SUPPORTING INFORMATION

Small Molecule Microarrays Enable the Discovery of Compounds that Bind the Alzheimer's Aβ Peptide.

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Table S1. Complete toxicity rescue data for the 79 compounds identified as hits in the SMM assay for binding to the Aβ peptide. 100% rescue scaled as the absorbance difference for cells not exposed to Aβ or exogenous compounds ($A_{570-670}$ = 0.716) and 0% rescue as that of cells exposed to Aβ42 alone ($A_{570-670}$ = 0.496). Composite Z-scores are also shown. Compound 2002-H20 is highlighted in grey.

Well Position	Broad Compound Code	Composite Z-Score	Rescue Ability (% Control)	Well Position	Broad Compound Code	Composite Z-Score	Rescue Ability (% Control)
1462-B09	CMLD1_000030	3.8183	98%	1462-C09	CMLD1_000051	3.5176	2%
2103-D21	PK04_103081	3.7388	89%	2131-I03	Ald1.1-H_000163	3.8406	2%
2002-G12	ChemDiv3_000496	3.5701	76%	2133-I03	Ald1.1-H_000755	3.7981	2%
1463-N04	ICCB6_000290	4.0076	64%	2103-I20	PK04_103178	3.6721	2%
1462-A16	CMLD1_000016	3.854	63%	2103-B03	PK04_103025	3.762	1%
2134-G21	Ald1.1-H_001046	3.7592	51%	1462-C07	CMLD1_000049	3.5682	0%
2055-H19	Maybridge4_002285	3.4537	49%	2103-E12	PK04_103092	3.5425	-1%
1463-N16	ICCB6_000302	3.5663	44%	2103-B11	PK04_103033	3.6273	-1%
1462-F19	CMLD1_000124	4.157	42%	2103-O02	PK04_103278	3.6505	-2%
2134-I03	CMLD1_000162	3.6503	41%	2103-G02	PK04_103122	3.8263	-5%
2002-H20	ChemDiv 1602-1352	3.4075	41%	2103-C02	PK04_103046	3.7421	-5%
1462-H07	CMLD1_000154	3.5369	39%	2134-I07	Ald1.1-H_001074	3.8105	-7%
1462-H17	CMLD1_000164	3.5353	37%	1462-B17	CMLD1_000038	3.5736	-7%
2131-I07	Ald1.1-H_000165	3.987	36%	2078-A11	TimTec1_005291	3.6328	-8%
2055-D04	Maybridge4_002182	3.555	32%	2001-C20	ChemDiv 0242-417	3.4988	-8%
1462-H15	Ald1.1-H_001072	3.6503	27%	2131-N18	Ald1.1-H_000264	3.716	-9%
1462-F17	CMLD1_000122	3.8233	23%	1462-B11	CMLD1_000032	3.5739	-10%
2103-E22	PK04_103100	3.6991	23%	2103-G16	PK04_103134	3.7816	-10%
2103-G14	PK04_103132	3.8232	23%	2133-I07	Ald1.1-H_000757	3.9051	-11%
2055-D16	Maybridge4_002194	3.433	23%	2096-H02	PK04_096142	3.8707	-12%
1462-G17	CMLD1_000143	3.513	23%	2103-H07	PK04_103145	3.6441	-14%
2103-G08	PK04_103126	3.5374	21%	2054-N14	Maybridge4_002060	3.6359	-15%
2103-C04	PK04_103048	3.7856	18%	2001-L09	ChemDiv 0367-0918	3.4127	-17%
1462-E07	CMLD1_000091	3.7092	17%	1462-N07	CMLD1_000279	3.5565	-18%
2103-I24	PK04_103180	3.6673	16%	2057-C18	Maybridge4_002878	4.065	-24%
2103-B17	PK04_103037	3.5871	15%	2096-D20	PK04_096080	3.6993	-27%
2103-E20	PK04_103098	3.652	15%	1462-C11	CMLD1_000053	3.5302	-28%
2103-O04	PK04_103280	3.7164	13%	2133-C23	Ald1.1-H_000655	3.5075	-30%
2108-B02	PK04_108024	3.7944	13%	2103-B21	PK04_103041	3.6683	-34%
1462-G19	CMLD1_000145	3.8152	12%	2103-B07	PK04_103029	3.8604	-35%
1462-C19	CMLD1_000061	3.9804	12%	1462-A19	CMLD1_000019	3.9053	-37%
2103-E16	PK04_103096	3.5508	10%	2001-H11	ChemDiv 0375-568	3.4411	-41%
2131-I17	Ald1.1-H_000175	3.5173	8%	1462-I17	CMLD1_000185	3.7601	-42%
1462-A18	CMLD1_000018	3.729	8%	2131-M05	Ald1.1-H_000235	3.5896	-51%
2103-B09	PK04_103031	3.5123	6%	2131-O15	Ald1.1-H_000283	3.5713	-53%
2103-B05	PK04_103027	3.7711	5%	1462-M15	CMLD1_000267	4.0814	-57%
2111-E22	CMLD2_000723	3.5777	5%	2109-I14	CMLD2_000168	3.5309	-73%
2103-E14	PK04_103094	3.8311	4%	2103-D17	PK04_103077	3.6186	-197%
2021-G12	ChemDiv 7418-0147	3.4279	3%	2103-D01	PK04_103065	3.5336	-204%
2131-C23	Ald1.1-H_000063	3.7647	3%				

Table S2. Analogs of Compound 2002-H20

ChemDiv Catalog Number	R1	R2	R3	R4	R5	R6
1602-1352 (2002-H20)	H	H	H	H	H	NH_2
1346-1290	H	H	H	H	H	$C(=O)-O-CH_3$
2026-3240	H	H	H	H	H	F
2026-3246	H	H	H	H	H	Br
2026-3255	H	H	H	H	H	$O-CH_3$
2026-3258	H	H	H	H	H	NO_2
2026-3262	H	H	H	H	H	$C(CH_3)$
2026-3267	H	H	H	Cl	H	Cl
2026-3269	H	H	H	H	Cl	Cl
2026-3380	H	CH_3	H	H	H	F
2026-3383	H	CH_3	H	H	H	Cl
2026-3392	H	CH_3	H	H	H	CH_3
2026-3395	H	CH_3	H	H	H	$O-CH_3$
2026-3407	H	CH_3	H	Cl	H	Cl
2026-3431	H	CH_2-CH_3	H	H	H	$O-CH_2-CH_3$
2026-3981	CH_3	CH_3	H	H	H	F
2026-3984	CH_3	CH_3	H	H	H	Cl
2026-3989	CH_3	CH_3	H	H	H	I
2026-4002	CH_3	CH_3	H	H	H	$O-CH_3$
7761-0151	H	H	H	H	H	Cl
8503-0073	H	H	CH_3	H	H	$O-CH_3$
8503-0076	H	H	CH_3	H	H	F

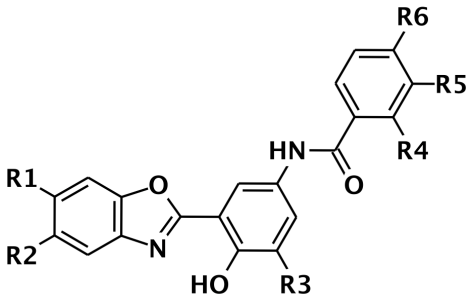
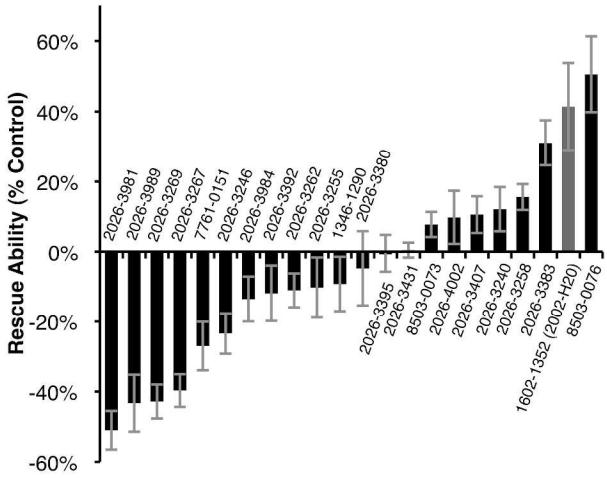


Figure S1. Analogs described in Table S2 were incubated at 100 μM with 20 μM Aβ42 peptide in PC12 cells. After 24 hours, the MTT assay was used to determine the ability of the compounds to rescue cells from Aβ-induced toxicity. Measured viability of cells not exposed to Aβ or compound was taken as 100 % rescue ($A_{570-670}$ = 0.836) and viability of cells exposed to Aβ without compound as 0% rescue ($A_{570-670}$ = 0.390).


Rescue Ability (% Control)
60%
40%
20%
0%
-20%
-40%
-60%
2026-3981
2026-3989
2026-3269
2026-3267
7761-0151
2026-3246
2026-3984
2026-3392
2026-3262
2026-3255
1346-1290
2026-3380
2026-3395
2026-3431
8503-0073
2026-4002
2026-3407
2026-3240
2026-3258
2026-3383
1602-1352 (2002-H20)
8503-0076