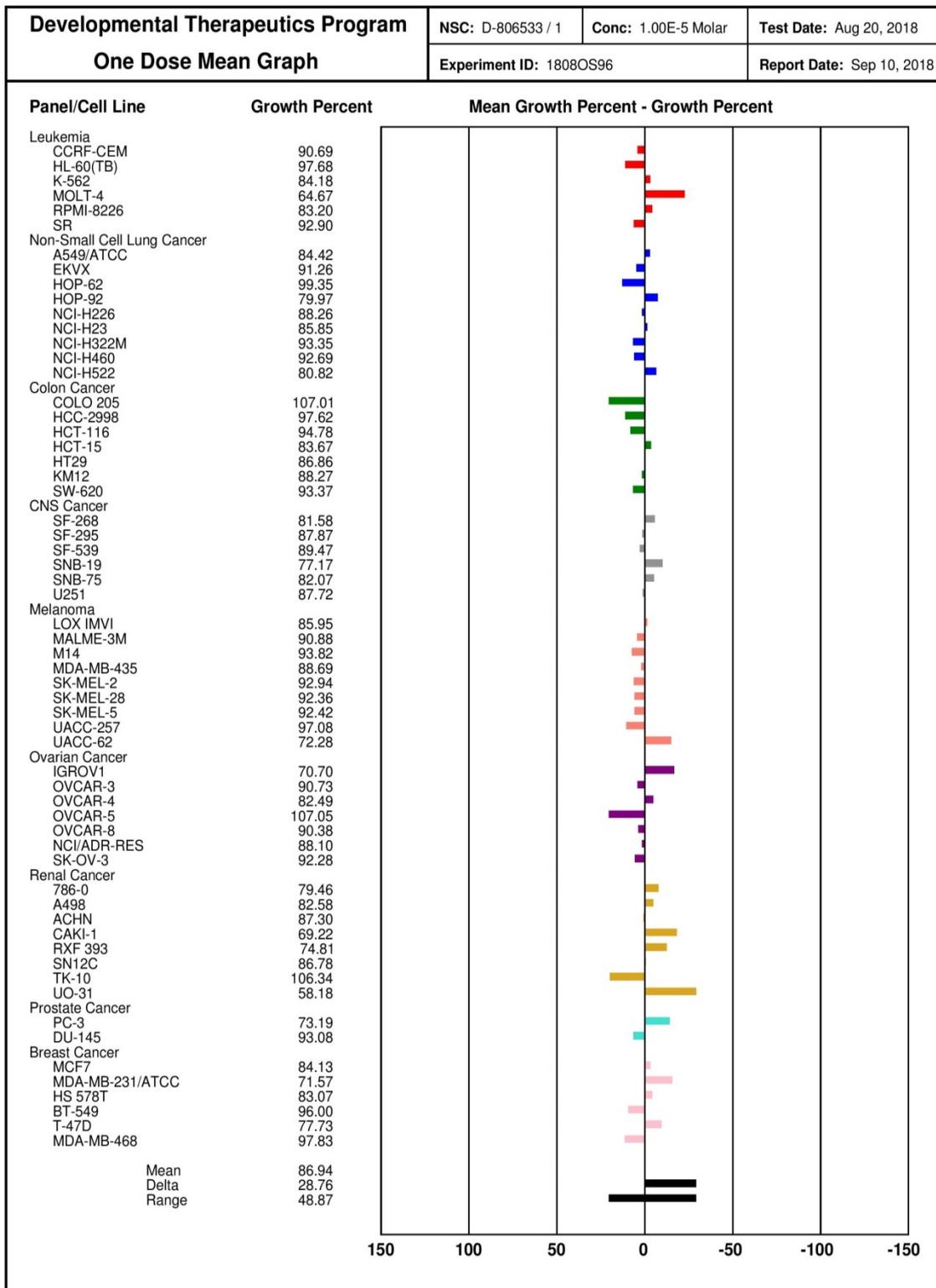
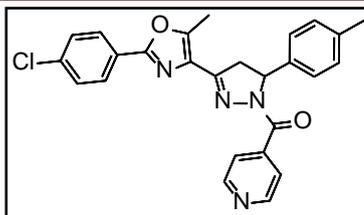
Sheet 15. One Dose Mean Graph of Compound 63e.

Appendix



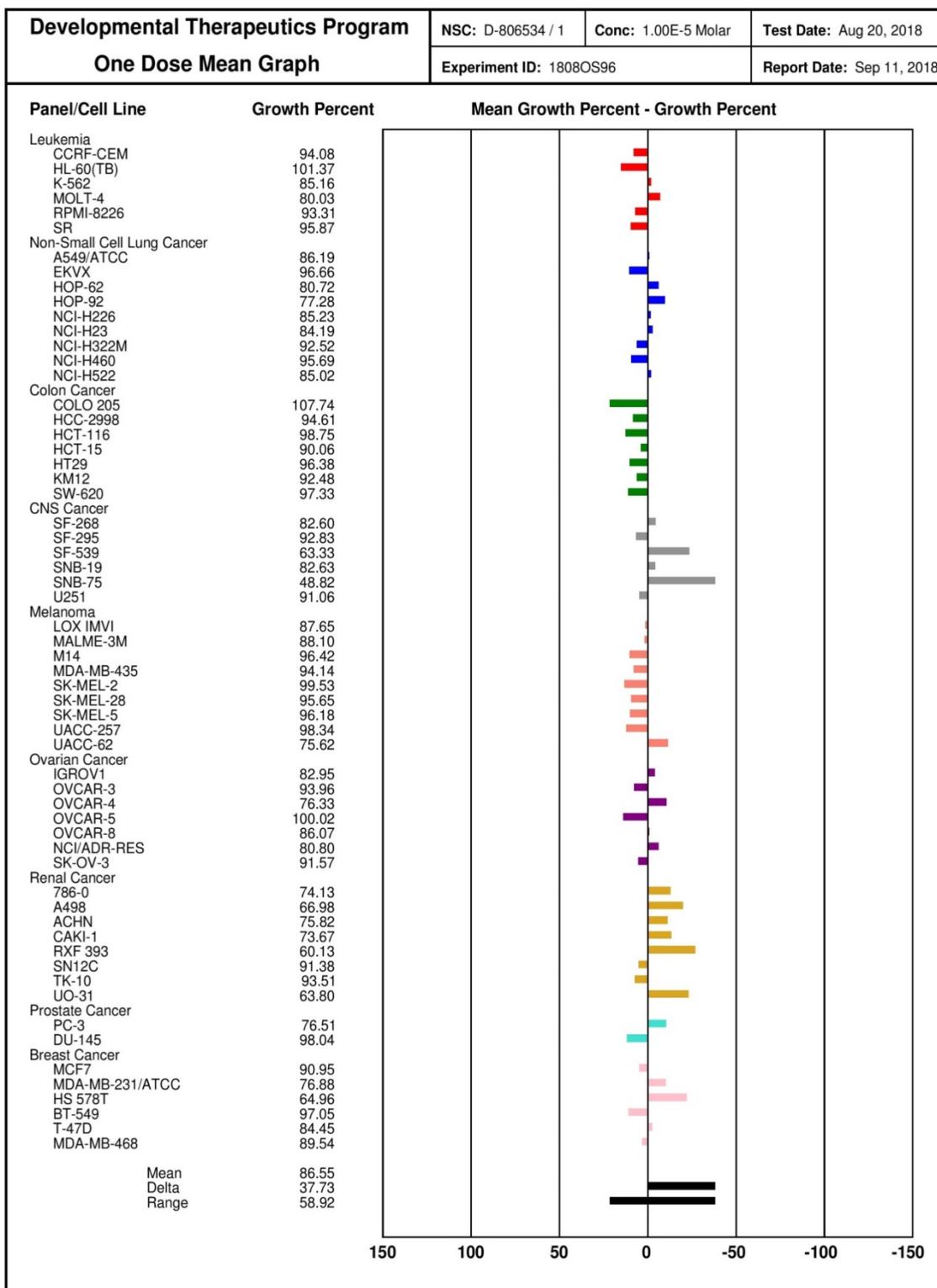
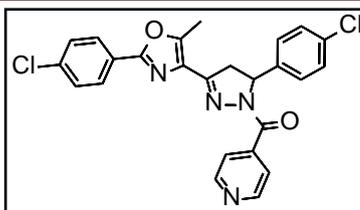
Sheet 16. One Dose Mean Graph of Compound 65a.

Appendix



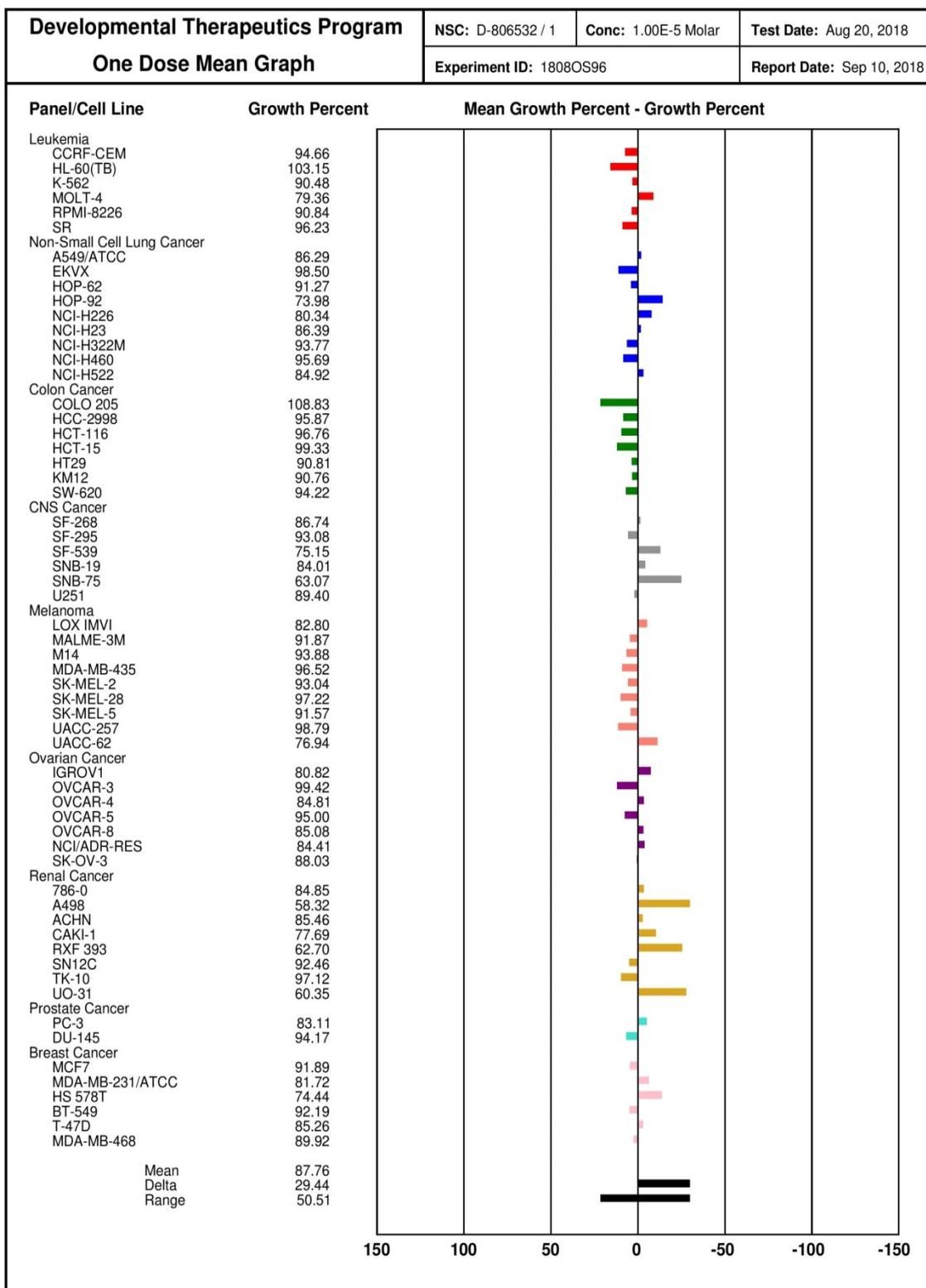
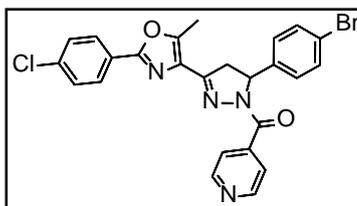
Sheet 17. One Dose Mean Graph of Compound 65b.

Appendix



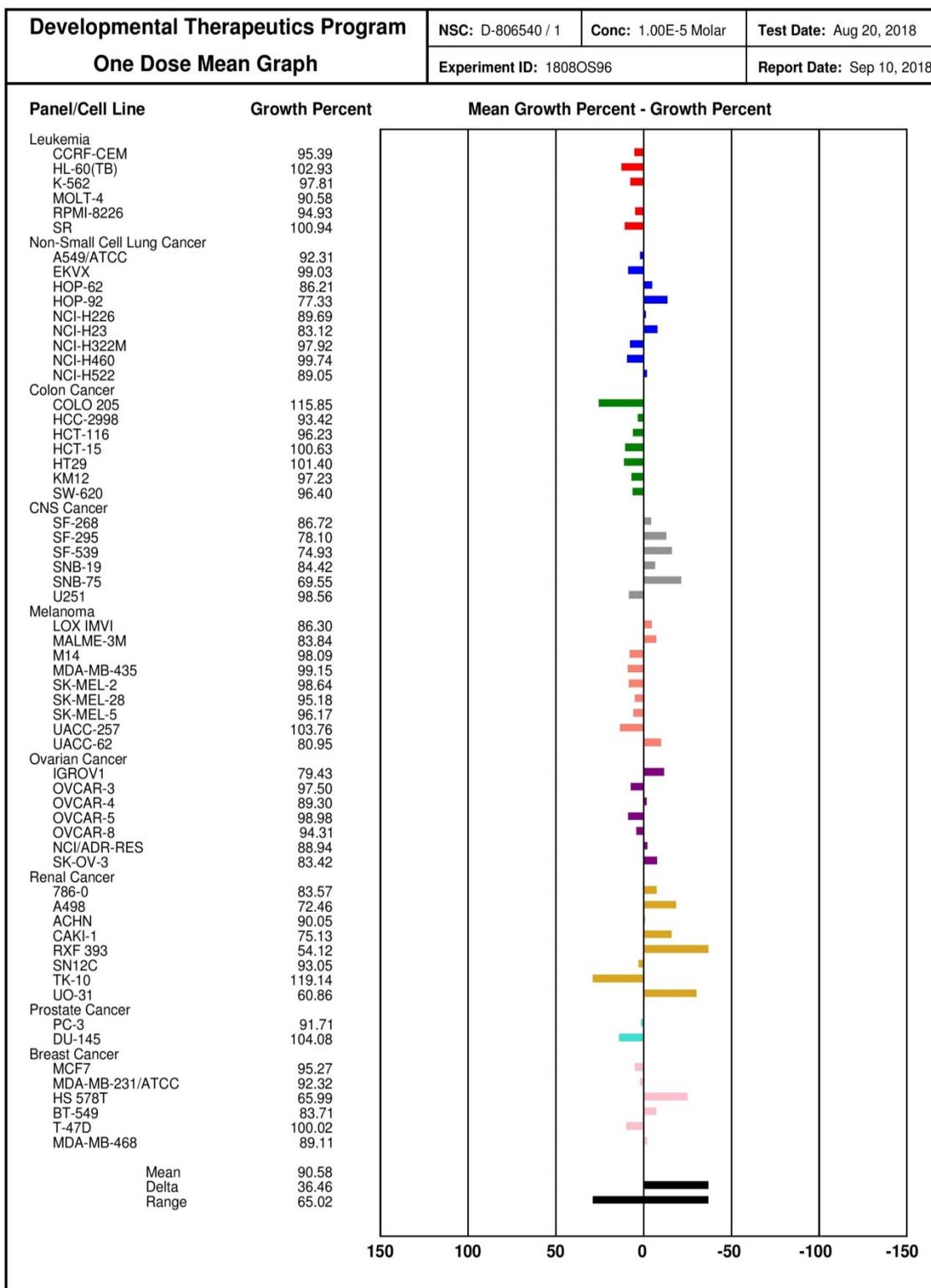
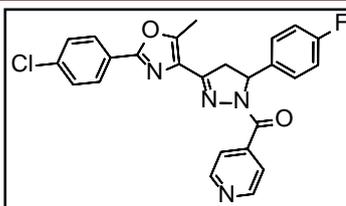
Sheet 18. One Dose Mean Graph of Compound 65c.

Appendix



Sheet 19. One Dose Mean Graph of Compound 65d.

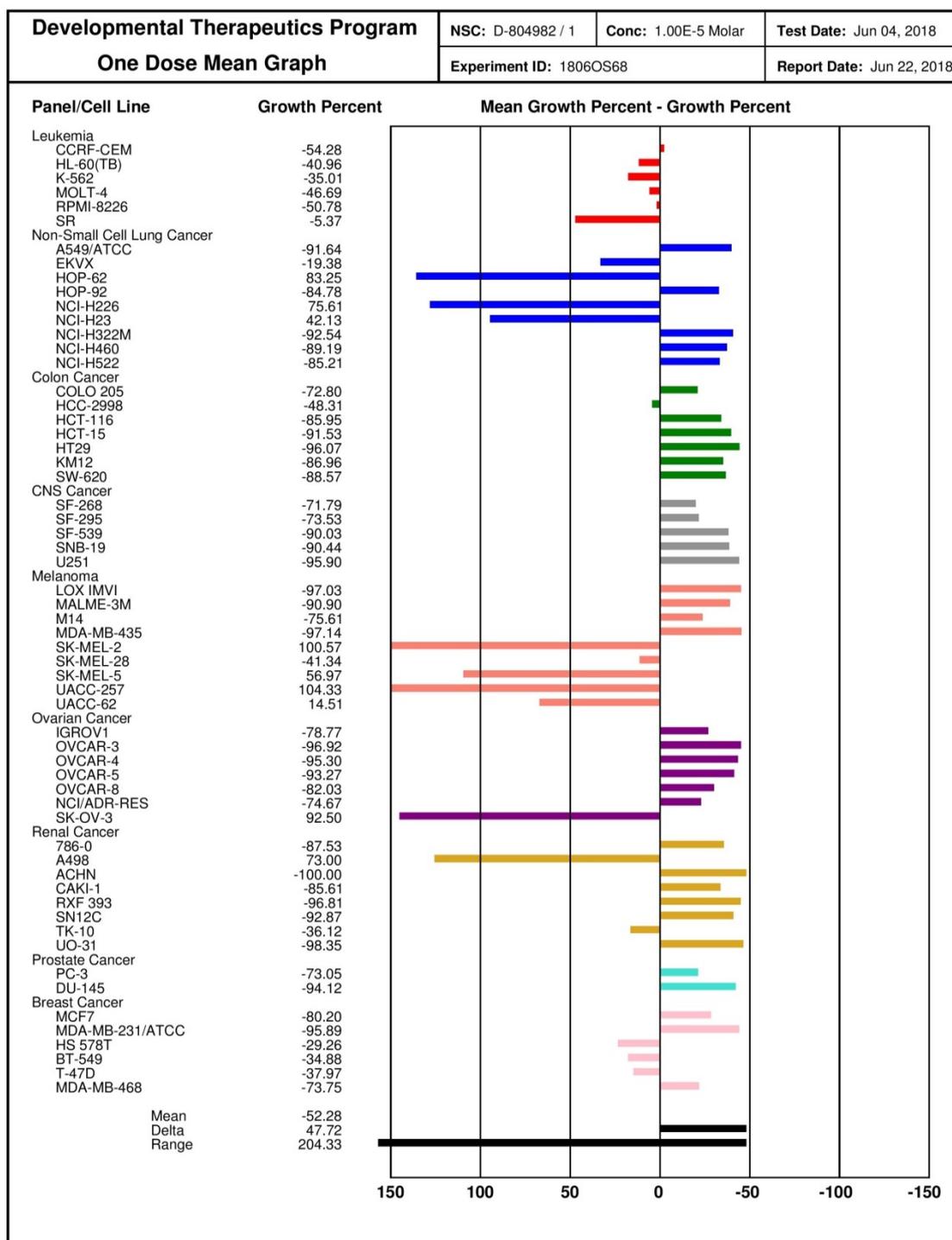
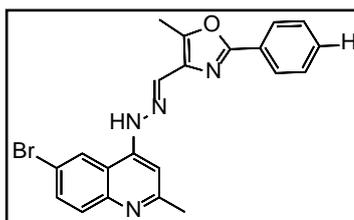
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Sheet 20. One Dose Mean Graph of Compound 65e.

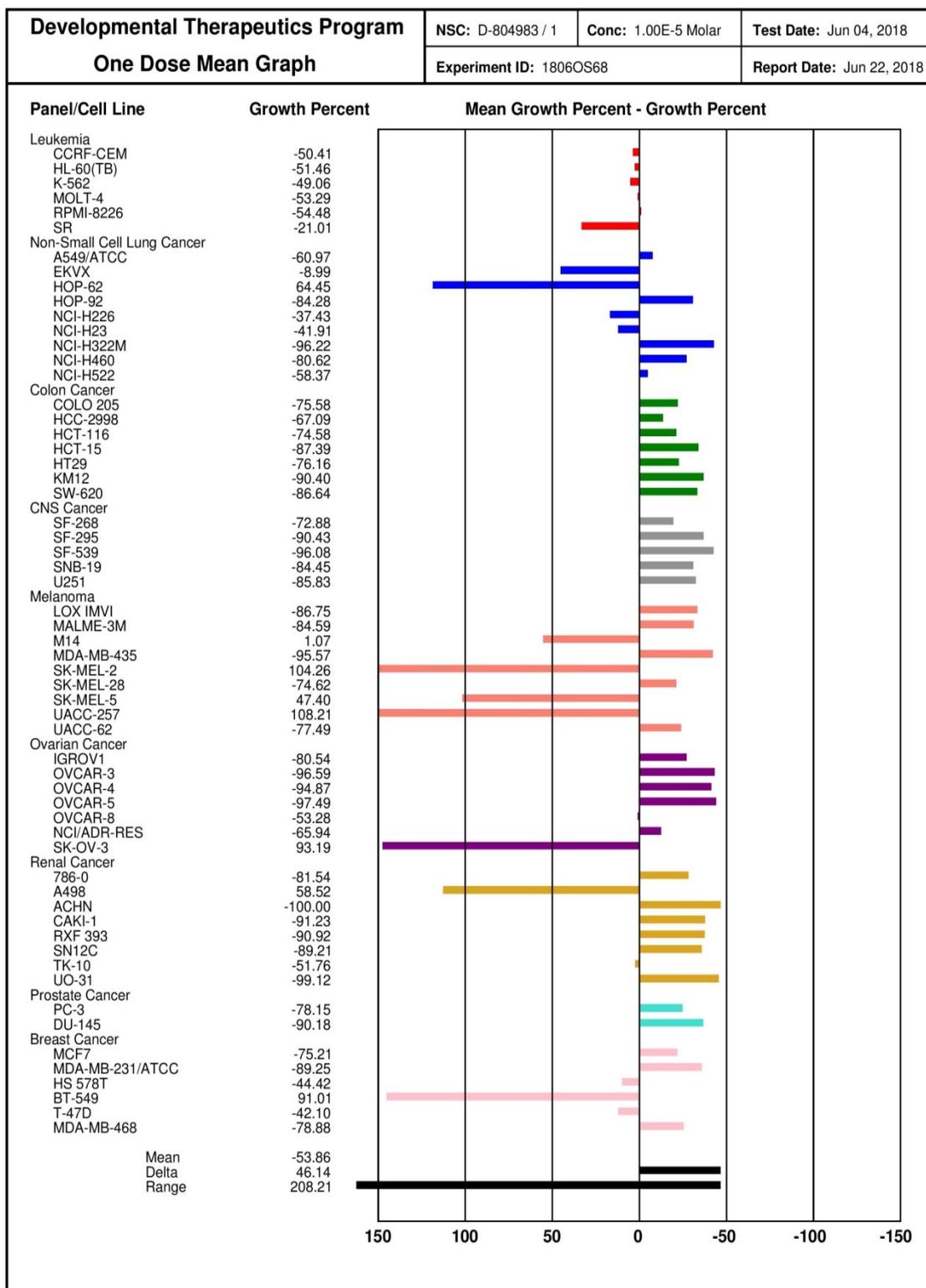
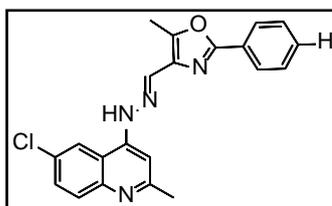
Appendix

Single Dose Anticancer Activity Results (Chapter-6A):



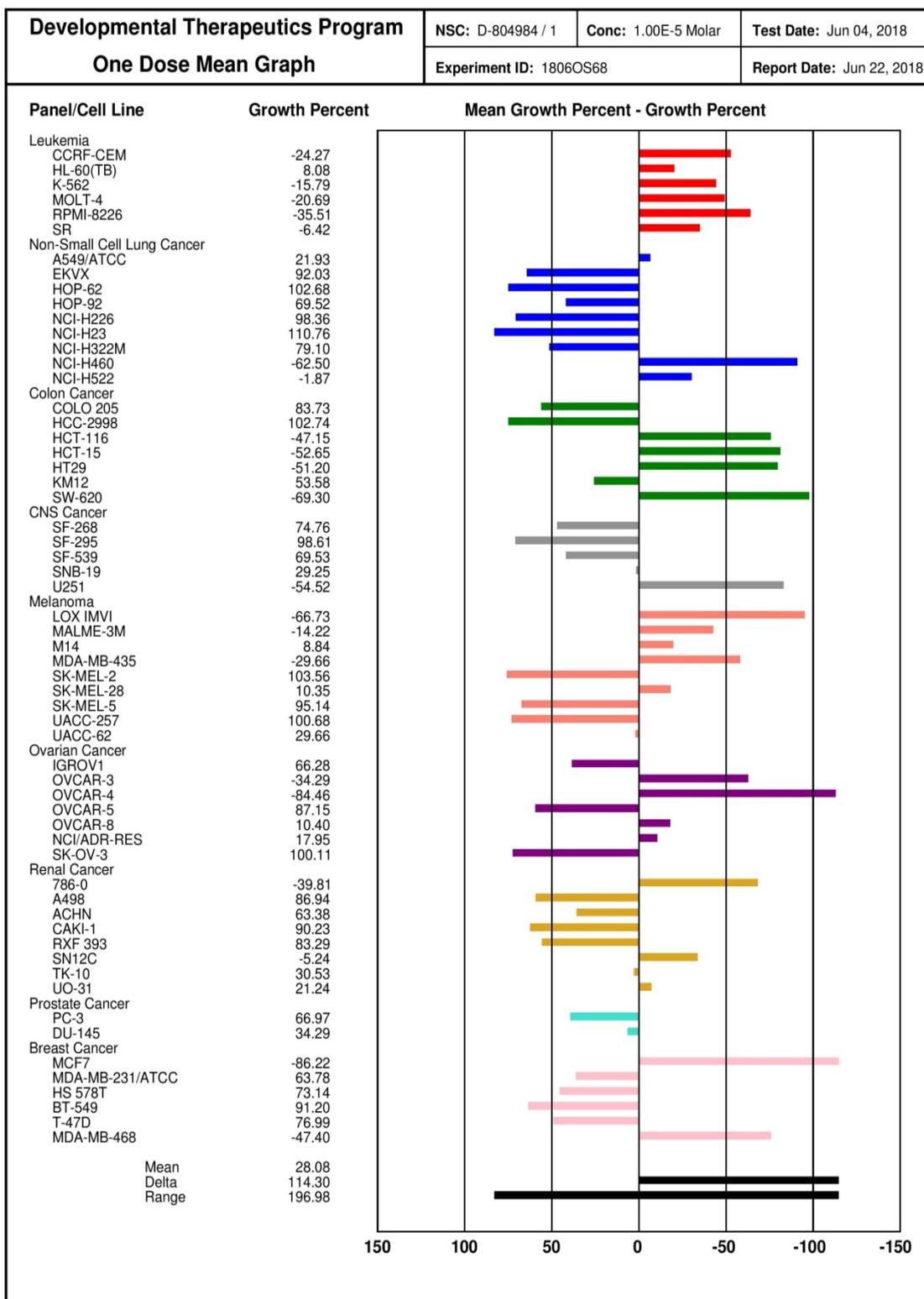
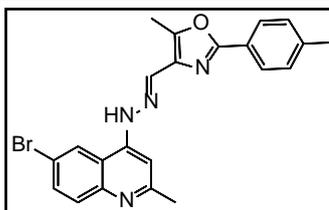
Sheet 21. One Dose Mean Graph of Compound 31a.

Appendix



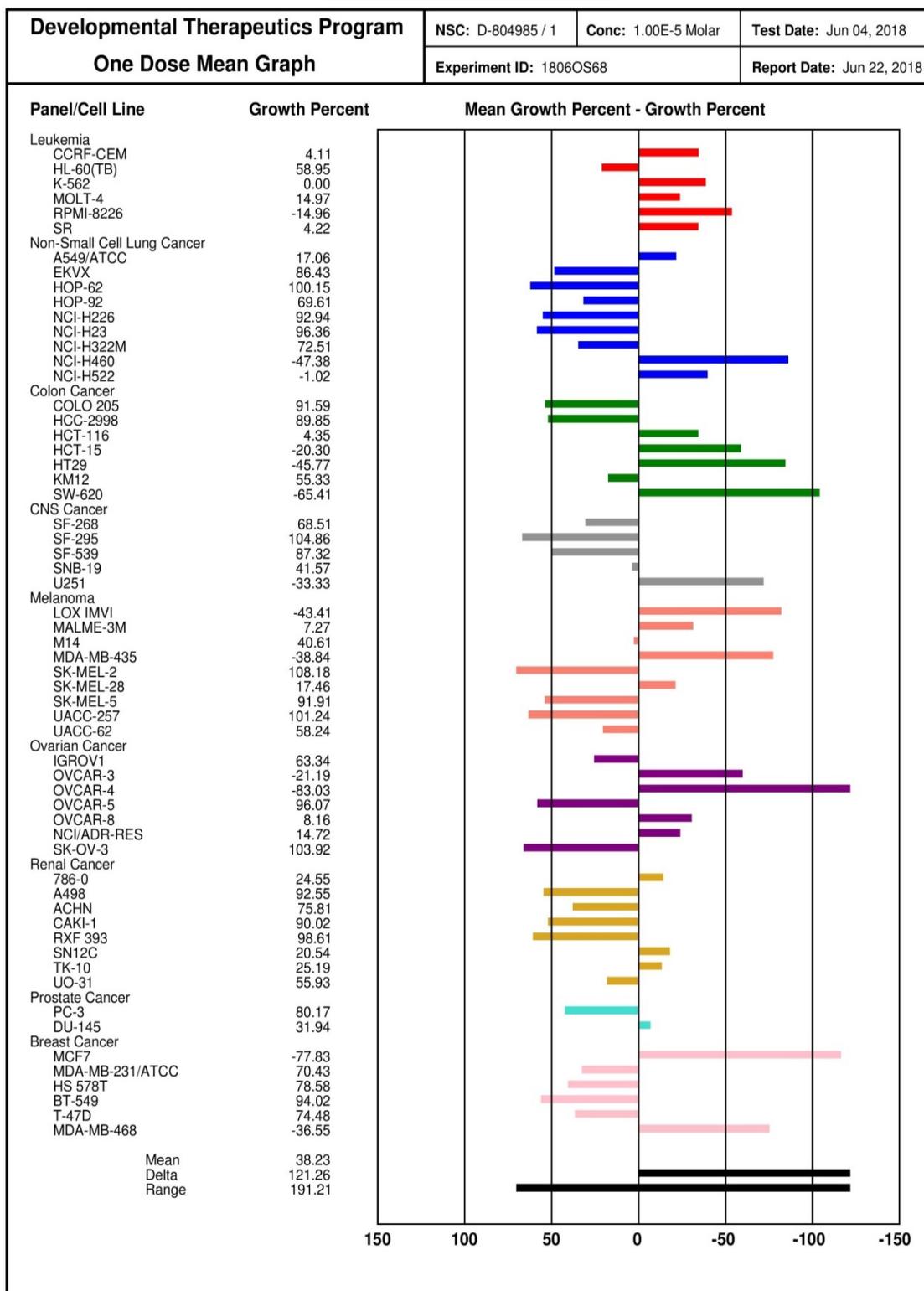
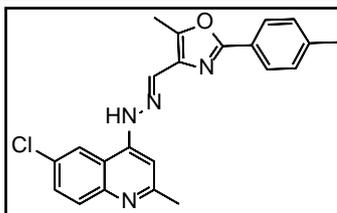
Sheet 22. One Dose Mean Graph of Compound 31b.

Appendix



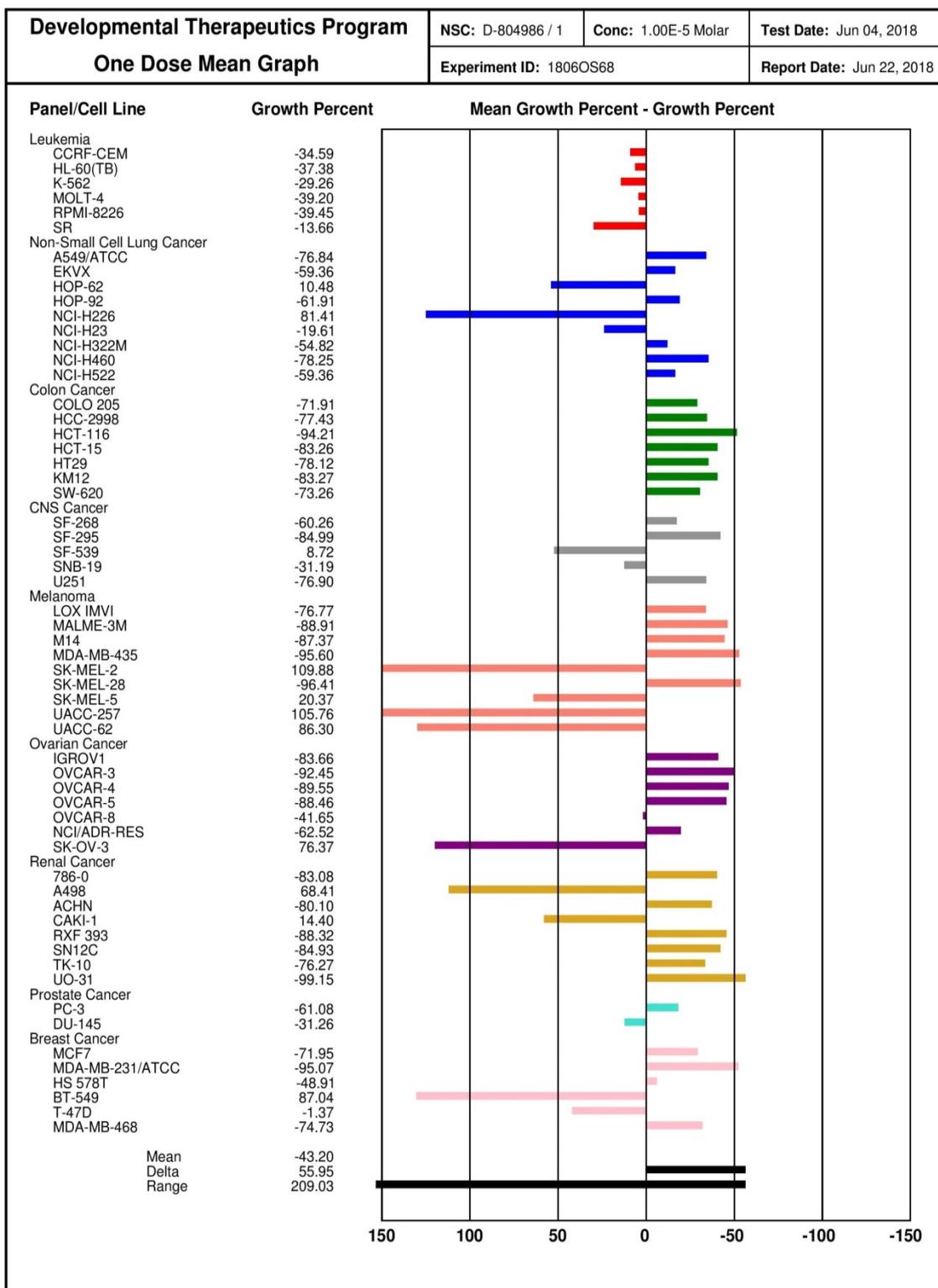
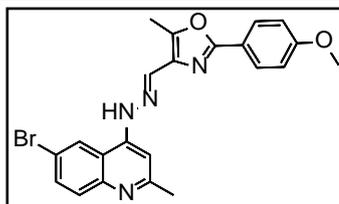
Sheet 23. One Dose Mean Graph of Compound 31c.

Appendix



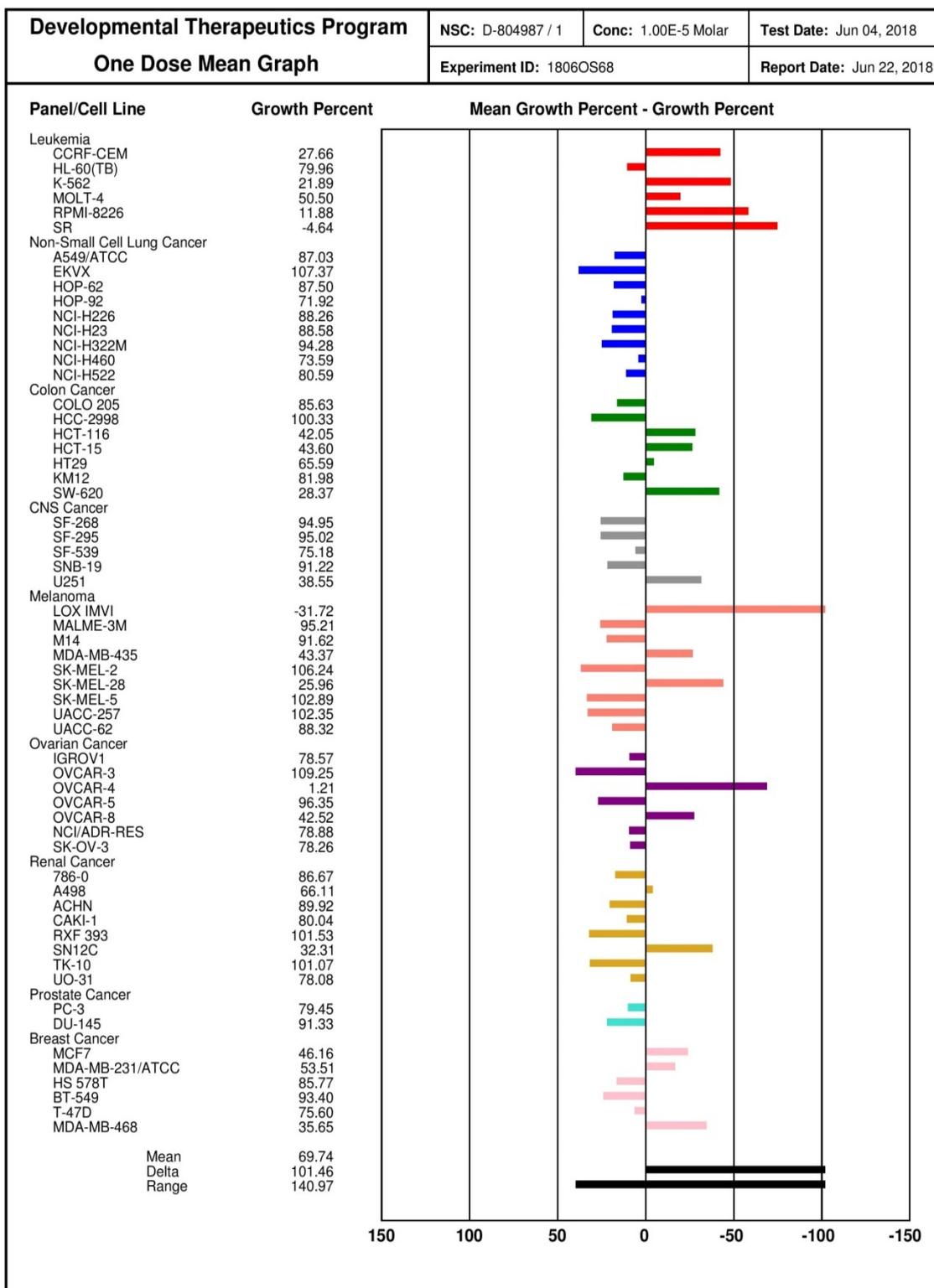
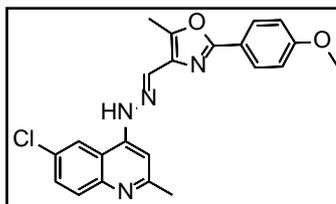
Sheet 24. One Dose Mean Graph of Compound 31d.

Appendix



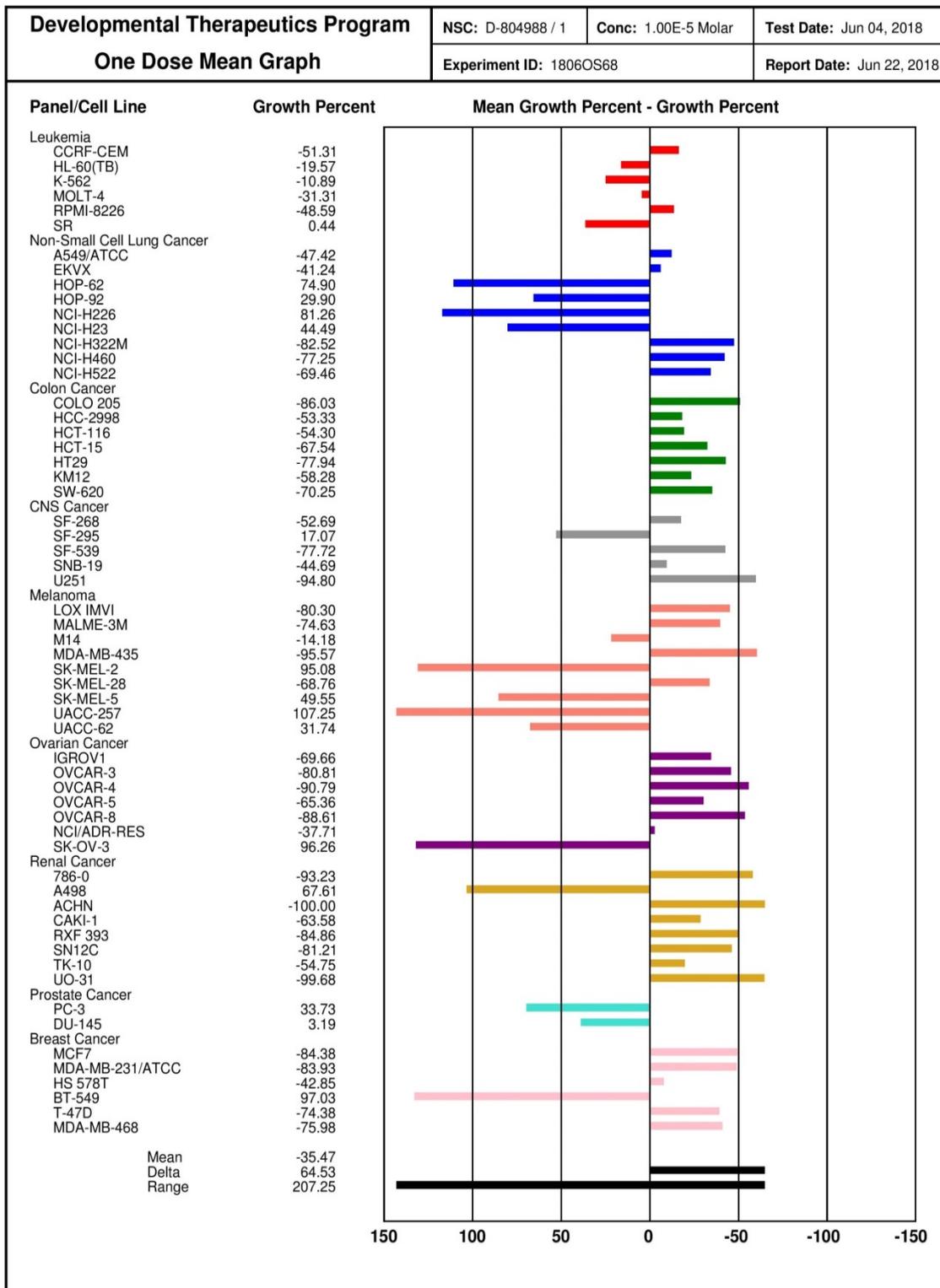
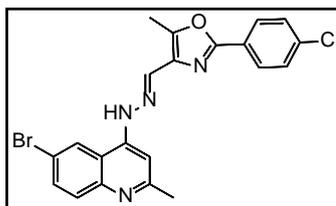
Sheet 25. One Dose Mean Graph of Compound 31e.

Appendix



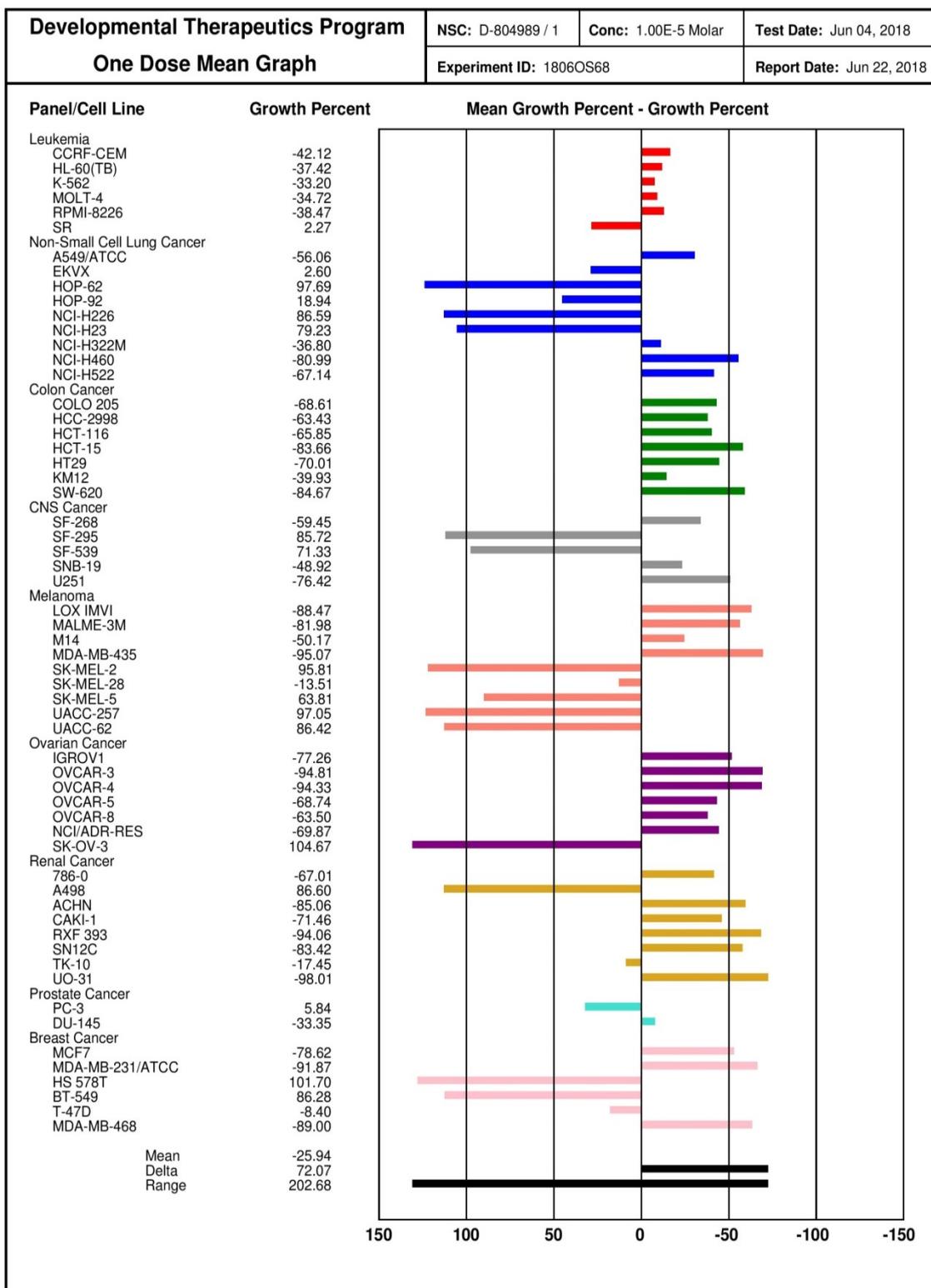
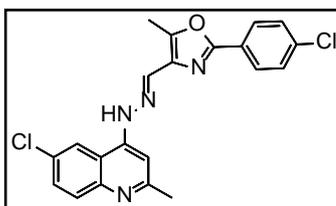
Sheet 26. One Dose Mean Graph of Compound 31f.

Appendix



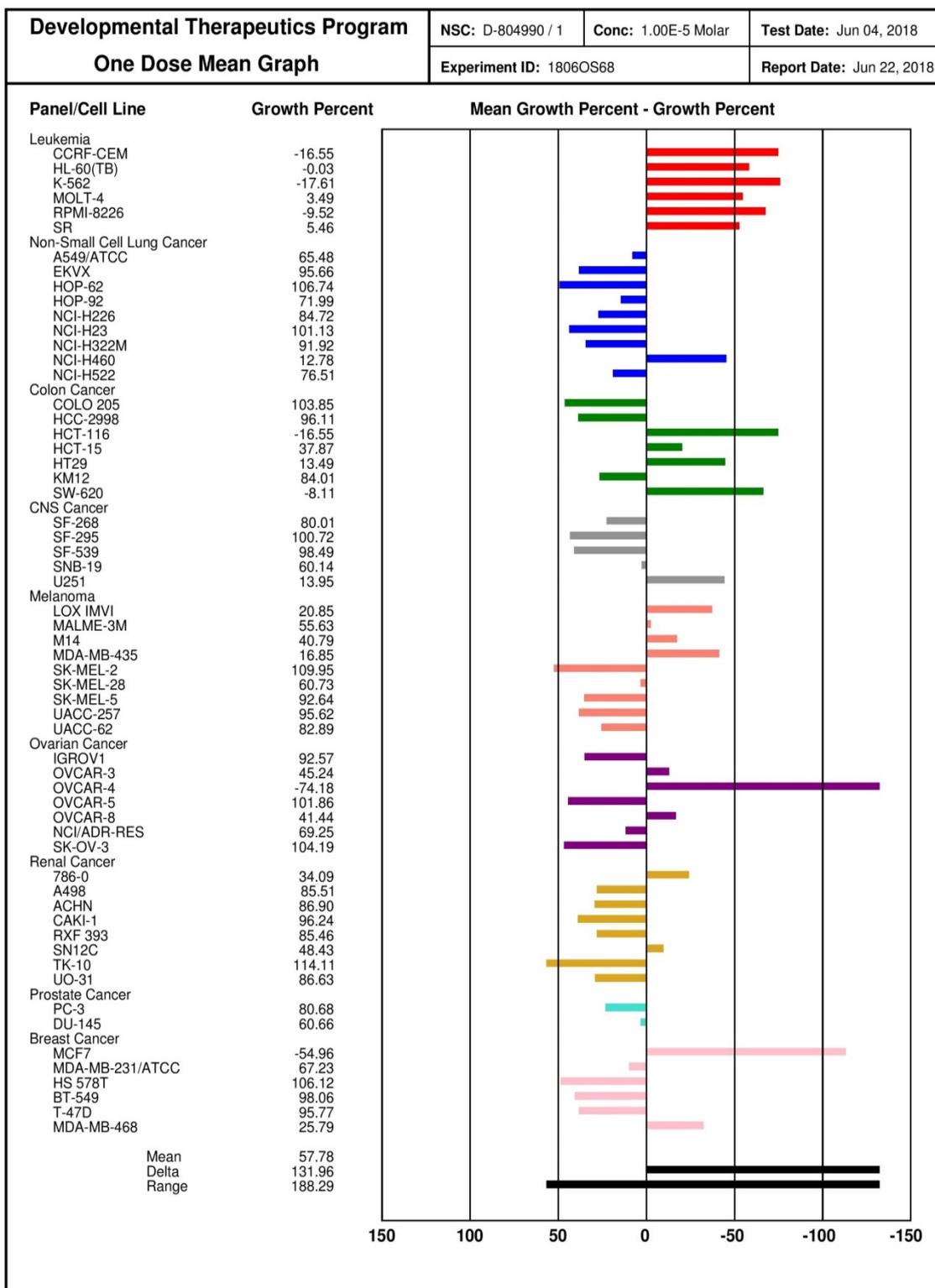
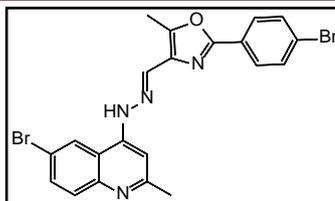
Sheet 27. One Dose Mean Graph of Compound 31g.

Appendix



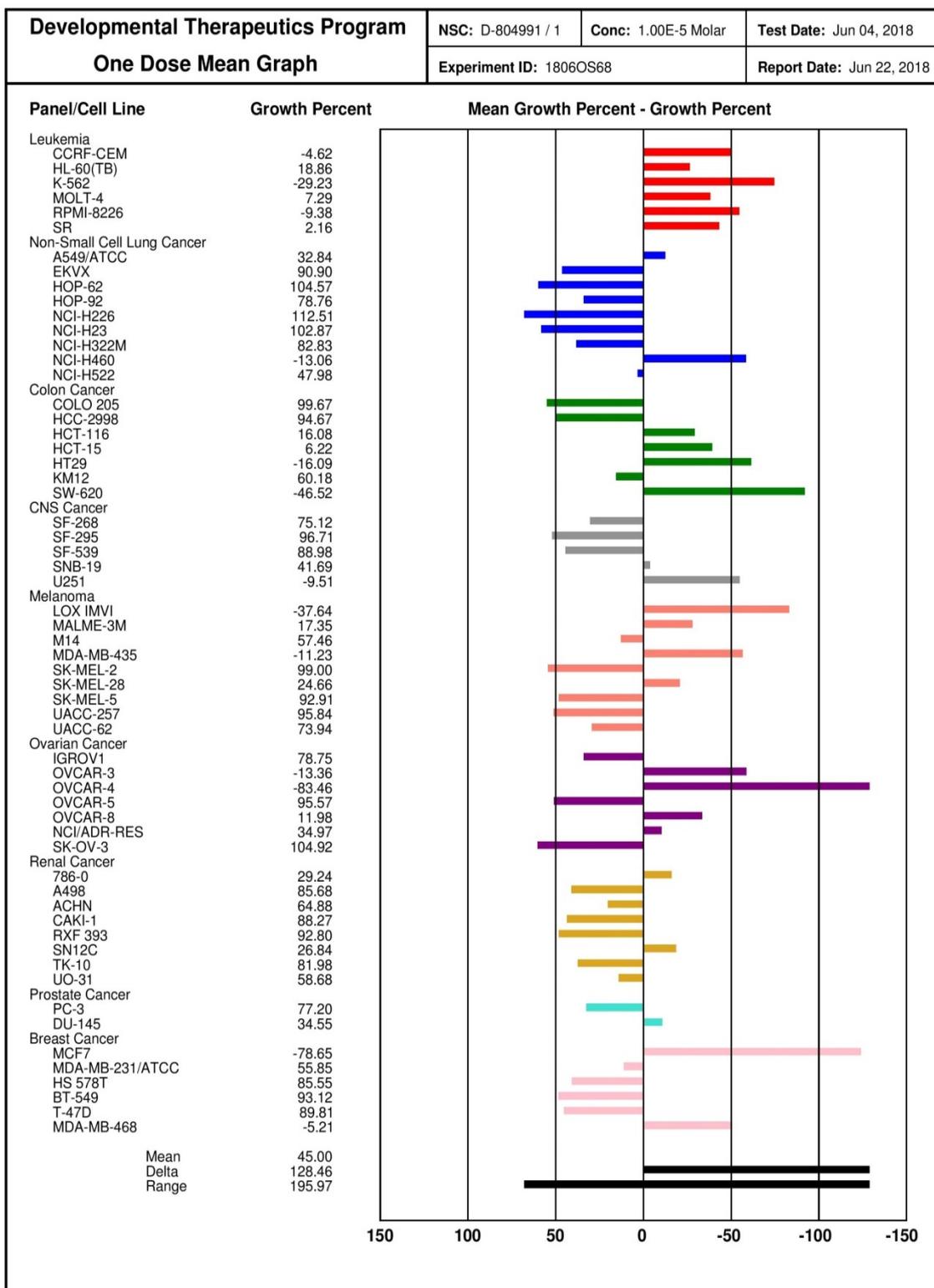
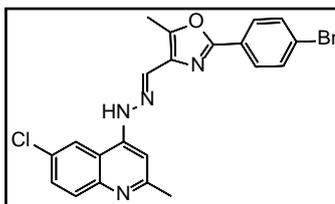
Sheet 28. One Dose Mean Graph of Compound 31h.

Appendix



Sheet 29. One Dose Mean Graph of Compound 31i.

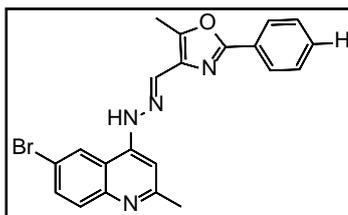
Appendix



Sheet 30. One Dose Mean Graph of Compound 31j.

Appendix

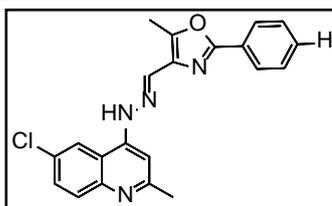
Five Dose Anticancer Activity Results (Chapter-6A):



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results															
NSC : D - 804982 / 1			Experiment ID : 1808NS91					Test Type : 08			Units : Molar				
Report Date : September 11, 2018			Test Date : August 20, 2018					QNS :			MC :				
COMI : KISQ-01			Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M							
Panel/Cell Line	Time Zero	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			
Leukemia															
CCRF-CEM	0.514	3.147	3.094	3.107	2.650	0.280	0.613	98	98	81	-46	4	1.76E-6		> 1.00E-4
HL-60(TB)	0.950	3.260	3.188	3.180	2.994	0.380	0.599	97	97	88	-60	-37	1.82E-6	3.94E-6	
K-562	0.194	2.450	2.225	2.375	0.419	0.052	0.253	90	97	10	-73	3	3.45E-7		
MOLT-4	0.584	2.973	2.877	2.942	2.766	0.228	0.561	96	99	91	-61	-4	1.87E-6	3.98E-6	
RPMI-8226	0.702	2.762	2.688	2.689	2.504	0.307	0.581	96	96	87	-56	-17	1.82E-6	4.06E-6	
SR	0.331	1.854	1.838	1.778	0.426	0.210	0.371	99	95	6	-37	3	3.21E-7		> 1.00E-4
Non-Small Cell Lung Cancer															
A549/ATCC	0.490	2.561	2.494	2.415	2.397	0.076	0.202	97	93	92	-85	-59	1.73E-6	3.32E-6	6.37E-6
EKVX	1.218	2.805	2.754	2.816	2.806	0.080	0.004	97	101	100	-93	-100	1.81E-6	3.29E-6	5.96E-6
HOP-62	0.494	1.802	1.641	1.666	1.656	0.045	0.076	88	90	89	-91	-85	1.64E-6	3.12E-6	5.92E-6
HOP-92	1.128	1.796	1.636	1.745	1.662	0.130	0.175	76	92	80	-88	-85	1.50E-6	2.98E-6	5.91E-6
NCI-H226	1.178	2.911	2.928	3.054	2.992	0.676	0.849	101	108	105	-43	-28	2.35E-6	5.14E-6	> 1.00E-4
NCI-H23	0.719	2.661	2.668	2.713	2.623	0.272	0.255	100	103	98	-62	-65	1.99E-6	4.09E-6	8.39E-6
NCI-H322M	0.643	2.023	1.935	2.019	1.923	0.014	0.021	94	100	93	-98	-97	1.68E-6	3.07E-6	5.61E-6
NCI-H460	0.239	2.594	2.590	2.647	2.558	0.041	0.110	100	102	98	-83	-54	1.85E-6	3.49E-6	6.59E-6
NCI-H522	0.738	2.238	2.125	2.180	2.145	0.230	0.398	92	96	94	-69	-46	1.86E-6	3.77E-6	
Colon Cancer															
COLO 205	0.323	1.684	1.573	1.604	1.500	0.047	0.061	92	94	86	-86	-81	1.63E-6	3.18E-6	6.21E-6
HCC-2998	0.762	2.748	2.716	2.814	2.768	0.081	0.149	98	103	101	-89	-80	1.85E-6	3.39E-6	6.21E-6
HCT-116	0.459	3.193	3.252	3.201	3.226	0.022	0.068	102	100	101	-95	-85	1.82E-6	3.27E-6	5.88E-6
HCT-15	0.310	1.858	1.728	1.849	1.548	0.048	0.088	92	99	80	-85	-72	1.52E-6	3.06E-6	6.16E-6
HT29	0.273	1.128	2.081	2.088	2.082	0.038	0.152	97	98	97	-86	-45	1.81E-6	3.40E-6	
KM12	0.413	2.513	2.455	2.443	2.383	0.086	0.161	97	97	94	-79	-61	1.79E-6	3.49E-6	6.78E-6
SW-620	0.291	2.464	2.374	2.350	2.107	0.053	0.137	96	95	84	-82	-53	1.60E-6	3.20E-6	6.41E-6
CNS Cancer															
SF-268	0.654	2.071	2.006	2.062	2.011	0.216	0.356	95	99	96	-67	-46	1.91E-6	3.87E-6	
SF-295	1.141	3.160	3.104	3.168	3.161	0.086	0.136	97	100	100	-93	-88	1.82E-6	3.31E-6	6.02E-6
SF-539	0.845	2.394	2.335	2.554	2.555	0.042	0.001	96	110	110	-95	-100	1.97E-6	3.45E-6	6.04E-6
SNB-19	0.761	2.558	2.430	2.548	2.483	0.137	0.271	93	99	96	-82	-64	1.81E-6	3.46E-6	6.60E-6
SNB-75	0.886	1.779	1.570	1.612	1.559	0.126	0.239	77	81	75	-86	-73	1.44E-6	2.93E-6	6.00E-6
U251	0.534	2.441	2.348	2.373	2.389	0.047	0.163	95	96	97	-91	-69	1.76E-6	3.28E-6	6.04E-6
Melanoma															
LOX IMVI	0.332	2.584	2.434	2.562	2.468	0.028	0.014	93	99	95	-92	-96	1.74E-6	3.23E-6	5.98E-6
MALME-3M	0.597	1.085	1.001	1.039	1.079	0.084	0.235	83	91	99	-86	-61	1.84E-6	3.43E-6	6.39E-6
M14	0.439	2.052	2.086	1.987	1.924	0.076	0.124	102	96	92	-83	-72	1.74E-6	3.36E-6	6.50E-6
MDA-MB-435	0.468	2.491	2.461	2.434	2.298	0.023	0.080	99	97	90	-95	-83	1.65E-6	3.07E-6	5.71E-6
SK-MEL-2	1.521	2.999	2.958	3.037	2.956	0.244	0.147	97	103	97	-56	-90	1.09E-5	2.41E-5	5.29E-5
SK-MEL-28	0.990	2.795	2.929	2.918	2.802	0.038	0.056	107	107	100	-96	-94	1.80E-6	3.24E-6	5.82E-6
SK-MEL-5	1.098	3.297	3.238	3.292	3.282	0.013	0.052	97	100	99	-99	-95	1.77E-6	3.17E-6	5.67E-6
UACC-257	0.952	2.316	2.198	2.242	2.166	0.188	0.211	91	95	89	-80	-78	1.70E-6	3.35E-6	6.62E-6
UACC-62	0.778	2.969	2.855	2.916	2.895	0.105	0.133	95	98	97	-87	-83	1.80E-6	3.37E-6	6.31E-6
Ovarian Cancer															
IGROV1	0.431	1.969	1.977	1.931	1.871	0.069	0.143	100	97	94	-84	-67	1.76E-6	3.36E-6	6.43E-6
OVCAR-3	0.500	1.892	1.914	1.975	1.895	0.028	0.048	102	106	100	-94	-90	1.81E-6	3.27E-6	5.91E-6
OVCAR-4	0.648	1.600	1.498	1.591	1.439	0.022	-0.006	89	99	83	-97	-100	1.53E-6	2.90E-6	5.50E-6
OVCAR-5	0.703	1.563	1.569	1.583	1.501	0.017		101	102	93	-98	-100	1.68E-6	3.07E-6	5.63E-6
OVCAR-8	0.365	1.901	1.852	1.857	1.808	0.129	0.059	97	97	94	-65	-84	1.89E-6	3.91E-6	8.08E-6
NCI/ADR-RES	0.486	1.858	1.831	1.931	1.842	0.161	0.196	98	105	99	-67	-60	1.97E-6	3.95E-6	7.91E-6
SK-OV-3	0.710	1.883	1.843	1.821	1.774	0.027	-0.010	97	95	91	-96	-100	1.65E-6	3.06E-6	5.66E-6
Renal Cancer															
786-O	0.648	2.545	2.340	2.358	2.255	0.040	0.020	89	90	85	-94	-97	1.56E-6	2.98E-6	5.68E-6
A498	1.537	2.204	2.114	2.211	2.053	1.686	-0.008	86	101	77	-22	-100	3.14E-6	1.52E-5	3.90E-5
ACHN	0.438	1.865	1.875	1.972	1.896	-0.001	0.045	101	107	102	-100	-90	1.81E-6	3.20E-6	5.66E-6
CAKI-1	0.559	2.572	2.451	2.542	2.373	0.001	-0.015	94	98	90	-100	-100	1.63E-6	2.98E-6	5.46E-6
RXF 393	1.168	2.221	2.176	2.216	2.093	0.130	0.349	96	100	88	-89	-70	1.64E-6	3.14E-6	6.03E-6
SN12C	0.656	2.676	2.558	2.786	2.593	0.109	0.117	94	105	96	-83	-82	1.80E-6	3.42E-6	6.51E-6
TK-10	0.756	1.879	1.759	1.854	1.899	0.042	0.034	89	98	102	-94	-96	1.83E-6	3.30E-6	5.94E-6
UO-31	0.898	2.353	2.251	2.325	2.172	0.036	-0.026	93	98	88	-96	-100	1.60E-6	3.00E-6	5.61E-6
Prostate Cancer															
PC-3	0.453	1.899	1.804	1.809	1.748	0.049	0.070	93	94	90	-89	-85	1.66E-6	3.17E-6	6.03E-6
DJ-145	0.436	1.726	1.683	1.754	1.665	0.041	0.115	97	102	95	-91	-74	1.75E-6	3.25E-6	6.04E-6
Breast Cancer															
MCF7	0.467	2.693	2.511	2.594	2.516	0.132	0.295	92	96	92	-72	-37	1.81E-6	3.65E-6	7.27E-6
MDA-MB-231/ATCC	0.679	1.575	1.580	1.621	1.626	0.170	0.201	101	105	106	-75	-70	2.03E-6	3.84E-6	7.81E-6
HS 578T	1.065	2.101	2.004	2.053	2.019	0.351	0.524	91	95	92	-67	-51	1.84E-6	3.79E-6	7.81E-6
BT-549	1.122	2.277	2.172	2.196	2.191	0.517	0.033	91	93	93	-54	-97	1.95E-6	4.28E-6	9.40E-6
T-47D	0.494	1.200	1.074	1.091	1.105	0.146	0.198	82	85	87	-71	-60	1.71E-6	3.56E-6	7.40E-6
MDA-MB-468	0.994	1.950	1.894	1.988	1.956	0.238	0.312	94	104	101	-76	-69	1.93E-6	3.71E-6	7.12E-6

Sheet 31. Response parameters at five dose level of compound 31a.

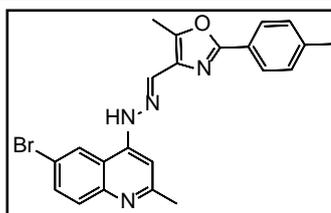
Appendix



National Cancer Institute Developmental Therapeutics Program																
In-Vitro Testing Results																
NSC : D - 804983 / 1			Experiment ID : 1808NS91					Test Type : 08			Units : Molar					
Report Date : September 11, 2018			Test Date : August 20, 2018					QNS :			MC :					
COMI : KISQ-02			Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M								
Panel/Cell Line	Time Zero	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				
Leukemia																
CCRF-CEM	0.514	3.129	3.104	3.085	1.624	0.320	0.349	99	98	42	-38	-32	7.32E-7	3.38E-6	> 1.00E-4	
HL-60(TB)	0.950	3.238	3.171	3.206	2.639	0.355	0.462	97	99	74	-63	-51	1.49E-6	3.47E-6	8.07E-6	
K-562	0.194	2.435	2.392	2.346	0.217	0.071	0.098	98	96	1	-64	-49	3.05E-7	1.04E-6	.	
MOLT-4	0.584	2.965	2.936	3.011	2.506	0.245	0.365	99	102	81	-58	-38	1.66E-6	3.81E-6	.	
RPMI-8226	0.702	2.710	2.658	2.644	2.335	0.304	0.369	97	97	81	-57	-47	1.69E-6	3.88E-6	.	
SR	0.331	1.925	1.894	1.823	0.427	0.252	0.304	98	94	6	-24	-8	3.15E-7	1.59E-6	> 1.00E-4	
Non-Small Cell Lung Cancer																
A549/ATCC	0.490	2.545	2.371	2.519	2.397	0.075	0.112	91	99	93	-85	-77	1.74E-6	3.33E-6	6.38E-6	
EKVX	1.218	2.958	2.976	3.093	3.076	0.096	0.063	101	108	107	-92	-95	1.93E-6	3.44E-6	6.14E-6	
HOP-62	0.494	1.861	1.685	1.703	1.704	0.077	0.129	87	88	89	-84	-74	1.67E-6	3.25E-6	6.32E-6	
HOP-92	1.128	1.830	1.645	1.736	1.653	0.234	0.345	74	87	75	-79	-69	1.45E-6	3.06E-6	6.45E-6	
NCI-H226	1.178	2.958	2.890	2.857	2.890	0.612	0.816	96	94	96	-48	-31	2.09E-6	4.64E-6	> 1.00E-4	
NCI-H23	0.719	2.696	2.565	2.660	2.644	0.244	0.383	93	98	97	-66	-47	1.95E-6	3.94E-6	.	
NCI-H322M	0.643	2.032	1.995	2.077	1.969	0.006	0.033	97	103	95	-99	-95	1.71E-6	3.09E-6	5.59E-6	
NCI-H460	0.239	2.720	2.708	2.771	2.709	0.061	0.064	99	102	100	-74	-73	1.93E-6	3.73E-6	7.23E-6	
NCI-H522	0.738	2.403	2.268	2.305	2.257	0.219	0.276	92	94	91	-70	-63	1.80E-6	3.67E-6	7.48E-6	
Colon Cancer																
COLO 205	0.323	1.696	1.617	1.681	1.515	0.069	0.098	94	99	87	-79	-70	1.67E-6	3.35E-6	6.71E-6	
HCC-2998	0.762	2.811	2.800	2.921	2.890	0.147	0.363	99	105	104	-81	-52	1.96E-6	3.65E-6	6.82E-6	
HCT-116	0.459	3.289	3.299	3.296	3.315	0.041	0.051	100	100	101	-91	-89	1.84E-6	3.35E-6	6.11E-6	
HCT-15	0.310	2.020	1.925	2.082	1.122	0.056	0.105	94	104	47	-82	-66	9.02E-7	2.33E-6	5.67E-6	
HT29	0.273	2.244	2.142	2.220	1.940	0.052	0.071	95	99	85	-81	-74	1.62E-6	3.24E-6	6.49E-6	
KM12	0.413	2.491	2.397	2.485	2.328	0.113	0.180	95	100	92	-73	-56	1.80E-6	3.62E-6	7.29E-6	
SW-620	0.291	2.313	2.280	2.301	0.684	0.055	0.079	98	99	19	-81	-73	1.55E-7	1.56E-6	4.91E-6	
CNS Cancer																
SF-268	0.654	2.142	2.078	2.114	2.123	0.256	0.397	96	98	99	-61	-39	2.02E-6	4.16E-6	.	
SF-295	1.141	3.272	3.227	3.310	3.323	0.157	0.341	98	102	102	-86	-70	1.90E-6	3.49E-6	6.43E-6	
SF-539	0.845	2.645	2.557	2.635	2.672	0.048	0.072	95	99	101	-94	-91	1.83E-6	3.30E-6	5.94E-6	
SNB-19	0.761	2.544	2.433	2.524	2.565	0.186	0.380	94	99	101	-76	-50	1.95E-6	3.73E-6	7.16E-6	
SNB-75	0.886	1.789	1.582	1.699	1.686	0.149	0.322	77	90	89	-83	-64	1.68E-6	3.28E-6	6.41E-6	
U251	0.534	2.425	2.278	2.323	2.458	0.053	0.104	92	95	102	-90	-81	1.86E-6	3.39E-6	6.18E-6	
Melanoma																
LOX IMVI	0.332	2.694	2.370	2.626	2.486	0.086	0.214	86	97	91	-74	-36	1.77E-6	3.56E-6	.	
MALME-3M	0.597	1.137	1.055	1.131	1.164	0.114	0.231	85	99	105	-81	-61	1.98E-6	3.67E-6	6.82E-6	
M14	0.439	2.141	2.053	2.058	2.047	0.072	0.085	95	95	94	-84	-81	1.76E-6	3.39E-6	6.48E-6	
MDA-MB-435	0.468	2.501	2.360	2.465	2.336	0.024	0.136	93	98	92	-95	-71	1.68E-6	3.10E-6	5.75E-6	
SK-MEL-2	1.521	3.044	3.016	3.056	3.067	0.452	0.619	98	101	102	-70	-59	1.98E-6	3.90E-6	7.62E-6	
SK-MEL-28	0.900	2.869	2.933	2.933	2.864	0.037	0.324	103	103	100	-96	-87	1.79E-6	3.23E-6	6.81E-6	
SK-MEL-5	1.098	3.260	3.105	3.234	3.257	0.010	0.227	93	99	100	-99	-79	1.78E-6	3.18E-6	5.67E-6	
UACC-257	0.952	2.266	2.171	2.283	2.326	0.147	0.267	93	101	105	-85	-72	1.94E-6	3.57E-6	6.56E-6	
UACC-62	0.778	2.979	2.838	2.898	2.849	0.112	0.223	94	96	94	-86	-71	1.76E-6	3.34E-6	6.34E-6	
Ovarian Cancer																
IGROV1	0.431	2.092	1.962	2.072	1.932	0.080	0.137	92	99	90	-81	-68	1.72E-6	3.36E-6	6.56E-6	
OVCAR-3	0.500	1.953	1.916	1.996	1.948	0.064	0.046	97	103	100	-87	-91	1.84E-6	3.41E-6	6.32E-6	
OVCAR-4	0.648	1.649	1.548	1.628	1.562	0.101	0.014	90	98	91	-84	-98	1.72E-6	3.31E-6	6.37E-6	
OVCAR-5	0.703	1.623	1.519	1.674	1.710	0.029	0.142	89	106	109	-96	-80	1.95E-6	3.41E-6	5.98E-6	
OVCAR-8	0.365	1.811	1.759	1.849	1.633	0.139	0.106	96	103	88	-62	-71	1.79E-6	3.86E-6	8.32E-6	
NCI/ADR-RES	0.486	1.881	1.875	1.857	1.805	0.241	0.242	100	98	95	-51	-50	2.03E-6	4.48E-6	9.92E-6	
SK-OV-3	0.710	1.898	1.846	1.899	1.825	0.030	0.019	96	100	94	-96	-97	1.70E-6	3.12E-6	5.73E-6	
Renal Cancer																
786-0	0.648	2.583	2.436	2.486	2.437	0.068	-0.010	92	95	92	-90	-100	1.71E-6	3.22E-6	6.07E-6	
A498	1.537	2.309	2.154	2.259	2.154	0.097	0.073	80	93	80	-94	-95	1.49E-6	2.89E-6	5.60E-6	
ACHN	0.438	1.959	1.878	1.990	1.905	0.004	0.047	95	102	96	-99	-89	1.73E-6	3.11E-6	5.60E-6	
Caki-1	0.559	2.614	2.504	2.522	2.396	0.006	0.002	95	96	89	-99	-100	1.62E-6	2.98E-6	5.50E-6	
RFX-393	1.168	2.256	2.189	2.231	1.991	0.158	0.407	94	98	78	-86	-65	1.44E-6	2.93E-6	5.98E-6	
SN12C	0.656	2.578	2.526	2.646	2.623	0.126	0.204	97	104	102	-81	-69	1.93E-6	3.62E-6	6.79E-6	
TK-10	0.756	1.925	1.837	1.883	2.041	0.043	0.066	92	96	110	-94	-91	1.97E-6	3.45E-6	6.08E-6	
UO-31	0.898	2.480	2.224	2.346	2.200	0.035	-0.027	84	92	82	-96	-100	1.52E-6	2.89E-6	5.51E-6	
Prostate Cancer																
PC-3	0.453	1.914	1.832	1.821	1.764	0.055	0.130	94	94	90	-88	-71	1.67E-6	3.20E-6	6.12E-6	
DU-145	0.436	1.849	1.785	1.850	1.754	0.067	0.114	95	100	93	-85	-74	1.75E-6	3.34E-6	6.39E-6	
Breast Cancer																
MCF7	0.467	2.845	2.631	2.724	2.653	0.165	0.250	91	95	92	-65	-47	1.85E-6	3.86E-6	.	
MDA-MB-231/ATCC	0.679	1.567	1.554	1.624	1.569	0.167	0.274	99	106	100	-75	-60	1.93E-6	3.72E-6	7.16E-6	
HS 578T	1.065	2.122	2.039	2.116	2.118	0.396	0.490	92	99	100	-63	-54	2.02E-6	4.10E-6	8.34E-6	
BT-549	1.122	2.346	2.230	2.249	2.239	0.071	0.070	91	92	91	-94	-94	1.67E-6	3.11E-6	5.80E-6	
T-47D	0.494	1.223	1.119	1.149	1.145	0.158	0.191	86	90	89	-68	-61	1.78E-6	3.69E-6	7.68E-6	
MDA-MB-468	0.994	1.962	1.824	1.931	1.781	0.236	0.534	86	97	81	-76	-46	1.58E-6	3.28E-6	.	

Sheet 32. Response parameters at five dose level of compound 31b.

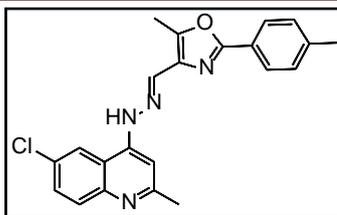
Appendix



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results															
NSC : D - 804984 / 1			Experiment ID : 1808NS91					Test Type : 08			Units : Molar				
Report Date : September 11, 2018			Test Date : August 20, 2018					QNS :			MC :				
COMI : KISQ-03			Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M							
Panel/Cell Line	Time Zero	Ctrl	Log10 Concentration					Percent Growth					GI50	TGI	LC50
			Mean Optical Densities												
			-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0	-5.0	-4.0			
Leukemia															
CCRF-CEM	0.514	3.105	3.083	3.047	2.206	0.458	0.376	99	98	65	-11	-27	1.59E-6	7.18E-6	> 1.00E-4
HL-60(TB)	0.950	3.213	3.168	3.180	2.945	0.562	0.432	98	99	88	-41	-55	1.98E-6	4.82E-6	4.66E-5
K-562	0.194	2.367	2.278	2.363	0.933	0.099	0.101	96	100	34	-49	-48	5.71E-7	2.56E-6	> 1.00E-4
MOLT-4	0.584	2.918	2.875	2.899	2.484	0.564	0.398	98	99	81	-3	-32	2.34E-6	9.11E-6	> 1.00E-4
RPMI-8226	0.702	2.667	2.608	2.589	2.463	0.454	0.404	97	96	90	-35	-42	2.07E-6	5.21E-6	> 1.00E-4
SR	0.331	1.856	1.862	1.850	0.441	0.320	0.261	100	100	7	-3	-21	3.44E-7	4.84E-6	> 1.00E-4
Non-Small Cell Lung Cancer															
A549/ATCC	0.490	2.414	2.376	2.365	2.216	0.140	0.156	98	97	90	-71	-68	1.76E-6	3.60E-6	7.36E-6
EKVX	1.218	2.994	2.816	2.854	2.845	2.614	0.056	90	92	92	-79	-95	1.46E-5	2.83E-5	5.48E-5
HOP-82	0.494	1.768	1.585	1.725	1.747	0.135	0.228	86	97	98	-73	-54	1.92E-6	3.76E-6	7.37E-6
HOP-92	1.128	1.812	1.645	1.726	1.675	1.301	0.115	76	87	80	-25	-90	3.53E-6	1.66E-5	4.51E-5
NCI-H226	1.178	2.919	2.897	2.993	3.001	2.620	0.481	99	104	105	83	-59	1.70E-5	3.83E-5	8.62E-5
NCI-H23	0.719	2.616	2.606	2.679	2.659	1.296	0.161	99	103	102	30	-78	5.34E-6	1.91E-5	5.55E-5
NCI-H322M	0.643	2.026	1.960	1.993	1.906	0.735	-0.001	95	98	91	7	-100	3.08E-6	1.15E-5	3.40E-5
NCI-H460	0.239	2.567	2.561	2.628	2.362	0.065	0.137	100	103	91	-73	-43	1.78E-6	3.60E-6	-
NCI-H522	0.738	2.354	2.180	2.239	2.174	0.353	0.349	89	93	89	-52	-53	1.89E-6	4.27E-6	9.65E-6
Colon Cancer															
COLO 205	0.323	1.611	1.528	1.572	1.484	0.258	0.134	94	97	90	-20	-59	2.31E-6	6.57E-6	5.96E-5
HCC-2998	0.762	2.749	2.782	2.806	2.864	0.636	0.028	102	103	106	-17	-96	2.86E-6	7.32E-6	2.62E-5
HCT-116	0.459	3.273	3.265	3.243	3.267	0.225	-0.025	100	99	100	-51	-100	2.14E-6	4.59E-6	9.84E-6
HCT-15	0.310	1.913	1.807	1.765	1.650	0.110	0.025	93	91	84	-65	-92	1.68E-6	3.66E-6	7.96E-6
HT29	0.273	2.219	2.032	1.961	1.962	0.169	0.208	90	87	87	-38	-24	1.97E-6	4.95E-6	> 1.00E-4
KM12	0.413	2.490	2.428	2.486	2.280	0.224	0.240	97	100	90	-46	-42	1.97E-6	4.60E-6	> 1.00E-4
SW-620	0.291	2.404	2.370	2.376	1.932	0.103	0.097	98	99	78	-65	-67	1.56E-6	3.51E-6	7.87E-6
CNS Cancer															
SF-268	0.654	2.117	2.048	2.115	2.091	0.677	0.453	95	100	98	2	-31	3.15E-6	1.12E-5	> 1.00E-4
SF-295	1.141	3.268	3.160	3.136	3.168	2.237	0.068	95	94	95	52	-94	1.02E-5	2.26E-5	4.98E-5
SF-539	0.845	2.551	2.429	2.644	2.582	0.109	-0.075	93	105	102	-87	-100	1.88E-6	3.46E-6	6.36E-6
SNB-19	0.761	2.480	2.345	2.447	2.453	1.057	0.257	92	98	98	17	-66	3.95E-6	1.61E-5	6.39E-5
SNB-75	0.886	1.755	1.541	1.588	1.607	0.323	0.313	75	81	83	-64	-65	1.68E-6	3.68E-6	8.08E-6
U251	0.534	2.386	2.222	2.327	2.297	0.080	0.115	91	97	95	-85	-78	1.78E-6	3.37E-6	6.39E-6
Melanoma															
LOX IMVI	0.332	2.630	2.539	2.689	2.577	0.135	0.092	96	103	98	-59	-72	2.01E-6	4.18E-6	8.70E-6
MALME-3M	0.597	1.097	1.026	1.071	1.073	0.085	0.007	86	95	95	-86	-99	1.78E-6	3.36E-6	6.35E-6
M14	0.439	2.126	2.089	2.076	2.046	0.178	-0.023	98	97	95	-59	-100	1.96E-6	4.13E-6	8.69E-6
MDA-MB-435	0.468	2.439	2.323	2.353	2.162	0.121	-0.020	94	96	86	-74	-100	1.68E-6	3.44E-6	7.07E-6
SK-MEL-2	1.521	3.036	2.976	3.051	3.017	2.845	0.208	96	101	99	87	-86	1.64E-5	3.18E-5	6.18E-5
SK-MEL-28	0.990	2.811	2.878	2.880	2.843	0.280	-0.004	104	104	102	-72	-100	1.99E-6	3.86E-6	7.49E-6
SK-MEL-5	1.098	3.263	3.229	3.246	3.256	2.108	-0.090	98	99	100	47	-100	8.64E-6	2.08E-5	4.56E-5
UACC-257	0.952	2.239	2.101	2.193	2.095	0.507	0.026	89	96	89	-47	-97	1.93E-6	4.52E-6	1.16E-5
UACC-62	0.778	2.898	2.768	2.863	2.763	0.180	0.035	94	98	94	-77	-96	1.80E-6	3.54E-6	6.95E-6
Ovarian Cancer															
IGROV1	0.431	2.028	1.955	2.027	1.967	0.573	0.086	95	100	96	9	-80	3.38E-6	1.26E-5	4.59E-5
OVCAR-3	0.500	1.878	1.880	1.934	1.898	0.064	0.001	100	104	101	-87	-100	1.87E-6	3.45E-6	6.34E-6
OVCAR-4	0.648	1.569	1.481	1.575	1.457	0.128	0.059	90	101	88	-80	-91	1.68E-6	3.33E-6	6.60E-6
OVCAR-5	0.703	1.649	1.573	1.526	1.587	1.134	-0.030	92	87	93	46	-100	8.08E-6	2.06E-5	4.53E-5
OVCAR-8	0.365	1.771	1.719	1.775	1.628	0.228	0.296	96	100	90	-38	-19	2.05E-6	5.06E-6	> 1.00E-4
NCI/ADR-RES	0.486	1.862	1.846	1.945	1.744	0.339	0.450	99	106	91	-30	-7	2.19E-6	5.63E-6	> 1.00E-4
SK-OV-3	0.710	1.808	1.810	1.830	1.767	0.842	-0.037	100	102	96	12	-100	3.54E-6	1.28E-5	3.58E-5
Renal Cancer															
786-0	0.648	2.594	2.386	2.341	2.278	0.049	0.016	89	87	84	-92	-98	1.55E-6	2.99E-6	5.74E-6
A498	1.537	2.254	2.144	2.178	2.140	0.970	0.141	85	89	84	60	-91	1.17E-5	2.51E-5	5.37E-5
ACHN	0.438	1.940	1.914	1.979	1.943	0.117	-0.057	98	103	100	-73	-100	1.95E-6	3.78E-6	7.34E-6
CAKI-1	0.559	2.531	2.455	2.514	2.429	0.256	-0.073	96	99	95	-54	-100	2.00E-6	4.33E-6	9.37E-6
RFX 393	1.168	2.246	2.179	2.204	2.068	1.415	0.085	94	96	84	23	-93	3.57E-6	1.58E-5	4.27E-5
SN12C	0.656	2.666	2.521	2.629	2.531	0.280	0.188	93	98	93	-57	-71	1.94E-6	4.16E-6	8.94E-6
TK-10	0.756	1.859	1.886	1.801	1.843	0.126	0.165	84	95	99	-83	-78	1.85E-6	3.48E-6	6.55E-6
UO-31	0.898	2.339	2.266	2.342	2.294	1.862	-0.093	95	100	97	67	-100	1.26E-5	2.52E-5	5.02E-5
Prostate Cancer															
PC-3	0.453	1.895	1.836	1.824	1.823	0.253	-0.009	96	95	95	-44	-100	2.10E-6	4.81E-6	1.27E-5
DU-145	0.436	1.785	1.749	1.786	1.695	0.358	-0.010	97	100	93	-18	-100	2.45E-6	6.90E-6	2.46E-5
Breast Cancer															
MCF7	0.467	2.689	2.439	2.566	1.985	0.107	0.126	90	95	69	-77	-73	1.35E-6	2.97E-6	6.52E-6
MDA-MB-231/ATCC	0.679	1.605	1.522	1.644	1.620	0.886	0.263	91	104	102	1	-61	3.25E-6	1.03E-5	6.58E-5
HS 578T	1.065	2.125	2.014	2.094	2.109	1.148	0.647	90	97	98	8	-39	3.42E-6	1.47E-5	> 1.00E-4
BT-549	1.122	2.316	2.201	2.191	2.190	1.686	0.016	90	90	89	47	-99	8.61E-6	2.11E-5	4.64E-5
T-47D	1.195	1.95	1.069	1.115	1.113	0.102	0.244	82	89	88	-79	-51	1.69E-6	3.38E-6	6.68E-6
MDA-MB-468	0.994	1.972	1.917	1.964	1.894	0.247	0.157	94	99	92	-75	-84	1.78E-6	3.55E-6	7.07E-6

Sheet 33. Response parameters at five dose level of compound 31c.

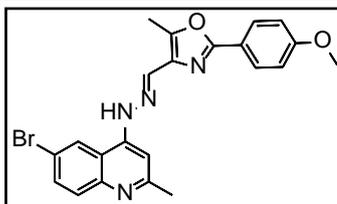
Appendix



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results															
NSC : D - 804985 / 1			Experiment ID : 1808NS91					Test Type : 08			Units : Molar				
Report Date : September 11, 2018			Test Date : August 20, 2018					QNS :			MC :				
COMI : KISQ-04			Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M							
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	0.514	3.137	3.124	2.744	2.490	0.513	0.563	99	85	75	.	2	2.16E-6	.	> 1.00E-4
HL-60(TB)	0.950	3.265	3.162	3.164	3.113	0.631	0.545	96	96	93	-34	-43	2.20E-6	5.44E-6	> 1.00E-4
K-562	0.194	2.368	2.293	2.243	1.365	0.111	0.161	97	94	54	-43	-17	1.10E-6	3.61E-6	> 1.00E-4
MOLT-4	0.584	2.903	2.866	2.864	2.585	0.603	0.553	98	98	86	1	-5	2.66E-6	1.35E-5	> 1.00E-4
RPMI-8226	0.702	2.797	2.783	2.706	2.524	0.417	0.573	99	96	87	-41	-18	1.95E-6	4.81E-6	> 1.00E-4
SR	0.331	1.784	1.777	1.772	0.524	0.312	0.333	99	99	13	-6	.	3.73E-7	.	> 1.00E-4
Non-Small Cell Lung Cancer															
A549/ATCC	0.490	2.552	2.378	2.494	2.313	0.163	0.219	92	97	88	-67	-55	1.77E-6	3.71E-6	7.80E-6
EKVX	1.218	2.916	2.715	2.823	2.727	2.533	0.058	88	94	89	77	-95	1.44E-5	2.81E-5	5.47E-5
HOP-62	0.494	1.839	1.683	1.726	1.730	0.186	0.210	88	92	92	-62	-57	1.87E-6	3.94E-6	8.31E-6
HOP-92	1.128	1.875	1.703	1.767	1.701	1.311	0.122	77	86	77	24	-89	3.24E-6	1.64E-5	4.52E-5
NCI-H226	1.178	2.899	2.855	2.923	2.831	2.487	0.799	97	101	96	76	-32	1.74E-5	5.04E-5	> 1.00E-4
NCI-H23	0.719	2.674	2.600	2.709	2.625	1.432	0.279	96	102	97	36	-61	6.00E-6	2.36E-5	7.68E-5
NCI-H322M	0.643	2.052	1.907	2.003	1.880	0.620	-0.031	90	97	88	-4	-100	2.59E-6	9.14E-6	3.03E-5
NCI-H460	0.239	2.685	2.649	2.740	2.610	0.060	0.119	99	102	97	-75	-50	1.88E-6	3.67E-6	7.16E-6
NCI-H522	0.738	2.381	2.295	2.315	2.274	0.373	0.309	95	96	94	-49	-58	2.02E-6	4.51E-6	1.15E-5
Colon Cancer															
COLO 205	0.323	1.621	1.533	1.591	1.500	0.342	0.126	93	98	91	1	-61	2.86E-6	1.06E-5	6.67E-5
HCC-2998	0.762	2.799	2.753	2.850	2.826	0.939	0.152	98	102	101	9	-80	3.58E-6	1.25E-5	4.59E-5
HCT-116	0.459	3.293	3.282	3.280	3.275	0.163	0.063	100	100	99	-64	-86	2.00E-6	4.04E-6	8.18E-6
HCT-15	0.310	1.993	1.873	1.846	1.691	0.170	0.107	93	91	82	-45	-65	1.79E-6	4.42E-6	1.73E-5
HT29	0.273	2.213	2.144	2.180	2.093	0.200	0.151	96	98	94	-27	-45	2.31E-6	5.98E-6	> 1.00E-4
KM12	0.413	2.461	2.423	2.539	2.337	0.273	0.276	98	104	94	-34	-33	2.21E-6	5.43E-6	> 1.00E-4
SW-620	0.291	2.393	2.333	2.384	2.150	0.138	0.103	97	100	88	-53	-65	1.87E-6	4.23E-6	9.56E-6
CNS Cancer															
SF-268	0.654	2.152	2.044	2.115	2.062	0.901	0.523	93	98	94	16	-20	3.70E-6	2.82E-5	> 1.00E-4
SF-295	1.141	3.269	3.177	3.180	3.109	2.510	0.148	96	96	92	64	-87	1.24E-5	2.66E-5	5.69E-5
SF-539	0.845	2.574	2.456	2.553	2.541	0.213	-0.079	93	99	98	-75	-100	1.90E-6	3.69E-6	7.19E-6
SNB-19	0.761	2.498	2.424	2.523	2.511	1.081	0.335	96	101	101	18	-56	4.13E-6	1.77E-5	8.31E-5
SNB-75	0.886	1.771	1.546	1.623	1.617	0.413	0.452	75	83	83	-53	-49	1.74E-6	4.05E-6	.
U251	0.534	2.464	2.271	2.335	2.313	0.075	0.159	90	93	92	-86	-70	1.73E-6	3.29E-6	6.28E-6
Melanoma															
LOX IMVI	0.332	2.596	2.409	2.580	2.594	0.083	0.142	92	99	100	-75	-57	1.93E-6	3.73E-6	7.20E-6
MALME-3M	0.597	1.122	1.041	1.101	1.072	0.275	0.017	84	96	90	-54	-97	1.91E-6	4.23E-6	9.38E-6
M14	0.439	2.192	2.125	2.112	2.071	0.227	0.015	96	95	93	-68	-97	2.02E-6	4.55E-6	1.08E-5
MDA-MB-435	0.468	2.463	2.363	2.416	2.354	0.168	-0.017	95	98	95	-64	-100	1.91E-6	3.94E-6	8.14E-6
SK-MEL-2	1.521	3.155	3.068	3.183	3.144	3.085	0.107	95	102	99	96	-93	1.75E-5	3.22E-5	5.92E-5
SK-MEL-28	0.990	2.854	2.888	2.868	2.799	0.478	0.007	102	101	97	-52	-99	2.07E-6	4.49E-6	9.74E-6
SK-MEL-5	1.098	3.255	3.108	3.228	3.228	2.410	-0.134	93	99	99	61	-100	1.17E-5	2.39E-5	4.89E-5
UACC-257	0.952	2.269	2.216	2.273	2.127	1.175	0.202	96	100	89	17	-79	3.49E-6	1.50E-5	5.00E-5
UACC-62	0.778	2.977	2.868	2.948	2.868	0.374	-0.002	95	99	95	-52	-100	2.02E-6	4.43E-6	9.69E-6
Ovarian Cancer															
IGROV1	0.431	2.070	1.959	2.097	1.891	0.604	0.273	93	102	89	11	-37	3.14E-6	1.67E-5	> 1.00E-4
OVCA-R-3	0.500	1.926	1.914	1.949	1.918	0.154	0.065	99	102	99	-69	-87	1.96E-6	3.89E-6	7.69E-6
OVCA-R-4	0.648	1.627	1.586	1.618	1.588	0.173	0.216	96	99	96	-73	-67	1.87E-6	3.69E-6	7.28E-6
OVCA-R-5	0.703	1.637	1.516	1.602	1.514	1.176	0.012	87	96	87	51	-98	1.01E-5	2.19E-5	4.73E-5
OVCA-R-8	0.365	1.798	1.746	1.834	1.778	0.261	0.263	96	102	99	-28	-28	2.41E-6	5.97E-6	> 1.00E-4
NCI/ADR-RES	0.486	1.861	1.818	1.840	1.822	0.278	0.470	97	98	97	-43	-3	2.17E-6	4.94E-6	> 1.00E-4
SK-OV-3	0.710	1.797	1.760	1.829	1.776	1.095	-0.127	97	103	98	35	-100	5.84E-6	1.82E-5	4.27E-5
Renal Cancer															
786-0	0.648	2.631	2.407	2.428	2.344	0.152	0.421	89	90	86	-77	-35	1.66E-6	3.37E-6	.
A498	1.537	2.316	2.081	2.209	2.127	1.944	0.444	70	86	76	52	-71	1.04E-5	2.65E-5	6.74E-5
ACHN	0.438	1.915	1.935	1.998	1.926	0.249	-0.040	101	106	101	-43	-100	2.25E-6	5.01E-6	1.31E-5
CAKI-1	0.559	2.594	2.428	2.548	2.443	0.307	-0.133	92	98	93	-45	-100	2.04E-6	4.70E-6	1.23E-5
RXF 393	1.168	2.185	2.147	2.209	2.041	1.446	0.134	96	102	86	27	-89	4.10E-6	1.72E-5	4.65E-5
SN12C	0.656	2.629	2.526	2.624	2.577	0.299	0.185	95	100	97	-54	-72	2.05E-6	4.38E-6	9.35E-6
TK-10	0.756	1.929	1.760	1.795	1.865	0.154	0.130	86	89	95	-80	-83	1.80E-6	3.49E-6	6.75E-6
UO-31	0.898	2.394	2.253	2.414	2.259	2.021	-0.012	91	101	91	75	-100	1.39E-5	2.68E-5	5.18E-5
Prostate Cancer															
PC-3	0.453	1.891	1.816	1.877	1.796	0.336	0.107	95	99	93	-26	-76	2.31E-6	6.07E-6	3.00E-5
DU-145	0.436	1.829	1.785	1.833	1.776	0.382	-0.028	97	100	96	-13	-100	2.66E-6	7.67E-6	2.68E-5
Breast Cancer															
MCF7	0.467	2.652	2.496	2.499	2.382	0.091	0.244	93	93	88	-81	-48	1.67E-6	3.32E-6	.
MDA-MB-231/ATCC	0.679	1.660	1.628	1.683	1.675	0.732	0.250	97	102	102	5	-63	3.43E-6	1.20E-5	6.41E-5
HS 578T	1.065	2.149	2.047	2.095	2.107	1.321	0.759	91	95	96	24	-29	4.33E-6	2.83E-5	> 1.00E-4
BT-549	1.122	2.373	2.233	2.299	2.239	1.654	-0.006	89	94	89	42	-100	6.91E-6	1.99E-5	4.46E-5
T-47D	0.494	1.176	1.115	1.155	1.128	0.110	0.142	91	97	93	-78	-71	1.79E-6	3.51E-6	6.88E-6
MDA-MB-468	0.994	1.979	1.859	1.949	1.768	0.380	0.324	88	97	79	-62	-67	1.60E-6	3.63E-6	8.24E-6

Sheet 34. Response parameters at five dose level of compound 31d.

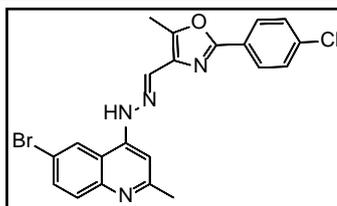
Appendix



National Cancer Institute Developmental Therapeutics Program																
In-Vitro Testing Results																
NSC : D - 804986 / 1					Experiment ID : 1808NS91					Test Type : 08			Units : Molar			
Report Date : September 11, 2018					Test Date : August 20, 2018					QNS :			MC :			
COMI : KISQ-05					Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M						
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	0.514	3.137	3.122	3.074	2.874	0.493	0.626	99	98	90	-4	4	2.66E-6		> 1.00E-4	
HL-60(TB)	0.950	3.265	3.220	3.193	3.181	0.373	0.555	98	97	96	-61	-42	1.97E-6	4.11E-6		
K-562	0.194	2.368	2.508	2.438	1.671	0.123	0.197	106	103	68	-37		1.48E-6		> 1.00E-4	
MOLT-4	0.584	2.903	2.934	2.887	2.774	0.297	0.435	101	99	94	-49	-26	2.04E-6	4.54E-6	> 1.00E-4	
RPMI-8226	0.702	2.797	2.801	2.756	2.615	0.478	0.711	100	98	91	-32		2.16E-6		> 1.00E-4	
SR	0.331	1.784	1.755	1.570	0.587	0.282	0.380	98	85	18	-15	3	3.32E-7		> 1.00E-4	
Non-Small Cell Lung Cancer																
A549/ATCC	0.490	2.552	2.484	2.384	2.486	0.108	0.173	97	92	97	-78	-65	1.85E-6	3.58E-6	6.91E-6	
EKVX	1.218	2.916	2.892	2.794	2.776	0.632	0.010	99	93	92	-48	-99	1.99E-6	4.53E-6	1.09E-5	
HOP-62	0.494	1.839	1.838	1.772	1.768	0.131	0.137	100	95	95	-73	-72	1.84E-6	3.66E-6	7.25E-6	
HOP-92	1.128	1.875	1.769	1.748	1.692	0.119	0.303	86	83	75	-89	-73	1.43E-6	2.87E-6	5.76E-6	
NCI-H226	1.178	2.899	2.796	2.799	2.739	0.971	0.787	94	94	91	-18	-33	2.38E-6	6.88E-6	> 1.00E-4	
NCI-H23	0.719	2.674	2.521	2.399	2.384	0.232	0.278	92	86	85	-68	-61	1.70E-6	3.61E-6	7.66E-6	
NCI-H322M	0.643	2.052	1.959	1.864	1.896	0.200	-0.012	93	87	89	-69	-100	1.76E-6	3.66E-6	7.59E-6	
NCI-H460	0.239	2.685	2.758	2.691	2.647	0.052	0.063	103	100	98	-78	-74	1.88E-6	3.61E-6	6.92E-6	
NCI-H522	0.738	2.381	2.254	2.258	2.214	0.304	0.380	92	92	90	-59	-49	1.85E-6	4.02E-6		
Colon Cancer																
COLO 205	0.323	1.621	1.638	1.549	1.510	0.095	0.115	101	94	91	-71	-65	1.80E-6	3.86E-6	7.45E-6	
HCC-2998	0.762	2.799	2.716	2.719	2.675	0.072	0.207	96	96	94	-91	-73	1.73E-6	3.23E-6	6.03E-6	
HCT-116	0.459	3.293	3.284	3.271	3.252	0.058	0.172	100	99	99	-87	-63	1.82E-6	3.39E-6	6.29E-6	
HCT-15	0.310	1.993	1.918	1.866	1.778	0.068	0.068	96	92	87	-78	-78	1.68E-6	3.37E-6	6.75E-6	
HT29	0.273	2.213	2.170	2.162	2.096	0.068	0.069	98	97	94	-75	-75	1.82E-6	3.59E-6	7.09E-6	
KM12	0.413	2.461	2.546	2.476	2.430	0.149	0.214	104	101	98	-64	-48	1.99E-6	4.04E-6		
SW-620	0.291	2.393	2.375	2.323	2.211	0.089	0.124	99	97	91	-69	-58	1.81E-6	3.70E-6	7.57E-6	
CNS Cancer																
SF-268	0.654	2.152	2.083	2.095	2.132	0.302	0.395	95	96	99	-54	-40	2.08E-6	4.43E-6		
SF-295	1.141	3.269	3.194	3.154	3.089	0.116	0.087	96	95	92	-90	-92	1.69E-6	3.20E-6	6.03E-6	
SF-539	0.845	2.574	2.479	2.440	2.445	0.065	0.072	94	92	93	-92	-92	1.70E-6	3.17E-6	5.90E-6	
SNB-19	0.761	2.498	2.411	2.416	2.419	0.430	0.383	95	95	95	-43	-50	2.12E-6	4.86E-6	> 1.00E-4	
SNB-75	0.886	1.771	1.584	1.622	1.632	0.205	0.344	79	83	84	-77	-61	1.63E-6	3.34E-6	6.81E-6	
U251	0.534	2.464	2.412	2.380	2.385	0.068	0.154	97	96	96	-87	-71	1.78E-6	3.34E-6	6.25E-6	
Melanoma																
LOX IMVI	0.332	2.596	2.523	2.446	2.422	0.089	0.186	97	93	92	-73	-44	1.80E-6	3.61E-6		
MALME-3M	0.597	1.122	1.104	1.069	1.154	0.069	0.171	96	90	106	-88	-71	1.94E-6	3.51E-6	6.34E-6	
M14	0.439	2.192	2.104	2.117	2.118	0.094	0.131	95	96	96	-79	-70	1.83E-6	3.54E-6	6.85E-6	
MDA-MB-435	0.468	2.463	2.446	2.349	2.419	0.034	0.062	99	94	98	-93	-87	1.78E-6	3.26E-6	5.97E-6	
SK-MEL-2	1.521	3.155	3.156	3.151	3.123	0.047	0.523	100	100	98	93	-66	1.87E-5	3.87E-5	7.97E-5	
SK-MEL-28	0.990	2.854	2.843	2.695	2.729	0.067	0.156	99	91	93	-93	-84	1.71E-6	3.16E-6	5.86E-6	
SK-MEL-5	1.098	3.255	3.217	3.229	3.193	0.051	0.019	98	99	97	-95	-98	1.76E-6	3.20E-6	5.81E-6	
UACC-257	0.952	2.269	2.242	2.116	2.128	0.571	0.286	98	88	89	-40	-70	2.01E-6	4.90E-6	2.15E-5	
UACC-62	0.778	2.977	2.796	2.754	2.734	0.154	0.180	92	90	89	-80	-77	1.70E-6	3.36E-6	6.63E-6	
Ovarian Cancer																
IGROV1	0.431	2.070	2.021	1.938	1.873	0.083	0.098	97	92	88	-81	-77	1.68E-6	3.32E-6	6.57E-6	
OVCAR-3	0.500	1.926	1.953	1.951	1.984	0.080	0.068	102	102	104	-84	-86	1.94E-6	3.57E-6	6.59E-6	
OVCAR-4	0.648	1.627	1.638	1.595	1.606	0.126	0.173	101	97	98	-61	-73	1.85E-6	3.53E-6	6.74E-6	
OVCAR-5	0.703	1.637	1.570	1.483	1.514	0.078	0.121	93	83	87	-89	-83	1.62E-6	3.12E-6	6.01E-6	
OVCAR-8	0.365	1.798	1.738	1.765	1.744	0.171	0.160	96	98	96	-53	-56	2.04E-6	4.40E-6	9.51E-6	
NCI/ADR-RES	0.486	1.861	1.775	1.767	1.721	0.192	0.231	94	93	90	-61	-53	1.84E-6	3.95E-6	8.50E-6	
SK-OV-3	0.710	1.797	1.832	1.800	1.737	0.084	0.097	103	100	94	-88	-86	1.75E-6	3.29E-6	6.18E-6	
Renal Cancer																
786-0	0.648	2.631	2.472	2.410	2.320	0.161	0.146	92	89	84	-75	-77	1.64E-6	3.38E-6	6.95E-6	
A498	1.537	2.316	2.148	2.179	2.059	1.797	0.067	78	82	67	33	-96	3.20E-6	1.81E-5	4.42E-5	
ACHN	0.438	1.915	1.886	1.852	1.874	0.008	0.051	98	96	97	-98	-88	1.74E-6	3.14E-6	5.66E-6	
CAKI-1	0.559	2.594	2.492	2.473	2.457	0.018	0.021	95	94	93	-97	-96	1.69E-6	3.10E-6	5.67E-6	
RXF 393	1.168	2.185	2.171	2.091	2.063	0.273	0.445	99	91	88	-77	-62	1.70E-6	3.42E-6	6.89E-6	
SN12C	0.656	2.629	2.596	2.563	2.495	0.141	0.137	98	97	93	-79	-79	1.78E-6	3.49E-6	6.82E-6	
TK-10	0.756	1.929	1.845	1.860	1.807	0.063	0.005	93	94	98	-92	-99	1.79E-6	3.29E-6	6.03E-6	
UO-31	0.898	2.394	2.211	2.246	2.193	0.082	0.091	88	90	87	-91	-90	1.61E-6	3.07E-6	5.88E-6	
Prostate Cancer																
PC-3	0.453	1.891	1.804	1.813	1.790	0.110	0.106	94	95	93	-76	-77	1.80E-6	3.55E-6	7.03E-6	
DU-145	0.436	1.829	1.905	1.800	1.860	0.199	0.150	105	98	102	-54	-66	2.15E-6	4.49E-6	9.36E-6	
Breast Cancer																
MCF7	0.467	2.652	2.447	2.468	2.260	0.156	0.190	91	92	82	-67	-59	1.64E-6	3.56E-6	7.73E-6	
MDA-MB-231/ATCC	0.679	1.660	1.654	1.595	1.605	0.189	0.275	99	93	94	-72	-60	1.85E-6	3.69E-6	7.35E-6	
HS 578T	1.065	2.149	2.075	2.042	2.069	0.530	0.554	93	90	93	-50	-48	1.99E-6	4.45E-6		
BT-549	1.122	2.373	2.255	2.231	2.207	0.117	0.104	91	89	87	80	-91	1.49E-5	2.93E-5	5.76E-5	
T-47D	0.494	1.176	1.205	1.174	1.161	0.205	0.214	104	100	98	-59	-57	2.02E-6	4.22E-6	8.82E-6	
MDA-MB-468	0.994	1.979	1.863	1.849	1.810	0.339	0.506	88	87	83	-66	-49	1.66E-6	3.61E-6		

Sheet 35. Response parameters at five dose level of compound 31e.

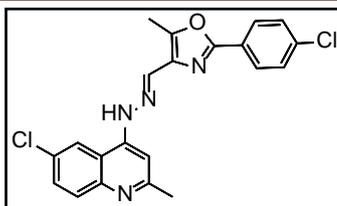
Appendix



National Cancer Institute Developmental Therapeutics Program															
In-Vitro Testing Results															
NSC : D - 804988 / 1			Experiment ID : 1808NS91					Test Type : 08			Units : Molar				
Report Date : September 11, 2018			Test Date : August 20, 2018					QNS :			MC :				
COMI : KISQ-07			Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M							
Panel/Cell Line	Time	Log10 Concentration										GI50	TGI	LC50	
		Zero	Ctrl	-8.0	-7.0	-6.0	-5.0	-4.0	-8.0	-7.0	-6.0				-5.0
Leukemia															
CCRF-CEM	0.514	3.109	3.094	3.103	2.381	0.342	0.391	99	100	72	-34	-24	1.61E-6	4.81E-6	> 1.00E-4
HL-60(TB)	0.950	3.204	3.162	3.169	2.214	0.357	0.446	98	98	56	-62	-53	1.12E-6	2.97E-6	7.86E-6
K-562	0.194	2.293	2.261	2.310	0.159	0.084	0.190	98	101	-18	-57	-2	2.67E-7	7.02E-7	
MOLT-4	0.584	2.895	2.802	2.926	2.662	0.347	0.393	100	101	90	-41	-33	2.02E-6	4.88E-6	> 1.00E-4
RPMI-8226	0.702	2.661	2.635	2.650	2.251	0.367	0.435	99	99	79	-48	-38	1.69E-6	4.20E-6	> 1.00E-4
SR	0.331	1.742	1.765	1.791	0.370	0.276	0.322	102	103	3	-17	-3	3.39E-7	1.39E-6	> 1.00E-4
Non-Small Cell Lung Cancer															
A549/ATCC	0.490	2.459	2.355	2.400	2.301	0.159	0.129	95	97	92	-68	-74	1.83E-6	3.77E-6	7.76E-6
EKVX	1.218	3.003	2.870	2.913	2.851	0.131	0.068	93	95	91	-89	-94	1.70E-6	3.21E-6	6.06E-6
HOP-62	0.494	1.748	1.660	1.718	1.732	0.102	0.085	93	98	99	-79	-83	1.88E-6	3.58E-6	6.83E-6
HOP-92	1.128	1.838	1.670	1.751	1.656	0.198	0.165	76	88	74	-82	-85	1.43E-6	2.98E-6	6.21E-6
NCI-H226	1.178	2.911	2.889	2.918	2.797	0.351	0.279	99	100	93	-70	-76	1.84E-6	3.72E-6	7.52E-6
NCI-H23	0.719	2.623	2.571	2.658	2.684	0.321	0.189	97	102	103	-55	-74	2.17E-6	4.48E-6	9.25E-6
NCI-H322M	0.643	1.929	1.830	1.890	1.750	0.225	0.112	92	97	86	-65	-83	1.73E-6	3.71E-6	7.95E-6
NCI-H460	0.239	2.681	2.712	2.704	2.653	0.067	0.075	101	101	99	-72	-69	1.93E-6	3.79E-6	7.44E-6
NCI-H522	0.738	2.391	2.256	2.302	2.235	0.303	0.378	92	95	91	-59	-49	1.87E-6	4.03E-6	
Colon Cancer															
COLO 205	0.323	1.612	1.561	1.564	1.478	0.089	0.092	96	96	90	-72	-72	1.76E-6	3.57E-6	7.27E-6
HCC-2998	0.762	2.652	2.641	2.787	2.848	0.144	0.080	99	107	110	-81	-86	2.07E-6	3.77E-6	6.88E-6
HCT-116	0.459	3.259	3.272	3.269	3.244	0.018	-0.003	100	100	99	-96	-100	1.79E-6	3.23E-6	5.81E-6
HCT-15	0.310	2.032	1.841	1.935	0.903	0.082	0.051	89	94	34	-74	-84	5.49E-7	2.08E-6	6.04E-6
HT29	0.273	2.238	2.123	2.102	1.073	0.106	0.126	94	93	41	-61	-54	6.64E-7	2.50E-6	7.74E-6
KM12	0.413	2.453	2.391	2.442	2.329	0.142	0.172	97	99	94	-66	-58	3.88E-6	3.88E-6	7.98E-6
SW-620	0.291	2.373	2.262	2.350	0.865	0.117	0.123	95	99	28	-60	-58	4.85E-7	2.07E-6	7.69E-6
CNS Cancer															
SF-268	0.654	2.110	2.065	2.115	2.073	0.274	0.375	97	100	97	-58	-43	2.02E-6	4.23E-6	
SF-295	1.141	3.242	3.149	3.190	3.207	0.107	0.189	96	98	98	-91	-83	1.80E-6	3.31E-6	6.09E-6
SF-539	0.845	2.535	2.305	2.521	2.480	0.083	0.096	86	99	97	-90	-89	1.78E-6	3.29E-6	6.09E-6
SNB-19	0.761	2.426	2.308	2.396	2.384	0.135	0.017	93	98	97	-82	-98	1.84E-6	3.49E-6	6.61E-6
SNB-75	0.886	1.746	1.525	1.603	1.579	0.185	0.320	74	83	81	-79	-64	1.55E-6	3.20E-6	6.57E-6
U251	0.534	2.345	2.203	2.328	2.321	0.067	0.085	92	99	99	-87	-84	1.83E-6	3.39E-6	6.29E-6
Melanoma															
LOX IMVI	0.332	2.574	2.335	2.685	2.589	0.117	0.176	89	105	101	-65	-47	2.02E-6	4.06E-6	
MALME-3M	0.597	1.061	1.001	1.066	1.070	0.129	0.205	87	101	102	-78	-66	1.94E-6	3.67E-6	6.96E-6
M14	0.439	2.107	2.058	2.046	2.011	0.091	0.088	97	96	94	-79	-80	1.80E-6	3.49E-6	6.77E-6
MDA-MB-435	0.468	2.500	2.432	2.449	2.296	0.068	0.068	97	97	90	-86	-86	1.69E-6	3.25E-6	6.27E-6
SK-MEL-2	1.521	3.077	3.057	3.115	3.059	0.575	0.320	99	102	99	-62	-79	2.01E-6	4.11E-6	8.40E-6
SK-MEL-28	0.990	2.765	2.803	2.853	2.756	0.071	0.175	102	105	99	-93	-82	1.81E-6	3.29E-6	5.99E-6
SK-MEL-5	1.098	3.258	3.188	3.267	3.230	0.007	-0.017	97	100	99	-99	-100	1.76E-6	3.15E-6	5.63E-6
UACC-257	0.952	2.222	2.130	2.161	2.106	0.154	0.216	93	95	91	-84	-77	1.71E-6	3.31E-6	6.40E-6
UACC-62	0.778	2.845	2.749	2.805	2.708	0.149	0.110	95	98	93	-81	-86	1.77E-6	3.43E-6	6.65E-6
Ovarian Cancer															
IGROV1	0.431	1.897	1.828	1.903	1.834	0.081	0.123	95	100	96	-81	-72	1.81E-6	3.48E-6	6.66E-6
OVCAR-3	0.500	1.859	1.869	1.965	1.923	0.074	0.048	101	108	105	-85	-90	1.94E-6	3.56E-6	6.52E-6
OVCAR-4	0.648	1.584	1.502	1.562	1.545	0.105	0.138	91	98	96	-84	-79	1.80E-6	3.42E-6	6.48E-6
OVCAR-5	0.703	1.582	1.488	1.509	1.494	0.143	0.020	89	92	90	-80	-97	1.72E-6	3.39E-6	6.68E-6
OVCAR-8	0.365	1.794	1.716	1.768	1.469	0.189	0.218	95	98	77	-48	-40	1.65E-6	4.13E-6	> 1.00E-4
NCI/ADR-RES	0.486	1.844	1.838	2.007	1.794	0.255	0.330	100	112	96	-48	-20	2.10E-6	4.67E-6	> 1.00E-4
SK-OV-3	0.710	1.765	1.790	1.780	1.754	0.027	0.004	102	101	99	-96	-99	1.78E-6	3.21E-6	5.80E-6
Renal Cancer															
786-0	0.648	2.584	2.358	2.341	2.126	0.022	0.009	88	87	76	-97	-99	1.42E-6	2.76E-6	5.37E-6
A498	1.537	2.253	2.188	2.183	2.097	0.655	0.004	91	90	78	-57	-100	1.61E-6	3.77E-6	8.82E-6
ACHN	0.438	1.899	1.862	1.922	1.806	-0.005	-0.002	98	102	94	-100	-100	1.68E-6	3.04E-6	5.52E-6
CAKI-1	0.559	2.568	2.494	2.564	2.480	0.032	-0.010	96	100	96	-94	-100	1.74E-6	3.19E-6	5.84E-6
RXF 393	1.168	2.181	2.128	2.129	1.942	0.156	0.191	95	95	76	-87	-84	1.45E-6	2.94E-6	5.96E-6
SN12C	0.656	2.537	2.393	2.551	2.411	0.140	0.253	92	101	93	-79	-62	1.79E-6	3.49E-6	6.81E-6
TK-10	0.756	1.851	1.692	1.767	1.829	0.076	0.014	85	92	98	-90	-98	1.80E-6	3.32E-6	6.13E-6
UO-31	0.898	2.228	2.103	2.137	2.094	0.004	0.028	91	93	90	-100	-97	1.62E-6	2.98E-6	5.48E-6
Prostate Cancer															
PC-3	0.453	1.856	1.733	1.823	1.780	0.312	0.156	91	98	95	-31	-66	2.26E-6	5.65E-6	3.52E-5
DU-145	0.436	1.756	1.708	1.786	1.709	0.347	0.121	96	102	96	-21	-72	2.49E-6	6.67E-6	3.71E-5
Breast Cancer															
MCF7	0.467	2.772	2.536	2.687	2.450	0.074	0.125	90	96	86	-84	-73	1.63E-6	3.20E-6	6.29E-6
MDA-MB-231/ATCC	0.679	1.597	1.502	1.575	1.555	0.129	0.204	90	98	95	-81	-70	1.81E-6	3.48E-6	6.67E-6
HS 578T	1.065	2.148	2.023	2.106	2.032	0.470	0.599	88	96	89	-56	-44	1.86E-6	4.12E-6	
BT-549	1.122	2.322	2.192	2.238	2.227	0.150	0.051	88	93	92	-87	-95	1.72E-6	3.27E-6	6.23E-6
T-47D	0.494	1.181	1.096	1.126	1.115	0.158	0.219	88	92	90	-68	-56	1.80E-6	3.72E-6	7.69E-6
MDA-MB-468	0.994	1.848	1.739	1.797	1.788	0.119	0.020	87	94	93	-88	-98	1.73E-6	3.26E-6	6.16E-6

Sheet 36. Response parameters at five dose level of compound 31g.

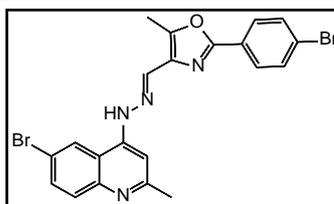
Appendix



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results															
NSC : D - 804989 / 1			Experiment ID : 1808NS91					Test Type : 08			Units : Molar				
Report Date : September 11, 2018			Test Date : August 20, 2018					QNS :			MC :				
COMI : KISQ-08			Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M							
Panel/Cell Line	Time Zero	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			
Leukemia															
CCRF-CEM	0.514	3.171	3.154	3.075	2.945	0.350	0.294	99	96	91	-32	-43	2.17E-6	5.51E-6	> 1.00E-4
HL-60(TB)	0.950	3.271	3.257	3.219	3.096	0.382	0.352	99	98	92	-60	-63	1.90E-6	4.05E-6	8.62E-6
K-562	0.194	2.517	2.577	2.506	2.239	0.107	0.096	103	100	88	-45	-51	1.93E-6	4.58E-6	8.03E-5
MOLT-4	0.584	2.862	2.967	2.927	2.924	0.340	0.293	105	103	103	-42	-50	2.32E-6	5.13E-6	> 1.00E-4
RPMI-8226	0.702	2.708	2.746	2.663	2.574	0.384	0.388	102	98	93	-45	-45	2.05E-6	4.71E-6	> 1.00E-4
SR	0.331	1.733	1.756	1.785	1.681	0.291	0.251	102	104	96	-12	-24	2.67E-6	7.71E-6	> 1.00E-4
Non-Small Cell Lung Cancer															
A549/ATCC	0.490	2.576	2.491	2.428	2.489	0.100	0.115	96	93	96	-80	-77	1.82E-6	3.52E-6	6.77E-6
EKVX	1.218	2.918	2.967	2.896	2.904	2.049	0.010	103	99	99	49	-99	9.51E-6	2.14E-5	4.65E-5
HOP-62	0.494	1.761	1.780	1.788	1.749	0.095	0.089	102	102	99	-81	-82	1.87E-6	3.55E-6	6.74E-6
HOP-92	1.128	1.835	1.756	1.719	1.693	0.129	0.185	89	84	80	-89	-84	1.50E-6	2.98E-6	5.90E-6
NCI-H226	1.178	2.770	2.699	2.797	2.735	2.286	0.685	96	102	98	70	-42	1.50E-5	4.21E-5	> 1.00E-4
NCI-H23	0.719	2.692	2.608	2.539	2.596	0.393	0.323	96	92	95	-45	-55	2.09E-6	4.75E-6	2.96E-5
NCI-H322M	0.643	2.061	2.005	1.934	2.006	0.220	0.032	96	91	96	-66	-95	1.93E-6	3.92E-6	7.98E-6
NCI-H460	0.239	2.562	2.577	2.574	2.584	0.059	0.044	101	101	101	-76	-82	1.94E-6	3.73E-6	7.17E-6
NCI-H522	0.738	2.153	2.030	2.066	2.063	0.308	0.298	91	94	94	-58	-60	1.94E-6	4.13E-6	8.81E-6
Colon Cancer															
COLO 205	0.323	1.689	1.692	1.693	1.729	0.100	0.107	100	100	103	-69	-67	2.03E-6	3.97E-6	7.75E-6
HCC-2998	0.762	2.715	2.611	2.623	2.585	0.095	0.247	95	95	93	-88	-68	1.74E-6	3.28E-6	6.20E-6
HCT-116	0.459	3.241	3.222	3.219	3.224	0.069	0.114	99	99	99	-85	-75	1.85E-6	3.46E-6	6.45E-6
HCT-115	0.310	2.028	1.950	1.920	1.960	0.078	0.087	95	94	96	-75	-79	1.86E-6	3.64E-6	7.14E-6
HT29	0.273	2.064	1.996	1.963	2.017	0.082	0.063	96	94	97	-70	-77	1.92E-6	3.82E-6	7.60E-6
KM12	0.413	2.409	2.445	2.416	2.407	0.084	0.072	102	100	100	-80	-83	1.89E-6	3.60E-6	6.83E-6
SW-620	0.291	2.305	2.042	2.231	2.314	0.067	0.062	87	96	100	-77	-79	1.92E-6	3.68E-6	7.05E-6
CNS Cancer															
SF-268	0.654	2.008	1.979	2.019	2.043	0.253	0.222	98	101	103	-61	-66	2.09E-6	4.22E-6	8.53E-6
SF-295	1.141	3.274	3.204	3.174	3.203	1.076	0.214	97	95	97	-6	-81	2.86E-6	8.80E-6	3.86E-5
SF-539	0.845	2.616	2.569	2.507	2.512	0.056	0.055	97	94	94	-93	-93	1.72E-6	3.18E-6	5.87E-6
SNB-19	0.761	2.600	2.554	2.534	2.596	0.118	0.301	97	96	100	-85	-60	1.86E-6	3.48E-6	6.49E-6
SNB-75	0.886	1.746	1.597	1.595	1.673	0.166	0.162	83	82	92	-81	-82	1.74E-6	3.39E-6	6.59E-6
U251	0.534	2.500	2.449	2.436	2.476	0.081	0.077	97	97	99	-85	-86	1.84E-6	3.45E-6	6.46E-6
Melanoma															
LOX IMVI	0.332	2.660	2.580	2.555	2.646	0.066	0.127	97	95	99	-80	-82	1.88E-6	3.57E-6	6.78E-6
MALME-3M	0.597	1.109	1.101	1.085	1.175	0.065	0.145	99	95	113	-89	-76	2.05E-6	3.97E-6	6.40E-6
M14	0.439	2.087	2.053	2.045	2.073	0.097	0.128	98	97	99	-78	-71	1.89E-6	3.63E-6	6.95E-6
MDA-MB-435	0.468	2.496	2.451	2.400	2.398	0.012	0.026	98	95	95	-97	-94	1.72E-6	3.12E-6	5.67E-6
SK-MEL-2	1.521	2.950	2.954	2.971	2.951	2.889	0.609	100	101	100	96	-60	1.97E-5	4.12E-5	8.83E-5
SK-MEL-28	0.990	2.862	2.891	2.850	2.748	0.102	0.109	102	99	94	-90	-89	1.73E-6	3.25E-6	6.08E-6
SK-MEL-5	1.098	3.211	3.175	3.147	3.130	1.415	0.038	98	97	96	15	-97	3.70E-6	1.36E-5	3.82E-5
UACC-257	0.952	2.289	2.239	2.164	2.212	0.568	0.163	96	91	94	-40	-83	2.13E-6	5.02E-6	1.69E-5
UACC-62	0.778	2.986	2.807	2.802	2.797	0.137	0.131	92	92	91	-82	-83	1.73E-6	3.36E-6	6.51E-6
Ovarian Cancer															
IGROV1	0.431	2.050	1.990	1.962	2.006	0.084	0.118	96	95	97	-81	-73	1.84E-6	3.52E-6	6.73E-6
OVCAR-3	0.500	1.834	1.861	1.862	1.896	0.030	-0.001	102	102	105	-94	-100	1.88E-6	3.36E-6	6.00E-6
OVCAR-4	0.648	1.617	1.609	1.600	1.640	0.089	0.110	99	98	102	-86	-83	1.89E-6	3.49E-6	6.42E-6
OVCAR-5	0.703	1.560	1.545	1.517	1.578	0.058	0.036	98	95	102	-92	-95	1.86E-6	3.36E-6	6.09E-6
OVCAR-8	0.365	1.904	1.894	1.876	1.889	0.165	0.100	99	98	99	-55	-73	2.08E-6	4.40E-6	9.29E-6
NCI/ADR-RES	0.486	1.818	1.731	1.757	1.719	0.243	0.213	93	95	93	-50	-56	1.99E-6	4.46E-6	1.00E-5
SK-OV-3	0.710	1.793	1.828	1.785	1.781	0.054	0.013	103	99	99	-92	-98	1.80E-6	3.29E-6	6.00E-6
Renal Cancer															
786-0	0.648	2.552	2.432	2.358	2.470	0.169	0.202	94	90	96	-74	-69	1.86E-6	3.67E-6	7.23E-6
A498	1.537	2.221	2.194	2.002	2.007	1.784	0.306	96	68	69	36	-80	3.73E-6	2.04E-5	5.50E-5
ACHN	0.438	1.982	1.910	1.935	1.997	0.007	0.061	95	97	101	-99	-86	1.80E-6	3.21E-6	5.71E-6
CAKI-1	0.559	2.547	2.451	2.422	2.476	0.007	-0.025	95	94	96	-99	-100	1.73E-6	3.12E-6	5.62E-6
RXF 393	1.168	2.116	2.012	1.989	1.994	0.184	0.330	89	87	87	-84	-72	1.65E-6	3.22E-6	6.31E-6
SN12C	0.656	2.655	2.561	2.608	2.588	0.172	0.124	95	98	97	-74	-81	1.88E-6	3.69E-6	7.25E-6
TK-10	0.756	1.887	1.819	1.825	1.890	0.048	0.113	94	94	100	-94	-85	1.82E-6	3.29E-6	5.95E-6
UO-31	0.898	2.382	2.236	2.241	2.240	0.047	0.092	90	91	90	-95	-90	1.65E-6	3.08E-6	5.73E-6
Prostate Cancer															
PC-3	0.453	1.895	1.801	1.758	1.765	0.071	0.051	93	90	91	-84	-89	1.71E-6	3.30E-6	6.37E-6
DU-145	0.436	1.758	1.791	1.723	1.716	0.056	0.053	102	97	97	-87	-88	1.80E-6	3.36E-6	6.27E-6
Breast Cancer															
MCF7	0.467	2.812	2.596	2.597	2.683	0.174	0.176	91	91	94	-63	-62	1.92E-6	3.99E-6	8.29E-6
MDA-MB-231/ATCC	0.679	1.582	1.519	1.549	1.612	0.164	0.220	93	96	103	-76	-68	1.98E-6	3.77E-6	7.17E-6
HS 578T	1.065	2.067	1.978	1.978	2.040	1.891	0.446	91	91	97	82	-58	1.70E-5	3.86E-5	8.75E-5
BT-549	1.122	2.242	2.164	2.174	2.162	1.935	0.189	93	94	93	73	-83	1.40E-5	2.93E-5	6.13E-5
T-47D	0.494	1.185	1.159	1.147	1.161	0.170	0.188	96	94	97	-66	-62	1.94E-6	3.94E-6	8.00E-6
MDA-MB-468	0.994	1.819	1.781	1.768	1.812	0.302	0.366	95	94	99	-70	-63	1.96E-6	3.87E-6	7.65E-6

Sheet 37. Response parameters at five dose level of compound 31h.

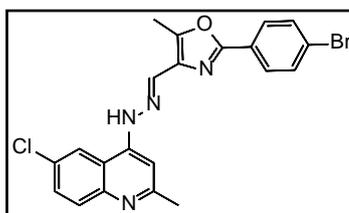
Appendix



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results																
NSC : D - 804990 / 1			Experiment ID : 1808NS91					Test Type : 08			Units : Molar					
Report Date : September 11, 2018			Test Date : August 20, 2018					QNS :			MC :					
COMI : KISQ-09			Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M								
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	0.514	3.147	3.120	3.009	3.029	2.987	2.764	99	95	96	94	85	> 1.00E-4	> 1.00E-4	> 1.00E-4	
HL-60(TB)	0.950	3.260	3.227	3.213	3.200	3.178	3.166	99	98	97	96	96	> 1.00E-4	> 1.00E-4	> 1.00E-4	
K-562	0.194	2.450	2.541	2.504	2.555	2.518	2.549	104	102	105	103	104	> 1.00E-4	> 1.00E-4	> 1.00E-4	
MOLT-4	0.584	2.973	2.952	2.920	2.945	2.952	2.860	99	98	99	99	95	> 1.00E-4	> 1.00E-4	> 1.00E-4	
RPMI-8226	0.702	2.762	2.773	2.675	2.679	2.644	2.574	101	96	96	94	91	> 1.00E-4	> 1.00E-4	> 1.00E-4	
SR	0.331	1.854	1.853	1.811	1.881	1.876	1.822	100	97	102	101	98	> 1.00E-4	> 1.00E-4	> 1.00E-4	
Non-Small Cell Lung Cancer																
A549/ATCC	0.490	2.561	2.557	2.445	2.476	2.481	2.426	100	94	96	96	93	> 1.00E-4	> 1.00E-4	> 1.00E-4	
EKVX	1.218	2.805	2.742	2.728	2.677	2.717	2.747	96	95	92	94	96	> 1.00E-4	> 1.00E-4	> 1.00E-4	
HOP-62	0.494	1.802	1.784	1.781	1.719	1.776	1.651	99	98	94	98	88	> 1.00E-4	> 1.00E-4	> 1.00E-4	
HOP-92	1.128	1.796	1.772	1.710	1.737	1.685	1.681	96	87	91	83	83	> 1.00E-4	> 1.00E-4	> 1.00E-4	
NCI-H226	1.178	2.911	2.842	2.859	2.795	2.804	2.786	96	97	93	94	93	> 1.00E-4	> 1.00E-4	> 1.00E-4	
NCI-H23	0.719	2.661	2.497	2.474	2.512	2.456	2.418	92	90	92	89	87	> 1.00E-4	> 1.00E-4	> 1.00E-4	
NCI-H322M	0.643	2.023	1.973	1.901	1.960	1.953	1.855	96	91	95	95	88	> 1.00E-4	> 1.00E-4	> 1.00E-4	
NCI-H460	0.239	2.594	2.598	2.663	2.711	2.567	2.585	100	103	105	99	100	> 1.00E-4	> 1.00E-4	> 1.00E-4	
NCI-H522	0.738	2.238	2.093	2.078	2.104	2.115	2.012	90	89	91	92	85	> 1.00E-4	> 1.00E-4	> 1.00E-4	
Colon Cancer																
COLO 205	0.323	1.684	1.706	1.677	1.693	1.722	1.646	102	99	101	103	97	> 1.00E-4	> 1.00E-4	> 1.00E-4	
HCC-2998	0.762	2.748	2.658	2.754	2.686	2.676	2.619	95	100	97	96	93	> 1.00E-4	> 1.00E-4	> 1.00E-4	
HCT-116	0.459	3.193	3.194	3.183	3.176	3.191	3.188	100	100	99	100	100	> 1.00E-4	> 1.00E-4	> 1.00E-4	
HCT-15	0.310	1.858	1.800	1.825	1.723	1.765	1.656	96	98	91	94	87	> 1.00E-4	> 1.00E-4	> 1.00E-4	
HT29	0.273	2.128	2.085	2.033	2.125	2.070	1.988	98	95	100	97	92	> 1.00E-4	> 1.00E-4	> 1.00E-4	
KM12	0.413	2.513	2.585	2.546	2.500	2.497	2.639	103	102	99	99	106	> 1.00E-4	> 1.00E-4	> 1.00E-4	
SW-620	0.291	2.464	2.417	2.367	2.395	2.366	2.352	98	96	97	96	95	> 1.00E-4	> 1.00E-4	> 1.00E-4	
CNS Cancer																
SF-268	0.654	2.071	2.068	2.024	2.047	1.962	1.955	100	97	98	92	92	> 1.00E-4	> 1.00E-4	> 1.00E-4	
SF-295	1.141	3.160	3.099	3.068	3.113	3.051	3.083	97	95	98	95	96	> 1.00E-4	> 1.00E-4	> 1.00E-4	
SF-539	0.845	2.394	2.433	2.400	2.284	2.358	2.304	103	100	93	98	94	> 1.00E-4	> 1.00E-4	> 1.00E-4	
SNB-19	0.761	2.558	2.486	2.408	2.455	2.460	2.424	96	92	94	95	93	> 1.00E-4	> 1.00E-4	> 1.00E-4	
SNB-75	0.886	1.779	1.630	1.590	1.606	1.613	1.621	83	79	81	81	82	> 1.00E-4	> 1.00E-4	> 1.00E-4	
U251	0.534	2.441	2.439	2.383	2.430	2.456	2.376	100	97	99	101	97	> 1.00E-4	> 1.00E-4	> 1.00E-4	
Melanoma																
LOX IMVI	0.332	2.584	2.469	2.429	2.407	2.451	2.521	95	93	92	94	97	> 1.00E-4	> 1.00E-4	> 1.00E-4	
MALME-3M	0.597	1.085	1.080	1.035	1.082	1.056	1.013	99	90	99	94	85	> 1.00E-4	> 1.00E-4	> 1.00E-4	
M14	0.439	2.052	2.009	1.974	1.969	1.939	1.906	97	95	95	93	91	> 1.00E-4	> 1.00E-4	> 1.00E-4	
MDA-MB-435	0.468	2.491	2.520	2.479	2.445	2.496	2.396	101	99	98	100	95	> 1.00E-4	> 1.00E-4	> 1.00E-4	
SK-MEL-2	1.521	2.999	3.040	2.977	2.920	2.927	2.908	103	98	95	95	94	> 1.00E-4	> 1.00E-4	> 1.00E-4	
SK-MEL-28	0.990	2.795	2.862	2.794	2.735	2.739	2.645	104	100	97	97	92	> 1.00E-4	> 1.00E-4	> 1.00E-4	
SK-MEL-5	1.098	3.297	3.275	3.244	3.246	3.215	3.193	99	98	98	96	95	> 1.00E-4	> 1.00E-4	> 1.00E-4	
UACC-257	0.952	2.316	2.263	2.160	2.190	2.190	2.116	96	89	91	91	85	> 1.00E-4	> 1.00E-4	> 1.00E-4	
UACC-62	0.778	2.969	2.798	2.742	2.766	2.768	2.727	92	90	91	91	89	> 1.00E-4	> 1.00E-4	> 1.00E-4	
Ovarian Cancer																
IGROV1	0.431	1.969	1.955	1.911	1.928	1.903	1.869	99	96	97	96	93	> 1.00E-4	> 1.00E-4	> 1.00E-4	
OVCAR-3	0.500	1.892	1.935	1.955	1.930	1.867	1.840	103	104	103	98	96	> 1.00E-4	> 1.00E-4	> 1.00E-4	
OVCAR-4	0.648	1.600	1.612	1.603	1.603	1.591	1.535	101	100	100	99	93	> 1.00E-4	> 1.00E-4	> 1.00E-4	
OVCAR-5	0.703	1.563	1.479	1.487	1.452	1.415	1.363	90	91	87	83	77	> 1.00E-4	> 1.00E-4	> 1.00E-4	
OVCAR-8	0.365	1.901	1.847	1.818	1.829	1.826	1.849	96	95	95	95	97	> 1.00E-4	> 1.00E-4	> 1.00E-4	
NCI/ADR-RES	0.486	1.858	1.870	1.818	1.856	1.777	1.785	101	97	100	94	95	> 1.00E-4	> 1.00E-4	> 1.00E-4	
SK-OV-3	0.710	1.883	1.949	1.861	1.862	1.860	1.780	106	98	98	98	91	> 1.00E-4	> 1.00E-4	> 1.00E-4	
Renal Cancer																
786-0	0.648	2.545	2.351	2.365	2.354	2.307	2.290	90	91	90	87	87	> 1.00E-4	> 1.00E-4	> 1.00E-4	
A498	1.537	2.204	2.150	2.118	2.147	2.106	2.024	92	87	91	85	73	> 1.00E-4	> 1.00E-4	> 1.00E-4	
ACHN	0.438	1.865	1.844	1.822	1.836	1.856	1.844	99	97	98	99	98	> 1.00E-4	> 1.00E-4	> 1.00E-4	
CAKI-1	0.559	2.572	2.488	2.450	2.454	2.452	2.499	96	94	94	94	96	> 1.00E-4	> 1.00E-4	> 1.00E-4	
RXF 393	1.168	2.221	2.149	2.064	2.076	2.041	2.002	93	85	86	83	79	> 1.00E-4	> 1.00E-4	> 1.00E-4	
SN12C	0.656	2.676	2.555	2.536	2.496	2.495	2.485	94	93	91	91	91	> 1.00E-4	> 1.00E-4	> 1.00E-4	
TK-10	0.756	1.879	1.850	1.781	1.769	1.738	1.711	97	91	90	87	85	> 1.00E-4	> 1.00E-4	> 1.00E-4	
UO-31	0.898	2.353	2.194	2.164	2.255	2.255	2.209	89	87	93	93	90	> 1.00E-4	> 1.00E-4	> 1.00E-4	
Prostate Cancer																
PC-3	0.453	1.899	1.804	1.825	1.817	1.789	1.813	93	95	94	92	94	> 1.00E-4	> 1.00E-4	> 1.00E-4	
DU-145	0.436	1.726	1.793	1.797	1.765	1.677	1.617	105	106	103	96	92	> 1.00E-4	> 1.00E-4	> 1.00E-4	
Breast Cancer																
MCF7	0.467	2.693	2.538	2.467	2.526	2.527	2.477	93	90	92	93	90	> 1.00E-4	> 1.00E-4	> 1.00E-4	
MDA-MB-231/ATCC	0.679	1.575	1.509	1.518	1.564	1.500	1.443	93	94	99	92	85	> 1.00E-4	> 1.00E-4	> 1.00E-4	
HS 578T	1.065	2.101	2.066	1.994	1.983	2.003	2.014	97	90	89	90	92	> 1.00E-4	> 1.00E-4	> 1.00E-4	
BT-549	1.122	2.277	2.150	2.148	2.180	2.091	2.107	89	89	92	84	85	> 1.00E-4	> 1.00E-4	> 1.00E-4	
T-47D	0.494	1.200	1.170	1.179	1.171	1.117	1.160	96	97	96	88	94	> 1.00E-4	> 1.00E-4	> 1.00E-4	
MDA-MB-468	0.994	1.950	1.837	1.818	1.787	1.798	1.717	88	86	83	84	76	> 1.00E-4	> 1.00E-4	> 1.00E-4	

Sheet 38. Response parameters at five dose level of compound 31i.

Appendix

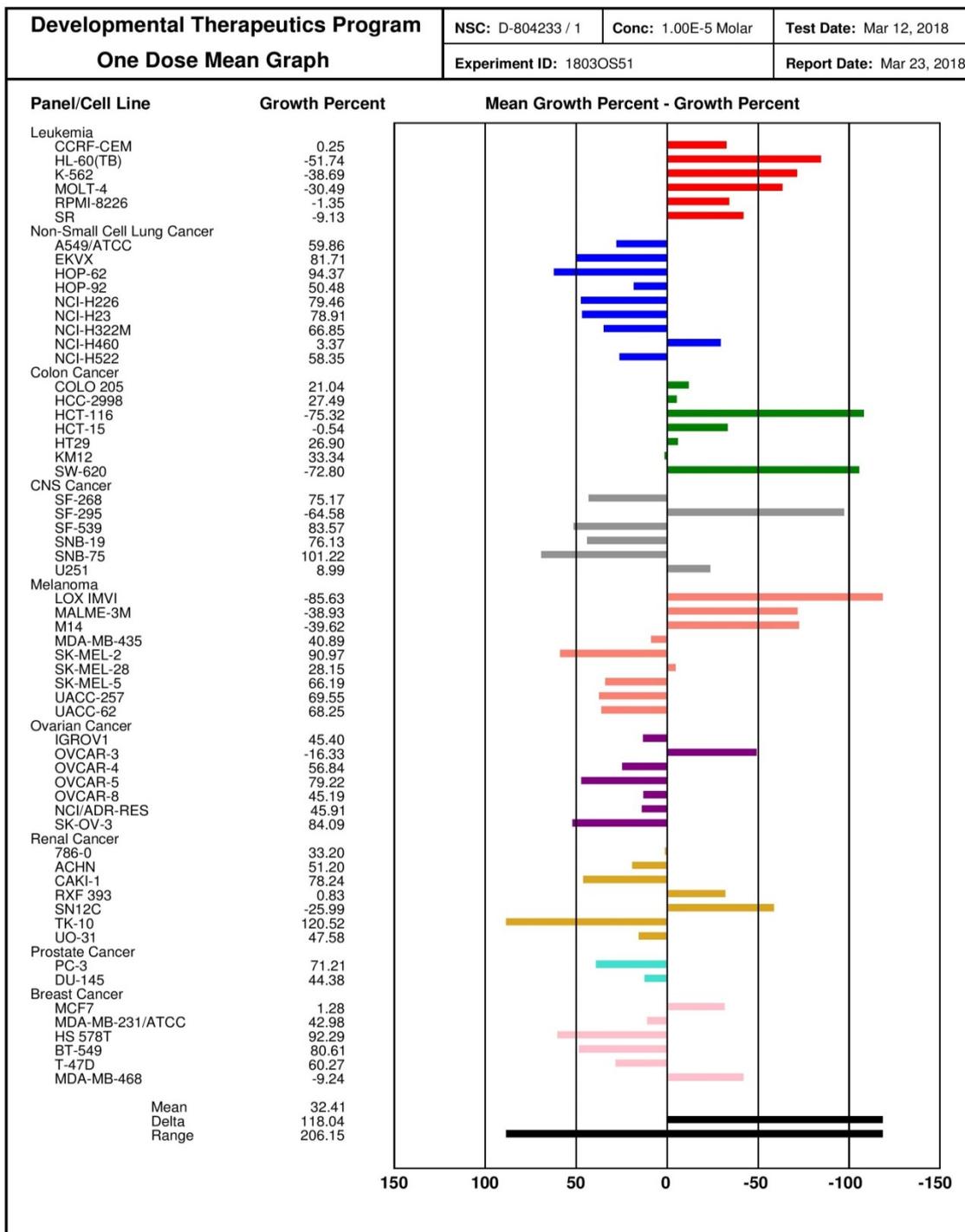
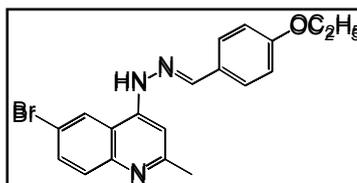


National Cancer Institute Developmental Therapeutics Program															
In-Vitro Testing Results															
NSC : D - 804991 / 1					Experiment ID : 1808NS91					Test Type : 08			Units : Molar		
Report Date : September 11, 2018					Test Date : August 20, 2018					QNS :			MC :		
COMI : KISQ-10					Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M					
Panel/Cell Line	Time	Log10 Concentration						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
Leukemia															
CCRF-CEM	0.514	3.129	3.107	3.052	2.371	0.546	0.507	99	97	71	1	-1	2.00E-6	2.97E-5	> 1.00E-4
HL-60(TB)	0.950	3.238	3.180	3.166	2.985	0.736	0.612	97	97	89	-23	-36	2.24E-6	6.28E-6	> 1.00E-4
K-562	0.194	2.435	2.504	2.446	1.263	0.174	0.287	103	100	48	-10	4	9.04E-7		> 1.00E-4
MOLT-4	0.584	2.965	2.967	2.940	2.538	0.732	0.640	100	99	82	6	2	2.65E-6	> 1.00E-4	> 1.00E-4
RPMI-8226	0.702	2.710	2.725	2.689	2.576	0.544	0.518	101	99	93	-23	-6	2.37E-6	6.39E-6	> 1.00E-4
SR	0.331	1.925	1.887	1.863	0.526	0.434	0.374	98	96	12	6	3	3.55E-7	> 1.00E-4	> 1.00E-4
Non-Small Cell Lung Cancer															
A549/ATCC	0.490	2.545	2.499	2.385	2.459	0.304	0.144	98	92	96	-38	-71	2.20E-6	5.20E-6	2.34E-5
EKVX	1.218	2.958	2.912	2.885	2.911	2.914	0.377	97	96	97	97	-69	1.93E-5	3.85E-5	7.68E-5
HOP-62	0.494	1.861	1.847	1.830	1.803	0.350	0.164	99	98	96	-29	-67	2.32E-6	5.84E-6	3.57E-5
HOP-92	1.128	1.830	1.753	1.686	1.635	1.244	0.150	89	79	72	16	-87	2.50E-6	1.44E-5	4.41E-5
NCI-H226	1.178	2.958	2.867	2.891	2.840	2.589	0.750	95	96	93	79	-36	1.79E-5	4.85E-5	> 1.00E-4
NCI-H23	0.719	2.696	2.560	2.522	2.585	1.463	0.221	93	91	94	39	-69	6.25E-6	2.28E-5	6.62E-5
NCI-H322M	0.643	2.032	1.949	1.926	1.916	1.137	-0.033	94	92	92	36	-100	5.53E-6	1.33E-5	4.28E-5
NCI-H460	0.239	2.720	2.801	2.776	2.648	0.100	0.125	103	102	97	-58	-48	2.01E-6	4.22E-6	> 1.00E-4
NCI-H522	0.738	2.403	2.288	2.243	2.281	0.510	0.390	93	90	93	-31	-47	2.21E-6	5.62E-6	> 1.00E-4
Colon Cancer															
COLO 205	0.323	1.696	1.698	1.705	1.684	0.634	0.184	100	101	99	23	-43	4.38E-6	2.21E-5	> 1.00E-4
HCC-2998	0.762	2.811	2.722	2.717	2.710	1.650	0.057	96	95	95	43	-93	7.43E-6	2.08E-5	4.86E-5
HCT-116	0.459	3.289	3.284	3.262	3.258	0.723	0.005	100	99	99	9	-99	3.52E-6	1.22E-5	3.53E-5
HCT-15	0.310	2.020	2.036	1.892	1.881	0.322	0.027	101	92	92	1	-91	2.88E-6	1.02E-5	3.55E-5
HT29	0.273	2.244	2.168	2.153	2.140	0.368	0.190	96	95	95	5	-31	3.14E-6	1.37E-5	> 1.00E-4
KM12	0.413	2.491	2.568	2.484	2.357	0.289	0.152	104	100	94	-30	-63	2.25E-6	5.71E-6	3.98E-5
SW-620	0.291	2.313	2.299	2.271	2.140	0.167	0.071	99	98	91	-43	-76	2.04E-6	4.81E-6	1.87E-5
CNS Cancer															
SF-268	0.654	2.142	2.120	2.099	2.094	1.264	0.519	99	97	97	41	-21	6.89E-6	4.62E-5	> 1.00E-4
SF-295	1.141	3.272	3.175	3.135	3.177	3.135	0.126	95	94	96	94	-89	1.73E-5	3.26E-5	6.12E-5
SF-539	0.845	2.645	2.547	2.530	2.487	0.199	-0.093	95	94	91	-77	-100	1.76E-6	3.50E-6	6.95E-6
SNB-19	0.761	2.544	2.353	2.404	2.420	1.114	0.504	89	92	93	20	-34	3.87E-6	2.34E-5	> 1.00E-4
SNB-75	0.886	1.789	1.663	1.636	1.651	0.725	0.403	86	83	85	-18	-55	2.17E-6	6.66E-6	7.49E-5
U251	0.534	2.425	2.375	2.331	2.433	0.137	0.056	97	95	100	-74	-90	1.94E-6	3.75E-6	7.25E-6
Melanoma															
LOX IMVI	0.332	2.694	2.613	2.543	2.571	0.150	0.076	97	94	95	-55	-77	1.99E-6	4.29E-6	9.26E-6
MALME-3M	0.597	1.137	1.125	1.089	1.131	0.282	-0.023	98	91	99	-53	-100	2.10E-6	4.48E-6	9.58E-6
M14	0.439	2.141	2.060	2.076	2.077	0.656	0.098	95	96	96	13	-78	3.58E-6	1.39E-5	4.94E-5
MDA-MB-435	0.468	2.501	2.522	2.450	2.441	0.298	-0.038	101	97	97	-36	-100	2.25E-6	5.34E-6	1.64E-5
SK-MEL-2	1.521	3.044	3.041	3.046	3.023	3.014	1.223	100	100	99	98	20	2.56E-5	6.81E-5	> 1.00E-4
SK-MEL-28	0.990	2.869	2.866	2.815	2.777	0.750	0.050	100	97	95	-24	-95	2.39E-6	6.26E-6	2.31E-5
SK-MEL-5	1.098	3.260	3.220	3.202	3.249	2.645	-0.104	98	97	99	72	-100	1.33E-5	2.61E-5	5.11E-5
UACC-257	0.952	2.266	2.235	2.158	2.134	1.508	0.172	98	92	90	42	-82	6.90E-6	2.19E-5	5.53E-5
UACC-62	0.778	2.979	2.800	2.755	2.697	0.431	-0.024	92	90	87	-45	-100	1.91E-6	4.58E-6	1.25E-5
Ovarian Cancer															
IGROV1	0.431	2.092	2.025	1.998	1.914	0.922	0.141	96	94	89	30	-67	4.55E-6	2.02E-5	6.63E-5
OVCAR-3	0.500	1.953	1.956	1.943	1.974	0.200	0.014	100	99	101	-60	-97	2.08E-6	4.25E-6	8.66E-6
OVCAR-4	0.648	1.649	1.654	1.583	1.553	0.235	0.326	101	93	90	-64	-50	1.83E-6	3.86E-6	
OVCAR-5	0.703	1.623	1.567	1.524	1.552	1.203	-0.064	94	89	92	54	-100	1.07E-5	2.25E-5	4.74E-5
OVCAR-8	0.365	1.811	1.805	1.794	1.724	0.292	0.249	100	99	94	-20	-32	2.43E-6	6.66E-6	> 1.00E-4
NCI/ADR-RES	0.486	1.881	1.832	1.841	1.762	0.466	0.426	96	97	91	-4	-12	2.71E-6	9.03E-6	> 1.00E-4
SK-OV-3	0.710	1.898	1.879	1.889	1.873	1.807	-0.086	98	99	98	92	-100	1.66E-5	3.02E-5	5.50E-5
Renal Cancer															
786-0	0.648	2.583	2.444	2.344	2.345	0.153	0.284	93	88	88	-76	-56	1.70E-6	3.42E-6	6.90E-6
A498	1.537	2.309	2.219	2.064	2.112	2.088	1.124	88	68	74	71	-27	1.65E-5	5.32E-5	> 1.00E-4
ACHN	0.438	1.959	1.906	1.880	1.973	0.392	-0.092	97	95	101	-11	-100	2.86E-6	8.35E-6	2.76E-5
CAKI-1	0.559	2.614	2.545	2.485	2.519	1.496	-0.134	97	94	95	46	-100	8.15E-6	2.06E-5	4.53E-5
RFX 393	1.168	2.256	2.171	2.155	2.034	1.574	0.136	92	91	80	37	-88	5.00E-6	1.98E-5	4.95E-5
SN12C	0.656	2.578	2.587	2.467	2.381	0.437	0.068	100	94	90	-33	-90	2.10E-6	5.36E-6	1.97E-5
TK-10	0.756	1.925	1.877	1.845	1.909	0.248	0.022	96	93	99	-67	-97	1.96E-6	3.93E-6	7.88E-6
UO-31	0.898	2.480	2.261	2.242	2.249	2.081	0.003	86	85	85	75	-100	1.39E-5	2.68E-5	5.19E-5
Prostate Cancer															
PC-3	0.453	1.914	1.851	1.812	1.791	0.428	0.015	96	93	92	-6	-97	2.68E-6	8.75E-6	3.07E-5
DU-145	0.436	1.849	1.849	1.799	1.790	0.675	-0.061	100	96	96	17	-100	3.81E-6	1.39E-5	3.73E-5
Breast Cancer															
MCF7	0.467	2.845	2.759	2.698	2.422	0.182	0.211	96	94	82	-61	-55	1.68E-6	3.74E-6	8.36E-6
MDA-MB-231/ATCC	0.679	1.567	1.542	1.489	1.514	0.681	0.164	97	91	94	-76	-76	2.95E-6	1.01E-5	4.57E-5
HS 578T	1.065	2.122	2.103	2.051	2.035	1.328	0.697	98	93	92	25	-35	4.21E-6	2.62E-5	> 1.00E-4
BT-549	1.122	2.346	2.243	2.230	2.214	1.786	0.078	92	91	89	54	-93	1.07E-5	2.33E-5	5.10E-5
T-47D	0.494	1.223	1.217	1.191	1.174	0.132	0.022	99	96	93	-64	-73	1.88E-6	3.90E-6	8.10E-6
MDA-MB-468	0.994	1.962	1.853	1.772	1.745	0.641	0.392	89	80	78	-36	-61	1.75E-6	4.85E-6	3.78E-5

Sheet 39. Response parameters at five dose level of compound 31j.

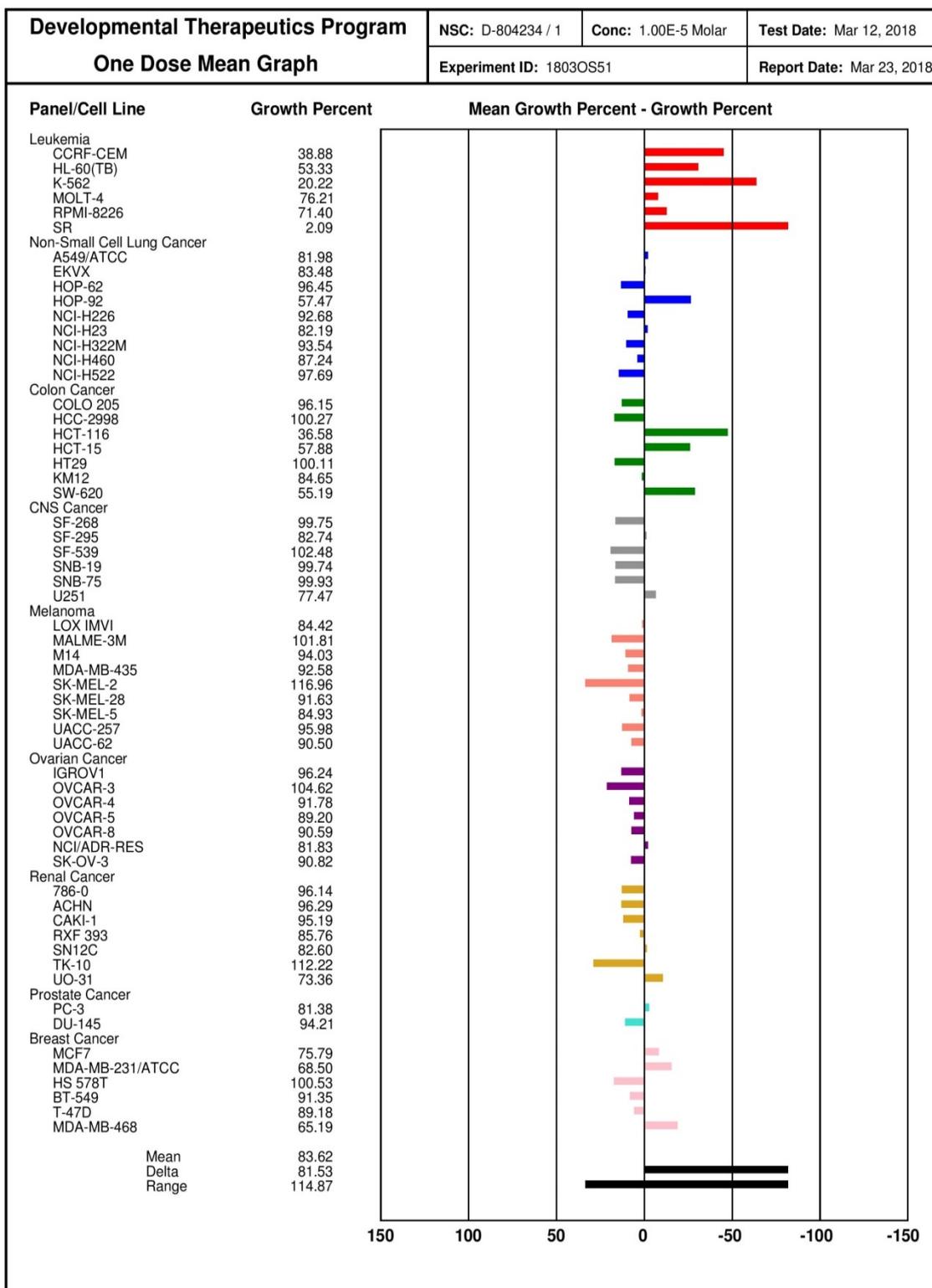
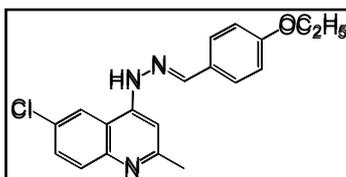
Appendix

Single Dose Anticancer Activity Results (Chapter-6B):



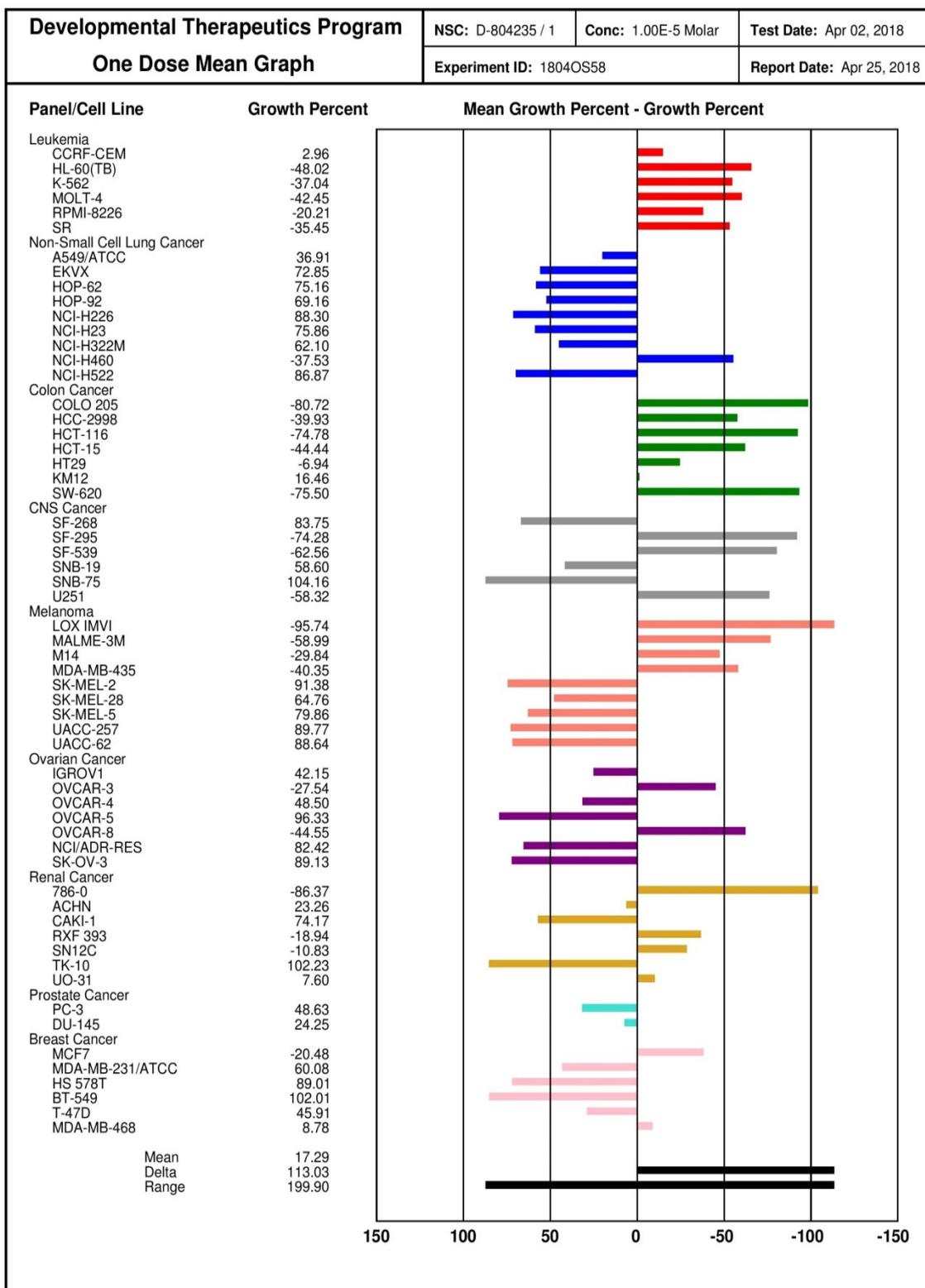
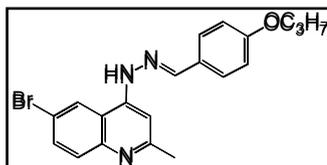
Sheet 40. One Dose Mean Graph of Compound 44a.

Appendix



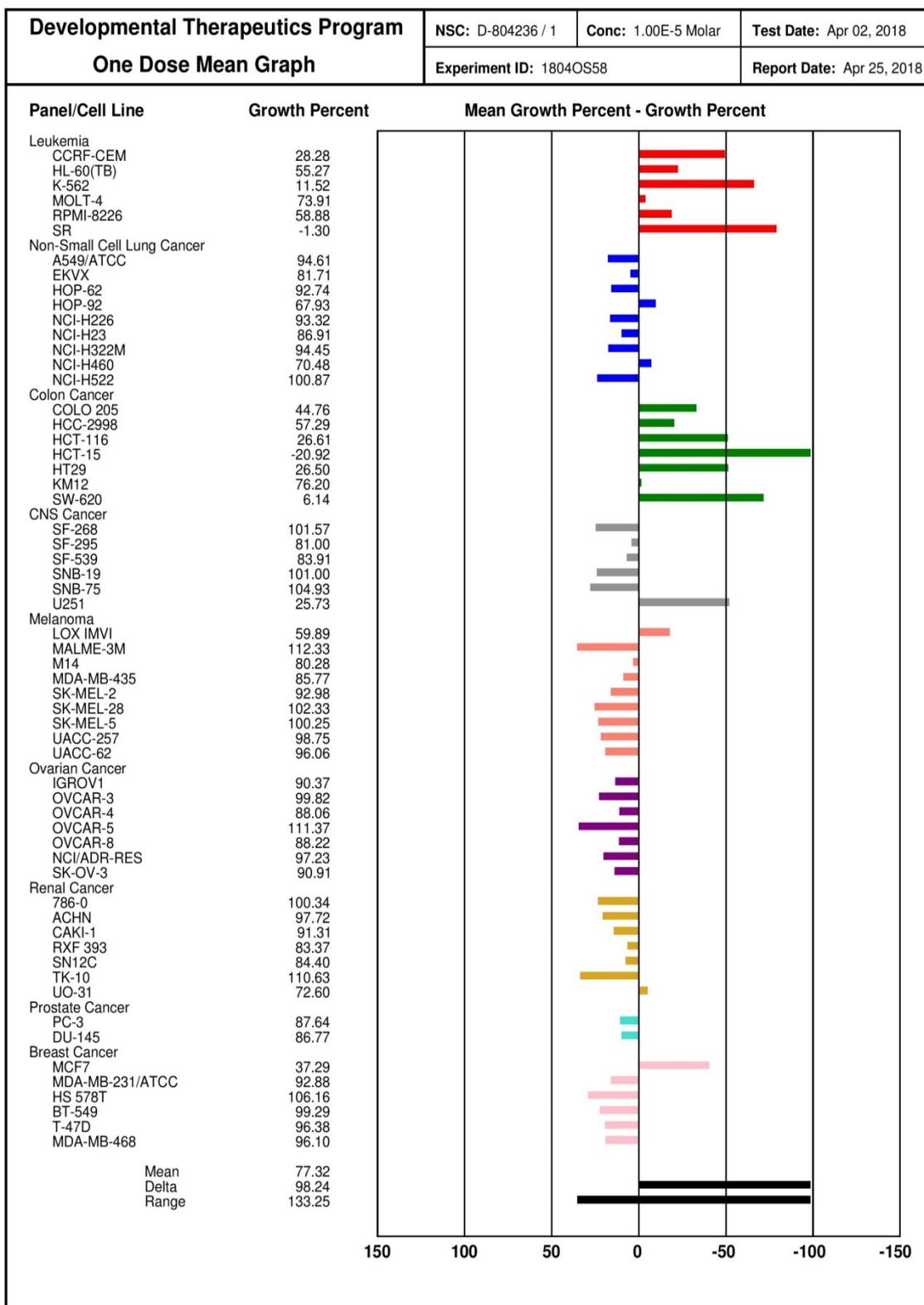
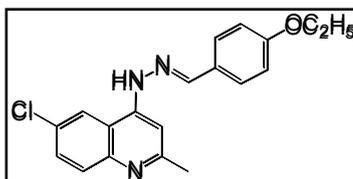
Sheet 41. One Dose Mean Graph of Compound 44b.

Appendix



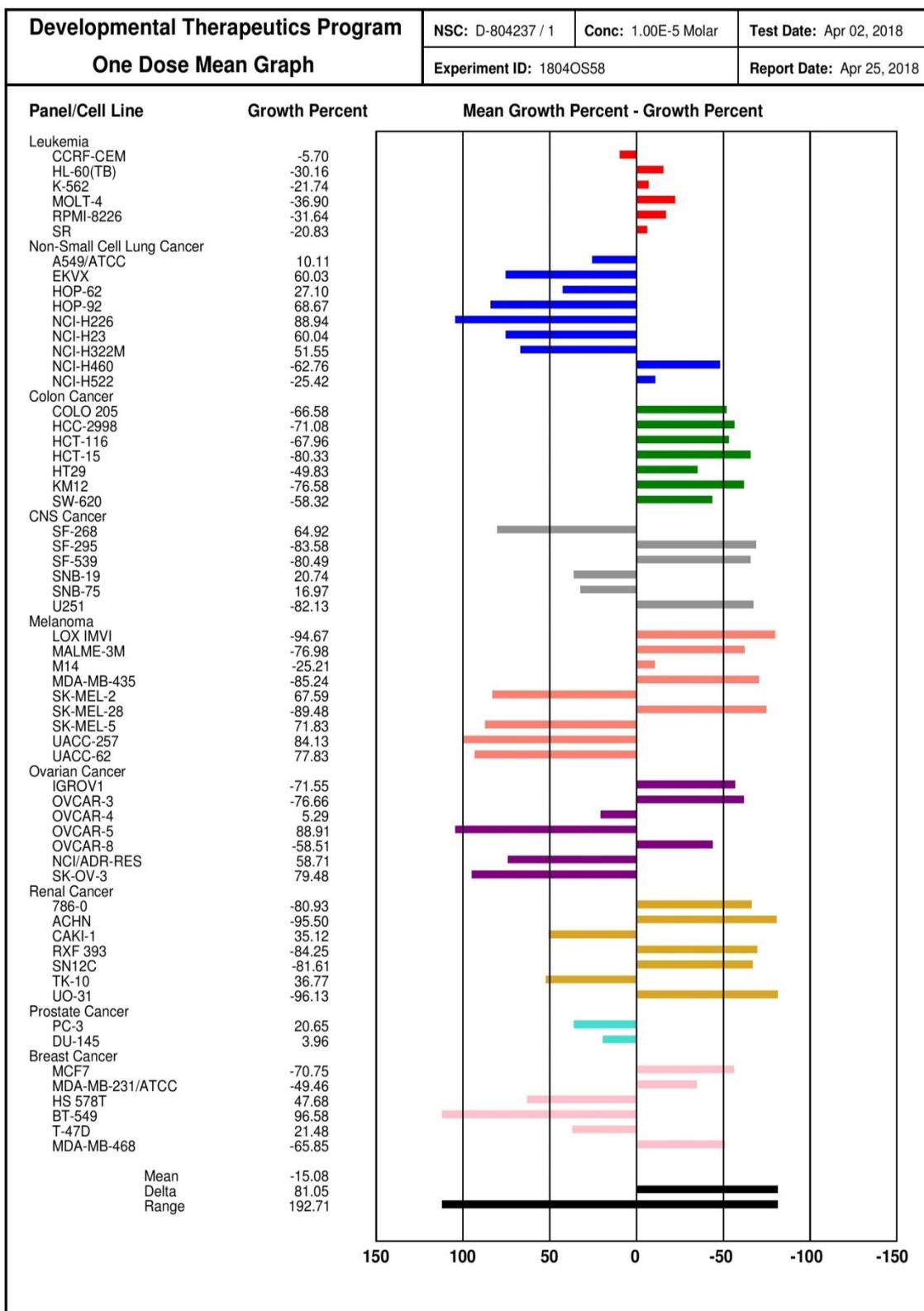
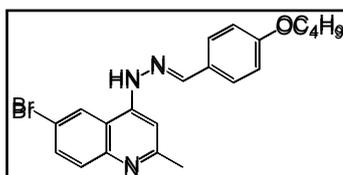
Sheet 42. One Dose Mean Graph of Compound 44c.

Appendix



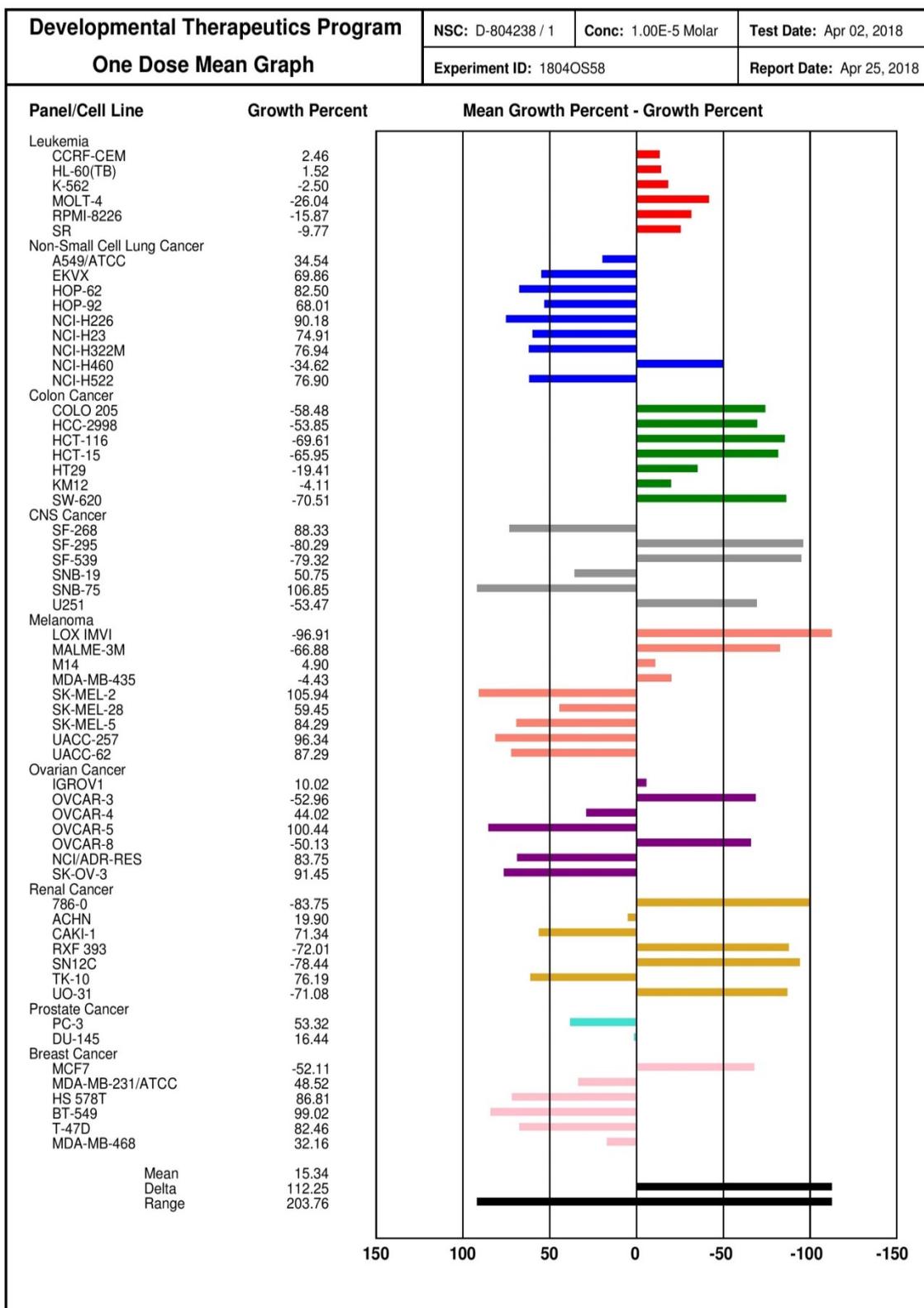
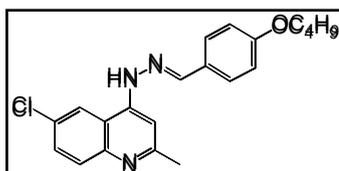
Sheet 43. One Dose Mean Graph of Compound 44d.

Appendix



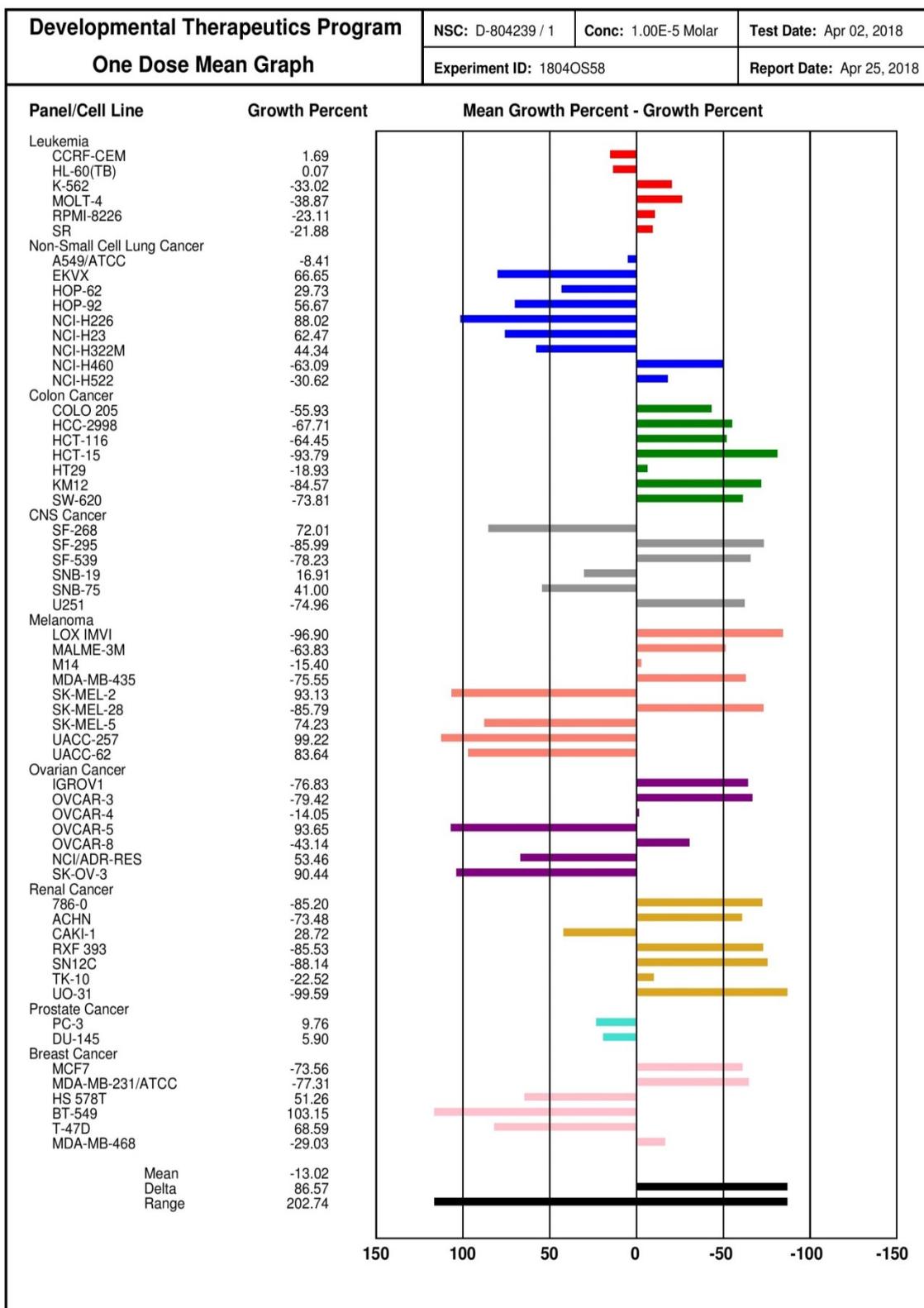
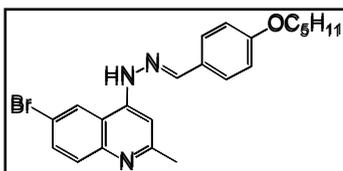
Sheet 44. One Dose Mean Graph of Compound 44e.

Appendix



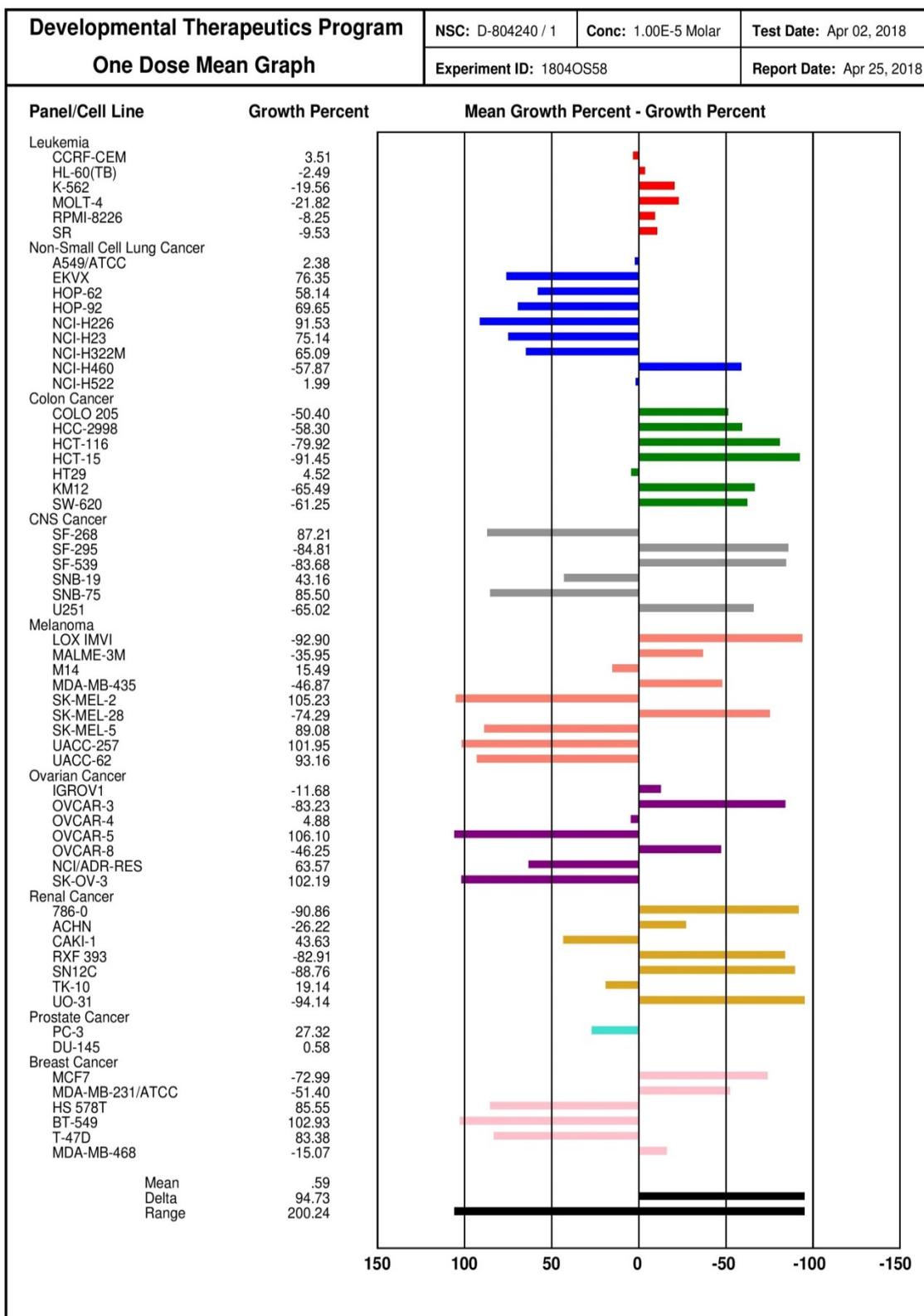
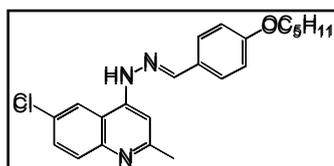
Sheet 45. One Dose Mean Graph of Compound 44f.

Appendix



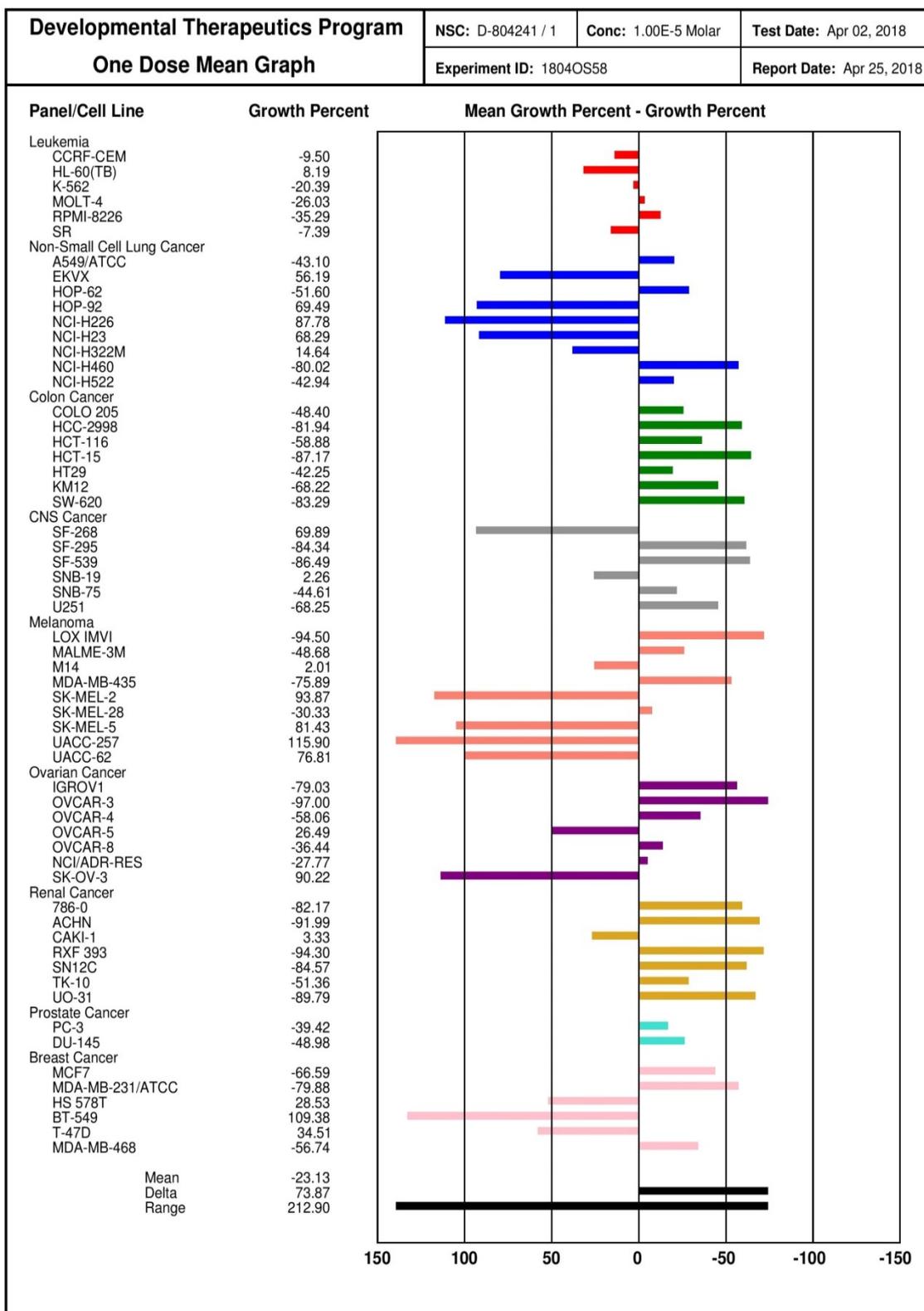
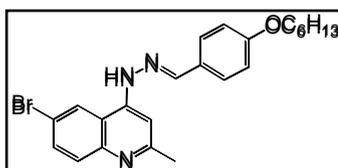
Sheet 46. One Dose Mean Graph of Compound 44g.

Appendix



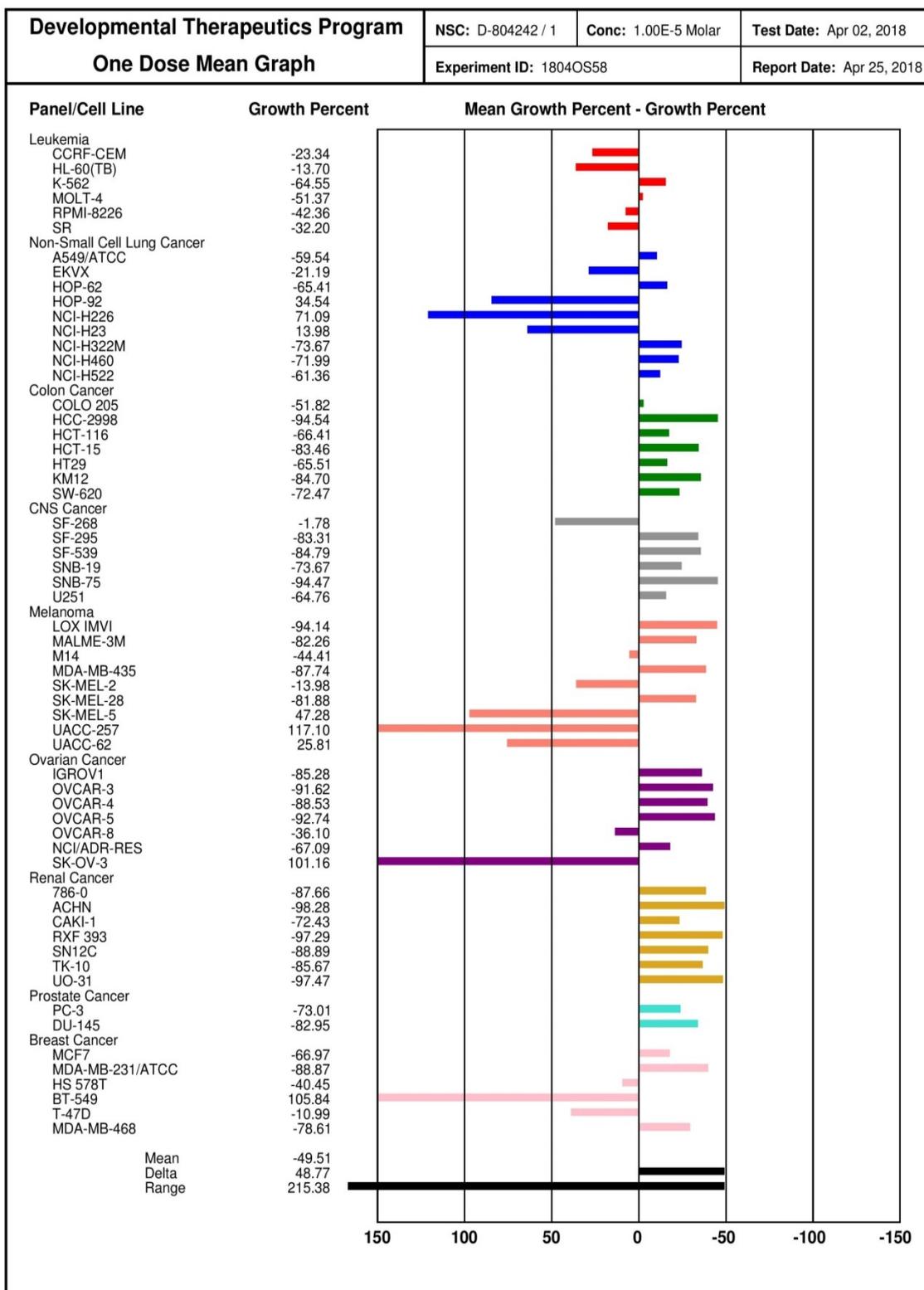
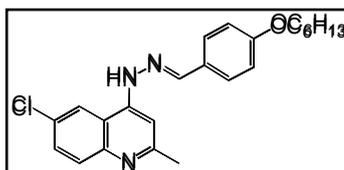
Sheet 47. One Dose Mean Graph of Compound 44h.

Appendix



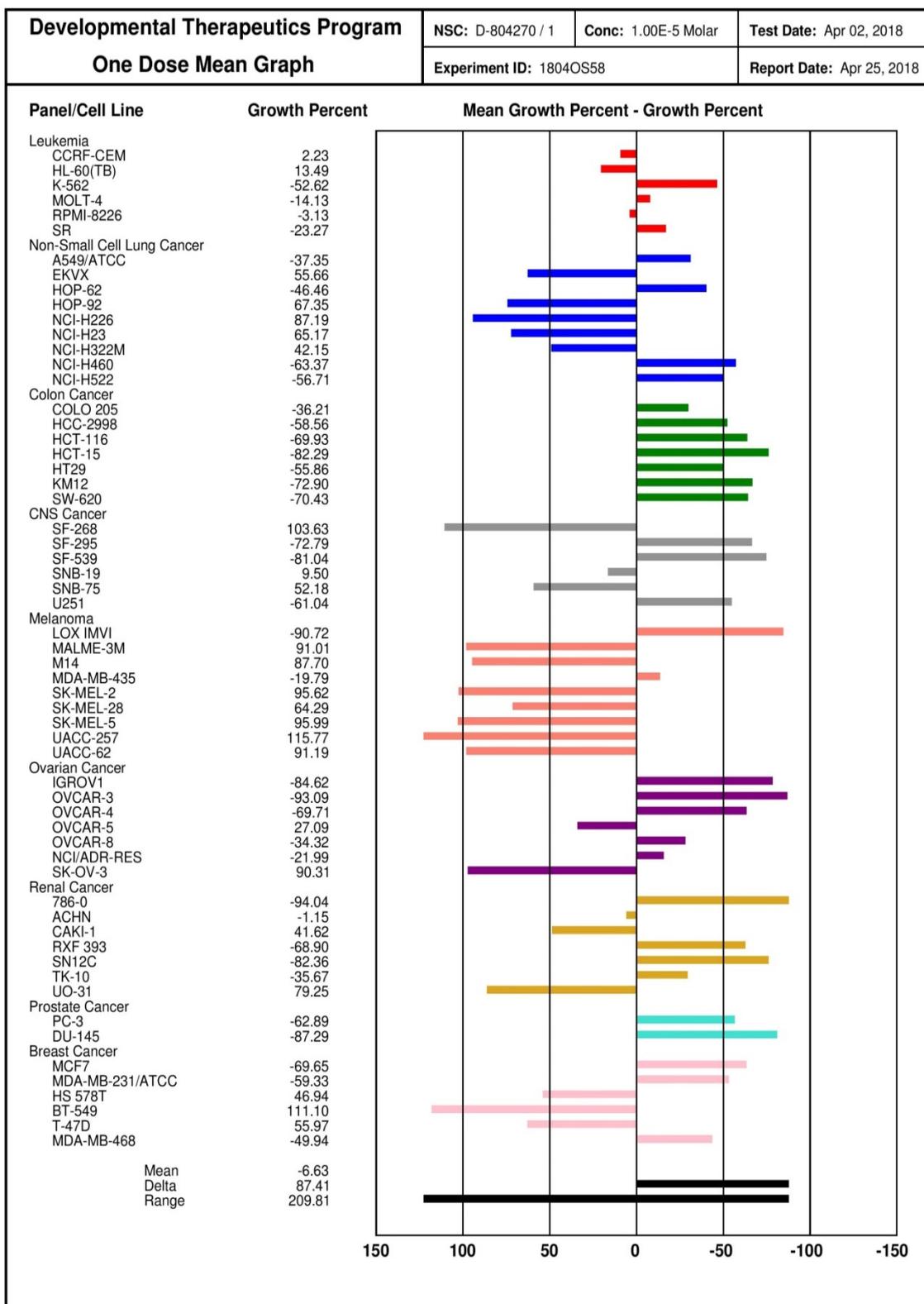
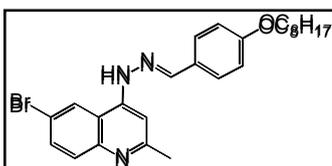
Sheet 48. One Dose Mean Graph of Compound 44i.

Appendix



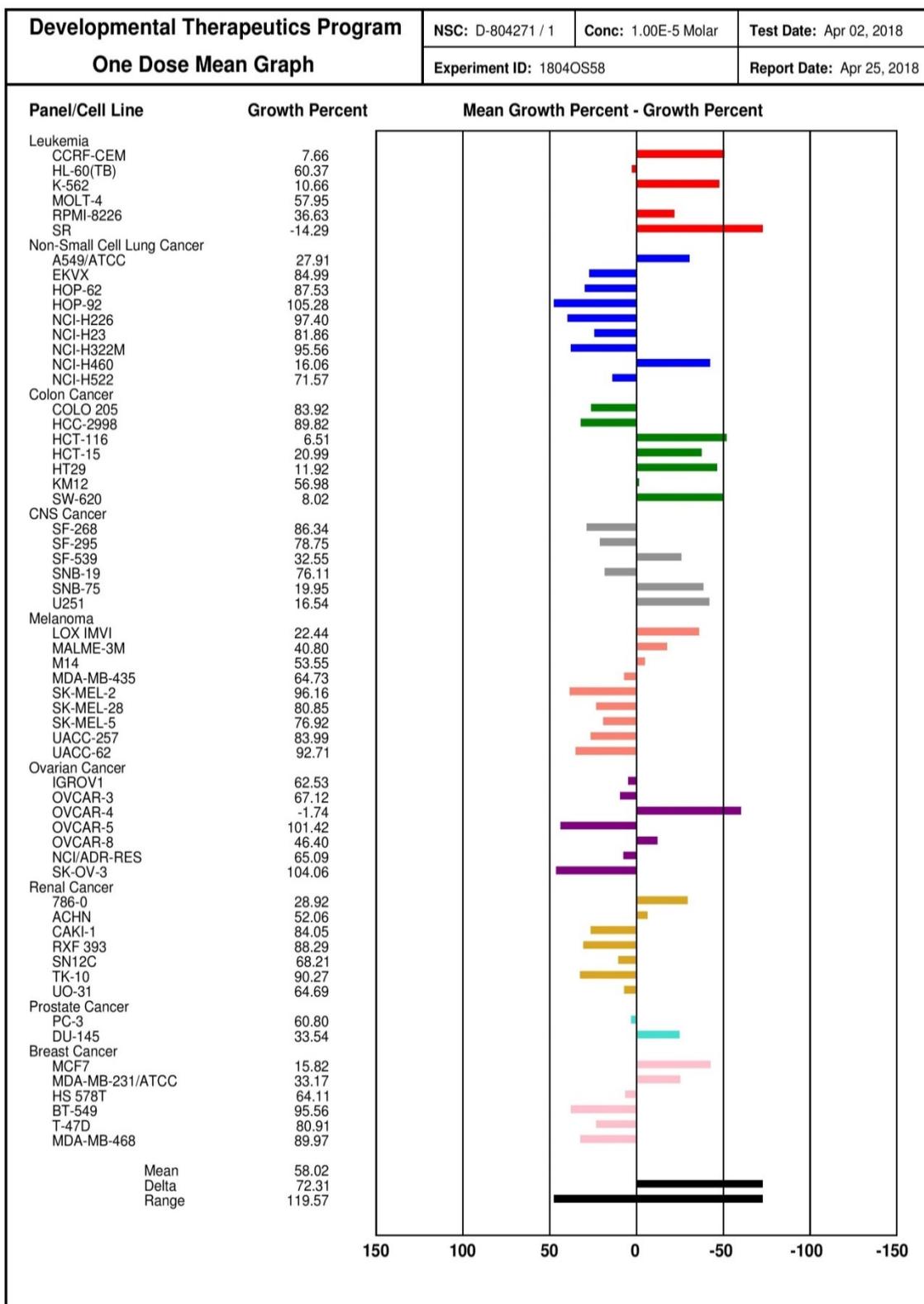
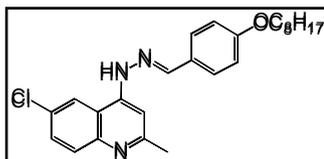
Sheet 49. One Dose Mean Graph of Compound 44j.

Appendix



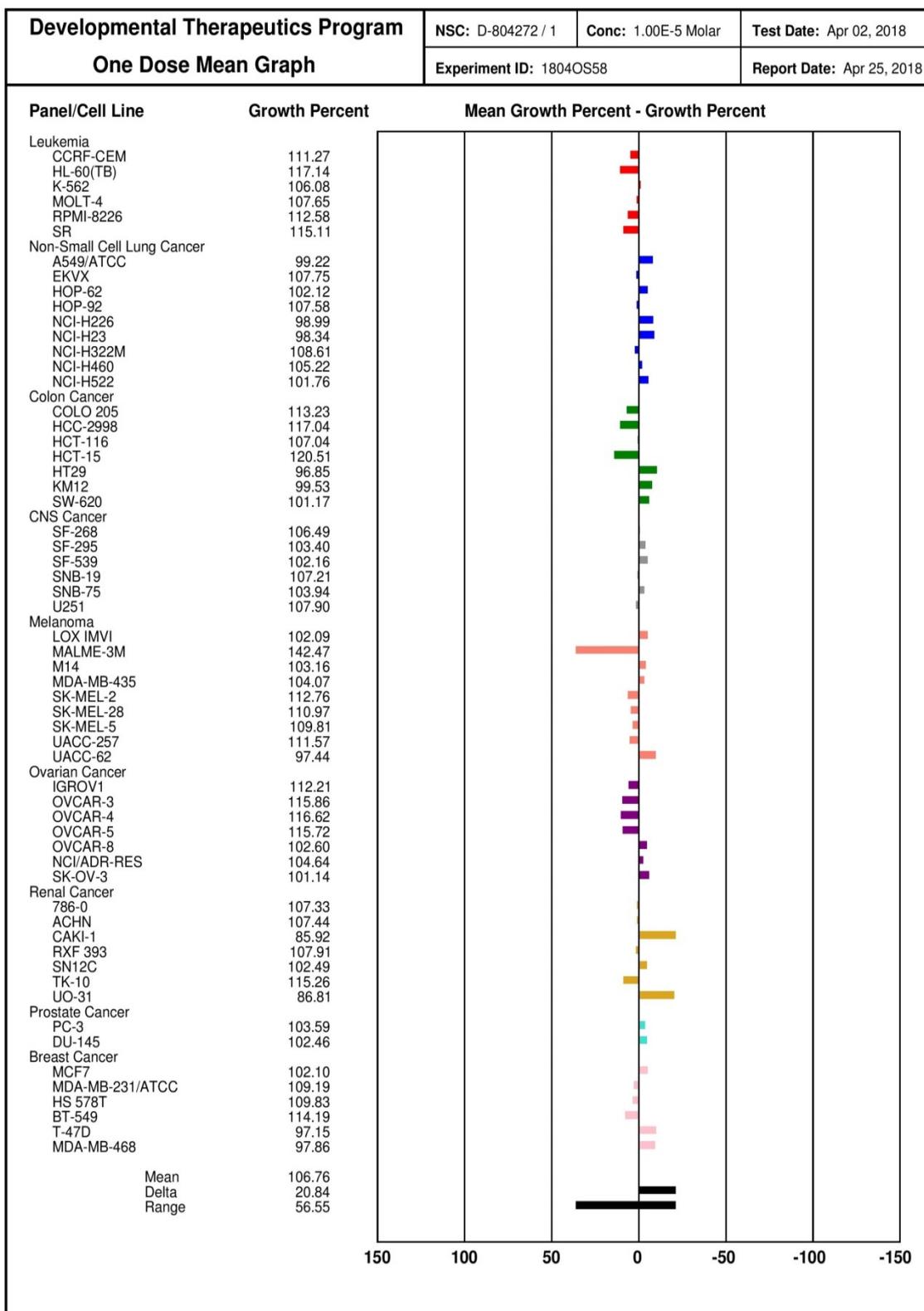
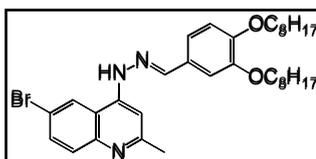
Sheet 50. One Dose Mean Graph of Compound 44k.

Appendix



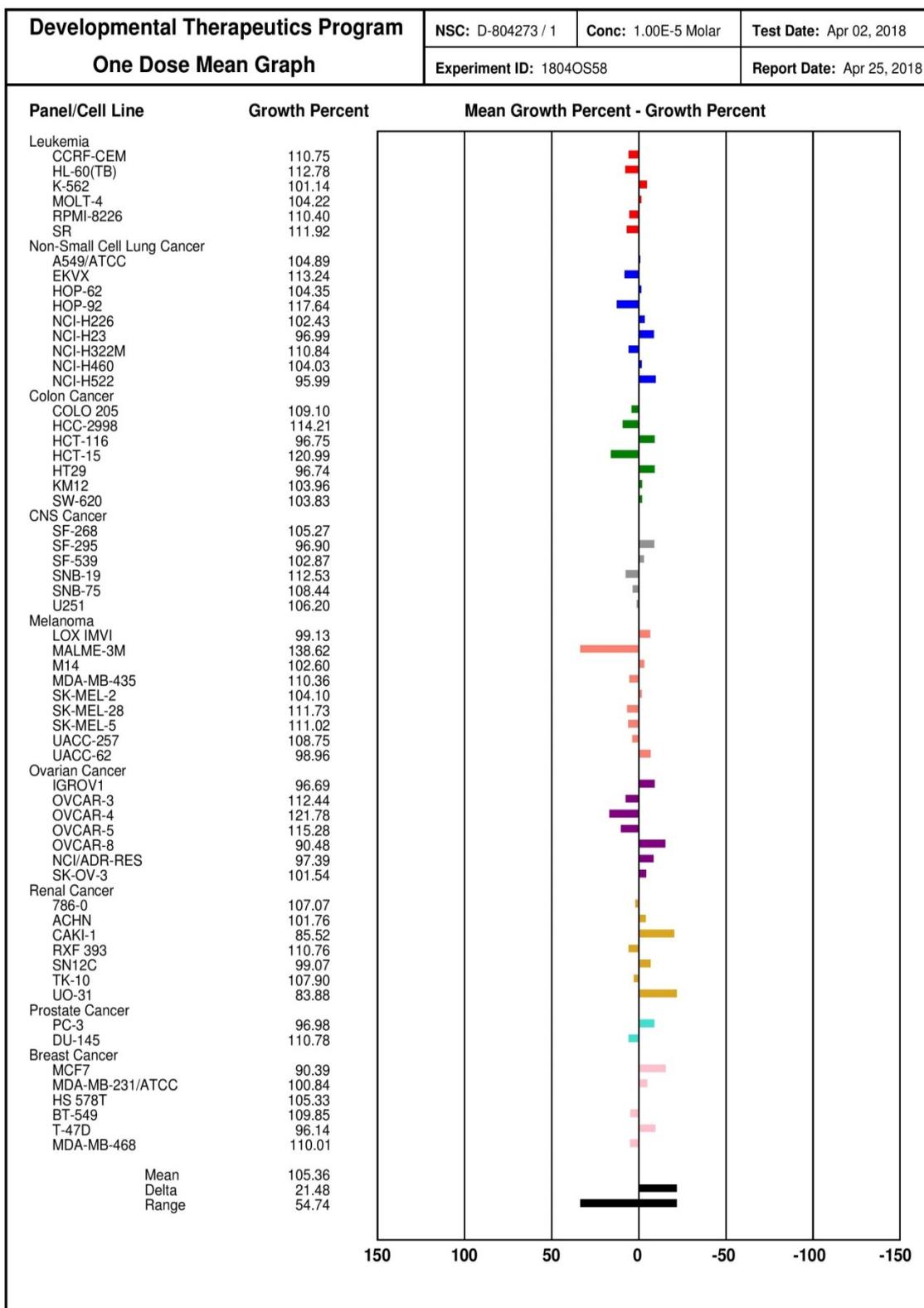
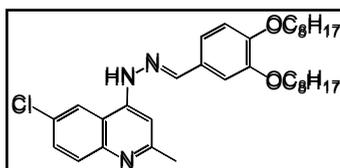
Sheet 51. One Dose Mean Graph of Compound 441.

Appendix



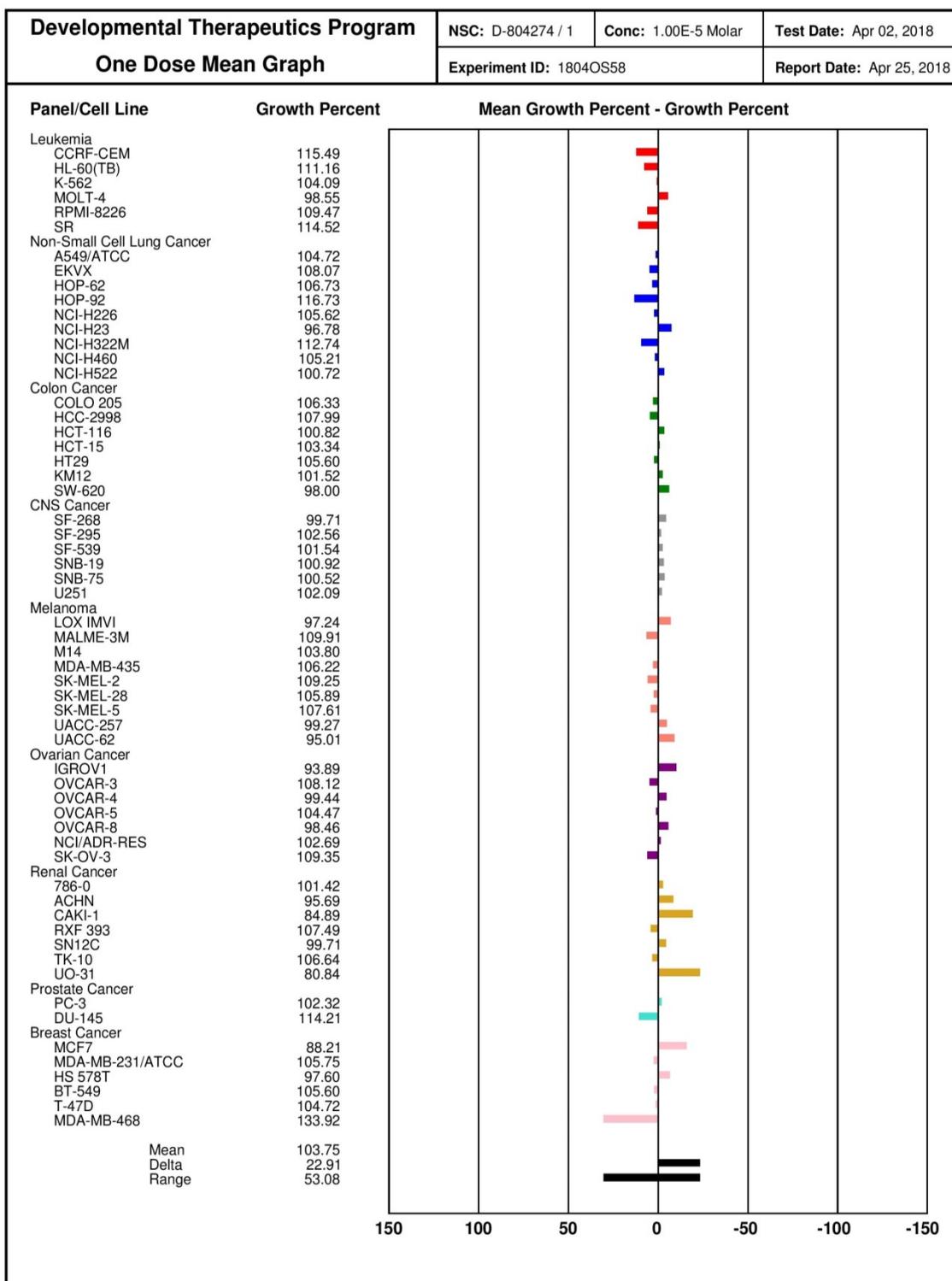
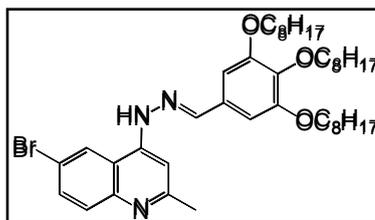
Sheet 52. One Dose Mean Graph of Compound 44m.

Appendix



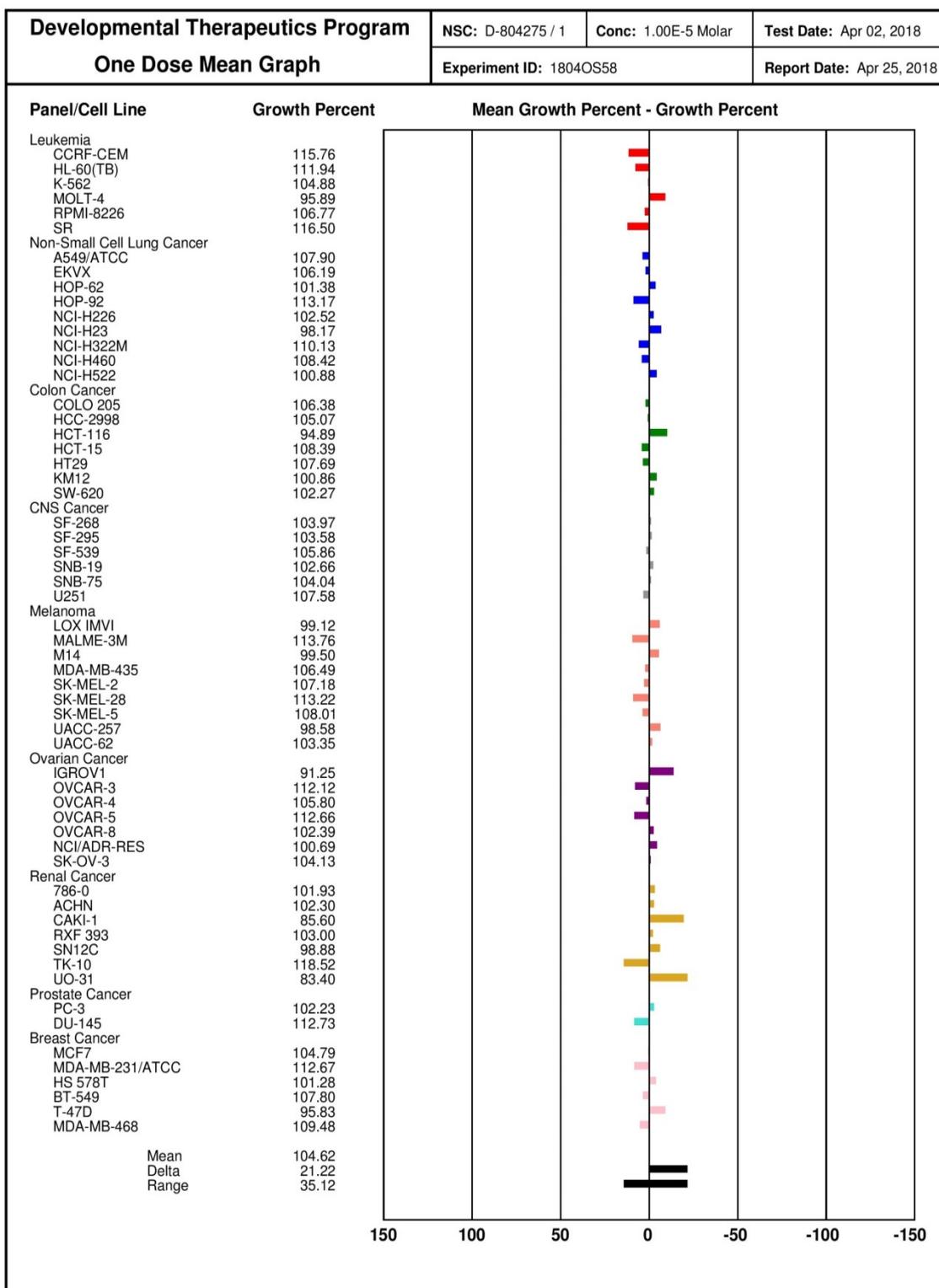
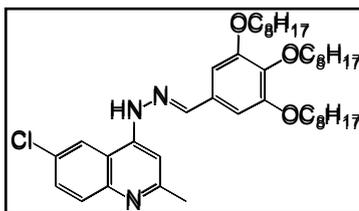
Sheet 53. One Dose Mean Graph of Compound 44n.

Appendix



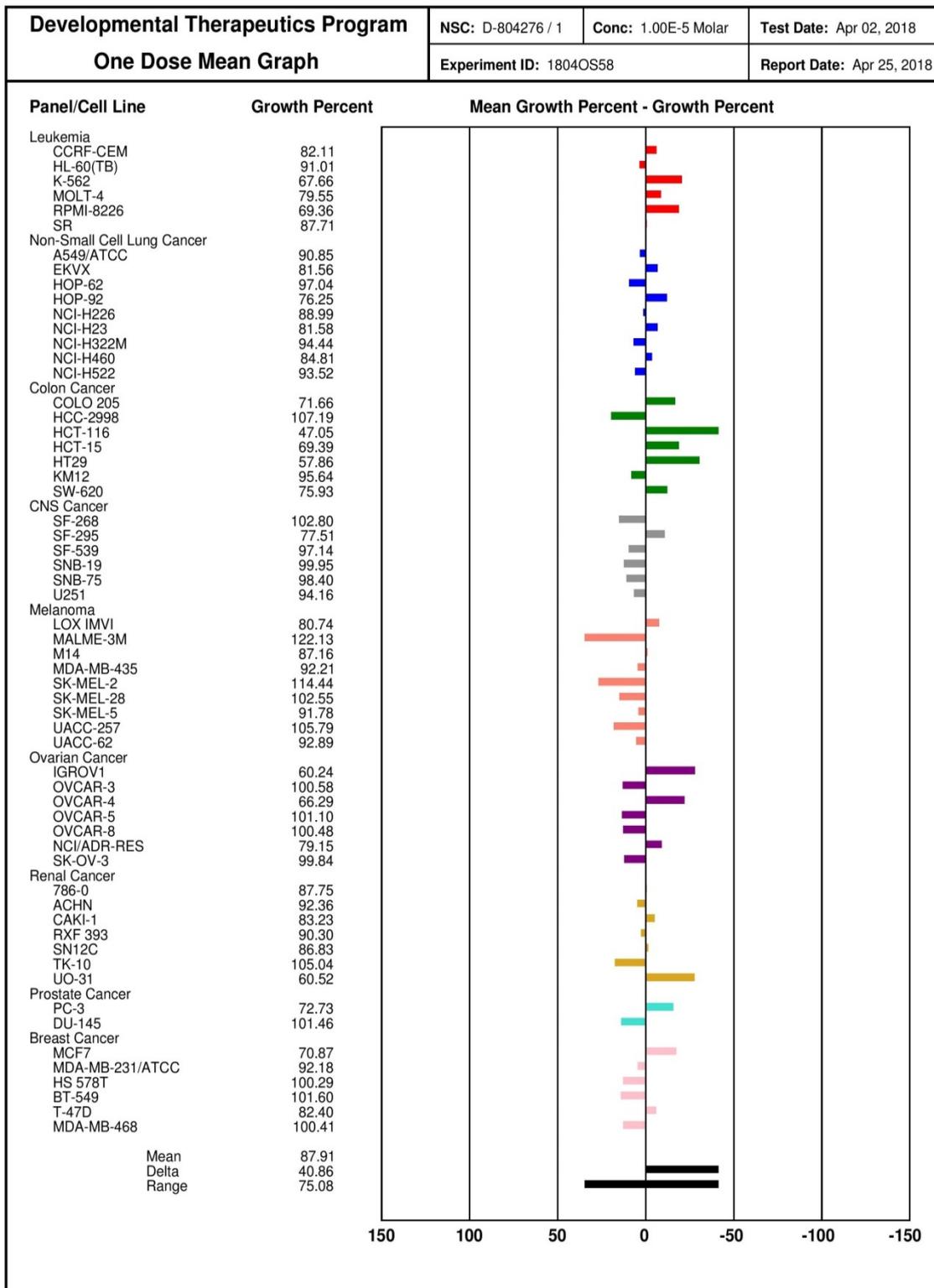
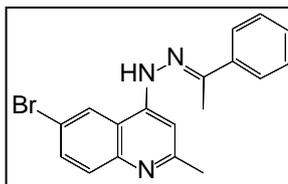
Sheet 54. One Dose Mean Graph of Compound 440.

Appendix



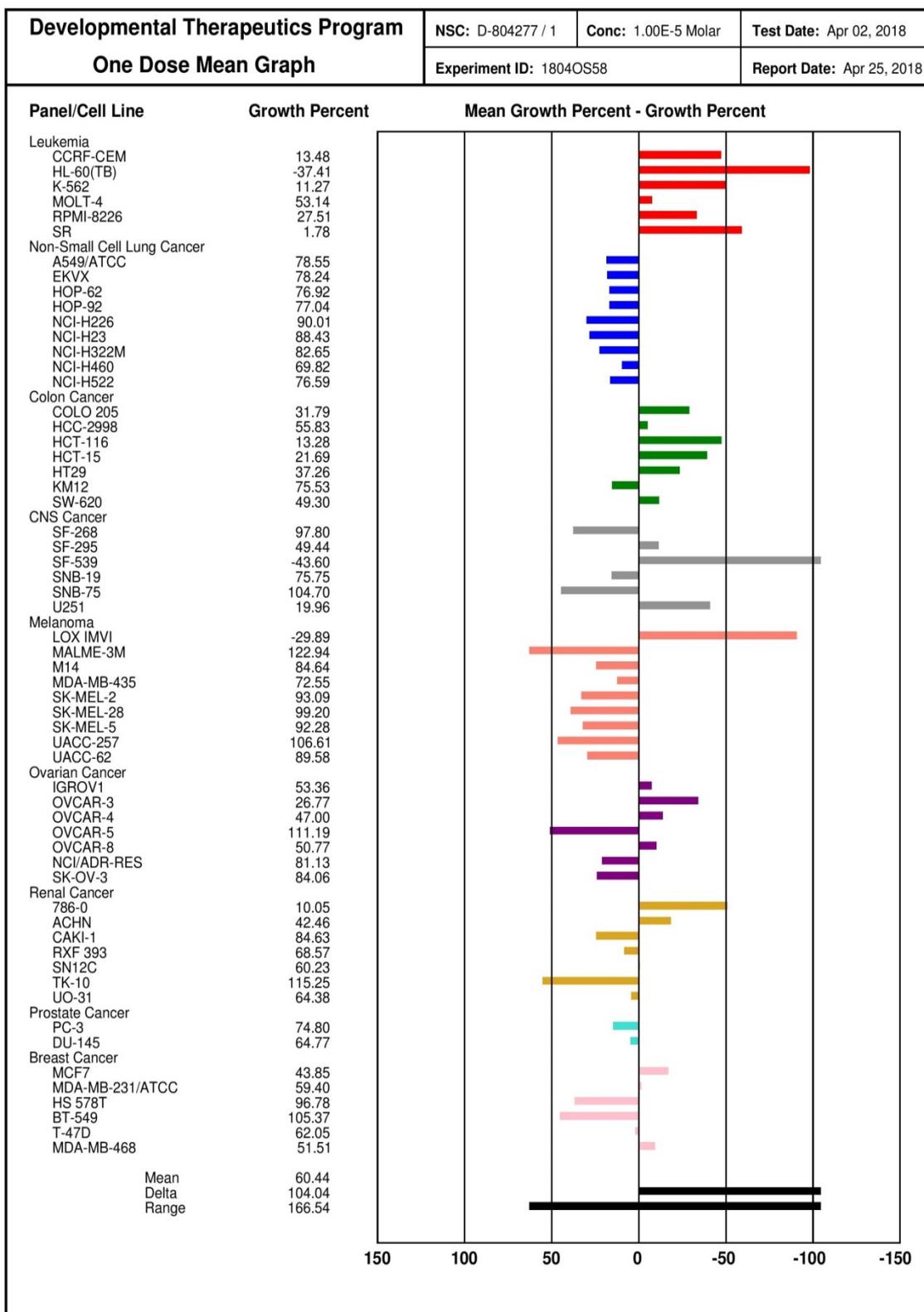
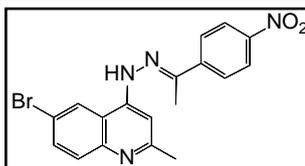
Sheet 55. One Dose Mean Graph of Compound 44p.

Appendix



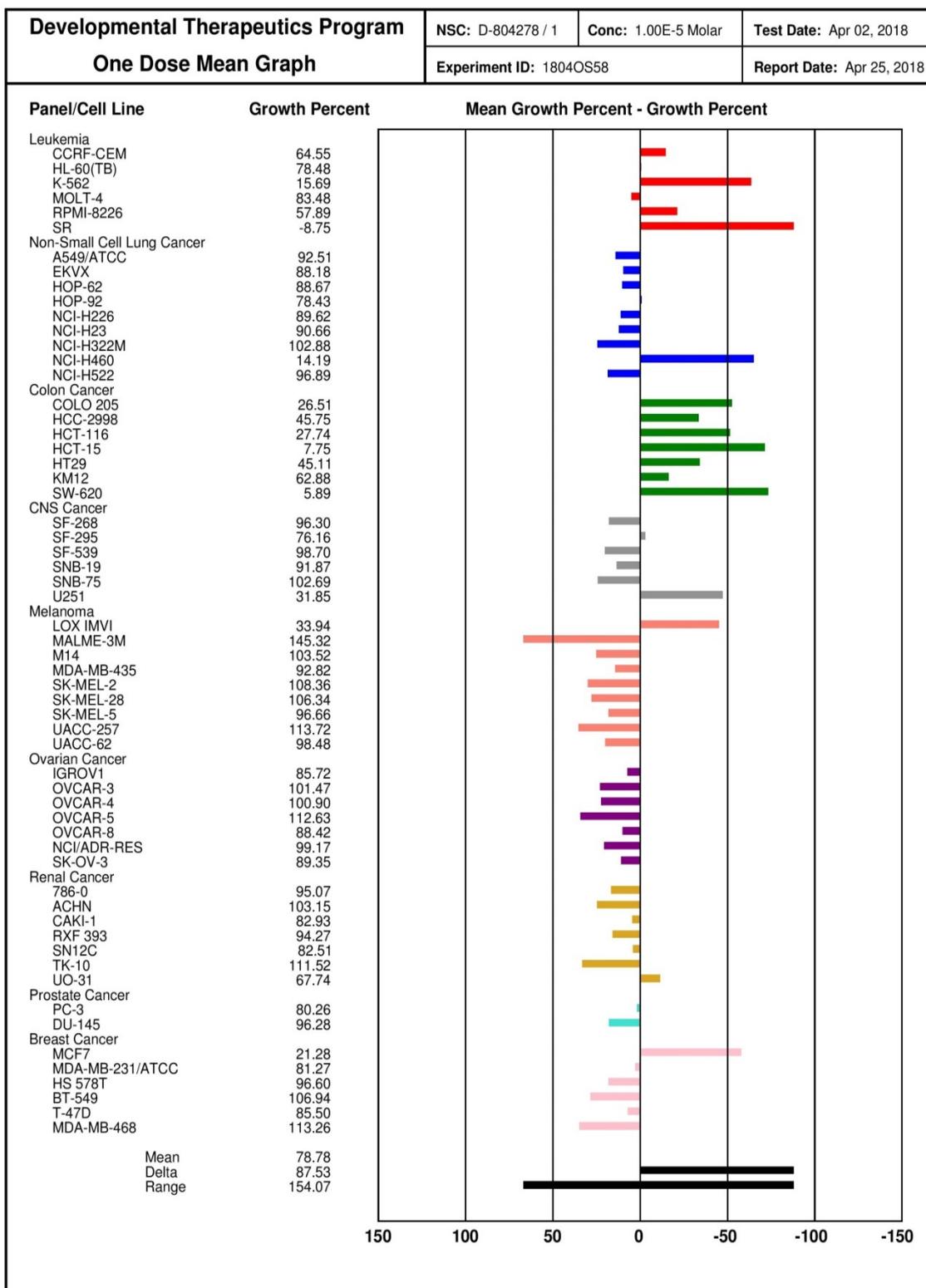
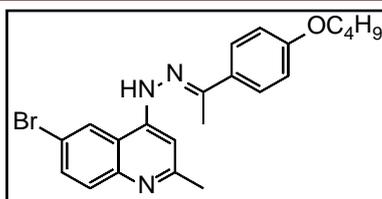
Sheet 56. One Dose Mean Graph of Compound 44q.

Appendix



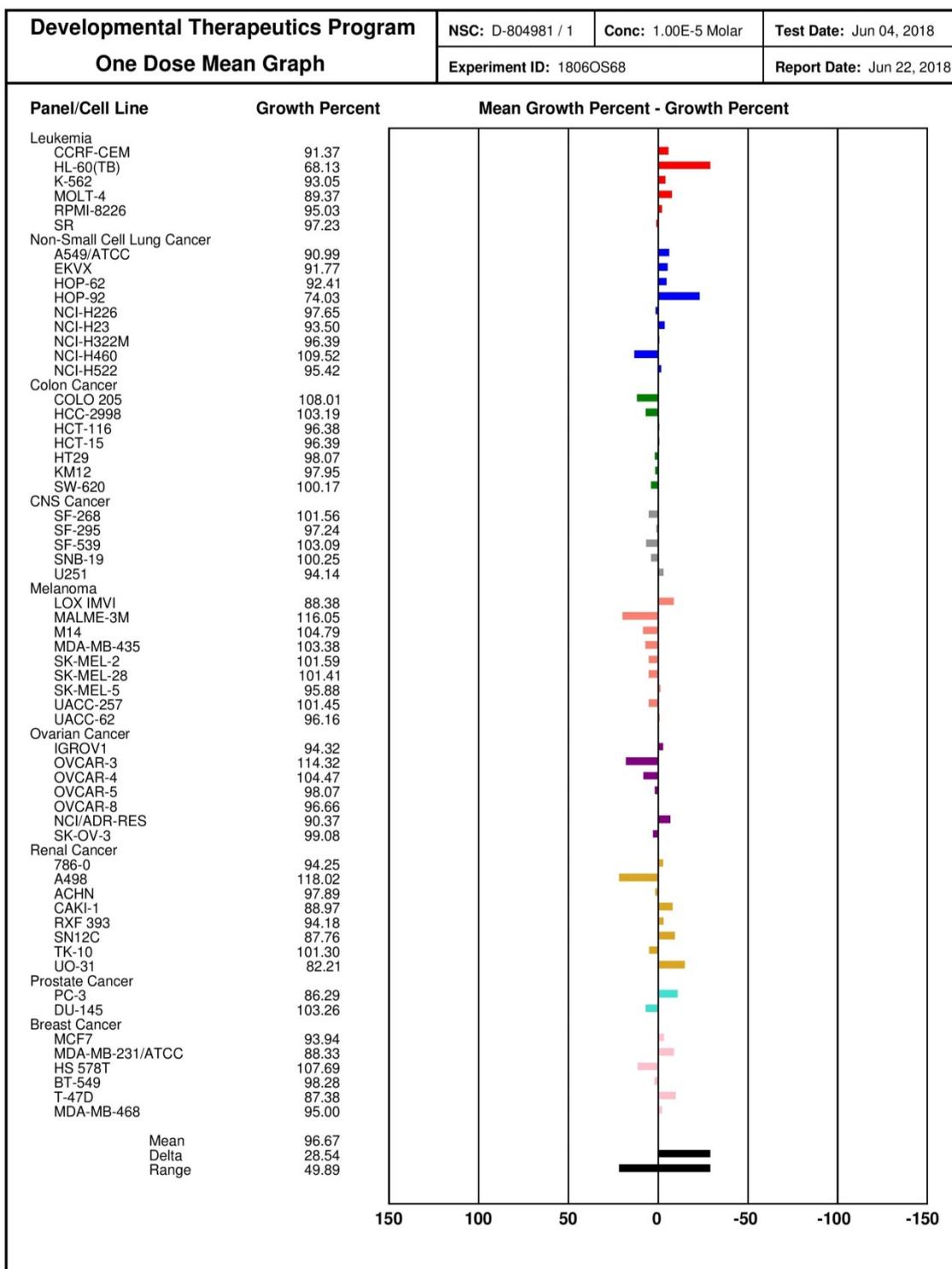
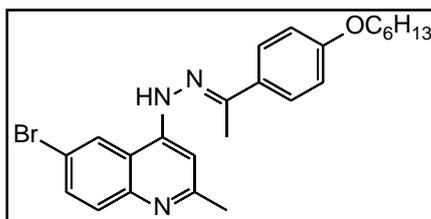
Sheet 57. One Dose Mean Graph of Compound 44r.

Appendix



Sheet 58. One Dose Mean Graph of Compound 44s.

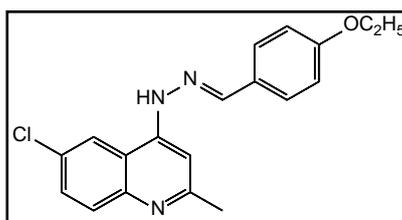
Appendix



Sheet 59. One Dose Mean Graph of Compound 44t.

Appendix

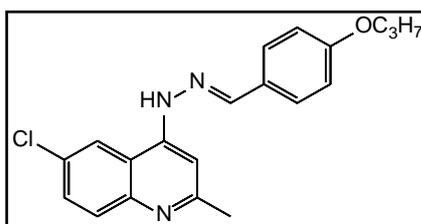
Five Dose Anticancer Activity Results (Chapter-6B):



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results																
NSC : D - 804233 / 1			Experiment ID : 1807NS84					Test Type : 08			Units : Molar					
Report Date : August 16, 2018			Test Date : July 30, 2018					QNS :			MC :					
COMI : KQ-01			Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M								
Panel/Cell Line	Time	Zero	Log10 Concentration					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	0.484	2.788	2.489	2.555	2.110	0.232	0.136	87	90	71	-52	-72	1.47E-6	3.76E-6	9.60E-6	
HL-60(TB)	0.600	2.693	2.547	2.675	2.582	0.174	0.108	93	99	95	-71	-82	1.86E-6	3.73E-6	7.46E-6	
K-562	0.202	2.267	2.130	2.213	1.638	0.046	0.037	93	97	70	-77	-82	1.36E-6	2.98E-6	6.52E-6	
MOLT-4	0.583	2.833	2.866	2.741	2.715	0.192	0.110	101	96	95	-67	-81	1.89E-6	3.85E-6	7.84E-6	
RPMI-8226	0.761	2.751	2.714	2.721	2.581	0.362	0.271	98	99	91	-52	-64	1.94E-6	4.32E-6	9.62E-6	
SR	0.170	0.630	0.650	0.622	0.423	0.092	0.055	104	98	55	-46	-68	1.12E-6	3.50E-6	1.55E-5	
Non-Small Cell Lung Cancer																
A549/ATCC	0.595	2.721	2.647	2.661	2.840	0.123	0.136	97	97	106	-79	-77	2.00E-6	3.72E-6	6.94E-6	
EKVX	1.062	2.857	2.720	2.811	2.755	0.672	0.011	92	97	94	-37	-99	2.18E-6	5.25E-6	1.63E-5	
HOP-62	0.889	2.204	1.938	1.981	2.076	0.707	0.107	80	83	90	-21	-88	2.31E-6	6.53E-6	2.73E-5	
HOP-92	1.083	1.841	1.723	1.808	1.693	0.929	0.181	84	96	80	-14	-83	2.10E-6	7.08E-6	3.30E-5	
NCI-H226	0.773	1.957	1.945	1.872	1.908	0.188	0.261	99	93	96	-76	-66	1.85E-6	3.62E-6	7.08E-6	
NCI-H23	0.718	2.317	2.194	2.211	2.237	0.090	0.049	92	93	95	-87	-93	1.76E-6	3.32E-6	6.23E-6	
NCI-H322M	0.789	2.015	1.930	2.021	2.028	0.048	-0.026	93	100	101	-94	-100	1.83E-6	3.30E-6	5.95E-6	
NCI-H460	0.267	2.524	2.536	2.639	2.519	0.111	0.106	101	105	100	-58	-60	2.06E-6	4.27E-6	8.85E-6	
NCI-H522	1.295	3.137	2.963	2.851	3.007	0.170	0.168	91	84	93	-87	-87	1.73E-6	3.29E-6	6.24E-6	
Colon Cancer																
COLO 205	0.480	2.107	2.115	2.141	2.172	0.056	0.037	100	102	104	-88	-92	1.91E-6	3.47E-6	6.31E-6	
HCC-2998	0.544	1.728	1.662	1.731	2.017	0.030	0.048	94	100	124	-94	-91	2.19E-6	3.70E-6	6.26E-6	
HCT-116	0.173	1.920	1.826	1.672	1.185	0.023	0.137	95	86	58	-87	-21	1.13E-6	2.51E-6	5.87E-6	
HCT-15	0.268	1.938	1.912	1.930	1.670	0.013	0.019	98	100	84	-95	-93	1.55E-6	2.94E-6	5.59E-6	
HT29	0.234	2.026	1.912	1.994	2.090	0.028	0.031	94	98	104	-88	-87	1.90E-6	3.47E-6	6.33E-6	
KM12	0.468	2.650	2.543	2.572	2.617	0.109	0.054	95	96	98	-77	-88	1.89E-6	3.65E-6	7.04E-6	
SW-620	0.245	1.916	1.850	1.888	1.873	0.089	0.086	96	98	97	-64	-65	1.97E-6	4.02E-6	8.22E-6	
CNS Cancer																
SF-268	0.528	1.960	1.887	1.950	2.046	0.141	0.179	95	99	106	-73	-66	2.05E-6	3.90E-6	7.41E-6	
SF-295	0.846	2.826	2.698	2.701	2.749	0.066	0.014	94	94	96	-92	-98	1.76E-6	3.24E-6	5.97E-6	
SF-539	1.020	2.562	2.601	2.638	2.751	0.012	-0.027	103	105	112	-99	-100	1.97E-6	3.40E-6	5.87E-6	
SNB-19	0.754	2.384	2.346	2.443	2.495	0.417	0.173	98	104	107	-45	-77	2.37E-6	5.07E-6	1.45E-5	
SNB-75	0.981	1.839	1.721	1.751	1.807	0.242	0.134	86	90	96	-75	-86	1.86E-6	3.64E-6	7.12E-6	
U251	0.719	2.533	2.489	2.785	2.662	0.032	0.093	98	114	107	-96	-87	1.91E-6	3.38E-6	5.96E-6	
Melanoma																
LOX IMVI	0.342	2.292	2.154	2.217	2.216	0.009	0.048	93	96	96	-98	-86	1.73E-6	3.14E-6	5.68E-6	
MALME-3M	0.619	1.449	1.363	1.515	1.541	0.070	0.037	90	108	111	-89	-94	2.02E-6	3.60E-6	6.40E-6	
M14	0.400	1.834	1.805	1.755	1.591	0.017	0.021	98	94	83	-96	-95	1.53E-6	2.91E-6	5.55E-6	
MDA-MB-435	0.470	2.428	2.389	2.356	2.338	0.044	-0.018	98	96	95	-91	-100	1.75E-6	3.26E-6	6.05E-6	
SK-MEL-2	1.372	2.790	2.790	2.859	2.855	0.125	-0.003	100	105	105	-91	-100	1.90E-6	3.43E-6	6.17E-6	
SK-MEL-28	0.682	1.984	2.042	2.063	1.984	0.017	-0.025	104	105	99	-98	-100	1.78E-6	3.19E-6	5.73E-6	
SK-MEL-5	0.692	2.491	2.373	2.546	2.419	-0.001	-0.032	93	103	96	-100	-100	1.72E-6	3.09E-6	5.58E-6	
UACC-257	1.257	2.501	2.398	2.432	2.485	0.118	-0.011	92	94	99	-91	-100	1.81E-6	3.32E-6	6.10E-6	
UACC-62	1.082	2.967	2.942	2.943	2.908	0.120	0.019	99	99	97	-89	-98	1.79E-6	3.32E-6	6.17E-6	
Ovarian Cancer																
IGROV1	0.421	1.517	1.502	1.568	1.533	0.087	0.095	99	105	102	-79	-78	1.93E-6	3.64E-6	6.87E-6	
OVCA-3	0.464	1.757	1.776	1.841	1.825	0.056	0.053	101	106	105	-88	-89	1.93E-6	3.50E-6	6.36E-6	
OVCA-4	0.677	1.643	1.570	1.627	1.575	0.153	-0.015	92	98	93	-77	-100	1.79E-6	3.51E-6	6.90E-6	
OVCA-5	0.601	1.302	1.297	1.342	1.364	0.052	-0.028	99	109	109	-91	-100	1.97E-6	3.50E-6	6.22E-6	
OVCA-8	0.457	2.197	2.279	2.317	2.260	0.269	-0.006	105	107	104	-41	-100	2.34E-6	5.19E-6	1.41E-5	
NCI/ADR-RES	0.582	1.807	1.782	1.819	1.748	0.184	0.124	98	101	95	-67	-78	1.90E-6	3.88E-6	7.83E-6	
SK-OV-3	1.029	2.035	1.994	1.874	2.095	0.856	-0.017	96	84	106	-17	-100	2.86E-6	7.29E-6	2.50E-5	
Renal Cancer																
786-0	0.565	2.362	2.196	2.265	2.079	0.053	0.208	91	95	84	-91	-63	1.57E-6	3.03E-6	5.86E-6	
A498	1.533	2.269	2.043	2.036	2.175	0.382	0.105	69	68	87	-75	-93	1.70E-6	3.45E-6	7.01E-6	
ACHN	0.415	1.664	1.732	1.702	1.669	-0.006	-0.028	105	103	100	-100	-100	1.79E-6	3.17E-6	5.63E-6	
CAKI-1	0.546	2.428	2.292	2.325	2.409	0.018	-0.003	93	95	99	-87	-100	1.78E-6	3.20E-6	5.77E-6	
RFX 393	1.168	2.000	1.939	1.964	1.929	0.040	0.109	93	96	91	-97	-91	1.66E-6	3.06E-6	5.85E-6	
SN12C	0.560	2.263	2.219	2.329	2.226	0.077	-0.008	97	104	98	-86	-100	1.82E-6	3.40E-6	6.35E-6	
TK-10	0.818	1.719	1.601	1.749	1.784	0.033	-0.027	87	103	107	-96	-100	1.91E-6	3.37E-6	5.94E-6	
UO-31	0.750	1.888	1.762	1.797	1.778	0.001	0.024	89	92	90	-100	-97	1.63E-6	2.98E-6	5.47E-6	
Prostate Cancer																
PC-3	0.535	2.201	1.909	1.899	1.833	0.113	0.100	82	82	78	-79	-81	1.51E-6	3.14E-6	6.54E-6	
DU-145	0.356	1.708	1.656	1.679	1.683	0.046	0.003	96	98	98	-87	-99	1.82E-6	3.38E-6	6.30E-6	
Breast Cancer																
MCF7	0.321	1.865	1.699	1.732	1.674	0.063	0.083	89	91	88	-80	-74	1.68E-6	3.32E-6	6.60E-6	
MDA-MB-231/ATCC	0.615	1.491	1.417	1.486	1.486	0.070	0.055	91	100	99	-89	-91	1.83E-6	3.38E-6	6.23E-6	
HS 578T	0.741	1.738	1.643	1.696	1.731	0.378	0.261	90	96	99	-49	-65	1.65E-6	4.87E-6	1.15E-5	
BT-549	1.202	2.412	2.214	2.229	2.241	0.164	0.210	84	85	86	-86	-83	1.61E-6	3.15E-6	6.15E-6	
T-47D	0.828	2.031	1.760	1.876	2.018	0.235	0.255	77	87	99	-72	-69	1.93E-6	3.80E-6	7.46E-6	
MDA-MB-468	0.898	2.000	1.978	2.029	1.926	0.108	0.090	98	103	93	-88	-90	1.73E-6	3.27E-6	6.17E-6	

Sheet 60. Response parameters at five dose level of compound 44b.

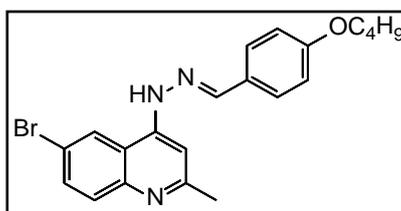
Appendix



National Cancer Institute Developmental Therapeutics Program																
In-Vitro Testing Results																
NSC : D - 804235 / 1					Experiment ID : 1807NS84					Test Type : 08			Units : Molar			
Report Date : August 16, 2018					Test Date : July 30, 2018					QNS :			MC :			
COMI : KQ-03					Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M						
Panel/Cell Line	Time Zero	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				
Leukemia																
CCR6-CEM	0.484	2.806	2.682	2.756	2.457	0.222	0.158	95	98	85	-54	-67	1.78E-6	4.08E-6	9.32E-6	
HL-60(TB)	0.600	2.643	2.480	2.642	2.477	0.196	0.135	92	100	92	-67	-78	1.83E-6	3.78E-6	7.78E-6	
K-562	0.202	2.150	2.104	2.194	1.688	0.046	0.052	98	102	76	-77	-75	1.48E-6	3.13E-6	6.63E-6	
MOLT-4	0.583	2.705	2.688	2.977	2.497	0.197	0.122	99	113	90	-66	-79	1.81E-6	3.77E-6	7.88E-6	
RPMT-8226	0.761	2.708	2.714	2.620	2.465	0.319	0.300	100	95	87	-58	-61	1.81E-6	3.99E-6	8.79E-6	
SR	0.170	0.594	0.593	0.526	0.411	0.099	0.076	100	84	57	-42	-56	1.17E-6	3.75E-6	3.86E-5	
Non-Small Cell Lung Cancer																
A549/ATCC	0.595	2.661	2.410	2.433	2.477	0.104	0.058	88	89	91	-83	-90	1.72E-6	3.35E-6	6.49E-6	
EKVX	1.062	3.022	2.745	2.950	2.822	0.047	0.006	86	96	90	-96	-99	1.64E-6	3.05E-6	5.68E-6	
HOP-62	0.889	2.188	1.955	2.072	2.003	0.044	0.045	82	91	86	-95	-95	1.58E-6	2.98E-6	5.63E-6	
HOP-92	1.083	1.865	1.794	1.837	1.697	0.209	0.153	91	96	78	-81	-86	1.51E-6	3.11E-6	6.41E-6	
NCI-H226	0.773	1.952	1.894	1.913	1.812	0.155	0.127	95	97	88	-80	-84	1.69E-6	3.35E-6	6.64E-6	
NCI-H23	0.718	2.286	2.206	2.286	2.207	0.152	0.097	95	100	95	-79	-86	1.81E-6	3.52E-6	6.82E-6	
NCI-H322M	0.789	2.125	1.948	2.011	2.045	0.005	0.002	87	92	94	-99	-100	1.69E-6	3.06E-6	5.56E-6	
NCI-H460	0.267	2.627	2.602	2.645	2.676	0.089	0.077	99	101	102	-67	-71	2.04E-6	4.03E-6	7.97E-6	
NCI-H522	1.295	3.097	2.903	2.837	2.945	0.259	0.215	89	86	92	-80	-83	1.75E-6	3.42E-6	6.68E-6	
Colon Cancer																
COLO 205	0.480	2.040	2.002	2.060	2.002	0.067	0.058	98	101	98	-86	-88	1.82E-6	3.40E-6	6.36E-6	
HCC-2998	0.544	1.906	1.855	2.033	2.093	0.034	0.034	96	109	114	-84	-94	2.03E-6	3.53E-6	6.15E-6	
HCT-116	0.173	1.785	1.770	1.723	1.619	0.031	0.027	99	96	90	-82	-84	1.70E-6	3.32E-6	6.48E-6	
HCT-15	0.268	2.142	2.017	2.125	1.805	0.019	0.010	93	99	82	-93	-96	1.52E-6	2.94E-6	5.67E-6	
HT29	0.234	2.020	1.934	2.040	1.921	0.048	0.034	95	101	94	-79	-85	1.80E-6	3.49E-6	6.77E-6	
KM12	0.468	2.592	2.478	2.558	2.536	0.055	0.047	95	98	97	-88	-90	1.80E-6	3.35E-6	6.22E-6	
SW-620	0.245	1.921	1.852	1.912	1.943	0.064	0.040	96	99	101	-74	-84	1.96E-6	3.79E-6	7.31E-6	
CNS Cancer																
SF-268	0.528	1.979	1.880	1.939	2.194	0.160	0.127	93	97	115	-70	-76	2.24E-6	4.19E-6	7.81E-6	
SF-295	0.846	3.008	2.836	2.774	2.871	0.068	0.025	92	89	94	-92	-97	1.72E-6	3.20E-6	5.94E-6	
SF-539	1.020	2.757	2.875	2.904	2.765	0.017	0.007	95	103	100	-98	-99	1.79E-6	3.20E-6	5.71E-6	
SNB-19	0.754	2.562	2.517	2.620	2.672	0.096	0.028	97	103	108	-87	-96	1.95E-6	3.54E-6	6.41E-6	
SNB-75	0.981	1.807	1.603	1.743	1.847	0.135	0.043	75	92	105	-86	-96	1.94E-6	3.54E-6	6.46E-6	
U251	0.719	2.482	2.435	2.746	2.749	0.042	0.013	97	115	115	-94	-98	2.05E-6	3.55E-6	6.15E-6	
Melanoma																
LOX IMVI	0.342	2.604	2.450	2.470	2.469	0.009	0.017	93	94	94	-97	-95	1.70E-6	3.10E-6	5.66E-6	
MALME-3M	0.619	1.467	1.381	1.494	1.457	0.039	0.025	90	103	99	-94	-96	1.79E-6	3.26E-6	5.93E-6	
M14	0.400	1.756	1.758	1.730	1.627	0.051	0.033	100	98	90	-87	-92	1.69E-6	3.23E-6	6.17E-6	
MDA-MB-435	0.470	2.363	2.290	2.283	2.363	0.019	0.004	96	96	100	-96	-99	1.80E-6	3.24E-6	5.83E-6	
SK-MEL-2	1.372	2.746	2.733	2.813	2.666	0.120	0.158	99	105	94	-91	-89	1.73E-6	3.22E-6	5.99E-6	
SK-MEL-28	0.682	2.140	2.188	2.188	2.080	0.025	0.019	103	103	96	-96	-97	1.73E-6	3.15E-6	5.74E-6	
SK-MEL-5	0.692	2.557	2.301	2.521	2.262	0.006	-0.001	86	98	84	-99	-100	1.54E-6	2.88E-6	5.39E-6	
UACC-257	1.257	2.401	2.214	2.338	2.369	0.135	0.055	84	94	97	-89	-96	1.79E-6	3.32E-6	6.16E-6	
UACC-62	1.082	3.057	2.993	3.038	2.990	0.077	0.146	97	99	97	-93	-87	1.76E-6	3.24E-6	5.94E-6	
Ovarian Cancer																
IGROV1	0.421	1.562	1.486	1.525	1.576	0.086	0.071	93	97	101	-80	-83	1.92E-6	3.63E-6	6.85E-6	
OVCAR-3	0.464	1.670	1.676	1.715	1.892	0.048	0.015	100	104	118	-90	-97	2.13E-6	3.70E-6	6.44E-6	
OVCAR-4	0.677	1.585	1.529	1.585	1.517	0.065	0.016	94	100	93	-90	-98	1.71E-6	3.21E-6	6.01E-6	
OVCAR-5	0.601	1.385	1.353	1.387	1.426	0.006	0.001	96	100	105	-99	-100	1.86E-6	3.28E-6	5.78E-6	
OVCAR-8	0.457	2.108	2.074	2.223	2.312	0.188	0.076	98	107	112	-59	-83	2.31E-6	4.53E-6	8.88E-6	
NCI/ADR-RES	0.562	1.959	1.886	2.041	1.904	0.173	0.099	95	106	96	-69	-82	1.90E-6	3.81E-6	7.65E-6	
SK-OV-3	1.029	1.944	1.895	1.919	1.938	0.020	0.006	95	97	99	-98	-99	1.78E-6	3.18E-6	5.71E-6	
Renal Cancer																
786-0	0.565	2.358	2.234	2.302	2.383	0.065	0.048	93	97	101	-88	-92	1.86E-6	3.42E-6	6.27E-6	
A498	1.533	2.207	1.939	2.040	2.172	0.074	0.119	60	75	95	-95	-92	1.72E-6	3.16E-6	5.79E-6	
ACHN	0.415	1.764	1.773	1.784	1.734	-0.006	-0.006	101	101	98	-100	-100	1.74E-6	3.12E-6	5.59E-6	
CAKI-1	0.546	2.375	2.210	2.254	2.367	0.013	0.003	91	93	100	-98	-100	1.78E-6	3.20E-6	5.73E-6	
RXF 393	1.168	1.927	1.886	1.911	1.808	0.052	0.047	95	98	84	-96	-96	1.55E-6	2.94E-6	5.58E-6	
SN12C	0.560	2.395	2.352	2.476	2.397	0.043	0.033	98	104	100	-92	-94	1.82E-6	3.31E-6	6.02E-6	
TK-10	0.818	1.763	1.673	1.790	1.921	0.007	0.006	90	103	117	-99	-99	2.04E-6	3.47E-6	5.92E-6	
UO-31	0.750	1.896	1.752	1.785	1.730	0.008	0.005	87	90	86	-99	-99	1.56E-6	2.91E-6	5.43E-6	
Prostate Cancer																
PC-3	0.535	2.335	2.179	2.082	1.974	0.100	0.088	91	86	80	-81	-84	1.53E-6	3.13E-6	6.39E-6	
DU-145	0.356	1.638	1.551	1.644	1.696	0.031	0.018	93	100	105	-91	-95	1.90E-6	3.42E-6	6.15E-6	
Breast Cancer																
MCF7	0.321	1.999	1.802	1.952	1.768	0.077	0.069	88	97	86	-76	-79	1.67E-6	3.40E-6	6.90E-6	
MDA-MB-231/ATCC	0.615	1.508	1.456	1.516	1.497	0.103	0.033	94	101	99	-83	-95	1.85E-6	3.49E-6	6.56E-6	
HS 578T	0.741	1.782	1.681	1.757	1.784	0.369	0.297	90	98	100	-50	-60	2.15E-6	4.63E-6	9.96E-6	
BT-549	1.202	2.372	2.275	2.249	2.281	0.807	0.100	92	89	92	-33	-92	2.17E-6	5.46E-6	1.96E-5	
T-47D	0.828	2.102	1.808	1.845	1.922	0.268	0.318	77	80	86	-68	-62	1.71E-6	3.62E-6	7.67E-6	
MDA-MB-468	0.898	1.968	1.957	1.994	1.873	0.095	0.066	99	102	91	-89	-93	1.69E-6	3.19E-6	6.04E-6	

Sheet 61. Response parameters at five dose level of compound 44d.

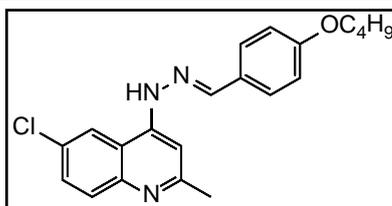
Appendix



National Cancer Institute Developmental Therapeutics Program															
In-Vitro Testing Results															
NSC : D - 804237 / 1					Experiment ID : 1807NS84					Test Type : 08			Units : Molar		
Report Date : August 16, 2018					Test Date : July 30, 2018					QNS :			MC :		
COMI : KQ-05					Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M					
Panel/Cell Line	Time Zero	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			
Leukemia															
CCRF-CEM	0.484	2.782	2.748	2.703	2.445	0.263	0.255	99	97	85	-46	-47	1.86E-6	4.48E-6	> 1.00E-4
HL-60(TB)	0.600	2.675	2.484	2.574	2.436	0.188	0.188	91	95	88	-69	-69	1.76E-6	3.65E-6	7.60E-6
K-562	0.202	2.130	2.219	2.123	1.255	0.061	0.105	105	100	55	-70	-48	1.09E-6	2.74E-6	
MOLT-4	0.583	2.820	2.865	2.748	2.494	0.188	0.248	102	97	85	-68	-57	1.70E-6	3.61E-6	7.66E-6
RPMI-8226	0.761	2.763	2.716	2.753	2.520	0.411	0.386	98	100	88	-46	-49	1.92E-6	4.53E-6	> 1.00E-4
SR	0.170	0.664	0.669	0.638	0.323	0.117	0.119	101	95	31	-31	-30	5.01E-7	3.13E-6	> 1.00E-4
Non-Small Cell Lung Cancer															
A549/ATCC	0.595	2.582	2.511	2.546	2.589	0.078	0.130	96	98	100	-87	-78	1.86E-6	3.44E-6	6.35E-6
EKVX	1.062	2.994	2.948	2.860	2.805	0.020	-0.009	98	93	90	-98	-100	1.64E-6	3.01E-6	5.55E-6
HOP-62	0.889	1.984	1.912	1.935	1.810	0.186	0.226	93	95	84	-79	-75	1.62E-6	3.28E-6	6.63E-6
HOP-92	1.083	1.865	1.812	1.771	1.664	0.196	0.236	93	88	74	-82	-78	1.43E-6	2.99E-6	6.25E-6
NCI-H226	0.773	2.065	1.975	1.890	1.843	0.212	0.194	93	86	83	-73	-75	1.63E-6	3.41E-6	7.16E-6
NCI-H23	0.718	2.218	2.100	2.094	2.114	0.136	0.105	92	92	93	-81	-85	1.77E-6	3.42E-6	6.63E-6
NCI-H322M	0.789	2.071	1.999	1.942	2.036	0.009	0.008	94	90	97	-99	-99	1.74E-6	3.13E-6	5.63E-6
NCI-H460	0.267	2.507	2.638	2.643	2.514	0.087	0.179	106	106	100	-68	-33	1.99E-6	3.96E-6	
NCI-H522	1.295	2.976	2.758	2.707	2.845	0.179	0.138	87	84	92	-86	-89	1.72E-6	3.29E-6	6.27E-6
Colon Cancer															
COLO 205	0.480	1.888	1.951	1.987	1.888	0.167	0.234	104	107	100	-65	-51	2.01E-6	4.03E-6	8.09E-6
HCC-2998	0.544	1.801	1.779	1.767	1.881	0.029	0.011	98	97	106	-95	-98	1.91E-6	3.38E-6	5.99E-6
HCT-116	0.173	1.760	1.832	1.812	1.695	0.097	0.163	105	103	96	-44	-6	2.13E-6	4.85E-6	> 1.00E-4
HCT-115	0.268	2.110	2.067	1.966	1.582	0.022	0.006	98	92	71	-92	-98	1.35E-6	2.74E-6	5.54E-6
HT29	0.234	1.840	1.758	1.794	1.268	0.024	0.023	95	97	64	-90	-90	1.24E-6	2.61E-6	5.51E-6
KM12	0.468	2.581	2.627	2.551	2.531	0.147	0.157	102	99	98	-69	-66	1.93E-6	3.87E-6	7.73E-6
SW-620	0.245	1.851	1.930	1.836	1.814	0.089	0.143	105	99	98	-64	-42	1.97E-6	4.02E-6	
CNS Cancer															
SF-268	0.528	1.962	2.034	2.059	2.038	0.258	0.344	105	107	105	-51	-35	2.26E-6	4.71E-6	
SF-295	0.846	3.038	2.853	2.818	2.835	0.053	0.064	92	90	91	-94	-92	1.66E-6	3.10E-6	5.79E-6
SF-539	1.020	2.781	2.796	2.754	2.823	0.042	0.052	101	98	102	-96	-95	1.84E-6	3.28E-6	5.87E-6
SNB-19	0.754	2.550	2.419	2.472	2.542	0.057	0.104	93	96	100	-93	-86	1.81E-6	3.30E-6	6.01E-6
SNB-75	0.981	1.759	1.635	1.676	1.708	0.145	0.138	84	89	93	-85	-86	1.75E-6	3.33E-6	6.35E-6
U251	0.719	2.499	2.446	2.384	2.392	0.052	0.129	97	94	94	-93	-82	1.72E-6	3.19E-6	5.90E-6
Melanoma															
LOX IMVI	0.342	2.419	2.360	2.265	2.275	0.011	0.019	97	93	93	-97	-95	1.69E-6	3.09E-6	5.67E-6
MALME-3M	0.619	1.513	1.471	1.504	1.523	0.063	0.065	95	99	101	-90	-90	1.85E-6	3.38E-6	6.18E-6
M14	0.400	1.737	1.708	1.711	1.656	0.141	0.155	98	98	94	-65	-61	1.89E-6	3.91E-6	8.07E-6
MDA-MB-435	0.470	2.341	2.382	2.286	2.257	0.024	0.023	102	97	95	-95	-95	1.73E-6	3.17E-6	5.80E-6
SK-MEL-2	1.372	2.629	2.647	2.685	2.628	0.180	0.246	101	104	100	-87	-82	1.85E-6	3.43E-6	6.34E-6
SK-MEL-28	0.662	2.109	2.165	2.064	1.984	0.032	0.039	104	97	91	-95	-94	1.66E-6	3.08E-6	5.72E-6
SK-MEL-5	0.692	2.531	2.447	2.433	2.327	0.005	-0.005	95	95	89	-99	-100	1.61E-6	2.97E-6	5.47E-6
UACC-257	1.257	2.420	2.362	2.213	2.261	0.143	0.087	95	82	86	-89	-93	1.61E-6	3.11E-6	6.01E-6
UACC-62	1.082	3.089	2.984	2.975	2.836	0.059	0.160	95	94	87	-95	-85	1.61E-6	3.02E-6	5.69E-6
Ovarian Cancer															
IGROV1	0.421	1.548	1.583	1.554	1.571	0.084	0.140	103	100	102	-80	-67	1.93E-6	3.63E-6	6.84E-6
OVCAR-3	0.464	1.673	1.788	1.739	1.754	0.101	0.183	110	105	107	-78	-61	2.03E-6	3.78E-6	7.04E-6
OVCAR-4	0.677	1.602	1.618	1.561	1.457	0.053	0.003	102	96	84	-92	-100	1.56E-6	3.00E-6	5.76E-6
OVCAR-5	0.601	1.410	1.355	1.377	1.427	0.013	0.002	93	96	102	-98	-100	1.82E-6	3.24E-6	5.76E-6
OVCAR-8	0.457	1.989	1.997	1.909	1.883	0.093	0.094	101	95	93	-80	-80	1.78E-6	3.46E-6	6.74E-6
NCI/ADR-RES	0.562	1.774	1.757	1.740	1.673	0.098	0.080	99	97	92	-83	-86	1.73E-6	3.36E-6	6.50E-6
SK-OV-3	1.029	1.802	1.818	1.800	1.798	0.066	0.162	102	100	99	-94	-84	1.80E-6	3.27E-6	5.94E-6
Renal Cancer															
786-0	0.565	2.442	2.379	2.399	2.533	0.127	0.184	97	98	105	-78	-67	2.00E-6	3.76E-6	7.06E-6
A498	1.533	2.135	2.097	2.090	2.024	0.106	0.585	94	93	82	-93	-62	1.52E-6	2.93E-6	5.67E-6
ACHN	0.415	1.733	1.758	1.702	1.690	-0.004	0.022	102	98	97	-100	-95	1.73E-6	3.10E-6	5.57E-6
CAKI-1	0.546	2.382	2.269	2.245	2.247	0.014	0.043	94	93	93	-98	-92	1.68E-6	3.07E-6	5.62E-6
RXF 393	1.168	1.979	1.929	1.833	1.783	0.034	0.110	94	82	76	-97	-91	1.41E-6	2.74E-6	5.34E-6
SN12C	0.560	2.453	2.372	2.396	2.230	0.042	0.053	96	97	88	-93	-91	1.63E-6	3.08E-6	5.82E-6
TK-10	0.818	1.662	1.583	1.595	1.709	0.009	0.005	91	92	106	-99	-99	1.87E-6	3.28E-6	5.78E-6
UO-31	0.750	1.907	1.739	1.775	1.739	0.019	0.062	85	89	85	-98	-92	1.56E-6	2.93E-6	5.50E-6
Prostate Cancer															
PC-3	0.535	2.259	2.188	2.216	2.088	0.099	0.113	96	98	90	-81	-79	1.71E-6	3.35E-6	6.55E-6
DU-145	0.356	1.763	1.809	1.778	1.649	0.109	0.168	103	101	92	-70	-53	1.82E-6	3.71E-6	7.57E-6
Breast Cancer															
MCF7	0.321	1.963	1.816	1.789	1.723	0.076	0.094	91	89	85	-76	-71	1.65E-6	3.37E-6	6.87E-6
MDA-MB-231/ATCC	0.615	1.585	1.564	1.509	1.526	0.065	0.062	98	92	94	-90	-90	1.74E-6	3.25E-6	6.09E-6
HS 578T	0.741	1.667	1.674	1.660	1.549	0.363	0.398	101	99	87	-51	-46	1.86E-6	4.27E-6	
BT-549	1.202	2.434	2.360	2.369	2.336	0.243	0.222	94	95	92	-80	-82	1.76E-6	3.43E-6	6.71E-6
T-47D	0.828	1.884	1.740	1.760	1.731	0.307	0.404	86	88	85	-63	-51	1.73E-6	3.77E-6	8.18E-6
MDA-MB-468	0.898	2.060	2.007	1.955	1.848	0.079	0.087	95	91	82	-91	-90	1.53E-6	2.97E-6	5.78E-6

Sheet 62. Response parameters at five dose level of compound 44e.

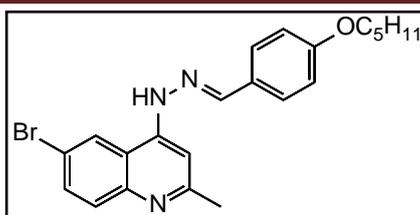
Appendix



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results															
NSC : D - 804238 / 1				Experiment ID : 1807NS84				Test Type : 08			Units : Molar				
Report Date : August 16, 2018				Test Date : July 30, 2018				QNS :			MC :				
COMI : KQ-06				Stain Reagent : SRB Dual-Pass Related				SSPL : 0X7M							
Panel/Cell Line	Time Zero	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			
Leukemia															
CCRF-CEM	0.484	2.698	2.682	2.655	2.400	0.258	0.224	99	98	87	-47	-54	1.88E-6	4.46E-6	2.90E-5
HL-60(TB)	0.600	2.580	2.451	2.596	2.590	0.215	0.177	93	101	100	-64	-71	2.02E-6	4.07E-6	8.19E-6
K-562	0.202	2.114	2.140	2.113	1.767	0.091	0.090	101	100	82	-55	-55	1.71E-6	3.97E-6	9.20E-6
MOLT-4	0.583	2.807	2.770	2.781	2.635	0.244	0.278	98	99	92	-58	-52	1.91E-6	4.11E-6	8.83E-6
RPMI-8226	0.761	2.698	2.677	2.659	2.572	0.396	0.332	99	98	93	-48	-56	2.03E-6	4.58E-6	1.72E-5
SR	0.170	0.617	0.681	0.631	0.589	0.153	0.197	114	103	94	-10	6	2.64E-6		> 1.00E-4
Non-Small Cell Lung Cancer															
A549/ATCC	0.595	2.669	2.611	2.632	2.670	0.102	0.111	97	98	100	-83	-81	1.88E-6	3.52E-6	6.61E-6
EKVX	1.062	2.924	2.892	2.808	2.726	0.038	0.004	98	94	89	-96	-100	1.63E-6	3.03E-6	5.63E-6
HOP-62	0.889	2.067	1.940	1.913	1.803	0.104	0.103	89	87	78	-88	-88	1.47E-6	2.94E-6	5.88E-6
HOP-92	1.083	1.854	1.808	1.751	1.706	0.182	0.175	94	87	81	-83	-84	1.54E-6	3.11E-6	6.27E-6
NCI-H226	0.773	2.024	2.039	1.886	1.908	0.271	0.228	101	89	91	-65	-71	1.83E-6	3.82E-6	8.01E-6
NCI-H23	0.718	2.140	2.065	2.076	2.056	0.220	0.159	95	96	94	-69	-78	1.86E-6	3.76E-6	7.61E-6
NCI-H322M	0.789	2.055	1.985	1.933	2.031	0.009	-0.006	94	90	98	-99	-100	1.76E-6	3.15E-6	5.65E-6
NCI-H460	0.267	2.490	2.633	2.614	2.589	0.088	0.114	106	106	104	-67	-57	2.08E-6	4.06E-6	7.94E-6
NCI-H522	1.295	2.957	2.766	2.737	2.844	0.120	0.091	89	87	93	-91	-93	1.72E-6	3.21E-6	6.00E-6
Colon Cancer															
COLO 205	0.480	1.954	1.942	1.956	1.943	0.075	0.128	99	100	99	-84	-73	1.85E-6	3.47E-6	6.50E-6
HCC-2998	0.544	1.649	1.672	1.699	1.833	0.069	0.083	102	105	117	-87	-85	2.12E-6	3.73E-6	6.56E-6
HCT-116	0.173	1.679	1.803	1.846	1.617	0.020	0.050	108	111	96	-89	-71	1.77E-6	3.31E-6	6.17E-6
HCT-115	0.268	1.952	1.949	1.907	1.735	0.020	0.025	100	97	87	-93	-91	1.61E-6	3.05E-6	5.80E-6
HT29	0.234	1.869	1.818	1.757	1.603	0.016	0.022	97	93	84	-93	-91	1.55E-6	2.97E-6	5.69E-6
KM12	0.468	2.614	2.589	2.583	2.592	0.141	0.169	99	99	99	-70	-64	1.95E-6	3.85E-6	7.62E-6
SW-620	0.245	1.824	1.754	1.817	1.882	0.071	0.131	96	100	104	-71	-47	2.03E-6	3.92E-6	
CNS Cancer															
SF-268	0.528	2.016	2.065	2.052	2.083	0.237	0.270	103	102	105	-55	-49	2.20E-6	4.52E-6	
SF-295	0.846	2.903	2.788	2.787	2.880	0.095	0.058	94	94	99	-89	-93	1.82E-6	3.36E-6	6.21E-6
SF-539	1.020	2.790	2.773	2.744	2.835	0.044	0.016	99	97	103	-96	-98	1.84E-6	3.29E-6	5.88E-6
SNB-19	0.754	2.514	2.427	2.452	2.528	0.089	0.140	95	96	101	-88	-81	1.86E-6	3.41E-6	6.28E-6
SNB-75	0.981	1.816	1.681	1.668	1.744	0.122	0.082	84	82	91	-88	-92	1.70E-6	3.24E-6	6.17E-6
U251	0.719	2.566	2.533	2.481	2.543	0.050	0.076	98	95	99	-93	-89	1.80E-6	3.27E-6	5.96E-6
Melanoma															
LOX IMVI	0.342	2.314	2.261	2.270	2.269	0.021	0.043	97	98	98	-94	-88	1.77E-6	3.24E-6	5.90E-6
MALME-3M	0.619	1.442	1.420	1.451	1.495	0.040	0.031	97	101	106	-94	-95	1.91E-6	3.40E-6	6.06E-6
M14	0.400	1.702	1.651	1.635	1.646	0.025	0.041	96	95	96	-94	-90	1.74E-6	3.20E-6	5.88E-6
MDA-MB-435	0.470	2.393	2.388	2.357	2.375	0.031	0.011	100	98	99	-94	-98	1.80E-6	3.27E-6	5.94E-6
SK-MEL-2	1.372	2.592	2.647	2.334	2.335	0.082	0.096	105	79	79	-94	-93	1.47E-6	2.86E-6	5.56E-6
SK-MEL-28	0.662	2.063	2.109	2.040	1.995	0.023	0.018	103	98	95	-97	-97	1.72E-6	3.13E-6	5.71E-6
SK-MEL-5	0.692	2.649	2.591	2.620	2.517	0.003	0.003	97	98	93	-100	-100	1.68E-6	3.04E-6	5.53E-6
UACC-257	1.257	2.399	2.451	2.300	2.274	0.150	0.071	104	91	89	-88	-94	1.66E-6	3.18E-6	6.09E-6
UACC-62	1.082	3.108	3.064	3.068	2.996	0.112	0.201	98	98	94	-90	-81	1.74E-6	3.26E-6	6.09E-6
Ovarian Cancer															
IGROV1	0.421	1.513	1.515	1.553	1.522	0.082	0.096	100	104	101	-81	-77	1.91E-6	3.59E-6	6.78E-6
OVCAR-3	0.464	1.710	1.898	1.765	1.806	0.109	0.159	115	104	108	-77	-66	2.06E-6	3.84E-6	7.18E-6
OVCAR-4	0.677	1.583	1.589	1.567	1.511	0.018	-0.003	101	98	92	-97	-100	1.67E-6	3.06E-6	5.62E-6
OVCAR-5	0.601	1.322	1.324	1.325	1.359	0.001	-0.011	100	100	105	-100	-100	1.86E-6	3.25E-6	5.71E-6
OVCAR-8	0.457	2.097	2.120	2.025	1.950	0.114	0.062	101	96	91	-75	-87	1.77E-6	3.53E-6	7.07E-6
NCI/ADR-RES	0.562	1.729	1.740	1.729	1.730	0.165	0.106	101	100	100	-71	-81	1.96E-6	3.85E-6	7.56E-6
SK-OV-3	1.029	1.810	1.787	1.771	1.746	0.026	0.020	97	95	92	-98	-98	1.66E-6	3.05E-6	5.61E-6
Renal Cancer															
786-0	0.565	2.337	2.234	2.270	2.329	0.062	0.107	94	96	100	-89	-81	1.83E-6	3.37E-6	6.20E-6
A498	1.533	2.199	2.061	2.052	2.068	0.057	0.436	79	78	80	-96	-72	1.48E-6	2.85E-6	5.47E-6
ACHN	0.415	1.704	1.712	1.684	1.665	-0.008	-0.001	101	98	97	-100	-100	1.73E-6	3.11E-6	5.57E-6
CAKI-1	0.546	2.381	2.271	2.256	2.284	0.013	0.025	94	93	95	-98	-95	1.71E-6	3.11E-6	5.65E-6
RFX 393	1.168	1.967	1.958	1.902	1.860	0.094	0.153	99	92	87	-92	-87	1.60E-6	3.05E-6	5.82E-6
SN12C	0.560	2.395	2.324	2.368	2.294	0.056	0.042	96	99	94	-90	-93	1.74E-6	3.25E-6	6.07E-6
TK-10	0.818	1.633	1.560	1.528	1.702	-0.004	-0.002	91	87	108	-100	-100	1.91E-6	3.31E-6	5.78E-6
UO-31	0.750	1.877	1.760	1.722	1.657	0.016	0.017	90	86	80	-98	-98	1.48E-6	2.82E-6	5.39E-6
Prostate Cancer															
PC-3	0.535	2.178	2.076	2.163	2.057	0.092	0.084	94	99	93	-83	-84	1.75E-6	3.37E-6	6.49E-6
DU-145	0.356	1.763	1.765	1.731	1.731	0.112	0.131	100	98	98	-69	-63	1.94E-6	3.87E-6	7.73E-6
Breast Cancer															
MCF7	0.321	1.868	1.754	1.788	1.768	0.090	0.111	93	95	94	-72	-65	1.83E-6	3.67E-6	7.37E-6
MDA-MB-231/ATCC	0.615	1.528	1.559	1.549	1.537	0.098	0.041	103	102	101	-84	-93	1.88E-6	3.51E-6	6.54E-6
HS 578T	0.741	1.706	1.651	1.624	1.611	0.416	0.410	94	92	90	-44	-45	1.99E-6	4.71E-6	> 1.00E-4
BT-549	1.202	2.353	2.319	2.308	2.279	0.221	0.088	97	96	94	-82	-93	1.77E-6	3.42E-6	6.80E-6
T-47D	0.828	1.958	1.837	1.760	1.785	0.267	0.343	89	82	85	-68	-59	1.69E-6	3.59E-6	7.65E-6
MDA-MB-468	0.898	2.059	1.996	1.948	1.929	0.125	0.173	95	90	89	-86	-81	1.67E-6	3.22E-6	6.22E-6

Sheet 63. Response parameters at five dose level of compound 44f.

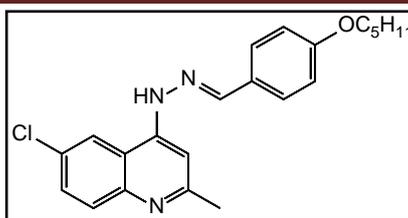
Appendix



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results																
NSC : D - 804239 / 1			Experiment ID : 1807NS84					Test Type : 08			Units : Molar					
Report Date : August 16, 2018			Test Date : July 30, 2018					QNS :			MC :					
COMI : KQ-07			Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M								
Panel/Cell Line	Time Zero	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				
Leukemia																
CCRF-CEM	0.484	2.646	2.624	2.604	2.276	0.226	0.282	99	98	83	-53	-42	1.74E-6	4.06E-6		
HL-60(TB)	0.600	2.647	2.495	2.552	2.326	0.145	0.203	93	95	84	-76	-66	1.64E-6	3.36E-6	6.90E-6	
K-562	0.202	2.064	2.071	2.042	0.960	0.053	0.033	100	99	41	-74	-84	6.91E-7	2.27E-6	6.20E-6	
MOLT-4	0.583	2.812	2.784	2.700	2.478	0.137	0.107	99	95	85	-77	-82	1.65E-6	3.36E-6	6.85E-6	
RPMI-8226	0.761	2.661	2.640	2.614	2.416	0.362	0.458	99	98	87	-52	-40	1.84E-6	4.21E-6		
SR	0.170	0.581	0.556	0.581	0.218	0.107	0.072	94	100	12	-37	-58	3.69E-7	1.73E-6	4.20E-5	
Non-Small Cell Lung Cancer																
A549/ATCC	0.595	2.638	2.550	2.696	2.676	0.091	0.172	96	103	102	-85	-71	1.90E-6	3.52E-6	6.52E-6	
EKVX	1.062	2.945	2.883	2.828	2.789	0.040	0.009	97	94	92	-96	-99	1.67E-6	3.07E-6	5.67E-6	
HOP-62	0.889	2.098	2.004	1.948	1.909	0.189	0.285	92	88	84	-79	-68	1.62E-6	3.29E-6	6.66E-6	
HOP-92	1.083	1.775	1.744	1.696	1.617	0.148	0.298	95	88	77	-86	-72	1.47E-6	2.96E-6	5.99E-6	
NCI-H226	0.773	2.045	2.013	1.943	1.800	0.295	0.366	97	92	81	-62	-53	1.64E-6	3.68E-6	8.25E-6	
NCI-H23	0.718	2.163	2.065	2.075	2.063	0.149	0.168	93	94	93	-79	-77	1.78E-6	3.47E-6	6.76E-6	
NCI-H322M	0.789	2.041	1.999	1.945	2.005	0.013	0.073	97	92	97	-98	-91	1.74E-6	3.14E-6	5.66E-6	
NCI-H460	0.267	2.587	2.728	2.657	2.525	0.092	0.065	106	103	97	-66	-76	1.95E-6	3.96E-6	8.03E-6	
NCI-H522	1.295	2.977	2.835	2.759	2.783	0.093	0.095	92	87	88	-93	-93	1.63E-6	3.08E-6	5.80E-6	
Colon Cancer																
COLO 205	0.480	1.948	1.867	1.932	1.937	0.102	0.025	95	99	99	-79	-95	1.89E-6	3.61E-6	6.89E-6	
HCC-2998	0.544	1.687	1.786	1.773	1.756	0.070	0.088	107	107	106	-87	-84	1.95E-6	3.54E-6	6.42E-6	
HCT-116	0.173	1.708	1.777	1.713	0.982	0.011	0.054	104	100	53	-94	-69	1.04E-6	2.29E-6	5.02E-6	
HCT-15	0.288	2.039	1.957	2.001	1.614	0.022	0.044	95	98	76	-92	-84	1.43E-6	2.94E-6	5.64E-6	
HT29	0.234	1.880	1.846	1.793	1.513	0.011	-0.014	98	95	78	-96	-100	1.44E-6	2.81E-6	5.48E-6	
KM12	0.468	2.603	2.490	2.457	2.504	0.078	0.079	95	93	95	-83	-83	1.79E-6	3.41E-6	6.50E-6	
SW-620	0.245	1.908	1.858	1.814	1.719	0.066	0.041	97	94	89	-73	-83	1.73E-6	3.53E-6	7.18E-6	
CNS Cancer																
SF-268	0.528	1.898	1.949	1.987	2.001	0.222	0.247	104	107	108	-58	-53	2.23E-6	4.46E-6	8.94E-6	
SF-295	0.846	2.930	2.774	2.759	2.826	0.113	0.235	93	92	95	-87	-72	1.77E-6	3.33E-6	6.28E-6	
SF-539	1.020	2.703	2.718	2.711	2.769	0.037	0.054	101	100	104	-96	-95	1.86E-6	3.30E-6	5.87E-6	
SNB-19	0.754	2.535	2.468	2.486	2.567	0.080	0.203	96	97	102	-89	-73	1.87E-6	3.41E-6	6.22E-6	
SNB-75	0.981	1.797	1.616	1.650	1.683	0.164	0.262	78	82	86	-83	-73	1.63E-6	3.22E-6	6.36E-6	
U251	0.719	2.550	2.502	2.434	2.422	0.050	0.063	97	94	93	-93	-91	1.70E-6	3.16E-6	5.87E-6	
Melanoma																
LOX IMVI	0.342	2.393	2.366	2.253	2.226	0.027	0.082	99	93	92	-92	-76	1.69E-6	3.15E-6	5.90E-6	
MALME-3M	0.619	1.470	1.420	1.460	1.476	0.066	0.119	94	99	101	-89	-81	1.85E-6	3.39E-6	6.21E-6	
M14	0.400	1.647	1.592	1.583	1.605	0.027	0.093	96	95	97	-93	-77	1.76E-6	3.23E-6	5.91E-6	
MDA-MB-435	0.470	2.417	2.381	2.327	2.337	0.032	0.083	98	95	96	-93	-82	1.75E-6	3.21E-6	5.91E-6	
SK-MEL-2	1.372	2.511	2.591	2.453	2.430	0.104	0.085	107	95	93	-92	-94	1.70E-6	3.17E-6	5.90E-6	
SK-MEL-28	0.682	2.092	2.116	2.055	1.996	0.021	0.132	102	97	93	-97	-81	1.69E-6	3.09E-6	5.66E-6	
SK-MEL-5	0.692	2.702	2.595	2.636	2.502	0.011	0.103	95	97	90	-98	-85	1.63E-6	3.01E-6	5.54E-6	
UACC-257	1.257	2.504	2.443	2.371	2.408	0.165	0.208	95	89	92	-87	-83	1.72E-6	3.27E-6	6.22E-6	
UACC-62	1.082	3.115	3.030	3.020	2.944	0.084	0.244	96	95	92	-92	-77	1.68E-6	3.15E-6	5.89E-6	
Ovarian Cancer																
IGROV1	0.421	1.519	1.516	1.548	1.529	0.082	0.125	100	103	101	-81	-70	1.91E-6	3.60E-6	6.79E-6	
OVCAR-3	0.464	1.627	1.693	1.697	1.708	0.065	0.125	106	106	107	-86	-73	1.97E-6	3.58E-6	6.51E-6	
OVCAR-4	0.677	1.559	1.521	1.534	1.501	0.066	0.017	96	97	93	-90	-98	1.72E-6	3.22E-6	6.03E-6	
OVCAR-5	0.601	1.385	1.365	1.374	1.404	0.007	0.010	97	99	102	-99	-98	1.82E-6	3.23E-6	5.71E-6	
HS OVCAR-8	0.457	2.065	2.078	2.019	1.979	0.200	0.189	101	97	95	-56	-59	1.98E-6	4.23E-6	9.08E-6	
NCI/ADR-RES	0.562	1.788	1.769	1.760	1.706	0.202	0.235	98	98	93	-64	-58	1.89E-6	3.92E-6	8.14E-6	
SK-OV-3	1.029	1.933	1.910	1.901	1.839	0.066	0.052	97	96	90	-84	-95	1.65E-6	3.08E-6	5.78E-6	
Renal Cancer																
786-0	0.565	2.361	2.200	2.231	2.297	0.064	0.181	91	93	96	-89	-68	1.78E-6	3.32E-6	6.18E-6	
A498	1.533	2.192	2.081	2.023	1.942	0.065	0.084	83	74	62	-96	-95	1.19E-6	2.47E-6	5.13E-6	
ACHN	0.415	1.713	1.748	1.686	1.692	-0.002	0.064	103	98	98	-100	-85	1.75E-6	3.13E-6	5.60E-6	
CAKI-1	0.546	2.365	2.274	2.201	2.185	0.018	0.087	95	91	90	-97	-84	1.64E-6	3.03E-6	5.62E-6	
RXF 393	1.168	1.962	1.933	1.958	1.867	0.094	0.226	96	99	88	-92	-81	1.63E-6	3.08E-6	5.84E-6	
SN12C	0.560	2.421	2.333	2.373	2.283	0.058	0.122	95	97	93	-90	-78	1.71E-6	3.22E-6	6.06E-6	
TK-10	0.818	1.593	1.541	1.518	1.588	0.006	0.068	93	90	99	-99	-92	1.77E-6	3.16E-6	5.65E-6	
UO-31	0.750	1.821	1.701	1.764	1.666	0.020	0.067	89	95	86	-97	-91	1.56E-6	2.93E-6	5.51E-6	
Prostate Cancer																
PC-3	0.535	2.213	2.112	2.127	1.983	0.058	0.077	94	95	86	-89	-86	1.61E-6	3.10E-6	5.98E-6	
DU-145	0.356	1.631	1.690	1.638	1.588	0.095	0.110	105	101	97	-73	-69	1.88E-6	3.70E-6	7.28E-6	
Breast Cancer																
MCF7	0.321	1.932	1.815	1.772	1.673	0.083	0.074	93	90	84	-74	-77	1.64E-6	3.40E-6	7.04E-6	
MDA-MB-231/ATCC	0.615	1.585	1.572	1.543	1.506	0.071	0.142	99	96	92	-89	-77	1.71E-6	3.23E-6	6.11E-6	
HS 578T	0.741	1.638	1.586	1.598	1.578	0.300	0.382	94	95	93	-60	-48	1.92E-6	4.08E-6		
BT-549	1.202	2.286	2.224	2.260	2.217	0.149	0.168	94	98	94	-88	-86	1.74E-6	3.28E-6	6.20E-6	
T-47D	0.828	1.943	1.884	1.816	1.807	0.278	0.374	95	89	88	-66	-55	1.76E-6	3.71E-6	7.83E-6	
MDA-MB-468	0.898	2.108	2.075	2.040	1.974	0.183	0.317	97	94	89	-80	-65	1.70E-6	3.37E-6	6.67E-6	

Sheet 64. Response parameters at five dose level of compound 44g.

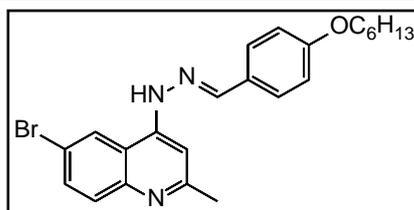
Appendix



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results															
NSC : D - 804241 / 1			Experiment ID : 1807NS84					Test Type : 08			Units : Molar				
Report Date : August 16, 2018			Test Date : July 30, 2018					QNS :			MC :				
COMI : KQ-09			Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M							
Panel/Cell Line	Time Zero	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			
Leukemia															
CCR6-CEM	0.484	2.832	2.784	2.764	2.226	0.210	0.257	98	97	74	-57	-47	1.53E-6	3.69E-6	.
HL-60(TB)	0.600	2.676	2.607	2.654	2.027	0.234	0.263	97	99	69	-61	-56	1.39E-6	3.38E-6	8.21E-6
K-562	0.202	2.160	2.156	2.271	0.643	0.117	0.077	100	106	23	-42	-62	4.67E-7	2.23E-6	2.44E-5
MOLT-4	0.583	2.714	2.738	2.738	2.485	0.248	0.225	101	101	89	-58	-61	1.85E-6	4.05E-6	8.88E-6
RPMI-8226	0.761	2.684	2.687	2.686	2.441	0.323	0.392	100	100	87	-58	-49	1.81E-6	4.01E-6	.
SR	0.170	0.658	0.664	0.644	0.207	0.120	0.082	101	97	8	-29	-52	3.36E-7	1.60E-6	8.11E-5
Non-Small Cell Lung Cancer															
A549/ATCC	0.595	2.172	1.917	2.058	2.166	0.151	0.165	84	93	100	-75	-72	1.93E-6	3.73E-6	7.22E-6
EKVX	1.062	2.841	2.669	2.786	2.748	0.103	0.885	90	97	95	-90	-17	1.75E-6	3.25E-6	.
HOP-62	0.889	2.198	2.065	2.026	1.960	0.126	0.219	90	87	82	-86	-75	1.55E-6	3.08E-6	6.11E-6
HOP-92	1.083	1.852	1.697	1.795	1.640	0.258	0.335	80	93	72	-76	-69	1.42E-6	3.07E-6	6.07E-6
NCI-H226	0.773	1.958	1.962	1.976	1.882	0.250	0.418	100	101	94	-68	-46	1.86E-6	3.80E-6	.
NCI-H23	0.718	2.166	2.109	2.149	2.165	0.128	0.221	96	99	100	-82	-69	1.88E-6	3.54E-6	6.65E-6
NCI-H322M	0.789	2.072	1.921	2.053	1.991	0.038	0.361	88	99	94	-95	-54	1.70E-6	3.13E-6	5.76E-6
NCI-H460	0.267	2.544	2.628	2.636	2.081	0.104	0.162	104	104	80	-61	-39	1.62E-6	3.68E-6	.
NCI-H522	1.295	3.048	2.775	2.598	2.934	0.286	0.288	84	74	93	-78	-78	1.79E-6	3.51E-6	6.87E-6
Colon Cancer															
COLO 205	0.480	2.188	2.126	2.168	1.934	0.044	0.064	96	99	85	-91	-87	1.58E-6	3.04E-6	5.85E-6
HCC-2998	0.544	1.773	1.736	1.823	1.849	0.048	0.121	97	104	106	-91	-78	1.93E-6	3.45E-6	6.19E-6
HCT-116	0.173	1.858	1.686	1.671	1.463	0.054	0.132	90	89	17	-69	-24	3.49E-7	1.59E-6	.
HCT-115	0.268	1.940	1.934	2.005	1.385	0.008	0.058	100	104	67	-97	-78	1.27E-6	2.55E-6	5.15E-6
HT29	0.234	1.953	1.830	1.833	1.698	0.027	0.064	93	93	85	-89	-73	1.59E-6	3.09E-6	5.99E-6
KM12	0.468	2.637	2.529	2.573	2.345	0.107	0.143	95	97	87	-77	-70	1.67E-6	3.38E-6	6.83E-6
SW-620	0.245	1.979	1.899	1.973	1.101	0.077	0.126	95	100	49	-69	-49	1.60E-7	2.62E-6	.
CNS Cancer															
SF-268	0.528	1.957	1.912	1.981	1.994	0.211	0.368	97	102	103	-60	-30	2.10E-6	4.27E-6	.
SF-295	0.846	2.914	2.742	2.768	2.779	0.088	0.227	92	93	93	-90	-73	1.73E-6	3.24E-6	6.07E-6
SF-539	1.020	2.631	2.534	2.584	2.684	0.022	0.025	94	97	103	-98	-98	1.84E-6	3.26E-6	5.78E-6
SNB-19	0.754	2.429	2.383	2.490	2.485	0.064	0.309	97	104	103	-92	-59	1.88E-6	3.39E-6	6.12E-6
SNB-75	0.981	1.824	1.695	1.732	1.793	0.161	0.371	85	89	96	-84	-62	1.81E-6	3.43E-6	6.50E-6
U251	0.719	2.239	2.079	2.183	2.299	0.070	0.096	89	96	104	-90	-87	1.90E-6	3.43E-6	6.20E-6
Melanoma															
LOX IMVI	0.342	2.315	2.182	2.259	1.642	0.017	0.104	93	97	66	-95	-70	1.26E-6	2.57E-6	5.25E-6
MALME-3M	0.619	1.495	1.426	1.541	1.535	0.061	0.127	92	105	105	-90	-80	1.91E-6	3.44E-6	6.22E-6
M14	0.400	1.906	1.941	1.863	1.748	0.079	0.140	102	97	89	-80	-65	1.71E-6	3.36E-6	6.62E-6
MDA-MB-435	0.470	2.432	2.333	2.303	2.314	0.026	0.125	95	93	94	-95	-73	1.71E-6	3.15E-6	5.80E-6
SK-MEL-2	1.372	2.823	2.744	2.787	2.720	0.150	0.339	95	98	93	-99	-75	1.72E-6	3.24E-6	6.10E-6
SK-MEL-28	0.682	1.983	2.000	2.025	1.959	0.020	0.129	101	103	98	-97	-81	1.76E-6	3.18E-6	5.74E-6
SK-MEL-5	0.692	2.663	2.546	2.652	2.546	0.020	0.077	94	99	94	-100	-89	1.69E-6	3.06E-6	5.54E-6
UACC-257	1.257	2.215	1.927	1.818	2.059	0.257	0.192	70	59	84	-80	-85	1.61E-6	3.26E-6	6.59E-6
UACC-62	1.082	3.018	2.995	3.016	2.968	0.089	0.274	99	100	97	-92	-75	1.78E-6	3.27E-6	6.01E-6
Ovarian Cancer															
IGROV1	0.421	1.563	1.474	1.506	1.484	0.098	0.205	92	95	93	-77	-51	1.79E-6	3.53E-6	6.96E-6
OVCAR-3	0.464	1.688	1.739	1.789	1.804	0.085	0.116	104	108	109	-82	-75	2.05E-6	3.74E-6	6.83E-6
OVCAR-4	0.677	1.531	1.493	1.572	1.503	0.028	0.094	96	105	97	-96	-86	1.75E-6	3.18E-6	5.78E-6
OVCAR-5	0.601	1.299	1.311	1.307	1.363	0.007	0.091	102	101	109	-99	-85	1.92E-6	3.35E-6	5.82E-6
OVCAR-8	0.457	1.970	1.855	1.907	1.834	0.207	0.098	92	96	91	-55	-79	1.91E-6	4.21E-6	9.28E-6
NCI/ADR-RES	0.562	1.761	1.731	1.787	1.739	0.143	0.203	97	102	98	-75	-64	1.90E-6	3.70E-6	7.20E-6
SK-OV-3	1.029	2.076	2.045	1.948	2.013	0.037	0.095	97	88	94	-96	-91	1.70E-6	3.11E-6	5.70E-6
Renal Cancer															
786-0	0.565	2.388	2.179	2.287	2.294	0.183	0.292	89	94	95	-68	-48	1.89E-6	3.84E-6	.
A498	1.533	2.175	2.006	2.127	2.132	0.272	0.115	74	93	93	-82	-93	1.77E-6	3.40E-6	6.55E-6
ACHN	0.415	1.713	1.712	1.749	1.656	-0.001	0.103	100	103	96	-100	-75	1.71E-6	3.08E-6	5.55E-6
CAKI-1	0.546	2.395	2.221	2.271	2.229	0.019	0.099	91	93	91	-97	-82	1.65E-6	3.06E-6	5.64E-6
RXF 393	1.168	1.951	1.920	1.946	1.829	0.068	0.143	96	99	84	-94	-88	1.56E-6	2.97E-6	5.65E-6
SN12C	0.560	2.378	2.281	2.392	2.222	0.052	0.158	95	101	91	-91	-72	1.69E-6	3.18E-6	5.98E-6
TK-10	0.818	1.630	1.463	1.547	1.681	0.018	0.158	79	90	106	-98	-81	1.89E-6	3.32E-6	5.83E-6
UO-31	0.750	1.912	1.753	1.774	1.688	0.039	0.145	86	88	81	-95	-81	1.50E-6	2.88E-6	5.56E-6
Prostate Cancer															
PC-3	0.535	2.305	2.172	2.161	1.982	0.110	0.202	92	92	82	-80	-62	1.57E-6	3.21E-6	6.56E-6
DU-145	0.356	1.674	1.651	1.678	1.637	0.076	0.130	98	100	97	-79	-64	1.86E-6	3.57E-6	6.87E-6
Breast Cancer															
MCF7	0.321	1.837	1.691	1.798	1.452	0.086	0.123	90	97	75	-73	-62	1.47E-6	3.20E-6	6.97E-6
MDA-MB-231/ATCC	0.615	1.566	1.484	1.561	1.460	0.091	0.192	91	99	89	-85	-69	1.67E-6	3.24E-6	6.28E-6
HS 578T	0.741	1.658	1.591	1.696	1.723	0.295	0.466	93	104	107	-60	-37	2.19E-6	4.37E-6	.
BT-549	1.202	2.338	2.148	2.207	2.318	0.653	1.550	83	88	98	-46	31	2.16E-6	.	> 1.00E-4
T-47D	0.828	1.997	1.716	1.907	1.982	0.282	0.384	76	82	99	-66	-56	1.98E-6	3.97E-6	8.00E-6
MDA-MB-468	0.898	1.959	1.926	2.003	1.839	0.086	0.124	97	104	89	-90	-86	1.65E-6	3.13E-6	5.95E-6

Sheet 65. Response parameters at five dose level of compound 44h.

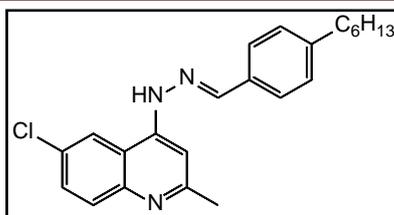
Appendix



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results																
NSC : D - 804240 / 1			Experiment ID : 1808NS87					Test Type : 08			Units : Molar					
Report Date : August 27, 2018			Test Date : August 06, 2018					QNS :			MC :					
COMI : KQ-08			Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M								
Panel/Cell Line	Time Zero	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				
Leukemia																
CCRF-CEM	0.546	2.855	2.800	2.794	2.310	0.199	0.254	98	97	76	-64	-53	1.54E-6	3.51E-6	7.99E-6	
HL-60(TB)	0.909	3.176	3.138	3.183	3.114	0.262	0.217	98	100	97	-71	-76	1.91E-6	3.78E-6	7.48E-6	
K-562	0.184	2.071	2.104	1.985	1.376	0.043	0.038	102	95	63	-77	-80	1.24E-6	2.83E-6	6.45E-6	
MOLT-4	0.571	2.645	2.667	2.677	2.389	0.169	0.151	101	102	88	-70	-74	1.73E-6	3.58E-6	7.42E-6	
RPMI-8226	1.200	3.023	3.011	2.999	2.868	0.529	0.529	99	99	91	-56	-56	1.91E-6	4.17E-6	9.11E-6	
SR	0.279	1.382	1.410	1.393	0.530	0.152	0.114	102	101	23	-46	-59	4.48E-7	2.15E-6	2.13E-5	
Non-Small Cell Lung Cancer																
A549/ATCC	0.550	2.952	2.879	2.843	2.920	0.136	0.118	97	95	99	-75	-79	1.90E-6	3.69E-6	7.15E-6	
EKVX	0.967	2.689	2.592	2.543	2.485	0.091	0.003	94	92	88	-91	-100	1.63E-6	3.11E-6	5.93E-6	
HOP-62	0.589	1.988	1.886	1.847	1.865	0.109	0.085	93	90	91	-81	-86	1.73E-6	3.37E-6	6.57E-6	
HOP-92	1.052	1.770	1.651	1.633	1.559	0.180	0.188	83	81	71	-83	-82	1.36E-6	2.88E-6	6.10E-6	
NCI-H226	0.715	2.138	2.116	2.006	1.946	0.360	0.359	98	91	87	-50	-50	1.85E-6	4.32E-6	> 1.00E-4	
NCI-H23	0.567	2.082	1.975	1.978	1.967	0.191	0.130	93	93	92	-66	-77	1.85E-6	3.82E-6	7.89E-6	
NCI-H322M	0.770	2.161	2.119	2.062	2.114	0.024	-0.003	97	93	97	-97	-100	1.74E-6	3.16E-6	5.72E-6	
NCI-H460	0.103	2.135	2.255	2.211	2.156	0.024	0.026	106	104	101	-77	-75	1.94E-6	3.70E-6	7.08E-6	
NCI-H522	0.984	2.784	2.740	2.727	2.675	0.535	0.294	98	97	94	-46	-70	2.06E-6	4.71E-6	1.51E-5	
Colon Cancer																
COLO 205	0.485	2.278	2.304	2.289	2.322	0.111	0.080	101	101	102	-77	-84	1.96E-6	3.72E-6	7.06E-6	
HCC-2998	0.509	1.912	1.937	1.851	2.052	0.104	0.104	102	96	110	-80	-80	2.07E-6	3.80E-6	6.98E-6	
HCT-116	0.172	2.039	2.032	2.104	1.955	0.025	0.014	100	103	95	-86	-92	1.78E-6	3.36E-6	6.35E-6	
HCT-15	0.270	2.107	2.079	2.042	1.784	0.044	0.018	98	96	82	-84	-94	1.57E-6	3.13E-6	6.25E-6	
HT29	0.150	1.443	1.437	1.422	1.346	0.068	0.033	99	98	92	-55	-78	1.94E-6	4.24E-6	9.25E-6	
KM12	0.419	2.305	2.300	2.211	2.217	0.027	0.015	100	95	95	-94	-97	1.74E-6	3.19E-6	5.87E-6	
SW-620	0.173	2.361	2.334	2.392	2.394	0.035	0.036	99	101	101	-80	-79	1.92E-6	3.63E-6	6.85E-6	
CNS Cancer																
SF-268	0.672	2.083	2.032	2.146	2.124	0.154	0.151	96	104	103	-77	-78	1.97E-6	3.73E-6	7.07E-6	
SF-295	0.914	3.087	3.027	2.929	2.972	0.189	0.093	97	93	95	-79	-90	1.81E-6	3.50E-6	6.78E-6	
SF-539	0.940	2.506	2.355	2.544	2.457	0.063	0.020	90	102	97	-93	-98	1.76E-6	3.23E-6	5.92E-6	
SNB-19	0.727	2.530	2.419	2.474	2.573	0.164	0.045	94	97	102	-78	-94	1.96E-6	3.71E-6	7.03E-6	
SNB-75	0.453	1.489	1.397	1.421	1.423	0.077	0.068	91	93	94	-83	-85	1.77E-6	3.39E-6	6.50E-6	
U251	0.560	2.521	2.458	2.478	2.480	0.073	0.037	97	98	98	-87	-93	1.82E-6	3.39E-6	6.31E-6	
Melanoma																
LOX IMVI	0.303	2.382	2.296	2.220	2.300	0.075	0.054	96	92	96	-75	-82	1.86E-6	3.64E-6	7.12E-6	
MALME-3M	0.390	1.040	1.032	1.034	1.051	0.051	0.053	99	99	102	-87	-86	1.88E-6	3.46E-6	6.37E-6	
M14	0.418	2.129	2.053	2.052	2.129	0.074	0.055	96	95	100	-82	-87	1.88E-6	3.53E-6	6.64E-6	
MDA-MB-435	0.360	2.645	2.695	2.669	2.597	0.011	-0.009	102	101	98	-97	-100	1.76E-6	3.18E-6	5.74E-6	
SK-MEL-2	0.861	2.235	2.125	2.207	2.243	0.264	0.175	92	98	101	-69	-80	1.98E-6	3.91E-6	7.69E-6	
SK-MEL-28	0.798	2.403	2.447	2.420	2.233	0.061	0.025	103	101	89	-92	-97	1.65E-6	3.10E-6	5.84E-6	
SK-MEL-5	1.043	3.244	3.231	3.232	3.175	0.030	-0.012	99	99	97	-97	-100	1.74E-6	3.16E-6	5.71E-6	
UACC-257	1.108	2.687	2.586	2.594	2.662	0.237	0.109	94	94	98	-79	-90	1.88E-6	3.60E-6	6.89E-6	
UACC-62	0.891	3.001	2.897	2.897	2.793	0.075	0.051	95	95	90	-92	-94	1.66E-6	3.13E-6	5.90E-6	
Ovarian Cancer																
IGROV1	0.550	2.249	2.236	2.244	2.082	0.106	0.088	99	100	90	-81	-84	1.72E-6	3.37E-6	6.80E-6	
OVCAR-3	0.435	1.502	1.553	1.572	1.587	0.015	0.001	105	107	108	-97	-100	1.92E-6	3.37E-6	5.92E-6	
OVCAR-4	0.196	0.832	0.839	0.814	0.805	0.019	-0.012	101	97	98	-91	-100	1.76E-6	3.27E-6	6.06E-6	
OVCAR-5	0.553	1.392	1.362	1.405	1.406	0.025	0.017	96	102	102	-95	-97	1.83E-6	3.28E-6	5.88E-6	
OVCAR-8	0.559	2.699	2.688	2.617	2.646	0.296	0.184	99	96	98	-47	-67	2.13E-6	4.73E-6	1.40E-5	
NCI/ADR-RES	0.631	2.270	2.146	2.178	2.051	0.300	0.197	92	94	87	-53	-69	1.83E-6	4.19E-6	9.59E-6	
SK-OV-3	0.941	1.993	2.010	1.966	1.961	0.037	0.026	102	97	97	-96	-97	1.75E-6	3.18E-6	5.77E-6	
Renal Cancer																
786-0	0.509	2.391	2.217	2.282	2.307	0.088	0.075	91	94	96	-83	-85	1.80E-6	3.43E-6	6.55E-6	
A498	0.817	1.846	1.788	1.856	1.855	0.060	0.094	94	101	101	-93	-88	1.83E-6	3.32E-6	6.02E-6	
ACHN	0.375	1.690	1.709	1.696	1.669	0.008	-0.001	101	100	98	-98	-100	1.77E-6	3.17E-6	5.70E-6	
CAKI-1	0.173	1.524	1.446	1.461	1.399	-0.002	-0.014	94	95	91	-100	-100	1.63E-6	2.99E-6	5.47E-6	
RXF 393	1.038	2.034	2.029	2.004	1.932	0.122	0.110	99	97	90	-88	-89	1.67E-6	3.19E-6	6.10E-6	
SN12C	0.613	2.558	2.477	2.487	2.413	0.079	0.043	96	96	93	-87	-93	1.72E-6	3.27E-6	6.21E-6	
TK-10	0.579	1.690	1.632	1.646	1.712	0.064	0.055	95	96	102	-89	-91	1.87E-6	3.42E-6	6.25E-6	
UO-31	0.729	1.949	1.894	1.892	1.764	0.053	0.083	96	95	85	-93	-89	1.57E-6	3.00E-6	5.74E-6	
Prostate Cancer																
PC-3	0.514	2.190	2.032	2.054	1.903	0.052	0.043	91	92	83	-90	-92	1.55E-6	3.02E-6	5.88E-6	
DU-145	0.292	1.360	1.382	1.383	1.367	0.013	-0.003	102	102	101	-96	-100	1.81E-6	3.25E-6	5.85E-6	
Breast Cancer																
MCF7	0.304	2.069	1.895	1.877	1.805	0.106	0.086	90	89	85	-65	-72	1.71E-6	3.68E-6	7.93E-6	
MDA-MB-231/ATCC	0.601	1.448	1.450	1.436	1.394	0.107	0.072	100	99	94	-82	-88	1.77E-6	3.41E-6	6.56E-6	
HS 578T	0.587	2.018	1.966	2.005	1.989	0.397	0.359	96	99	98	-32	-39	2.33E-6	5.64E-6	> 1.00E-4	
BT-549	0.991	2.180	2.100	2.104	2.100	0.189	0.043	93	94	93	-81	-96	1.77E-6	3.43E-6	6.64E-6	
T-47D	0.641	1.453	1.430	1.395	1.363	0.246	0.280	97	93	89	-62	-56	1.81E-6	3.89E-6	8.36E-6	
MDA-MB-468	0.807	2.103	2.118	2.063	2.042	0.184	0.141	101	97	95	-77	-83	1.83E-6	3.57E-6	6.96E-6	

Sheet 66. Response parameters at five dose level of compound 44i.

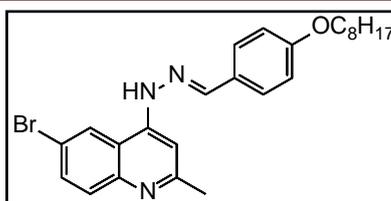
Appendix



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results															
NSC : D - 804242 / 1			Experiment ID : 1807NS84					Test Type : 08			Units : Molar				
Report Date : August 15, 2018			Test Date : July 30, 2018					QNS :			MC :				
COMI : KQ-10			Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M							
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	0.484	2.853	2.841	2.743	2.426	0.218	0.213	100	95	82	-55	-56	1.71E-6	3.97E-6	9.20E-6
HL-60(TB)	0.600	2.783	2.144	2.710	1.987	0.238	0.238	71	97	64	-60	-60	1.29E-6	3.26E-6	8.25E-6
K-562	0.202	2.387	2.379	2.425	1.362	0.082	0.089	100	102	53	-60	-56	1.07E-6	2.96E-6	8.21E-6
MOLT-4	0.583	2.952	2.837	2.029	1.989	0.240	0.237	95	61	59	-59	-59	1.20E-6	3.18E-6	8.42E-6
RPMI-8226	0.761	2.784	2.738	2.723	2.573	0.322	0.319	98	97	90	-58	-58	1.86E-6	4.06E-6	8.87E-6
SR	0.170	0.712	0.713	0.725	0.251	0.101	0.093	100	102	15	-41	-46	3.96E-7	1.85E-6	> 1.00E-4
Non-Small Cell Lung Cancer															
A549/ATCC	0.595	2.592	2.468	2.324	2.473	0.110	0.067	94	87	94	-82	-89	1.78E-6	3.43E-6	6.61E-6
EKVX	1.062	2.966	2.744	2.908	2.870	0.041	0.012	88	97	95	-96	-99	1.72E-6	3.14E-6	5.73E-6
HOP-62	0.889	2.299	1.997	1.853	1.985	0.106	0.063	79	68	78	-88	-93	1.47E-6	2.94E-6	5.89E-6
HOP-92	1.083	1.846	1.729	1.816	1.661	0.166	0.176	85	96	76	-85	-84	1.45E-6	2.97E-6	6.08E-6
NCI-H226	0.773	2.019	1.954	1.915	1.830	0.117	0.231	95	92	85	-85	-70	1.60E-6	3.16E-6	6.23E-6
NCI-H23	0.718	2.380	2.279	2.309	2.280	0.134	0.088	94	96	94	-81	-88	1.78E-6	3.43E-6	6.62E-6
NCI-H322M	0.789	2.072	1.890	1.972	2.011	0.002	-0.003	86	92	95	-100	-100	1.71E-6	3.08E-6	5.55E-6
NCI-H460	0.267	2.674	2.664	2.721	2.626	0.084	0.059	100	102	98	-69	-78	1.94E-6	3.88E-6	7.74E-6
NCI-H522	1.295	3.136	2.976	2.838	2.946	0.230	0.204	91	84	90	-82	-84	1.70E-6	3.32E-6	6.49E-6
Colon Cancer															
COLO 205	0.480	2.211	2.287	2.237	2.181	0.087	0.049	104	102	98	-82	-90	1.85E-6	3.51E-6	6.65E-6
HCC-2998	0.544	1.841	1.799	1.954	2.008	0.044	0.037	97	109	113	-92	-93	2.03E-6	3.56E-6	6.24E-6
HCT-116	0.173	1.974	1.883	1.786	1.020	0.004	-0.002	95	90	47	-98	-100	8.50E-7	2.11E-6	4.67E-6
HCT-15	0.288	2.117	2.028	2.090	1.797	0.007	0.005	95	99	83	-97	-98	1.52E-6	2.88E-6	5.46E-6
HT29	0.234	2.117	2.069	2.035	1.881	0.025	0.008	97	96	87	-90	-97	1.63E-6	3.12E-6	5.98E-6
KM12	0.468	2.677	2.562	2.681	2.543	0.099	0.067	95	100	94	-79	-86	1.80E-6	3.50E-6	6.81E-6
SW-620	0.245	2.009	1.907	2.013	1.597	0.093	0.040	94	100	77	-62	-84	1.56E-6	3.56E-6	8.16E-6
CNS Cancer															
SF-268	0.528	2.035	1.885	2.060	2.042	0.213	0.168	90	102	100	-60	-68	2.07E-6	4.24E-6	8.70E-6
SF-295	0.846	3.037	2.858	2.857	2.900	0.069	0.036	92	92	94	-92	-96	1.72E-6	3.20E-6	5.95E-6
SF-539	1.020	2.586	2.610	2.612	2.678	0.014	0.006	101	102	106	-99	-99	1.87E-6	3.29E-6	5.78E-6
SNB-19	0.754	2.529	2.464	2.512	2.494	0.113	0.040	96	99	98	-85	-95	1.83E-6	3.43E-6	6.43E-6
SNB-75	0.981	1.828	1.625	1.721	1.816	0.156	0.115	76	87	99	-84	-88	1.84E-6	3.46E-6	6.50E-6
U251	0.719	2.496	2.430	2.551	2.564	0.047	0.010	96	103	104	-94	-99	1.87E-6	3.36E-6	6.02E-6
Melanoma															
LOX IMVI	0.342	2.436	2.240	2.316	2.090	0.011	0.014	91	94	83	-97	-96	1.53E-6	2.90E-6	5.50E-6
MALME-3M	0.619	1.515	1.440	1.557	1.542	0.051	0.066	92	105	103	-92	-89	1.87E-6	3.38E-6	6.10E-6
M14	0.400	1.821	1.850	1.790	1.707	0.014	0.016	102	98	92	-97	-96	1.67E-6	3.08E-6	5.67E-6
MDA-MB-435	0.470	2.478	2.405	2.476	2.384	0.021	0.012	96	100	95	-96	-98	1.73E-6	3.16E-6	5.77E-6
SK-MEL-2	1.372	2.897	2.811	2.903	2.846	0.152	0.130	94	100	97	-89	-91	1.78E-6	3.32E-6	6.17E-6
SK-MEL-28	0.682	1.993	2.032	2.060	2.007	0.023	0.017	103	105	101	-97	-98	1.81E-6	3.24E-6	5.81E-6
SK-MEL-5	0.692	2.618	2.442	2.607	2.487	-0.001	-0.005	91	99	93	-100	-100	1.67E-6	3.04E-6	5.51E-6
UACC-257	1.257	2.423	2.160	2.192	2.459	0.248	0.088	77	80	103	-80	-93	1.95E-6	3.65E-6	6.83E-6
UACC-62	1.082	3.002	2.931	2.955	2.903	0.097	0.091	96	98	95	-91	-92	1.74E-6	3.24E-6	6.01E-6
Ovarian Cancer															
IGROV1	0.421	1.591	1.547	1.565	1.491	0.091	0.087	96	98	91	-79	-79	1.75E-6	3.45E-6	6.80E-6
OVCAR-3	0.464	1.762	1.762	1.788	1.798	0.093	0.066	100	102	103	-80	-86	1.94E-6	3.65E-6	6.85E-6
OVCAR-4	0.677	1.589	1.542	1.603	1.553	0.120	0.034	95	102	96	-82	-95	1.81E-6	3.46E-6	6.59E-6
OVCAR-5	0.601	1.287	1.289	1.323	1.355	0.008	0.006	100	105	110	-99	-99	1.94E-6	3.36E-6	5.84E-6
OVCAR-8	0.457	2.109	2.012	2.127	2.152	0.164	0.044	94	101	103	-64	-90	2.07E-6	4.12E-6	8.23E-6
NCI/ADR-RES	0.562	1.910	1.820	1.978	1.856	0.178	0.099	93	105	96	-68	-82	1.90E-6	3.84E-6	7.73E-6
SK-OV-3	1.029	2.090	1.978	1.911	1.992	0.047	0.026	89	83	91	-95	-97	1.65E-6	3.07E-6	5.70E-6
Renal Cancer															
786-0	0.565	2.334	2.214	2.289	2.217	0.043	0.048	93	97	93	-92	-92	1.71E-6	3.18E-6	5.91E-6
A498	1.533	2.255	2.034	2.099	2.142	0.188	0.337	69	78	84	-88	-78	1.58E-6	3.09E-6	6.03E-6
ACHN	0.415	1.689	1.761	1.757	1.654	-0.002	-0.002	106	105	97	-100	-100	1.74E-6	3.11E-6	5.58E-6
CAKI-1	0.546	2.436	2.289	2.296	2.274	0.012	0.008	92	93	91	-98	-99	1.65E-6	3.04E-6	5.59E-6
RXF 393	1.168	2.023	1.931	1.967	1.884	0.068	0.072	89	93	84	-94	-94	1.55E-6	2.95E-6	5.64E-6
SN12C	0.560	2.398	2.295	2.401	2.251	0.047	0.054	94	100	92	-92	-90	1.69E-6	3.17E-6	5.93E-6
TK-10	0.818	1.659	1.522	1.598	1.735	0.013	0.023	84	93	109	-98	-97	1.93E-6	3.35E-6	5.84E-6
UO-31	0.750	1.885	1.742	1.770	1.695	0.021	0.032	87	90	83	-97	-96	1.53E-6	2.89E-6	5.48E-6
Prostate Cancer															
PC-3	0.535	2.347	2.234	2.079	2.123	0.082	0.064	94	85	88	-85	-88	1.65E-6	3.23E-6	6.29E-6
DU-145	0.356	1.724	1.589	1.733	1.723	0.086	0.080	90	101	100	-76	-78	1.92E-6	3.70E-6	7.13E-6
Breast Cancer															
MCF7	0.321	1.914	1.795	1.836	1.673	0.075	0.083	92	95	85	-77	-74	1.64E-6	3.35E-6	6.84E-6
MDA-MB-231/ATCC	0.615	1.479	1.397	1.443	1.371	0.051	0.053	91	96	87	-92	-91	1.62E-6	3.08E-6	5.85E-6
HS 578T	0.741	1.754	1.679	1.704	1.779	0.336	0.292	93	95	102	-55	-61	2.16E-6	4.49E-6	9.34E-6
BT-549	1.202	2.370	2.281	2.185	2.315	0.413	0.059	92	84	95	-66	-95	1.91E-6	3.91E-6	8.00E-6
T-47D	0.828	2.133	1.914	1.932	2.030	0.255	0.294	83	85	92	-69	-64	1.82E-6	3.72E-6	7.60E-6
MDA-MB-468	0.898	2.052	1.975	1.989	1.950	0.104	0.076	93	95	91	-88	-92	1.70E-6	3.22E-6	6.11E-6

Sheet 67. Response parameters at five dose level of compound 44j.

Appendix



National Cancer Institute Developmental Therapeutics Program In-Vitro Testing Results															
NSC : D - 804270 / 1					Experiment ID : 1807NS84					Test Type : 08			Units : Molar		
Report Date : August 17, 2018					Test Date : July 30, 2018					QNS :			MC :		
COMI : KQ-11					Stain Reagent : SRB Dual-Pass Related					SSPL : 0X7M					
Panel/Cell Line	Time Zero	Log10 Concentration						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	0.484	2.884	2.722	2.765	2.589	0.321	0.204	93	95	88	-34	-58	2.04E-6	5.28E-6	4.70E-5
HL-60(TB)	0.600	2.717	2.554	2.643	2.571	0.298	0.274	92	97	93	-50	-54	2.00E-6	4.46E-6	9.95E-6
K-562	0.202	2.407	2.397	2.489	1.901	0.110	0.077	100	104	77	-46	-62	1.66E-6	4.24E-6	1.83E-5
MOLT-4	0.583	2.912	2.857	2.876	2.701	0.348	0.270	98	98	91	-40	-54	2.05E-6	4.93E-6	5.24E-5
RPMI-8226	0.761	2.765	2.691	2.703	2.600	0.411	0.306	96	97	92	-46	-60	2.01E-6	4.63E-6	1.94E-5
SR	0.170	0.684	0.713	0.750	0.510	0.151	0.096	106	113	66	-11	-44	1.61E-6	7.12E-6	> 1.00E-4
Non-Small Cell Lung Cancer															
A549/ATCC	0.595	2.674	2.406	2.328	2.400	0.166	0.174	87	83	87	-72	-71	1.70E-6	3.52E-6	7.26E-6
EKVX	1.062	3.042	2.860	2.962	2.998	0.111	0.063	91	96	98	-90	-94	1.80E-6	3.33E-6	6.15E-6
HOP-62	0.889	2.247	1.994	2.072	1.935	0.176	0.175	81	87	77	-80	-80	1.48E-6	3.09E-6	6.42E-6
HOP-92	1.083	1.807	1.683	1.779	1.661	0.150	0.216	83	96	80	-86	-80	1.51E-6	3.02E-6	6.05E-6
NCI-H226	0.773	2.102	2.014	2.041	1.901	0.256	0.246	93	95	85	-67	-68	1.70E-6	3.62E-6	7.74E-6
NCI-H23	0.718	2.325	2.293	2.321	2.254	0.230	0.110	98	100	96	-68	-85	1.90E-6	3.84E-6	7.76E-6
NCI-H322M	0.789	2.104	1.945	2.062	2.106	0.021	0.041	88	97	100	-97	-95	1.79E-6	3.21E-6	5.75E-6
NCI-H460	0.267	2.628	2.719	2.771	2.715	0.073	0.063	104	106	104	-73	-77	2.01E-6	3.87E-6	7.42E-6
NCI-H522	1.295	3.120	2.817	2.818	3.026	0.429	0.429	83	83	95	-67	-67	1.89E-6	3.86E-6	7.86E-6
Colon Cancer															
COLO 205	0.480	2.212	2.118	2.109	2.123	0.110	0.033	95	94	95	-77	-93	1.82E-6	3.56E-6	6.96E-6
HCC-2998	0.544	1.878	1.858	1.940	2.039	0.056	0.037	99	105	112	-90	-93	2.03E-6	3.59E-6	6.36E-6
HCT-116	0.173	1.919	1.966	1.815	1.763	0.060	0.068	103	94	91	-66	-61	1.83E-6	3.81E-6	7.95E-6
HCT-15	0.268	2.243	2.170	2.212	2.259	0.027	0.019	96	98	101	-90	-93	1.85E-6	3.38E-6	6.17E-6
HT29	0.234	2.112	1.978	2.115	2.077	0.025	0.022	93	100	98	-89	-91	1.81E-6	3.34E-6	6.17E-6
KM12	0.468	2.607	2.586	2.577	2.594	0.066	0.046	99	99	99	-86	-90	1.85E-6	3.44E-6	6.39E-6
SW-620	0.245	1.981	1.918	1.977	1.959	0.055	0.023	96	100	99	-78	-91	1.89E-6	3.63E-6	6.96E-6
CNS Cancer															
SF-268	0.528	1.913	1.847	1.988	2.083	0.166	0.224	95	105	112	-69	-58	2.21E-6	4.18E-6	7.90E-6
SF-295	0.846	3.034	2.900	2.966	2.988	0.136	0.121	94	97	98	-84	-86	1.83E-6	3.45E-6	6.50E-6
SF-539	1.020	2.785	2.776	2.758	2.868	0.024	0.062	99	98	105	-98	-94	1.86E-6	3.29E-6	5.81E-6
SNB-19	0.754	2.512	2.456	2.571	2.567	0.198	0.145	97	103	103	-74	-81	2.00E-6	3.83E-6	7.34E-6
SNB-75	0.981	1.781	1.651	1.753	1.772	0.166	0.127	84	97	99	-83	-87	1.86E-6	3.49E-6	6.58E-6
U251	0.719	2.532	2.292	2.521	2.501	0.092	0.104	87	99	98	-87	-86	1.82E-6	3.39E-6	6.30E-6
Melanoma															
LOX IMVI	0.342	2.581	2.379	2.541	2.338	0.039	0.057	91	98	89	-89	-83	1.66E-6	3.17E-6	6.06E-6
MALME-3M	0.619	1.497	1.383	1.499	1.515	0.051	0.100	87	100	102	-92	-84	1.85E-6	3.36E-6	6.08E-6
M14	0.400	1.855	1.682	1.797	1.716	0.099	0.078	102	96	90	-75	-81	1.75E-6	3.51E-6	7.03E-6
MDA-MB-435	0.470	2.397	2.368	2.325	2.305	0.023	0.016	98	96	95	-95	-97	1.73E-6	3.16E-6	5.79E-6
SK-MEL-2	1.372	2.787	2.809	2.839	2.879	0.199	0.230	102	104	107	-86	-83	1.97E-6	3.59E-6	6.53E-6
SK-MEL-28	0.682	2.153	2.171	2.184	2.144	0.019	0.022	101	102	99	-97	-97	1.78E-6	3.20E-6	5.75E-6
SK-MEL-5	0.692	2.732	2.583	2.698	2.633	0.034	0.033	93	98	95	-95	-95	1.73E-6	3.16E-6	5.79E-6
UACC-257	1.257	2.492	2.165	2.250	2.289	0.574	0.112	73	80	84	-54	-91	1.75E-6	4.03E-6	9.30E-6
UACC-62	1.082	3.060	3.018	3.101	3.058	0.173	0.115	98	102	100	-84	-89	1.87E-6	3.49E-6	6.53E-6
Ovarian Cancer															
IGROV1	0.421	1.545	1.483	1.519	1.477	0.117	0.173	94	98	94	-72	-59	1.84E-6	3.67E-6	7.34E-6
OVCAR-3	0.464	1.631	1.680	1.684	1.853	0.067	0.041	104	105	119	-86	-91	2.17E-6	3.82E-6	6.70E-6
OVCAR-4	0.677	1.619	1.540	1.629	1.572	0.152	0.029	92	101	95	-78	-96	1.82E-6	3.55E-6	6.92E-6
OVCAR-5	0.601	1.365	1.319	1.363	1.369	0.009	0.015	94	100	100	-99	-98	1.79E-6	3.20E-6	5.70E-6
OVCAR-8	0.457	2.190	2.098	2.180	2.135	0.253	0.114	95	99	97	-45	-75	2.14E-6	4.84E-6	1.50E-5
NCI/ADR-RES	0.562	1.903	1.862	1.877	1.861	0.213	0.173	97	98	97	-62	-69	1.97E-6	4.07E-6	8.39E-6
SK-OV-3	1.029	1.967	1.945	1.971	1.873	0.074	0.025	98	100	90	-93	-98	1.65E-6	3.10E-6	5.83E-6
Renal Cancer															
786-0	0.565	2.467	2.335	2.426	2.391	0.145	0.161	93	98	96	-74	-72	1.86E-6	3.66E-6	7.19E-6
A498	1.533	2.114	1.936	2.030	2.183	0.060	0.086	69	86	112	-96	-94	1.98E-6	3.45E-6	6.00E-6
ACHN	0.415	1.778	1.825	1.828	1.746	0.002	0.078	103	104	98	-100	-81	1.74E-6	3.13E-6	5.60E-6
CAKI-1	0.546	2.425	2.280	2.330	2.298	0.021	0.037	92	95	93	-96	-93	1.69E-6	3.11E-6	5.70E-6
RXF-393	1.168	2.018	1.932	1.951	1.883	0.050	0.064	90	92	84	-96	-95	1.55E-6	2.94E-6	5.57E-6
SN12C	0.560	2.487	2.418	2.465	2.397	0.076	0.127	96	99	95	-86	-77	1.78E-6	3.35E-6	6.30E-6
TK-10	0.818	1.767	1.578	1.717	1.842	0.011	0.081	80	95	108	-99	-90	1.91E-6	3.33E-6	5.81E-6
UO-31	0.750	1.927	1.782	1.806	1.741	0.027	0.080	88	90	84	-96	-89	1.55E-6	2.93E-6	5.53E-6
Prostate Cancer															
PC-3	0.535	2.352	1.945	2.005	1.966	0.084	0.062	78	81	79	-84	-89	1.50E-6	3.04E-6	6.16E-6
DJ-145	0.356	1.736	1.652	1.649	1.664	0.046	0.016	94	94	95	-87	-96	1.76E-6	3.32E-6	6.24E-6
Breast Cancer															
MCF7	0.321	2.076	1.903	1.970	2.024	0.107	0.111	90	94	97	-67	-65	1.94E-6	3.91E-6	7.89E-6
MDA-MB-231/ATCC	0.615	1.525	1.472	1.555	1.487	0.114	0.184	94	103	96	-82	-70	1.81E-6	3.47E-6	6.64E-6
HS 578T	0.741	1.685	1.579	1.651	1.754	0.321	0.357	89	96	107	-57	-52	2.23E-6	4.51E-6	9.10E-6
BT-549	1.202	2.438	2.343	2.327	2.416	2.095	0.321	92	91	98	72	-73	1.42E-5	3.14E-5	6.91E-5
T-47D	0.828	2.106	1.768	1.890	2.021	0.338	0.372	74	83	93	-59	-55	1.92E-6	4.09E-6	8.71E-6
MDA-MB-468	0.898	2.135	2.121	2.143	2.071	0.156	0.120	99	101	95	-83	-87	1.79E-6	3.42E-6	6.54E-6

Sheet 68. Response parameters at five dose level of compound 44k.