

Suppl. Figure 1

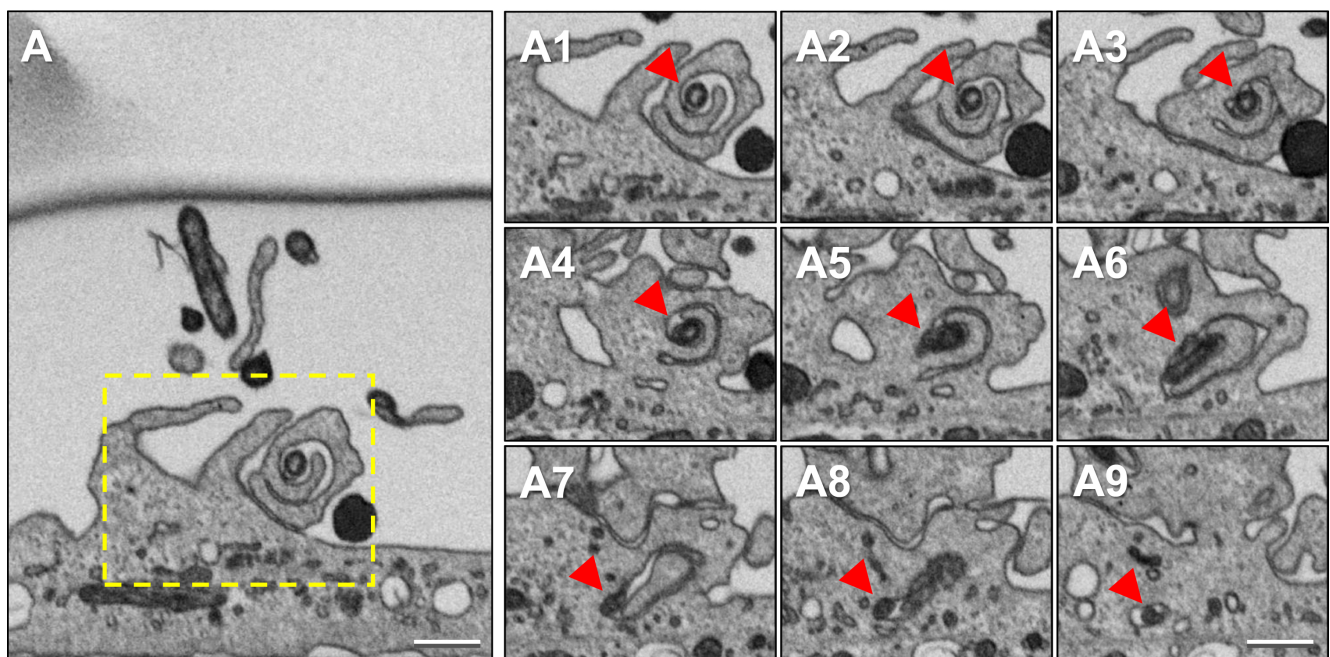
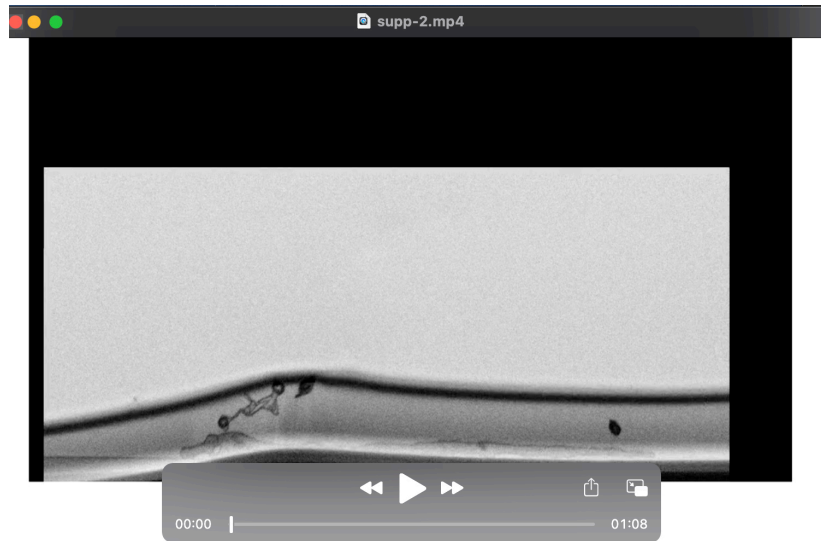
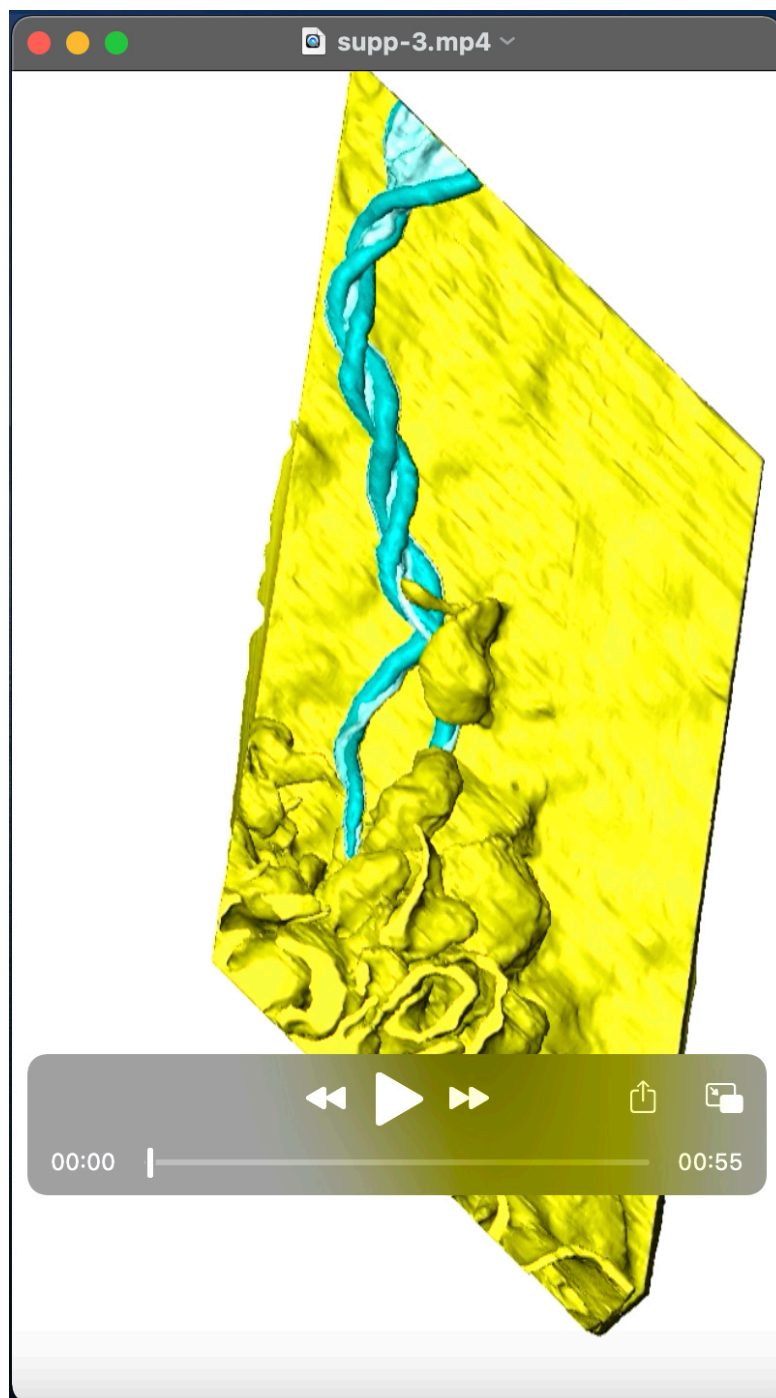


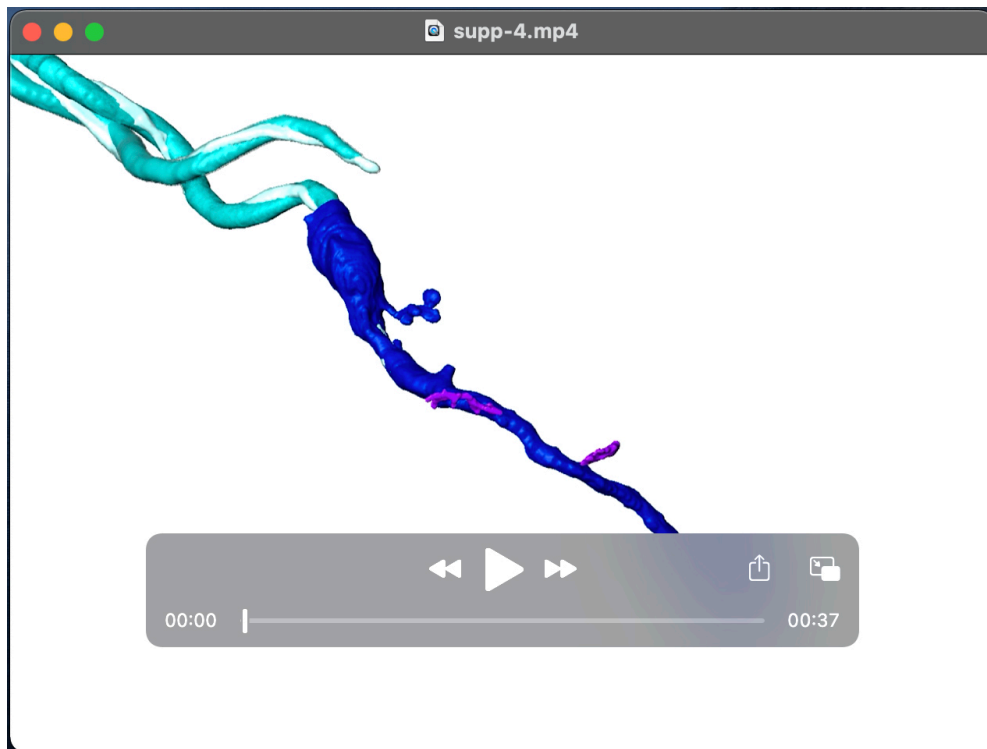
Fig. S1. Internalization of a *Borrelia* cell by a macrophage. (A) Gallery of FIB/SEM images; related to Fig. 2 and Suppl. Video 2. Larger image shows part of a macrophage in contact with several borreliae and embedded in resin (dark border in upper third of image). Dashed yellow box indicates site of detail images shown on the right (A1-A9), corresponding to frame number 310, 315, 321, 333, 340, 347, 355, 358, and 364, respectively, of a total of 782 frames shown in Suppl. Video 3. Red arrowheads indicate *Borrelia* cell whose extracellular part is enwrapped by a coiling pseudopod and whose intracellular part is taken up into a phagosome. Scale bars: 1 μ m.



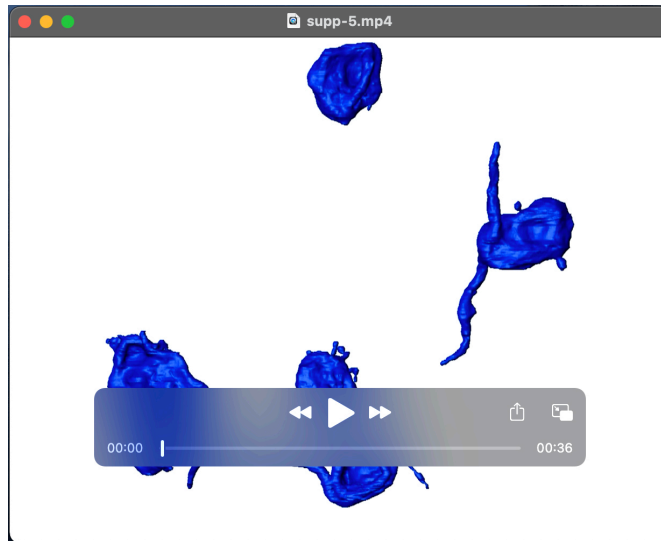
Movie 1. Animation of FIB/SEM generated Image stacks of whole macrophages in contact with GFP-expressing borreliae. Image stacks were subsequently segmented and reconstructed using AmiraTM software and false colour-coding to visualize respective regions of interest, with macrophage membranes in yellow and internalized borreliae in turquoise. Image width: 18.8 μm . The pixel size of the FIB/SEM series is 5 nm laterally (x/y). This results in a resolution of ~ 12 nm, according to the Nyquist criterion.



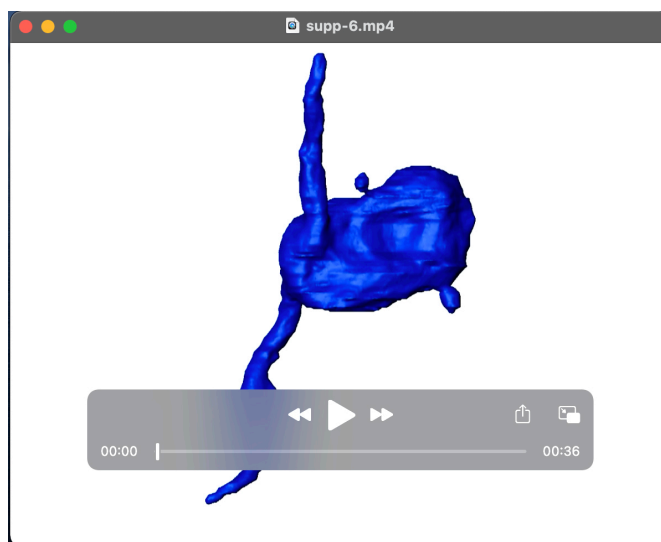
Movie 2. Surface renderings of a captured *Borrelia* cell. Animation related to Figs. 2 and 3. *Borrelia* (turquoise), with endoflagella (light blue), coiled upon itself, with both ends embedded in multiple membrane folds of the macrophage surface (yellow). Transparency of macrophage surface increases as the video progresses, with additional visualisation of ER (magenta) contact sites and also further rendering of the ER. Note that one end of the *Borrelia* cell is wrapped in multiple membrane folds and embedded in a membrane tunnel that extends further into the host cytoplasm than the actual spirochete cell. Image width: 8.8 μm .



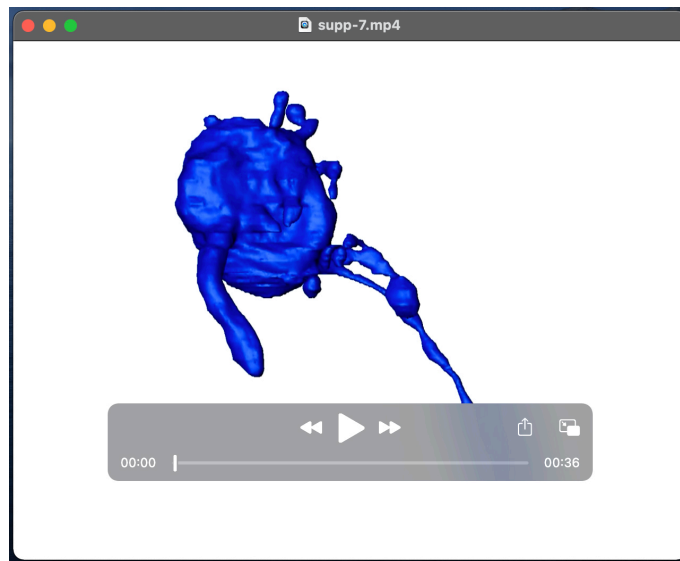
Movie 3. Rendering of *Borrelia* cell with associated phagosome/tunnel and ER. Animation related to Fig. 3 and Suppl. Video 2. *Borrelia* (turquoise), with endoflagella (light blue), coiled upon itself, with one end partially internalized by macrophage membranes (blue), corresponding to a nascent phagosome and a *Borrelia*-free membrane tunnel. Transparency of phagosome/tunnel membrane increases as the video progresses, with additional visualisation of ER (magenta) contact sites and further rendering of the ER, from different perspectives. Image width: 10.4 μm .



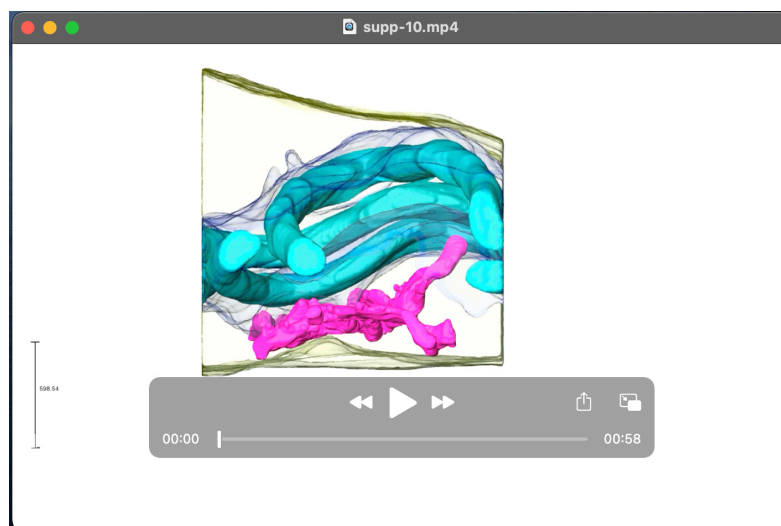
Movie 4. *Borrelia*-containing phagosomes within a single macrophage, in various stages of compaction. Animation from Fig. 4B,C. Surface rendered in yellow, with ER contact sites in magenta, with increased transparency as the video progresses. Internalized *Borrelia* cells shown in turquoise. Image width: 18.6 μm .



Movie 5. Membrane tubulation at a single *Borrelia*-containing phagosome. Animation from Fig. 6B1,C1. Individual phagosome enlarged from video 6. Surface rendered in blue, with increased transparency as the video progresses. Internalized *Borrelia* cells shown in turquoise. Note sites of membrane tubulation at upper and lower side of the compacted part of the phagosome. Image width: 9.2 μm .



Movie 6. Membrane tubulation at a single *Borrelia*-containing phagosome. Animation from Fig. 6B2,C2. Individual phagosome enlarged from Suppl. Video 4. Surface rendered in blue, with increased transparency as the video progresses. Internalized *Borrelia* cells shown in turquoise. Note multiple sites of, occasionally pronounced, membrane tubulation. Image width: 7.4 μm .



Movie 7. The ER forms a site of close contact with a *Borrelia*-containing phagosome. Animation from Fig. 7. Surface rendered in blue, with ER in blue and internalized *Borrelia* cell in turquoise. Site of close ER contact is fully coloured, with increased transparency of the more distal parts of the ER network as the video progresses. Scale bar: 598 nm.