

Supplementary Materials

Table S1. Classification of inhibitors of α -synuclein fibrillation

- Non-inhibitors.
- + Weak inhibitors, with a lag time 2 or 3 times longer than control;
- ++ Good inhibitory effect; with a lag time 4 or 5 times longer than control;
- +++ Excellent inhibitors, completely inhibit synuclein fibril formation after 3 days incubation;

Flavonols:

Catalog NO. / Name Synonym	Activity	8	7	6	5	3	2'	3'	4'	5'	6'
Quercetin 3,5,7,3',4'-Pentahydroxyflavone dihydrate	++	H	OH	H	OH	OH	H	OH	OH	H	H
Fisetin 3,7,3',4'-Tetrahydroxyflavone	+	H	OH	H	H	OH	H	OH	OH	H	H
T-601 3',4'-Dihydroxyflavonol	+	H	H	H	H	OH	H	OH	OH	H	H
22-344 3,6,3',4'-Tetrahydroxyflavone	+	H	H	OH	H	OH	H	OH	OH	H	H
22-318 3,6,2',3'- Tetrahydroxyflavone	+	H	H	OH	H	OH	OH	OH	H	H	H
G-500 / Gossypetin 3,5,7,8,3',4'-Hexahydroxyflavone	++	OH	OH	H	OH	OH	H	OH	OH	H	H
C-101 / Myricetin 3,5,7,3',4',5'-Hexahydroxyflavone,	+++	H	OH	H	OH	OH	H	OH	OH	OH	H
Rutin Quercetin-3-rutinoside	+	H	OH	H	OH	Rut	H	OH	OH	OH	H

Catalog NO. / Name/ Synonym	Activity	8	7	6	5	3	2'	3'	4'	5'	6'
K-102 / Kaempferol 3,5,7,4'-Tetrahydroxyflavone	-	H	OH	H	OH	OH	H	H	OH	H	H
020065 / Isorhamnetin 3'-Methoxy-3,5,7,4'- Tetrahydroxyflavone	-	H	OH	H	OH	OH	H	H	OH	OMe	H
020067 / Galangin 3,5,7-Trihydroxyflavone	-	H	OH	H	OH	OH	H	H	H	H	H
021140S / Tamarixetin 4'-Methoxy-3,5,7,3'- Tetrahydroflavone	-	H	OH	H	OH	OH	H	OH	OMe	H	H

Flavones:

Catalog NO. / Name Synonym	Activity	8	7	6	5	3	2'	3'	4'	5'	6'
22-324 6,2',3'- Trihydroxyflavone	+++	H	H	H	H	H	OH	OH	H	H	OH
D-406 2',3'- Dihydroxyflavone	++	H	H	H	H	H	OH	OH	H	H	H
D-258 3',4'- Dihydroxyflavone	++	H	H	H	H	H	H	OH	OH	H	H
D-116 5,6-Dihydroxy-7-Methoxyflavone	++	H	OMe	OH	OH	H	H	H	H	H	H
22-357 5,6- Dihydroxyflavone	+	H	H	OH	OH	H	H	H	H	H	H
22-336 6,7,3'- Trihydroxyflavone	+	H	OH	OH	H	H	H	OH	H	H	H
D-112 6,7- Dihydroxyflavone	+	H	OH	OH	H	H	H	H	H	H	H
Luteolin 5,7,3',4'-Tetrahydroxyflavone	+	H	OH	H	OH	H	H	OH	OH	H	H
22-340 / Tricetin 5,7,3',4',5'-Pentahydroxyflavone	+++	H	OH	H	OH	H	H	OH	OH	OH	H
22-341 7,3',4',5'- Tetrahydroxyflavone	+++	H	OH	H	H	H	H	OH	OH	OH	H
021165 / 6-HP 5,6,7,4'-Tetrahydroxyflavone	+++	H	OH	OH	OH	H	H	H	OH	H	H
B-101 / Baicalein 5,6,7- Trihydroxyflavone	+++	H	OH	OH	OH	H	H	H	H	H	H

Catalog NO. / Name Synonym	Activity	8	7	6	5	3	2'	3'	4'	5'	6'
22-323 6,2',3'- Trimethoxyflavone	-	H	H	H	H	H	OMe	OMe	H	H	OMe
D-407 2',4'- Dihydroxyflavone	-	H	H	H	H	H	OH	H	OH	H	H
021104S / Chrysoeriol 4',5,7-Trihydroxy-3'- Methoxyflavone	-	H	OH	H	OH	H	H	H	OH	OMe	H
021108S / Diosmetin 5,7,3'-Trihydroxy-4'- Methoxyflavone	-	H	OH	H	OH	H	H	OH	OMe	H	H
Wogonin 5,7-Dihydroxy-8- Methoxyflavone	-	OMe	OH	H	OH	H	H	H	H	H	H
H-114 3'-Hydroxy-5,6,7,4'- Tetramethoxyflavone	-	H	OMe	OMe	OMe	H	H	OH	OMe	H	H

Flavanones:

Catalog NO. / Name Synonym	Activity	8	7	6	5	3	2'	3'	4'	5'	6'
020056 / Eriodictyol 2-[3,4-Dihydroxyphenyl] 2,3-dihydro-5,7- dihydroxy-4H-1benzopyran-4-one	+++	H	OH	H	OH	H	H	OH	OH	H	H

Catalog NO. / Name Synonym	Activity	8	7	6	5	3	2'	3'	4'	5'	6'
H-103 / Hesperetin 5,7,3'-Trihydroxy-4'- methoxyflavanone	-	H	OH	H	OH	H	H	OH	OMe	H	H
020091 / Homoeriodictyol 5,7,4'-Trihydroxy-5'- methoxyflavanone	-	H	OH	H	OH	H	H	H	OH	OMe	H
Hesperidin/ Hesperetin-7-O-rutinoside	-	H	Rut	H	OH	H	H	OH	OMe	H	H

Flavanols:

Catalog NO. / Name Synonym	Activity	8	7	6	5	3	2'	3'	4'	5'	6'
D-105 / Fustin 3,7,3',4'- Tetrahydroxyflavone	+	H	OH	H	H	OH	H	OH	OH	H	H
021037 3,3',4',5',7-Pentahydroxyflavanone	+	H	OH	H	H	OH	H	OH	OH	OH	H

Non-inhibitors were not tested.

Isoflavonoids:

Catalog NO. / Name Synonym	Activity	8	7	6	5	2	2'	3'	4'	5'	6'
T-116 6,7,4'- Trihydroxyisoflavone	+	H	OH	OH	H	H	H	H	OH	H	H
T-415 7,3',4'- Trihydroxyisoflavone	+++	H	OH	H	H	H	H	OH	OH	H	H

Catalog NO. / Name Synonym	Activity	8	7	6	5	2	2'	3'	4'	5'	6'
19-612 3',4'-Dimethoxy-7-hydroxyisoflavone	-	H	OH	H	H	H	H	H	OMe	OMe	H
D-101 / Daidzein 7,4'-Dihydroxyisoflavone	-	H	OH	H	H	H	H	H	H	OH	H
F-103 / Formononetin 7-Hydroxy-4'-methoxyisoflavone	-	H	OH	H	H	H	H	H	H	OMe	H
Biochanin A 5,7-Dihydroxy-4'-methoxyisoflavone	-	H	OH	H	OH	H	H	H	H	OMe	H

Catechins:

Catalog NO. / Name Synonym	Activity	8	7	6	5	4	3	2'	3'	4'	5'	6'
020976S / Catechin (+)-3,3',4',5,7-Flavanepentol (2H)-benzopyran-3,5,7-triol / (2R,3R)-2-(3,4-Dihydroxyphenyl)- 3,4-dihydro-1	+	H	OH	H	OH	H	OH	H	OH	OH	H	H
Epicatechin gallate (ECG) ((2R,3R) -2-(3,4-Dihydroxyphenyl)- 3,4-dihydro-1 (2H) -benzopyran-3,5,7-triol 3- (3,4,5-trihydroxybenzoate)	+	H	OH	H	OH	H	gallate	H	OH	OH	H	H
EpigalloCatechin Gallate (EGCG) (2R,3R)-2-(3,4,5- Trihydroxyphenyl)-3,4-dihydro- 1(2H)-benzopyran-3,5,7-triol 3- (3,4,5-trihydroxybenzoate)	+++	H	OH	H	OH	H	gallate	OH	OH	OH	H	H

Non-inhibitors were not tested.

Anthraquinones:

Catalog NO. / Name Synonym	Activity	8	7	6	5	3	2'	3'	4'	5'	6'
020411 / Alizarin 1,2-Dihydroxyanthraquinone	+										

Catalog NO. / Name Synonym	Activity	8	7	6	5	3	2'	3'	4'	5'	6'
Chrysophanol 1,8-Dihydroxy-3-methylanthraquinone	-										
Emodin 1,3,8-Trihydroxy-6-methylanthraquinone	-										

Figure S1. Instant changes in the intensity of ThT fluorescence upon adding 50 μ M flavonoids directly to the existing α -synuclein fibril solution

