Microtubule cytoskeleton behavior in the initial steps of host cell invasion by Besnoitia besnoiti

Besnoitia besnoiti is a protozoan parasite responsible for bovine besnoitiosis. Indirect immunofluorescence showed that isolated B. besnoiti possesses a set of subpellicular microtubules, radiating from the apical end and extending for more than 2/3 of the cell body. Upon interaction with the host cell, B. besnoiti undergoes dramatic modifications of shape and surface, as revealed by atomic force microscopy, accompanied by a distinct tubulin labeling on the posterior region. In the host cell, the microtubule cytoskeleton shows a re-arrangement around the invading parasite suggesting a filamentous interaction with the parasite cytoskeleton during invasion.