

Captions for supplementary movies

Movie 1:

Example of sprouting process captured by time lapse microscopy for 48 hours with frames 1 hour apart. The video shows the maximum intensity projection where all z-planes are superimposed.

Movie 2:

Demonstration of the algorithm over 48 hours, with frames being 1 hour apart. The algorithm takes in images from all the Z planes as input, but this movie shows the maximum intensity projection of all the Z-planes. Green texts represent the sprout number in the order of their appearance. The cyan circle denotes the location and size of the microcarrier. The yellow and blue circles mark the region where sprouts are detected. Sprout 5 regressed after a hour 42. Since the algorithm keeps track of their locations, it is able to delete sprouts that have regressed during the time frame.