Supplemental Material to:

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High-throughput screen identifies disulfiram as a potential therapeutic for triple-negative breast cancer cells: Interaction with IQ motif-containing factors

Cell Cycle 2013; 12(18)
http://dx.doi.org/10.4161/cc.26063
http://www.landesbioscience.com/journals/cc/article/26063

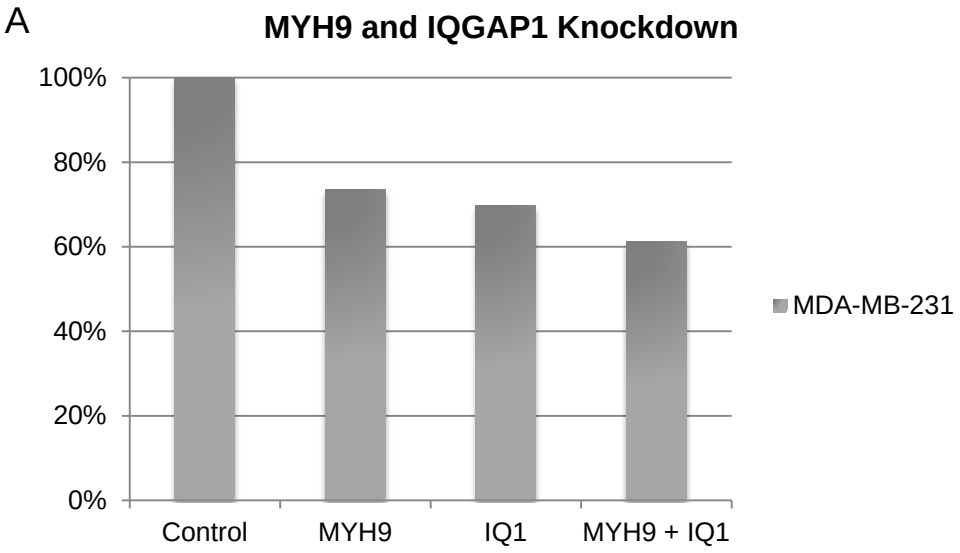
Table S1. Top hits from screening the Spectrum library

Spectrum Library	HCC70	MDA-MB-231	MDA-MB-436	Bt549
THIRAM	-0.4	-0.6	0.3	-1.1
PYRITHIONE ZINC	-0.7	0.4	0.8	-0.3
DISULFIRAM	-0.4	0.5	1.3	-0.2
THIMEROSAL	0.3	0.3	0.9	0.7
DACTINOMYCIN	1.0	16.4	20.8	4.5
TOMATINE	0.2	1.3	45.7	1.2
MITOXANTHRONE HYDROCHLORIDE	1.0	15.1	19.4	18.6
TYROTHRICIN	17.2	16.8	5.8	16.6
PYRROMYCIN	3.3	11.3	40.2	8.6
PRISTIMERIN	2.8	2.4	67.6	2.7
CELASTROL	7.4	6.5	59.2	5.2
OBTUSAQUINONE	1.9	4.9	75.3	2.2
GRAMICIDIN	27.1	29.3	7.7	20.5
TETRACHLOROISOPHTHALONITRILE	0.2	0.0	84.0	0.9
1-BENZYLOXYCARBONYLAMINOPHENETHYL CHLOROMETHYL KETONE	4.0	7.7	71.9	8.7
PHENYLMERCURIC ACETATE	1.0	95.2	1.0	0.8
ACRIFLAVINIUM HYDROCHLORIDE	25.2	24.6	22.4	28.1
SANGUINARINE SULFATE	26.5	4.1	42.6	29.6
ALEXIDINE HYDROCHLORIDE	57.4	16.8	6.7	31.6
AKLAVINE HYDROCHLORIDE	27.3	25.2	47.2	27.1
CHLORANIL	7.7	37.2	74.2	11.0
CETRIMONIUM BROMIDE	15.4	22.2	71.9	21.2
PUROMYCIN HYDROCHLORIDE	3.6	24.1	68.6	36.6
GENTIAN VIOLET	18.6	23.9	79.2	14.1
PERUVOSIDE	40.8	16.5	79.4	3.4
OUABAIN	41.4	13.9	82.4	2.9
MITOMYCIN C	41.7	59.6	3.7	35.7
CONVALLATOXIN	44.8	13.9	81.1	3.4
COLCHICINE	13.9	24.0	90.1	17.3
CYMARIN	52.7	17.1	76.8	3.8
NERIIFOLIN	44.0	18.1	82.2	6.6
CAMPTOTHECIN	8.9	32.1	89.4	22.2
DIGITOXIN	46.8	20.9	81.2	3.9
BETA-PELTATIN	14.4	26.1	95.0	17.6
GITOXIGENIN DIACETATE	39.9	36.9	67.4	9.2
EMETINE	25.0	11.5	94.3	23.0
COLCHICEINE	16.2	23.5	92.3	22.7
10-HYDROXYCAMTOTHECIN	10.0	37.3	91.5	21.5
ANTIMYCIN A	23.1	28.4	74.9	38.6
NOCODAZOLE	18.6	26.2	95.3	25.5
PODOPHYLLOTOXIN ACETATE	22.0	25.7	95.6	22.6
CYCLOHEXIMIDE	30.1	21.6	93.9	20.7
DEOXYSAPPANONE B 7,3'-DIMETHYL ETHER ACETATE	23.9	35.7	76.6	30.3
DIGOXIN	55.1	27.8	80.1	6.8
PACLITAXEL	15.0	28.8	99.9	26.6
GUAIAZULENE	29.8	32.2	82.3	29.0
DIHYDROGAMBOGIC ACID	0.9	107.4	63.1	1.9
ROTENONE	28.7	37.6	82.0	25.8
NIGERICIN SODIUM	29.6	48.5	72.5	24.6
PATULIN	3.4	98.2	69.2	6.6

Table S2. Top hits from screening the Prestwick library

Prestwick Library	HCC70	MDA-MB-231	MDA-MB-436	Bt549
DISULFIRAM	0.6	0.4	5.0	2.9
COLCHICINE	17.0	17.4	4.9	35.2
DAUNORUBICIN HYDROCHLORIDE	26.4	18.3	13.3	18.6
DOXORUBICIN HYDROCHLORIDE	30.8	21.9	14.5	23.2
MITOXANTRONE DIHYDROCHLORIDE	32.1	16.6	15.0	26.8
EMETINE DIHYDROCHLORIDE	1.8	7.8	69.9	21.3
CEPHAELINE DIHYDROCHLORIDE HEPTAHYDRATE	1.4	6.1	66.4	37.0
PUROMYCIN DIHYDROCHLORIDE	3.4	18.5	67.1	29.0
ANISOMYCIN	17.5	10.7	74.6	30.1
MONENSIN SODIUM SALT	28.4	8.7	70.1	28.8
CAMPTOTHECINE (S,+)	6.0	24.2	73.5	34.3
PROSCILLARIDIN A	22.4	18.1	82.5	22.0
PODOPHYLLOTOXIN	17.5	16.5	80.3	43.2
SANGUINARINE	39.4	4.8	85.9	28.8
CHRYSENE-1,4-QUINONE	5.5	10.2	72.1	72.0
PARBENDAZOLE	18.1	21.8	92.7	37.1
PACLITAXEL	18.8	21.9	83.9	49.7
MEBENDAZOLE	19.8	26.9	85.7	43.3
NICLOSAMIDE	6.4	59.1	81.2	32.8
RIBOSTAMYCIN SULFATE SALT	66.9	40.7	29.0	44.6
CYCLOHEXIMIDE	35.2	24.9	73.2	48.0
FENBENDAZOLE	20.4	27.2	82.7	50.9
NOCODAZOLE	19.1	22.1	88.9	54.9
METHIAZOLE	25.8	27.7	77.7	56.4
DIGOXIN	41.1	24.6	82.7	40.3
CANTHARIDIN	17.4	52.7	85.8	35.6
ELLIPTICINE	49.7	26.0	69.7	48.3
ALBENDAZOLE	24.0	38.1	83.1	52.6
STROPHANTINE OCTAHYDRATE	49.7	21.4	96.0	34.5
CHLOROPYRAMINE HYDROCHLORIDE	76.8	46.5	35.6	49.5
METHYL BENZETHONIUM CHLORIDE	61.0	36.8	64.2	57.5
BENZYLPENICILLIN SODIUM	73.2	48.1	56.6	50.3
RILUZOLE HYDROCHLORIDE	96.5	50.3	34.4	49.7
LASALOCID SODIUM SALT	42.0	70.4	85.4	36.4
DIGITOXIGENIN	76.1	48.9	70.8	40.6
PARTHENOLIDE	53.9	39.9	80.8	69.7
PIPERLONGUMINE	44.7	56.2	72.7	76.7
BROMPHENIRAMINE MALEATE	40.8	40.8	92.4	77.1
CHELIDONINE MONOHYDRATE (+)	55.2	42.1	89.9	66.3
(S)-PROPRANOLOL HYDROCHLORIDE	80.2	85.6	85.5	3.6
THIOSTREPTON	73.9	94.8	20.1	67.5
THIETHYLPERAZINE MALATE	75.2	16.0	89.8	80.2
NALBUPHINE HYDROCHLORIDE	80.1	58.8	51.1	73.1
MECLOCYCLINE SULFOSALICYLATE	85.5	81.4	25.9	71.8
DIPHENHYDRAMINE HYDROCHLORIDE	73.9	49.5	77.4	64.1
LETROZOLE	76.6	48.7	80.9	61.2
DOXYCYCLINE HYDROCHLORIDE	83.6	86.7	27.3	70.2
LANATOSIDE C	81.7	46.4	86.6	53.8
DEMECLOCYCLINE HYDROCHLORIDE	84.2	87.7	25.3	71.5
SKIMMIANINE	23.5	83.7	87.7	74.6

A


MYH9 and IQGAP1 Knockdown
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80%
60%
40%
20%
0%
Control
MYH9
IQ1
MYH9 + IQ1
MDA-MB-231

B

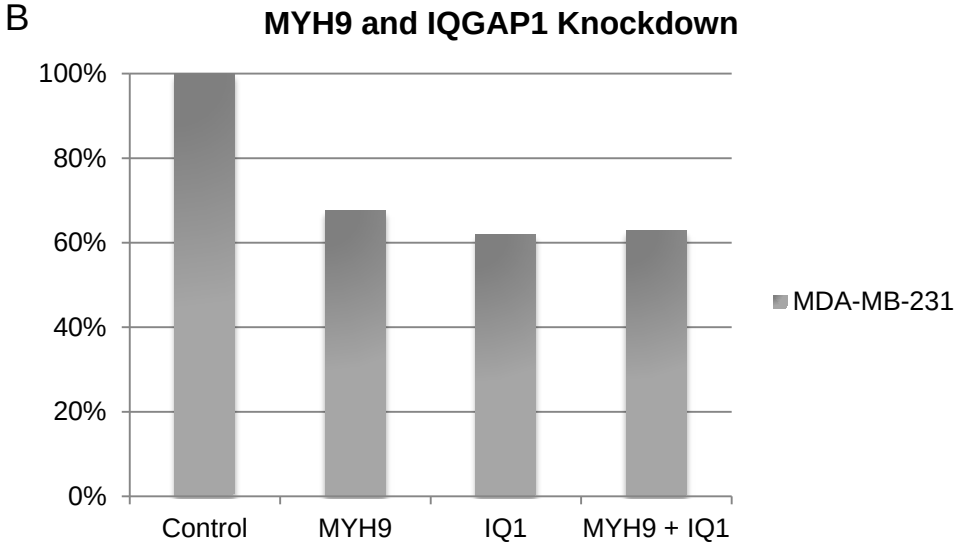
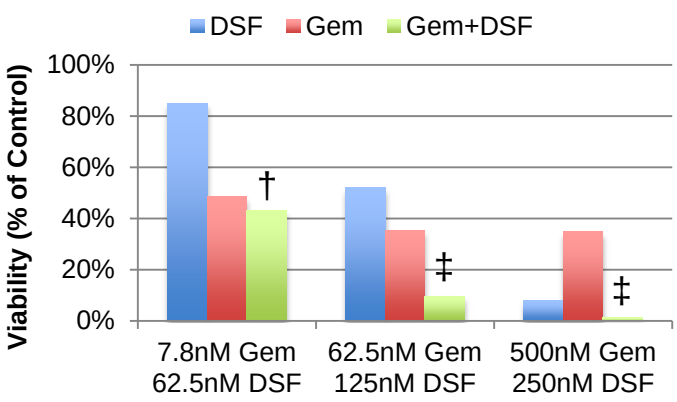

MYH9 and IQGAP1 Knockdown
100%
80%
60%
40%
20%
0%
Control
MYH9
IQ1
MYH9 + IQ1
MDA-MB-231

Figure S1

A



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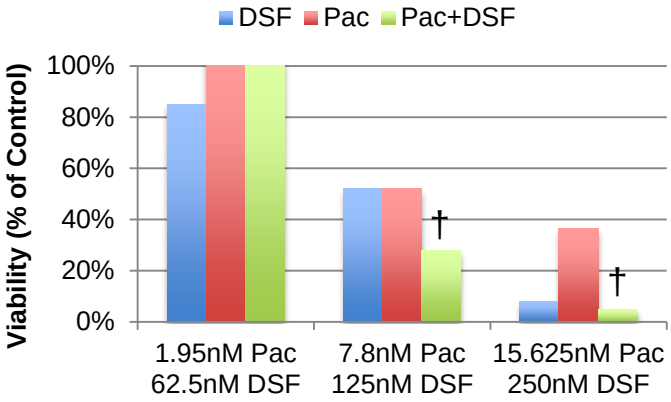

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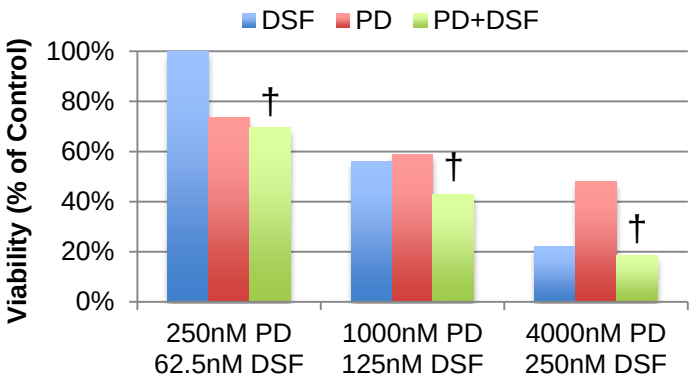

Figure S2

LEGENDS TO SUPPLEMENTARY FIGURES

Figure S1. Effect of IQGAP1 plus MYH9 knockdown on growth of MDA-MB-231 cells. Shown are two experiments in which IQGAP1 and MYH9 are knocked down alone or together followed by MTT assay. In different experiments, IQGAP1 plus MYH9 knockdown moderately decreased cell viability (A) or had no effect (B) compared to knockdown with either siRNA alone.

Figure S2. Effect of combination treatment with disulfiram (DSF) and either gemcitabine, paclitaxel or PD-0332991. MDA-MB-231 cells were treated with (A) DSF and gemcitabine alone or in combination and analyzed by MTT viability assay. (B) DSF and paclitaxel. (C) DSF and PD-0332991. All values represent % of untreated control. † denotes additive effect, ‡ denotes synergistic effect (See METHODS).