Reprogramming human skin cells into aged neurons to study neurodegenerative disorders

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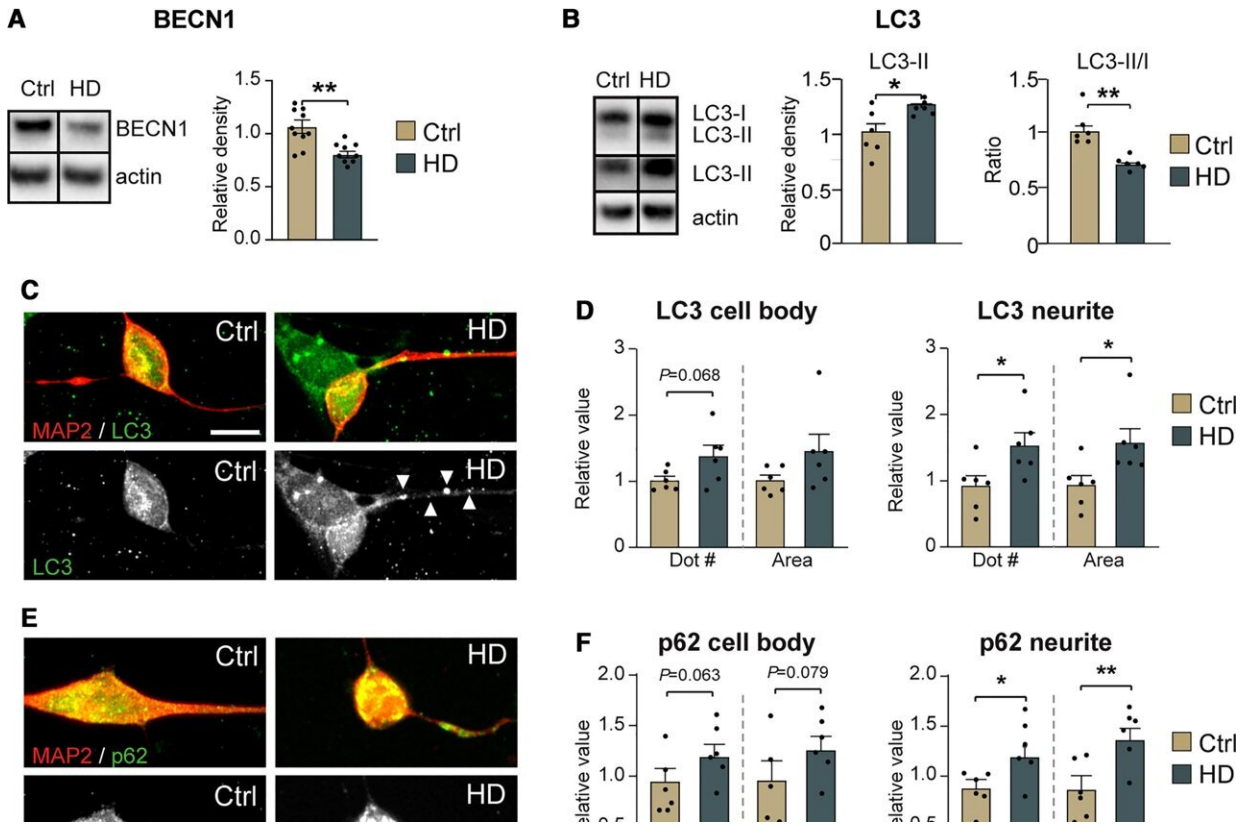

HD-iNs exhibit neurite specific autophagy alteration. (A) Reduced BECN1 expression in HD-iNs compared to Ctrl-iNs using western blot (n = 10 replicates for control and n = 9 replicates for HD-iNs). (B) LC3B-II levels are significantly increased in the HD-iNs, while the LC3B-II/I ratio decreased compared to the healthy Ctrl-iNs (n = 6 replicates). (C–H) Representative images and statistical analysis shows a significant increase both in number and size of LC3B, p62 and LAMP1 dots in the MAP2^{+} neurites of HD-iNs compared to controls (n = 6 lines). (I) Representative images of human post-mortem striatal tissue from a

healthy control and three different Huntington's disease patients at different disease stages showing p62 accumulation specifically in the neurites as visualized by a neurofilament specific antibody. ***P