The role of proteinase-activated receptors in pathogenesis of prion diseases

https://neurodegenerationresearch.eu/survey/the-role-of-proteinase-activated-receptors-in-pathogenesis-of-prion-diseases/

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Czech Republic

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The role of proteinase-activated receptors in pathogenesis of prion diseases

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Research Abstract

Transmissible spongiform encephalopathies (TSEs) or prion diseases are fatal neurodegenerative disorders of men and animals. The hallmark of TSEs is accumulation of misfolded form of prion protein in the brain of affected subjects. Despite intensive research the mechanism of neurodegeneration in TSEs remains unknown and no specific treatment is available. Proteinase-activated receptors (PARs) facilitate cellular responses to extracellular proteases. Recent studies provided strong evidence about the involvement of PARs in the pathogenesis of other neurodegenerative proteinopathies, like Alzheimer and Parkinson disease. In contrast, the role of PARs in TSEs has not been studied yet. To prove the

involvement of PARs in TSE pathogenesis, we plan to utilize variety of models including PAR-1 and PAR-2 knockout mice. Studies will be conducted on prion infected cell cultures, on mouse TSE models in vivo and also on autoptic CNS tissues of TSE patients. We anticipate that our project will provide essential information about the feasibility of PARs targeting as a therapeutic approach in TSEs.

Further information available at:

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