

Ellie Hanzi

Engineering human cells to propagate fluorescent prions in ovPrP-Glow line for live monitoring of prion infection with high-resolution in situ prion structure determination

Conclusions and summary

- The traditional labelling of proteins in cells isn't compatible for the study of prion propagation: bulky fluorescent dyes interfere with prion protein conversion into its pathogenic form.
- Here, I show that a single amino acid within the prion protein can be modified to produce a fluorescent (glowing) prion protein in human cells.
- Such a minimal modification aims to enable the live tracking of prion propagation for a better understanding of the molecular mechanisms driving prion disease.
- The future research will aim to identify and validate key molecular players in human cells that facilitate prion propagation as potential therapeutic targets.