1078-57-94 **Akio Kawauchi*** (kawauchi@sci.osaka-cu.ac.jp), 3-3-138 Sugimoto-cho, Sumiyoshi-ku, Osaka, Osaka 558-8585, Japan. *Topology of prion proteins.* Preliminary report.

The content of this talk is a joint work with Kayo Yoshida. A topological model of prion proteins (PrP^C, PrP^{SC}) which we call a prion-tangle is proposed to explain some entangling properties of prion proteins by a knot theoretical approach. We can explain in our model how two splitted prion-tangles are changed into a non-split prion-tangle with the given prion-tangles contained by a one-crossing change. We also determine for every $n > 1$ that the minimal crossing number of n-string non-split prion-tangles is $2n$ or $2n-2$, respectively, according to whether or not we count the assumption that the loop system is a trivial link. (Received November 23, 2011)