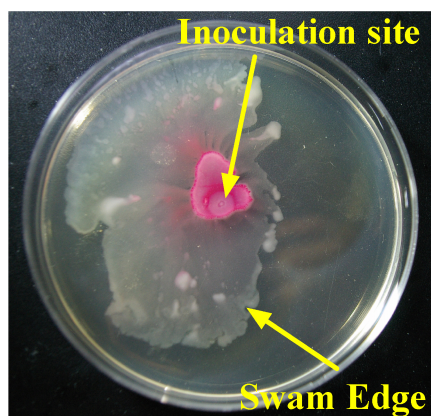
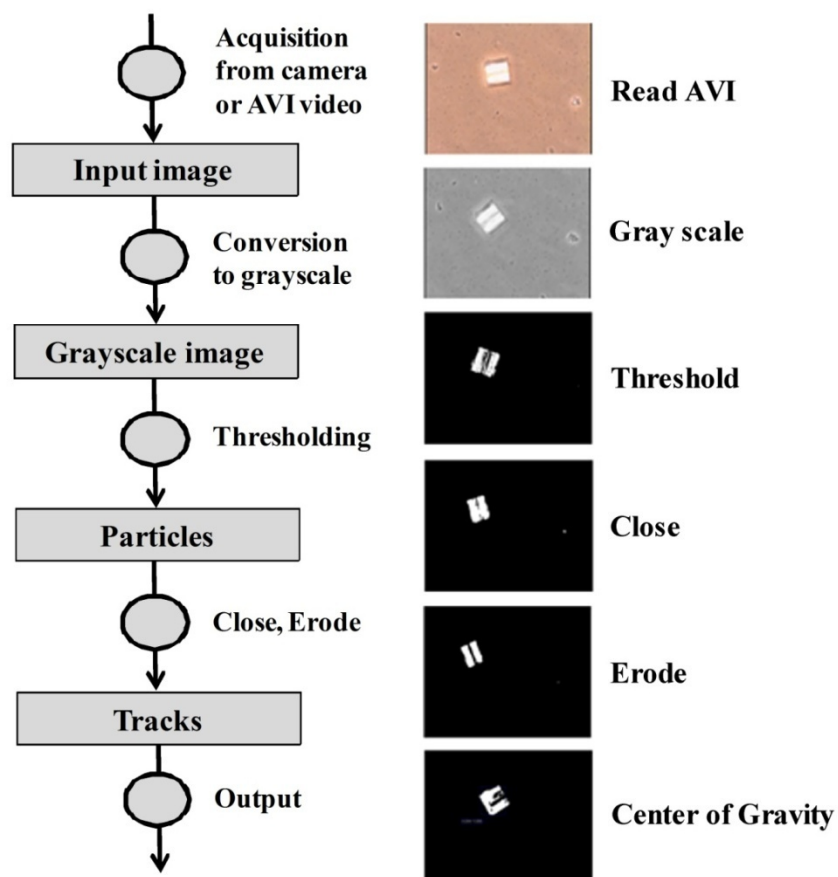


Supplementary Information



S. 1. Photograph of motile bacterial strain of *S. marcescens* showing a swarming colony on a swarm plate.



S. 2. Schematic diagrams for image analysis: a) Step of image processing with RoBo Realm, b) Process of images analysis—Structures tracking an individual video frame of $30\ \mu\text{m} \times 30\ \mu\text{m} \times 30\ \mu\text{m}$ micro cube movement are captured.