## 1 Cyanidin-3-O-glucoside inhibits Aβ40 fibrillogenesis, disintegrates

## 2 preformed fibrils, and reduces amyloid cytotoxicity

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- 4 Fufeng Liu<sup>a</sup>\*, Fang Zhao<sup>a</sup>, Wenjuan Wang<sup>a</sup>, Jingcheng Sang<sup>a</sup>, Longgang Jia<sup>a</sup>, Li
- 5 Li<sup>b</sup>, Fuping Lu<sup>a</sup>\*
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<sup>7</sup> \*Key Laboratory of Industrial Fermentation Microbiology (Tianjin University of 8 Science & Technology), Ministry of Education, Tianjin, 300457, P. R. China; Tianjin
<sup>9</sup> Key Laboratory of Industrial Microbiology, Tianjin University of Science & 10 Technology, Tianjin, 300457, P. R. China; College of Biotechnology, Tianjin
<sup>11</sup> University of Science & Technology, Tianjin 300457, P. R. China
<sup>12</sup> <sup>b</sup> College of Marine and Environmental Sciences, Tianjin University of Science &

13 Technology, Tianjin 300457, P. R. China.

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## **15 Corresponding Authors**

16 \*F.-F. Liu, Phone: +86-022-60602717; Fax: +86-022-60602298; E-mail: 17 fufengliu@tust.edu.cn:\_

18 \*F.-P. Lu, Phone: +86-022-60602271; Fax: +86-022-60602298; E-mail:
19 fplu@tust.edu.cn



Figure S1. The initial conformation of Aβ40 trimer obtained from the Aβ40 nonamer.
Aβ40 were displayed using a New cartoon drawing method, and the residues of
hydrophobic core of the Aβ40 trimer were displayed using Licorice drawing method.
The non-polar and polar residues of the Aβ40 trimer are colored by white and green,
respectively.





Figure S2. Effect of Cy-3G on the cytotoxicity of PC12 cells. The cellular viability
treated with PBS buffer alone (negative control) was set as 100%. All values represent
means ± s.d. (n=3). NS, no significant, \*\*, P< 0.01 compared to the control group, \*\*\*,</li>
P< 0.001 compared to the control group.</li>





Figure S3. The intracellular ROS production induced by cyanidin-3-O-glucoside as
evidenced by the fluorescein dye 2',7'-dichlorofluorescein diacetate in the absence and
presence of different concentrations of Cy-3G. The intracellular ROS level treated with
PBS buffer alone was set as 100%. All values represent means ± s.d. (n=5). NS, no
significant. NS, no significant.



Figure S4. Time-dependent of root mean square deviation (RMSD) of the atom Cα of
the Aβ40 trimer.





59 Figure S5. Proportion of each secondary structure of the A $\beta$ 40 trimer in the total

- 60 amount. The secondary structure content of the  $A\beta 40$  trimer was calculated in the last
- 61 10 ns.



**Figure S6.** The number of hydrogen bonds between the A $\beta$ 40 trimer and Cy-3G during

66 100 ns simulation time.

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