

Special Issue

Structure and Formation Mechanism of Amyloid Fibrils

Message from the Guest Editors

Amyloid fibrils are known to cause serious diseases such as neurodegenerative diseases and amyloidosis. Recently, it has been reported that lower-molecular-sized oligomers are found to be more toxic in cells than mature fibrils. The technology for the degradation of those amyloid assemblies has the potential for leading to amyloidosis therapy. However, the formation mechanism of amyloid fibrils is not completely understood, and it is usually difficult to degrade the rigid fibrous conformation under mild conditions unless using denaturants. This special issue welcomes structural studies focusing on the fibrils, proto-fibrils, and oligomers of various types of amyloid peptides and proteins. Especially uses of not only experimental techniques but also computer simulation methods for approaching the formation mechanisms of amyloid assemblies are acceptable. In addition, application studies of physical engineering techniques such as lasers and high-power radiations to develop novel therapeutic ways for amyloidosis should also be welcome.

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