(Supplementary Information)

Anticancer activity of 4-aminoquinoline-triazine based molecular hybrids

Sunny Manohar,^{*a*} Antonella Pepe,^{*b*} Christian E. Vélez Gerena,^{*c*} Beatriz Zayas,^{*c*} Sanjay V. Malhotra^{*b*}* and Diwan S. Rawat^{*a*}*

Торіс	Page
One dose Mean Graph (Compound 11)	2
One dose Mean Graph (Compound 14)	3
FIVE dose results (Compound 11)	4-6
FIVE dose results (Compound 14)	7-10
	Topic One dose Mean Graph (Compound 11) One dose Mean Graph (Compound 14) FIVE dose results (Compound 11) FIVE dose results (Compound 14)



One dose Mean Graph (Compound 11)



One dose Mean Graph (Compound 14)

FIVE dose results (Compound 11)

Dose response curves



FIVE dose results (Compound 11)

						1.0	a10.0a	centration							
	Time			Maar	Ontical	Densiti		ricentration		ercent C	incustion in the				
Panel/Cell Line	Zem	CHI	-8.0	-7.0	-6.0	-5.0	-40	-8.0	-7.0	-6.0	-5.0	-4.0	G150	TGI	LOST
Leukemia	2010						-						0.50		2000
CCRF-CEM	0.332	1.934	1.941	1.956	1.696	0.498	0.184	100	101	85	10	-45	2.95E-6	1.54E-5	> 1.00E-4
HL-60(TB)	0.659	2.683	2.601	2.369	1.720	0.768	0.354	96	84	52	5	-46	1.13E-6	1.27E-5	> 1.00E-4
K-562	0.247	2.087	2.083	2.011	1.679	0.224	0.124	100	96	78	-9	-50	2.09E-6	7.82E-6	> 1.00E-4
MOLT-4	0.544	2.264	2.200	2.171	1.754	0.600	0.188	96	95	70	3	-65	2.01E-6	1.12E-5	5.96E-5
RPMI-8226	0.901	2.750	2.789	2.748	2.487	0.981	0.604	102	100	86	.4	-33	2.75E-6	1.31E-5	> 1.00E-4
SR	0.440	1.994	1.911	1.963	1.633	0.388	0.259	95	98	77	-12	-41	2.01E-6	7.36E-6	> 1.00E-4
Non-Small Cell Lung	Cancer														
A549/ATCC	0.365	1.734	1.662	1.693	1.574	0.811	0.098	95	97	88	33	-73	4.87E-6	2.03E-5	6.04E-5
HOP-62	0.342	1.108	1.124	1.128	1.087	0.688	0.034	102	103	97	45	-90	8.09E-6	2.16E-5	5.06E-5
NOLH225	1.641	1 249	1 196	1.257	1.8/8	1.684	0.41/	85	107	53		-/	1.165-6	1.305-5	5.105-5
NCI-H23	1.152	3.073	2,996	2,959	2.970	2 498	0.249	96	94	95	70	-78	1.37E-5	2.97E-5	6.44E-5
NCI-H322M	0.838	1.717	1.631	1.611	1.697	1,292	0.046	90	88	98	52	-95	1.03E-5	2.26E-5	4.96E-5
NCI-H460	0.375	3.175	3.227	3.277	3.235	1.024	0.157	102	104	102	23	-58	4.58E-6	1.93E-5	7.94E-5
NCI-H522	0.936	1.948	1.897	1.902	2.074	0.995	0.112	95	96	112	6	-88	3.85E-6	1.15E-5	3.93E-5
Color Cancer															
COLO 205	0.473	1,990	2 033	1,996	1.649	0.139	0.097	103	100	78	-71	-80	1.538-6	3 338-6	7.25E-6
HCC-2998	0.929	2.610	2.545	2.501	2.753	0.225	0.083	96	94	109	-76	-91	2.08E-6	3.88E-6	7.24E-6
HCT-116	0.193	2.132	2.020	2.090	1.725	0.551	0.021	94	98	79	18	-89	3.01E-6	1.48E-5	4.31E-5
HCT-15	0.173	1.890	1.836	1.944	1.623	0.213	0.071	97	103	84	2	-59	2.63E-6	1.09E-5	7.14E-5
HT29	0.237	1.344	1.322	1.342	0.821	0.144	0.032	98	100	53	-39	-87	1.07E-6	3.75E-6	1.69E-5
KM12	0.462	2.419	2.369	2.399	2.410	1.053	0.053	97	99	100	30	-89	5.18E-6	1.80E-5	4.74E-5
SW-620	0.281	2.404	2.380	2,419	2.350	0.487	0.093	33	101	97	10	-67	3.47E-6	1.34E-5	5.335-5
CNS Cancer															
SF-268	0.667	2.287	2.181	2.089	1.965	1.269	0.063	93	88	80	37	-91	5.03E-6	1.95E-5	4.81E-5
8F-295	0.988	2.183	2.103	2.169	2.253	0.271	0.043	93	99	106	-73	-96	2.05E-6	3.92E-6	7.47E-6
81-535	0.547	1.932	1.947	1.890	1.6/3	0.485	0.057	101	97	81	-11	-90	2.185%	7.546-6	3.128-5
SNB-19 SNB-75	0.894	2.297	2.249	1 201	1,792	1.644	0.094	9/	35	91	53	-89	1.065-5	2.365-5	3.035-5
U251	0.530	2.296	2.186	2.176	1,905	0.903	0.044	94	93	78	21	-92	3.10E-6	1.54E-5	4.27E-5
Malanana															
LOX IMVI	0.629	3.053	2,966	2,956	2,901	0.684	0.120	96	96	94	2	-81	3.01E-6	1.06E-5	4.24E-5
MALME-3M	0.684	1,425	1.380	1,407	1.477	0.060	0.139	94	98	107	-91	-80	1.94E-6	3.47E-6	6.19E-6
M14	0.534	2.044	1.997	2.009	2.047	0.078	0.052	97	98	100	-85	-90	1.86E-6	3.47E-6	6.45E-6
MDA-MB-435	0.421	1.868	1.786	1.791	1.812	0.081	0.033	94	95	96	-81	-92	1.82E-6	3.49E-6	6.69E-6
SK-MEL-2	1.186	2.177	2.186	2.186	2.261	0.435	0.107	101	101	108	-63	-91	2.19E-6	4.28E-6	8.36E-6
SK-MEL-28	0.443	1.226	1.208	1.232	1.226	0.027	0.021	35	101	100	-94	-95	1.81E-6	3.28E-6	5.942-6
UACC-257	0.074	4,6001	1.472	4,525	4 5 1 3	0.045	0.012	20	100		- 22	- 20	1.000-0	3.042-0	5.702-0
UACC-62	0.678	2.715	2,703	2.718	2.638	0.156	0.020	99	100	96	-77	-97	1.85E-6	3.59E-6	6.99E-6
Ovarian Cancer		4.007	4.000			4 470			-				0.005.0	2245.5	
IGROV1	0.570	1.85/	1.860	1.817	1.712	1.1/9	0.114	33	35	85		-80	8.43576	2.345-5	5.805-5
OVCAR-3	0.593	1.831	1.845	1.790	1.750	1.331	0.028	101	100	33	40	-95	1.155-5	2.438-5	5.105-5
OVCAR-5	0.545	1.567	1.534	1.516	1.554	1.386	0.091	97	95	99	82	-83	1.57E-5	3.14E-5	6.29E-5
OVCAR-8	0.467	1.917	1.887	1.919	1.699	1.073	0.217	98	100	85	42	-54	6.46E-6	2.74E-5	9.16E-5
NCI/ADR-RES	0.625	2.243	2.215	2.224	2.162	1.258	0.252	98	99	95	39	-60	6.38E-6	2.49E-5	7.97E-5
SK-OV-3	0.407	1.104	1.074	1.103	1.106	0.829	0.024	96	100	100	60	-94	1.17E-5	2.46E-5	5.18E-5
Renal Cancer															
786-0	0.678	2.474	2.378	2.335	1.928	0.845	0.051	95	92	70	9	-92	2.11E-6	1.23E-5	3.82E-5
A498	1.458	2.409	2.276	2.190	1.601	1.034	0.139	86	77	15	-29	-91	2.72E-7	2.19E-6	2.19E-5
ACHN	0.290	1.506	1.532	1.518	1.405	0.658	0.039	102	101	92	30	-87	4.77E-6	1.81E-5	4.86E-5
GAKI-1 EVE 202	0.912	2.782	2.674	2.665	2,483	1.458	0.079	94	34	34	29	-91	4.17E-6	1.75E-5	4.548-5
RAF 333	0.614	3,009	2 970	7.954	2 664	1.914	0.079	99	97	84	20	-81	9,735-6	2365-6	5.555-5
TK-10	0.831	1463	1,436	1,430	1.432	1,110	0.028	96	95	95	44	-97	7.64E-6	2.06E-5	4.668-5
UO-31	0.820	2.153	1.966	1.918	1.549	1.047	0.040	86	82	55	17	-95	1.33E-6	1.42E-5	3.96E-5
Designed and the Constant															
Prostate Cancer PC-3	0.692	1739	1 699	1 697	1.494	0.925	0.159	97	95	79	24	-73	3 945-6	1995-5	6.025-6
DU-145	0.350	1.595	1.611	1.589	1.538	0.955	0.015	101	99	95	50	-95	9.80E-6	2.19E-5	4.84E-5
Breast Cancer															
MCF7	0.395	2 306	2,198	2,166	2,006	0.569	0.092	94	93	84	9	-77	2.865-6	1,285-5	4.875-5
MDA-MB-231/ATC	C 0.595	1.385	1.452	1.414	1.292	0.601	0.121	110	104	88	1	-80	2.73E-6	1.02E-5	4.28E-5
HS 578T	1.007	2.043	1.972	1.951	1.886	1.277	0.582	93	91	85	26	-42	3.91E-6	2.41E-5	> 1.00E-4
BT-549	0.935	1.789	1.784	1.815	1.753	1.361	0.047	99	103	96	50	-95	9.92E-6	2.21E-5	4.89E-5
T-47D	0.592	1.462	1.416	1.419	1.499	1.099	0.167	95	95	104	58	-72	1.16E-5	2.80E-5	6.80E-5
MD/A-MB-468	0.657	1.495	1.411	1.629	1.295	0.318	0.074	90	32	11	-50	-66	1.621-6	4.03616	3.335-6

FIVE dose results (Compound 11)



Mean graph

FIVE dose results (Compound 14)

Dose response curves





FIVE dose curves for individual cancer panel (Compound 14)

FIVE dose results (Compound 14)

						14	ag 10 Conc	entration							
	Time	langer -	1000	Meet	Optice	Denad	-	1.000	P	arcart C	inowth	in and	100000-01	4000	112-22-24-15
enel/Cell Line	Zero	CH	-8.0	-T.D	-6.0	-8.0	-40	-6.0	-7,0	-6.0	-5.0	-6.0	0/50	TOF	1050
ALMANTIN CEM	0.412	1.065	10.000		1.004		0.000	1.000	100			- 60	4 6 6 7 1	1.000.0	T STOLEN
HL-SOUTH1	0.726	2 307	2 070	1.972	1.004	0.455	0.100	100 E	28	79	-36	-45	1.806-8	4.896-8	× 1.00E-4
(-582	0.223	1.758	1.668	1.603	1.675	0.233	0.099	107	85	03	1	-56	2 915-6	1.036-5	7.966-8
HOLT-4	0.825	2.772	2.708	2,602	2.811	1,178	0.285	37	91	102	10	-65	4.176-6	1.652-5	6 538-5
RPM-8226	0.766	2.731	2.875	2.626	2.496	0.997	0.313	- 22	.96	88	12	-50	3.156-6	1.462-6	7.42E-8
18	0.315	1.967	1.530	1,465	1.431	0,277	0.241	37	92	20	-32	-23	2,440-8	7.805-8	> 1 DDE-4
on-Small Cell Lung	Cancer														
ASKNATCC	0.517	2.270	2.245	2.217	2.144	1,445	0.106	399	:07	33.	53	-79	1.055-5	2515-8	5.99E-8
C3-90H	0.438	1.145	1.109	1.098	1.057	0.944	0.011	- 96	23	87	72	-97	1.348-6	2.650-5	5.246-5
1019-02	1.492	1.806	1.762	1,702	1.661	1.346	0.064	- 66	67	. 16	-10	-36	1.038-8	6.885-6	2.948-6
NCD-FLC2D	4.009	1.204	1.222	1.230	1.437	1.1804	0.201	30	100	1941	14	-00	1.446-0	3.346-0	7.700-C
WU-FLCI	0.828	1.0017	1.741	1.622	1.665	2.101	0.008		87	10	10	-03	1.182-6	2,001.8	6.125.6
C2-H4KE	0.305	2,720	2,766	2.883	2540	0.622	0.072	102	98	93	13	-78	3.446-6	1.406-5	5 006-5
VCI-H622	1.093	2 500	2.342	2 308	2 633	1.360	0.178	100	36	102	19	-84	4.258-6	1.535-5	4,706-5
store Changes															
00.0 20	12.408	1.815	1.895	1.775	1.711	0.055	0.057	104	96		-87		1.718-8	3.265-6	0.238-8
HOC-2996	1.065	2.984	2.902	2.992	3.010	0.338	0.157	95	27	101	-68	-85	2.006-6	3.955-6	7.796-6
9CT-116	0.234	2,383	2.298	2.379	2.331	0.636	0.016	36	100	96	28	-573	4.026-6	1.708-6	4.39E-5
ICT-15	0.272	2.225	2.197	2.243	2.146	0.254	0.067	30	101	96	-72	-75	2.462-6	8-386.8	3.138-6
1129	0.239	1,384	1.334	1.405	1.354	0.169	0.040	105	102	34	-29	-83	2.278-6	5.772-6	2.40E-5
CM12	0.471	2.421	2.429	2.368	2.381	1,121	0.053	100	87	96	33	-80	5.446-6	1.871-5	4.815-5
an Gale	0.321	2.416	+ 340	4.558	1.00	ene	0.008	30	30	-	**	-19	4-410-0	0.040-0	106-0
NS Center				-	-		-	-	_	-				and send of the	
11-200	0.646	1.901	1.929	1.501	1.007	1.189	0.056	30	30	93.	42	-91	6.005-6	2.066-8	4 2006-5
11.830	0.002	1000	3,990	1.995	0.000	1,212	0.141	CLP Int		00	100	-0.1	3 394 4	1.030-0	4.000-0
INB-10	0.345	1,000	1.700	1.471	1.411	1,040	0.020	24	07	14	84	-01	1.346-6	2805.8	-4 LUE-5
UNB-75	0.740	1.600	1.522	1.512	1.375	0.970	0.00	100	- 10	73	26	-39	3.138-0	1.626-8	4755-4
1291	0.540	7.254	2.189	2.191	2 085	1.064	0.028	36	26	90	21	-35	4.725-6	1,755-5	4.396-6
all accounts		15	11.58		100										
OK IMM	0.507	2,775	2.621	2.670	2.642	0.512	0.101	93	25	- 94	1.0	-80	2.955-6	1.018-5	4,218-8
MALME-3M	0.498	0.782	0.775	0.743	0.930	0,100	0.062	98	36	152	-80	-84	2765-6	4.525-6	7.43E-8
ATA	0.361	1.764	1.721	1.1298	1.810	0.081	0.044	36	94	102	-79	-89	1.948-6	3.668-6	6.5/38-6
MDA-M5-635	0.645	2.875	2.562	2.618	2581	0.418	0,082	34	.07	38	-35	-87	2.222-6	8.375-6	1.3025-8
SK-MEL-2	1.130	2.237	2.196	2.299	2.355	0.504	0.074	. 91	100	105	-65	-503	2.208-8	4.510-6	9,255-6
SAMEL-20	0.529	1.501	1.501	1.496	3 101	0.015	0.006	100	-	102	100	-569	7.838-6	3,200-6	5.005-6
DACC-287	0.890	1,007	1.798	1,782	1,845	0.164	0.045	105	35	100	377	-05	1.905-6	3.656.6	7.005-6
JACC-62	0.738	2.891	2,831	2.858	2.845	0.627	0.014	197	38	18	-35	-98	2.650-6	7.365-6	2 635-5
CROWS	0.8%	1 1000	1.000	1.000	1.767	1.1.1	0120	1000	100	-	in the		A 1915 A	7 142 5	Same -
OVCAR-3	0.673	1,805	1.808	1,008	1.791	1,174	0.020	100	572	190	87	-57	1.100-5	2.555.8	5 ORT-A
DV/CAR-4	0.745	1 8040	1.507	1.8010	1.441	1.174	OBM		26	80	-	-04	1.075.4	2315.8	5008-5
VICAR-8	0.703	1.679	1.529	1.495	1,522	1.549	0.042	54	30	23	97	-194	1.758-5	3,218-8	5.878-5
OVCAR-8	0.418	1.799	1.813	1.773	1.755	1.1922	0.267	101	38	37	58	-36	1.162-5	4.068-8	+ 1.00E-4
CHAOR-RES	0.700	2.493	2.449	2.434	2.439	1.576	0.239	195	37	97	-40	-58	9-386-6	2.655-5	7.21E-8
IK-OV-3	0.609	1.555	1.845	1.827	1.525	1.194	0,022	39	:07	37	82	-98	1.196-6	2.465-6	5.095-5
enal Canper															
196-0	0.665	2.478	2.420	2.362	2.186	1.018	0.102	37	93	54	10	-85	3.368-6	1.536-6	4.646-8
AAGE -	1.472	2,438	2.250	2.180	2.063	1.402	0,057	81	73	en	-5	-96	1.488-6	8.475-6	3.138-8
ACHIN.	0.389	1.663	1.681	1,635	1.587	0.909	0.015	101	8	24	42	-56	7.06E-8	2.025-5	4.655-5
NAME OF T	0.044	1.004	2,632	2.673	2500	1.546	0.092	30	100	20	30	-00	D-064E-6	1.305-0	4.005-5
INT AC	1.047	1 200	3,303	3.166	3,04/2	2 324	0.1/1	-	3	-	-10	-100	1 1921-8	2 505-5	E ADE N
TK-10	0.758	1.537	1.472	1.475	1.504	1.162	0.049	93	92	36	62	-54	1.008-5	2.278-8	5.018-5
JQ-31	368.0	2.305	2.065	2.095	1.978	1.221	0.028	- 154	-56	78	27	-507	3.525-6	1.656-5	4.188-5
contrate Concern															
-1C-3	0.658	1,766	1.694	1.897	1,583	1.044	0.031	93	34	84	35	-05	4.87E-6	1.850-8	4 496-5
04-145	0.968	1.842	1.879	1.845	1.001	1.162	0.019	102	100	103	46	-37	8.6885-6	2,116-6	4.728-6
want Carlowr															
MCF7	0.433	2.445	2,200	2.278	2,235	0.752	0.092	91	92	89	16	-79	3.438-6	1.478-8	4.965-5
IDA-MB-201/ATCC	0.540	1.452	1.468	1.472	1.425	0.674	0.090	56	20	33	4	-86	3.056-6	1.116-6	3.98E-6
15 57BT	0.925	1.030	1 923	1.865	1.847	1.352	0.454	30	94	32	43	-51	7.321-8	2.896-8	11.782-5
01-040	0.002	1./10	1.124	1-145	1.000	1.444	0.062	101	101	av.	47	-50	0.6/1-6	2,200-6	8.128-6
MCA.MR. ANK	0.716	1,000	1.448	1,015	1.100	0.624	0.087	30	43	50	40	-70	1 001-0	48168	1 5000 5
and and and	0.100	1.000	1.440	1.410		0.463		-		-		-	1.000-0		1.0000

FIVE dose results (Compound 14)

	Martin Martin Contraction Contraction					1.1.1.1
Fare/Call.ine	ing_lide (199	Leg _{en} túi	19	Lag _{al} LCBI	1050
Leutenia CCIII-CEM HL-80(15) K-902 MCLT-4 NYMI-8226 SR SR Non-Stratt Cel Luca Canaer	47 45 45 45 45 45 45 45 45		4,73 4,33 4,92 4,76 4,65 4,65 4,12		+12 + 100 +110 +110 +113 +113 +100	
AS40A1CC H0P-R2 H0P-R2 WCH-R28 WCH-R28 WCH-R28 WCH-R32 WCH-R32 WCH-R32 WCH-R52	4404 4400 800 800 800 800 800 800 800 80		1990 1990 1990 1990 1990 1990 1990 1990	1		
COLO 205 HCC-2598 HCT-115 HCT-15 HT23 IW12 SW42D CHS Cancer	8.17 8.70 8.50 3.51 8.51 8.55 8.55 8.55 8.55 8.55 8.55	F	48 49 40 17 10 40 10 40 10 40 10 40 10 40 10 40 10 40 10 40 10 40 10 40 10 40 10 40 10 40 10 40 10 10 10 10 10 10 10 10 10 10 10 10 10		44444 44444 3958959	F
57-258 57-256 57-530 5NS-19 5NS-75 U251	818 830 437 - 850 830	1	위 사내위 T 가가가가		4 35 4 45 4 427 4 33 4 33 4 33	
LOX INV MALWE 3M MI4 MD4-MB-438 SK-MEL2 SK-MEL2 SK-MEL2 SK-MEL2 MCC-257 UACC-52 UACC-52	450 456 4577 4568 4374 4577 4577 459		400 434 457 457 44 457 44 454 454 454 451 554 451 554 554 554		4.38 4.13 4.77 4.77 4.014 4.016 4.016 4.016 4.058	II
GROVI OVCAR-3 OVCAR-4 OVCAR-4 OVCAR-8 OVCAR-8 NCAADE-RES BI-OV-3	944 944		- - - - - - - - - - - - - - - - - - -		- 133 - 134 - 134	
756-0 A498 ACHN CANI-1 R00 303 SMI2C TK-10 UC-31	40 40 44 47 4 47 4 47 4 47 4 4 47 4		48 407 407 407 407 400 407 400 404 470		138935599759974 14474 1444 1444 1444 1444 1444 1444	
Proteinia Central PC-3 DU-148	431 405		473 4切		133	1
MOT MOT HE STATE STATE STATE T-AND T-AND MOA-MID-408	4.8 4.52 4.14 4.88 4.71 4.71		11 11 11 11 11 11 11 11 11 11 11 11 11		430 440 429 429 436 480	-
	22					
Data Range			400 061 1.1	-		+

Mean graph