【Advantageous effects】

The pyrrolidine derivative represented by Formula I, II, III, IV, or V, or a pharmaceutically acceptable salt thereof disclosed herein is highly effective in inhibiting aggregation of beta-amyloids and/or tau proteins and/or degrading the aggregates of beta-amyloids and/or tau proteins, and is thus highly useful for preventing and/or treating neurological diseases caused by aggregation and/or accumulation of beta-amyloids and/or tau proteins.

【Description of Drawings】

FIGS. 1A and 1B are diagrams identifying that TAU-1 and TAU-2 PROTAC compounds containing the compound according to the present invention exhibit degradation activity in three types of phosphorylated tau proteins. Specifically, FIG. 1A is an image obtained using ImageQuant LAS 4000 (GE healthcare, IL, USA) by western blotting with respect to the tau degradation activity of TAU-1 and TAU-2, and FIG. 1B shows the result of quantification of the image using Image J program.

phosphorylated tau proteins, TAU-1 PROTAC exhibited more effective degradation activity in P-Tau S396, and TAU-2 PROTAC exhibited more effective degradation activity in P-Tau S202, T205, and S356. Accordingly, the compounds according to examples of the present invention have phosphorylated tau degradation activity and are particularly useful for the treatment of brain diseases attributable to phosphorylated tau proteins.