Generic amyloidogenicity of mammalian prion proteins from species susceptible and resistant to prions

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HuPrP,self-seeded

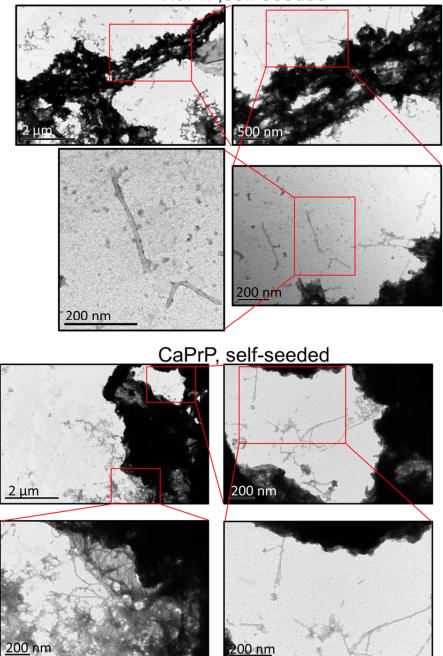


FIGURE S1: **Examples of ultrastructure of seeded mammalian PrP aggregates by transmission electron microscopy.** HuPrP and CaPrP displayed common features upon seeding showing fibrils protruding from heavily clustered aggregates.

BoPrP HuPrP FePrP MoPrP PoPrP HaPrP CaPrP	MRGSHHHHHHGLVPRGSKKRPKPGGGWNTGGGSRYPGQGSPGGNRYPPQG MRGSHHHHHGLVPRGSKKRPKPGGGWNTGGSRYPGQGSPGGNRYPPQG MRGSHHHHHHGLVPRGSKKRPKPGGGWNTGGSRYPGQGSPGGNRYPPQG MRGSHHHHHGLVPRGSKKRPKPGGGWNTGGSRYPGQGSPGGNRYPPQG MRGSHHHHHGLVPRGSKKRPKPGGGWNTGGSRYPGQGSPGGNRYPPQG MRGSHHHHHGLVPRGSKKRPKPGGWNTGGSRYPGQGSPGGNRYPPQG MRGSHHHHHHGLVPRGSKKRPKPGGWNTGGSRYPGQGSPGGNRYPPQG
BoPrP	€C€ WGQPH [_] GGGWGQPH <mark>-</mark> GG € WGQPH = GG € WG QPHGGGW€ QPH G€ GGWGQ
HuPrP	GCGWGQPH GGGWGQPH GCGWGQPH GGGWGQPH GGGWGQ
FePrP	GGGWGQPHAGGGWGQPHAGGGWG
MoPrP	=GTWGQPH=GGGWGQPH=GGSWGQPH=GGSWG======QPHG=GGWGQ
PoPrP	GGGWGQPH-GGGWGQPH-GGGWGQPH-GGGWGQPHGGGGWGQ
HaPrP	GGTWGQPH-GGGWGQPH-GGGWGQPH-GGGWGQPHG-GGWGQ
CaPrP	GGGWGQPH=GGGWGQPH=GGGWGQPH=GGGWG <mark>======</mark> QPHGGGGWGQ
	* **** ****** ** ***** ** ***
BoPrP	■GGEHGOWNKPSKPKTNMKHŸAGAAAAGAVVGGLGGYMLGSAMSRPDIHF
HuPrP	GGGTHSOWNKPSKPKTNMKHWAGAAAAGAVVGGLGGTMLGSAMSKPLTHF
FePrP	GGG HGOWGKPSKPKTNMKHMAGAAAAGAVVGGLGG IMLGSAMSKP HIF
MoPrP	CGGTHNOWNKPSKPKTNLKHVAGAAAAGAVVGGLGGYMLGSAMSRPMIHF
PoPrP	GGGSHGOWNKPSKPKTNMKHVAGAAAAGAVVGGLGGYMLGSAMSRPLIHF
HaPrP	GGGTHNOWNKPNKPKT SMKHMAGAAAAGAVVGGLGGYMLGSAMSRPMLHF
CaPrP	GGGSHGOWGKPNKPKTNMKHVAGAAAAGAVVGGLGGYMLGSAMSRPLIHF
	:*..**.***::**:********************
BoPrP	G S DYEDRYYRENMIRYP <mark>HOVYYR</mark> PWDQY <mark>SNONNFVH</mark> DCVNIT VK EHTVTT
HuPrP	GSDWEDRYYRENMNRYPNOVYYRPMDBYSNONNFVEDCVNIT
FePrP	GNDWEDRYYRENMWRYPNOVYYRPWDWYSNONNFVHDCVNITWRWHTVTT
MoPrP PoPrP	GNDWEDRYYRENMYRYPNOWYYRPMDQYSNONNEVHEDCVNITHAOHTVTT GSDYEDRYYRENMYRYPNOVYYRPVDQYSNONSEVHEDCVNITVAOHTVTT
HaPrP	GSDIEDRIIRENMIRIENQVIIRENDQIENQNE VHDCVNIIVAQHIVII GNDWEDRYYRENMNRYENQVYREVDQYNOQNNEVHDCVNIIIKQHIVII
CaPrP	GNDWEDRIIRENMIRIPNOVIIRPVDQIMRONU VHDCVNIIIROHIVII GNDYEDRYYRENMYRYPDOVYYRPVDQYSNONNFVRDCVNIIVKOHIVII
Carlr	GNDEDRITREMIERTED VITRE DO ISNOWE VEDOVNITVNO HVIT
	159 177 185
BoPrP	TTKGENFTETD IKMM ERVVEQMC I TQY QRE<mark>SQ</mark>AYYQ-R-GA
HuPrP	TTKGENFTETD VKMM ERVVEQMC∎TQY ERESQ AY YQ ⊢R —GS
FePrP	TTKGENFTETD MKIM ERVVEQMCVTQY QKESE AY YQ- R RAS
MoPrP	TTKGENFTETD WKMM ERVVEQMC W TQY QKESQ AY YDG R RSS
PoPrP	TTKGENFTETDVKMIERVVEQMCITQYQKEYEAYAQ-RGAS
HaPrP	TTKGENFTETD VKMM ERVVEQMC V TQY QKESQ AY YDG R <mark>RSS</mark>
CaPrP	TTKGENFTETD MKIM ERVVEQMC V TQY QKESE AYY Q =R GAS

FIGURE S2 **Sequence alignments of mamPrPs**. Stars indicate identical residues. Stars indicate identical residues colon denotes conserved residues and points mark non-conserved mutations. Mismatched residues are marked in color. The red boxes highlight amyloidogenic stretches according to the WALTZ prediction tool ⁴⁷ and the blue boxes highlight amino acids modifying disease susceptibility according to ⁵⁷.