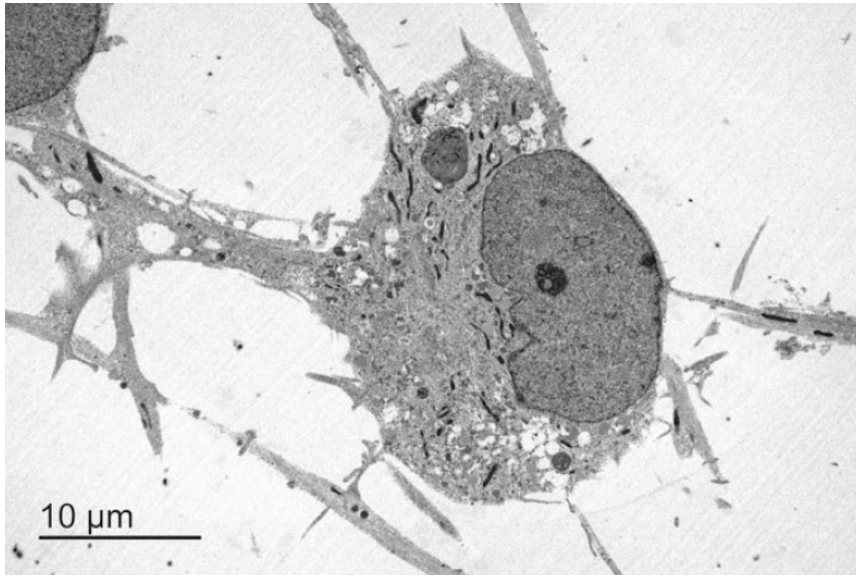


# Supplementary Material

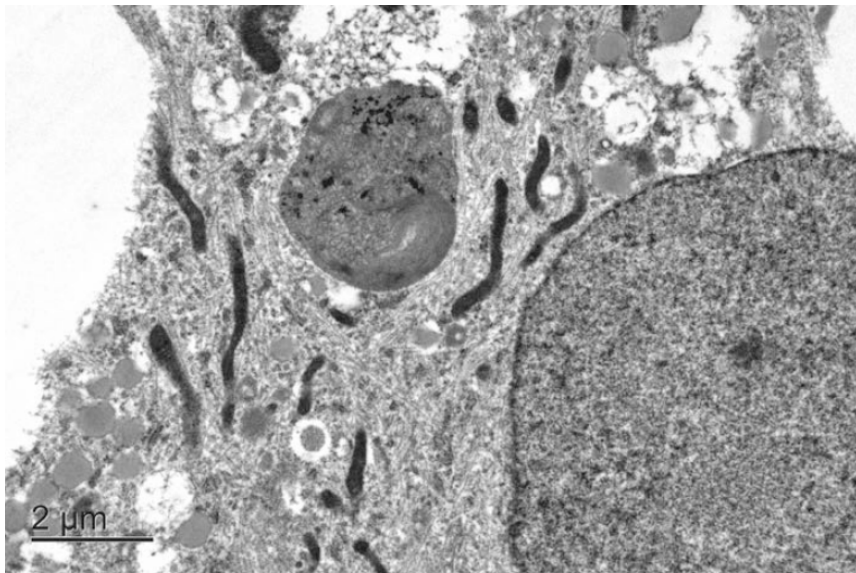
## Alzheimer's Disease-Like Neurodegeneration in *Porphyromonas gingivalis* Infected Neurons with Persistent Expression of Active Gingipains

**Supplementary video:** Time lapse imaging of infected neurons demonstrating colocalization of *P. gingivalis* with lysotracker. *P. gingivalis* (red), lysotracker (green), and NeuO (blue). Outline 1 is presented as inset 1 and outline 2 as inset 2 in Figure 4F. The movie has been compiled from maximal projections of confocal image stacks imaged at 30-s intervals for 1 h.

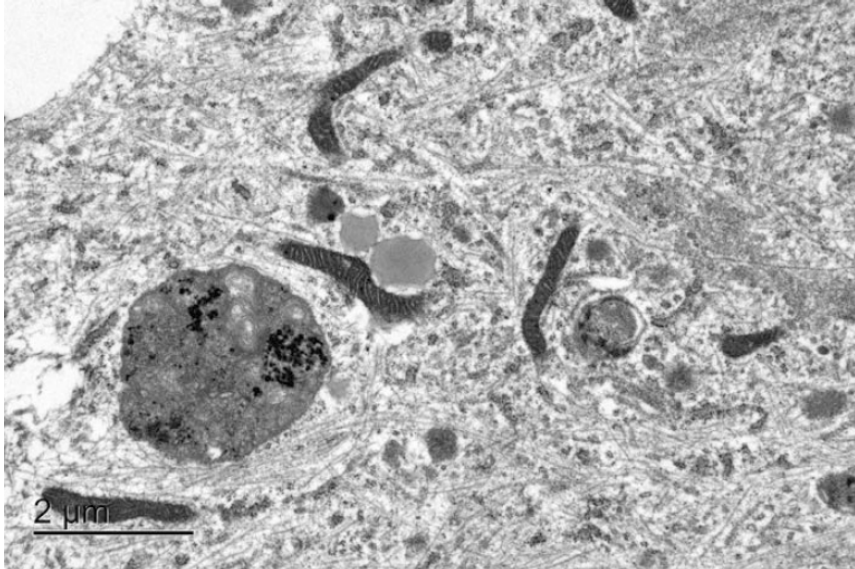
**Supplementary Figures 1-4. TEM images of non-infected iPSC derived neurons after 48 h in culture.**



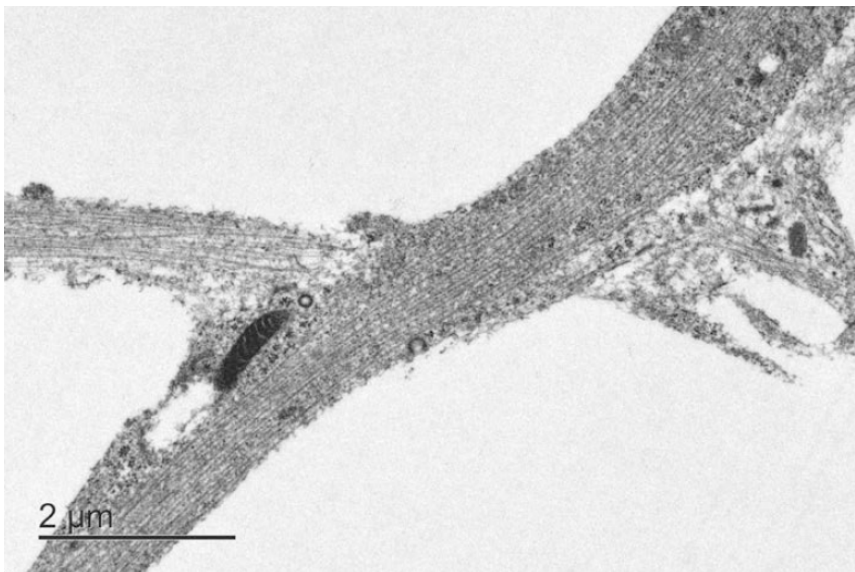
**Supplementary Figure 1.** Low magnification image contains one cell and a portion of a second cell nucleus. The nucleus is peripherally located and contains a single nucleolus.



**Supplementary Figure 2.** The perikaryon contains multiple non-membrane bound electron lucent homogeneous lipid vacuoles, streams of intermediate filaments, elongated mitochondria, ribosomes, and a single approximately 3  $\mu\text{m}$  diameter membrane bound lysosome containing heterogeneous electron dense matrix and concentric membranous whorls.

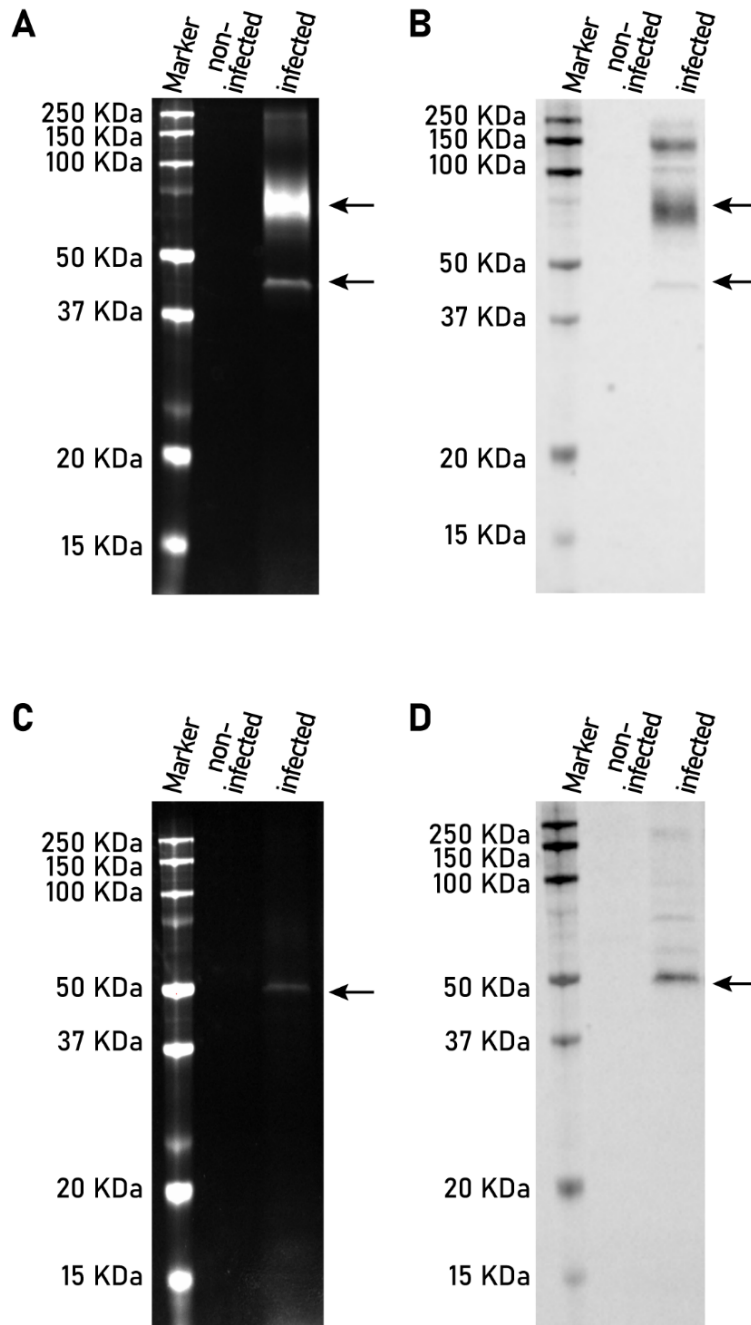


**Supplementary Figure 3.** The cytosol contains interlacing intermediate filaments, elongated mitochondria, ribosomes, rough endoplasmic reticulum, lipid vacuoles as previously described, and approximately 1.5-3  $\mu\text{m}$  diameter organelles containing concentric membranous whorls and heterogeneous electron dense matrix.



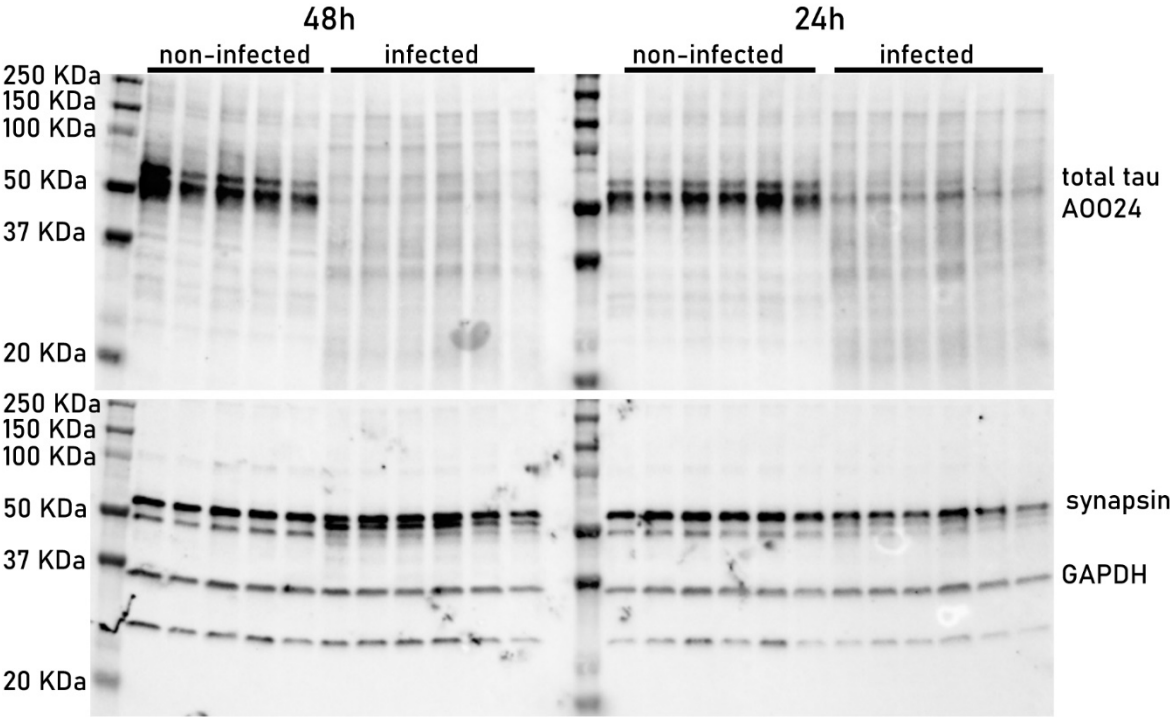
**Supplementary Figure 4.** Neurites contain intermediate filaments, mitochondria, and rough endoplasmic reticulum/ribosomes.

**Supplementary Figure 5. Full length gels and western blots of Rgp and Kgp presented in Figure 2C-F.**



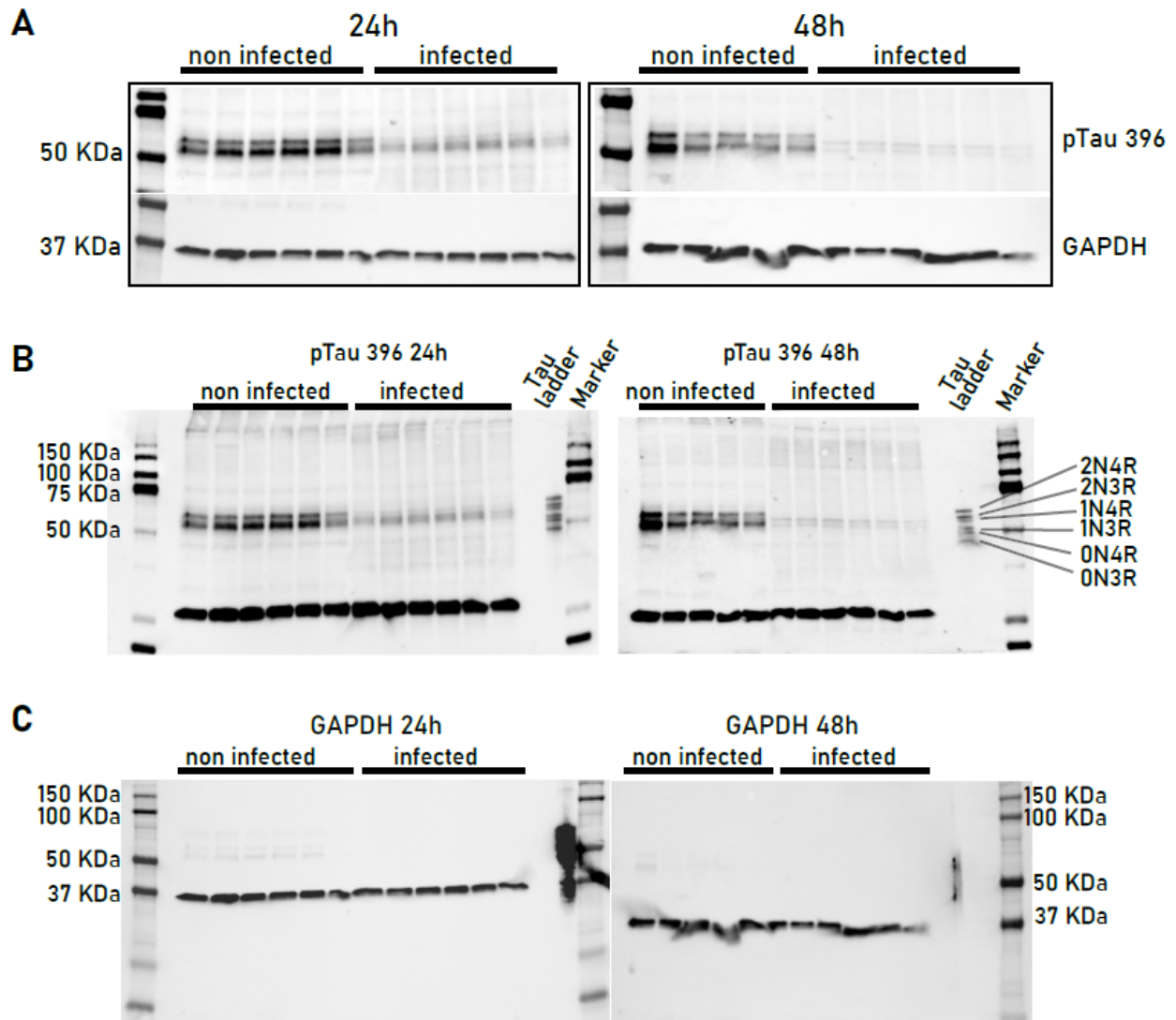
**Supplementary Figure 5.** Original full-length gels (A, C) and western blots (B, D presented in Fig. 5C, D and Fig. 5E, F, respectively). A, C) Gel electrophoresis of cell lysates incubated with a Cy-5 conjugated activity probe for Rgp (A) and Kgp (C). Arrows indicate the expected protein sizes at 45 kDa and 70 kDa for Rgp (A) and 50 kDa for Kgp (C). B and D are the corresponding western blots to the gels depicted in A and C, respectively. Blots were stained with antibodies against Rgp (B) and Kgp (D).

**Supplementary Figure 6. Full length western blots for total tau and synapsin1 presented in Figure 6A.**



**Supplementary Figure 6.** Original full-length western blots presented in Figure 6A probed for tau (upper blot) and synapsin (lower blot).

Supplementary Figure 7. Western blot for ptau(S396)



**Supplementary Figure 7.** Western blots for ptau(S396) 24 h and 48 h after infection. A) Cropped western blots for easy viewing of the relevant bands of ptau(S396) and GAPDH. B) Full size and non-cropped western blots for ptau(396). C) The blot from B was stripped and re-probed for GAPDH.