

Supplementary Materials

Amyloid β aggregation induces human brain microvascular endothelial cell death with abnormal actin organization

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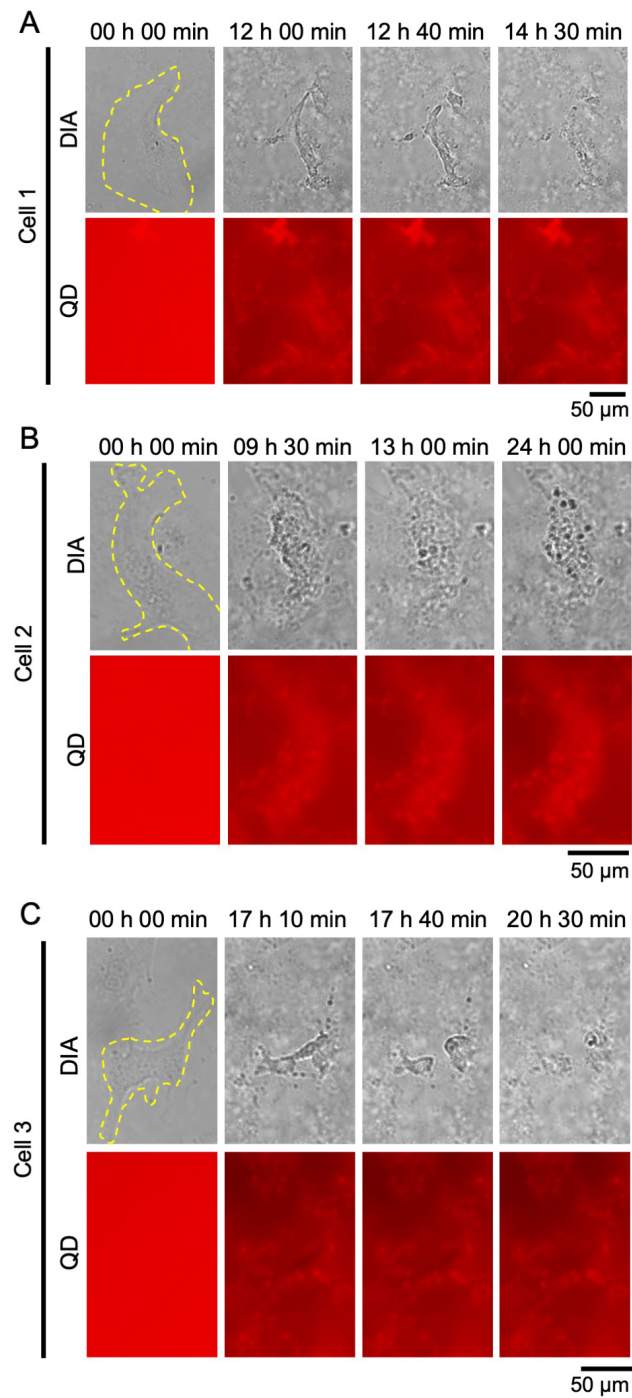
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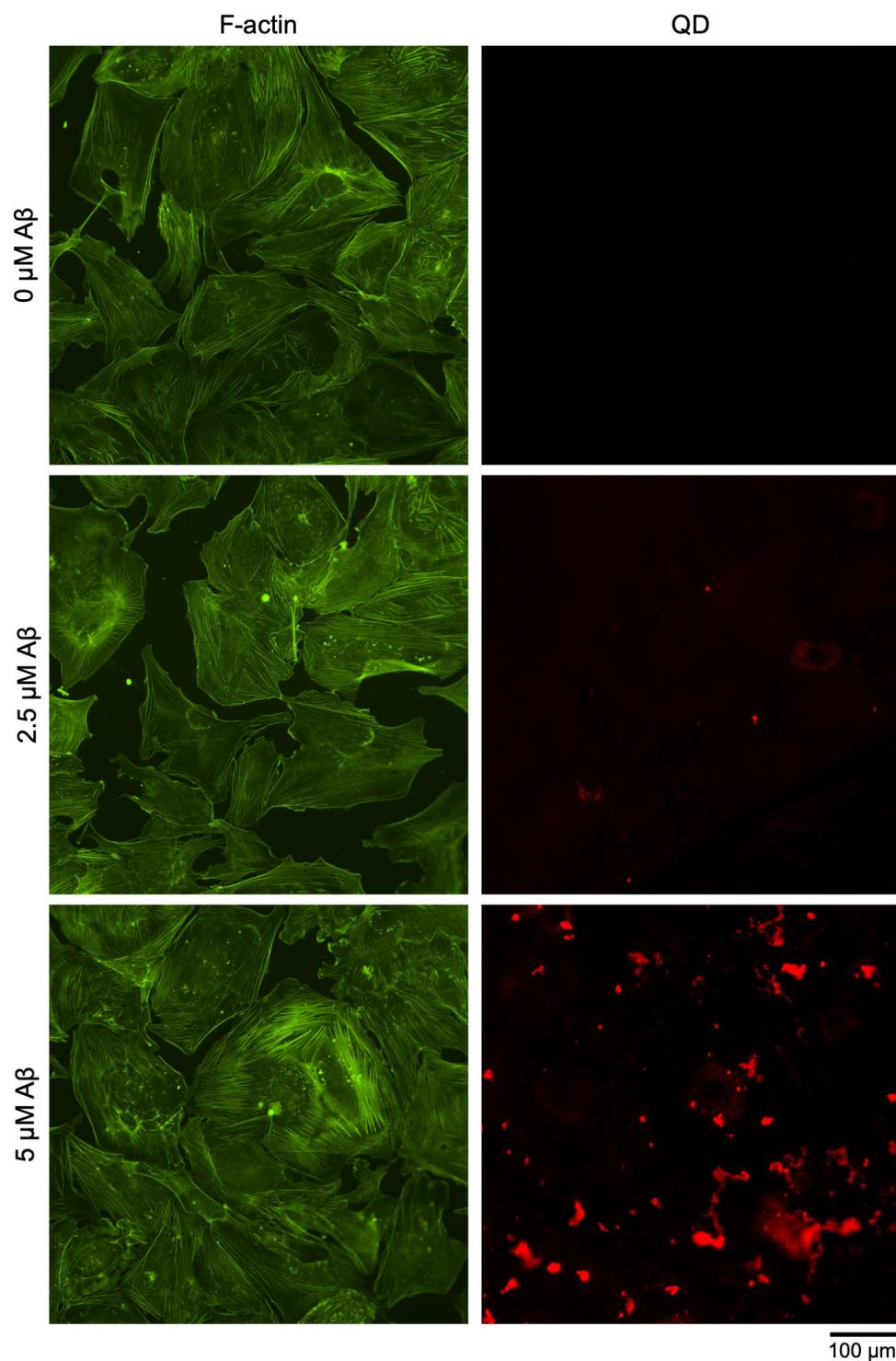
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Supplementary Figures



Sup. Fig. S1: A β aggregation and endothelial cell death under the same conditions as in Fig 1. hBMECs co-incubated with 20 μ M A β_{42} and 30 nM QDA β were observed by an inverted fluorescence microscope. This figure shows another cell, not viewed in Fig. 1. The yellow dotted lines show the outline of endothelial cells.



Sup. Fig. S2: Fluorescence images of F-actin in hBMECs and A β aggregates under the same conditions as in Fig 4. hBMECs were co-incubated with A β of each concentration and 30 nM QDA β (red) for 24 h, then stained for F-actin (green) with Alexa 488 Phalloidin. Alexa 488 and QD were imaged by an inverted fluorescence microscope.

Supplementary Movie Legends

Sup. Movie S1. hBMECs were co-incubated with 20 μM $\text{A}\beta_{42}$ and 30 nM QDA β . This movie shows that hBMECs induced cell death by $\text{A}\beta$ aggregation. White arrowheads indicate hBMECs that caused cell death. Images were captured at a rate of 1 frame/10 min. Playback speed is 15 frames/sec. Still images are displayed in Fig. 1 and Fig. S1. Bar = 100 μm .

Sup. Movie S2. hBMECs were treated with 0.4% DMSO without $\text{A}\beta_{42}$ (control condition). Images were captured at a rate of 1 frame/10 min. Playback speed is 15 frames/sec. Bar = 50 μm .

Sup. Movie S3. hBMECs were co-incubated with 10 μM $\text{A}\beta_{42}$ and 30 nM QDA β . This movie shows that hBMECs were anchored to the plate surface by $\text{A}\beta$ aggregation. White arrowheads indicate points of cells anchored to the plate surface by $\text{A}\beta$ aggregates. Images were captured at a rate of 1 frame/10 min. Playback speed is 15 frames/sec. Still images are displayed in Fig. 2A. Bar = 50 μm .

Sup. Movie S4. hBMECs were co-incubated with 5 μM $\text{A}\beta_{42}$ and 30 nM QDA β . This movie shows that hBMECs were cut. White arrowhead shows a part of a cell where $\text{A}\beta_{42}$ aggregated and was broken off. Images were captured at a rate of 1 frame/10 min. Playback speed is 10 frames/sec. Still images are displayed in Fig. 2B. Bar = 50 μm .

Sup. Movie S5. hBMECs were co-incubated with 10 μM $\text{A}\beta_{42}$ and 30 nM QDA β . This movie shows that $\text{A}\beta$ aggregation induced holes in the cell monolayer. Images were captured at a rate of 1 frame/10 min. Playback speed is 15 frames/sec. Still images are displayed in Fig. 3. Bar = 100 μm .