Special Issue

10th Anniversary of Biology: Amyloid Interaction in Regulation of Protein Function, Prion Propagation, and Cell Death

Message from the Guest Editor

Amyloid aggregation has been involved in severe neurodegenerative disease as well as in the regulation of cell functions. Physical properties of amyloid fibrils are useful for natural biofilms and are utilized for artificial nanotube elaboration. However, they also form membrane pores leading to cellular lysis. How can amyloid proteins govern cell viability through hydrophobic interactions, and how do cells deal with the formation of toxic aggregates? These are the questions that this review series aims to answer. Several aspects of amyloid aggregation, such as structural characterizations, the spread of yeast prions, cellular necroptosis, and neurodegeneration, will be examined. Recent interest in anti-prion systems (such as chemical or natural chaperones) and in the viral ability to block necroptosis by targeting amyloid interaction will add a therapeutic perspective to this series.

Guest Editor

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