

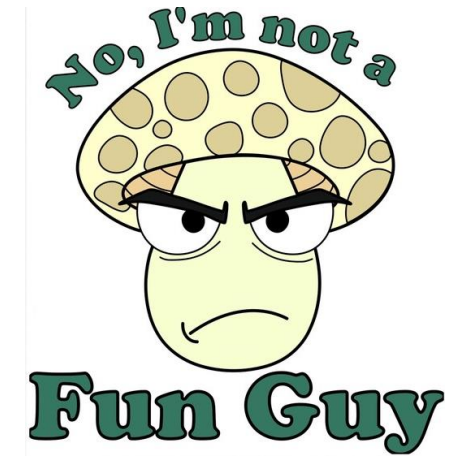
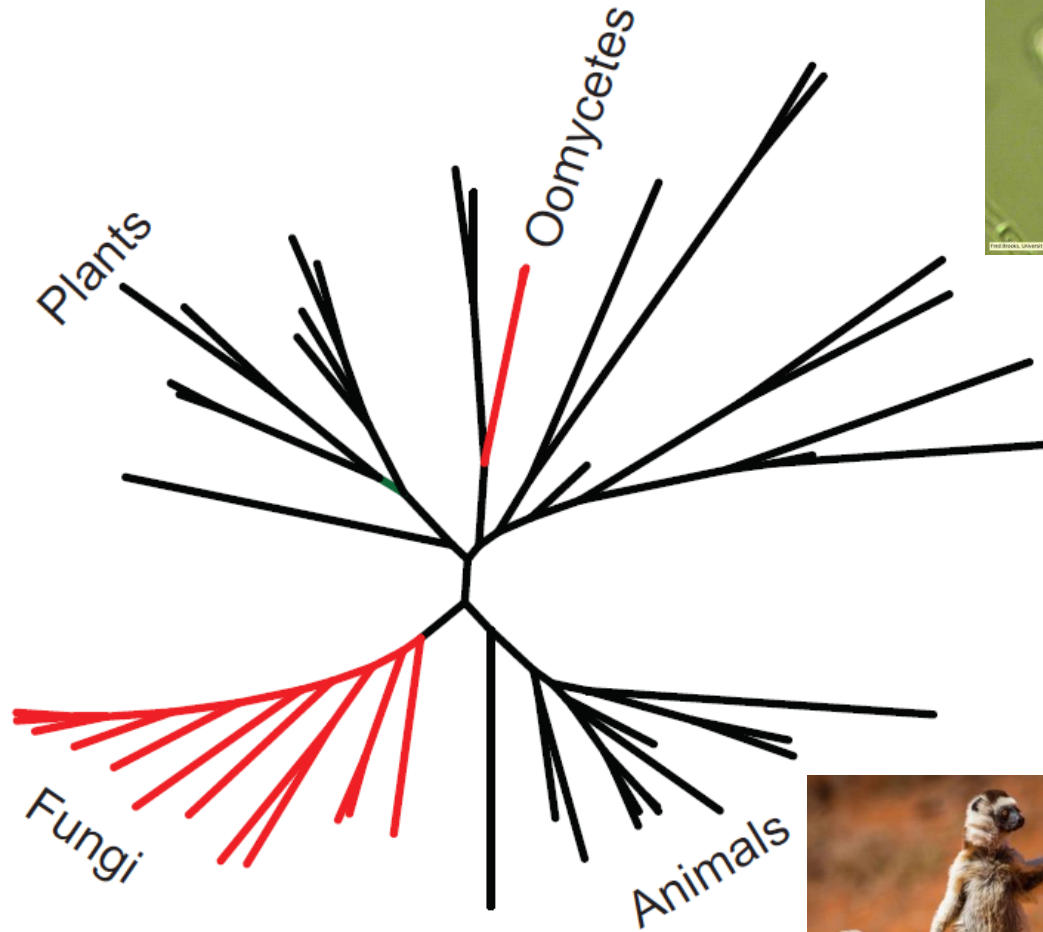
De dynamische organisatie
van het cytoskelet in
Phytophthora-pathogenen

Kiki Kots

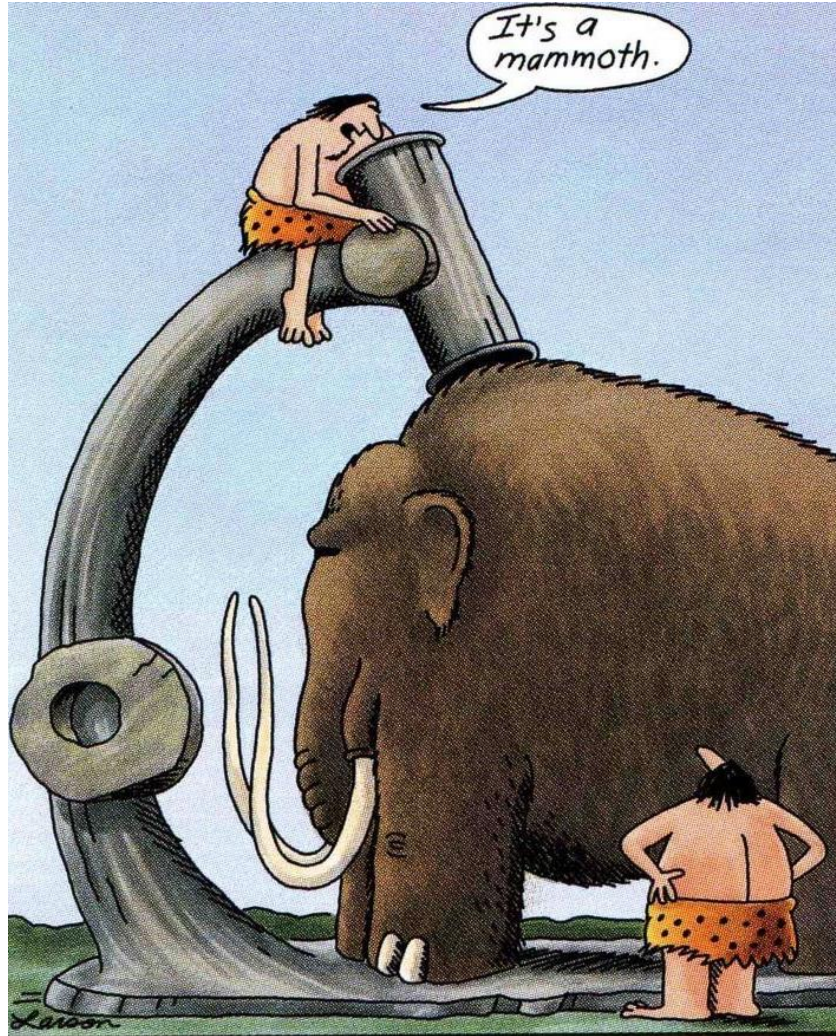
Phytophthora soorten; *Phytophthora infestans* en anderen



Phytophthora is geen schimmel



Het bestuderen van de *Phytophthora* cel

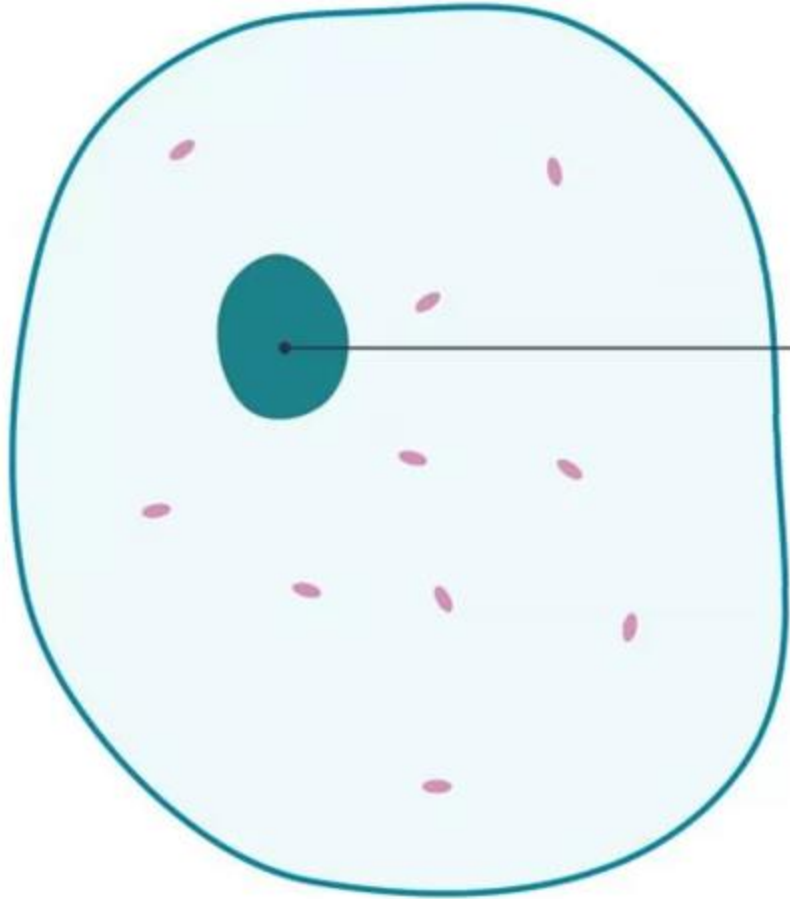


Eerste microscoop

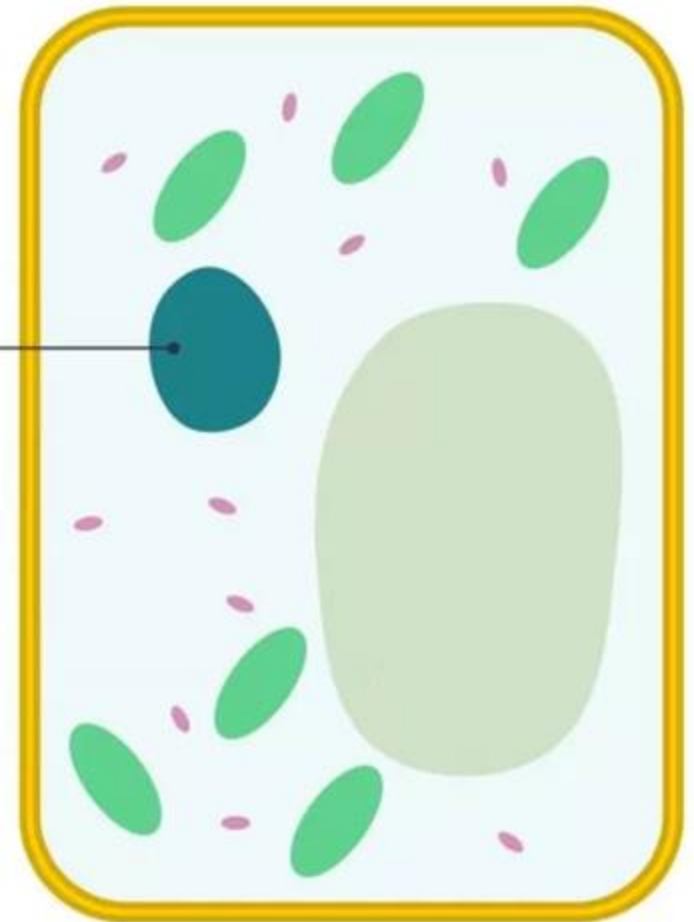


Wat is een cel?

Animal cell

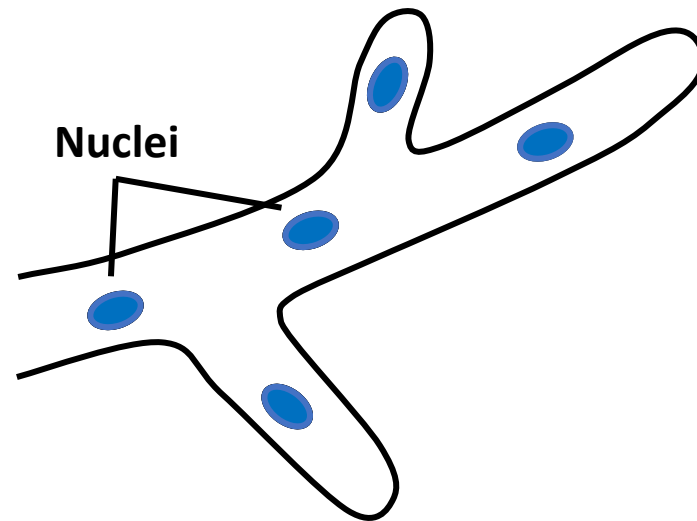
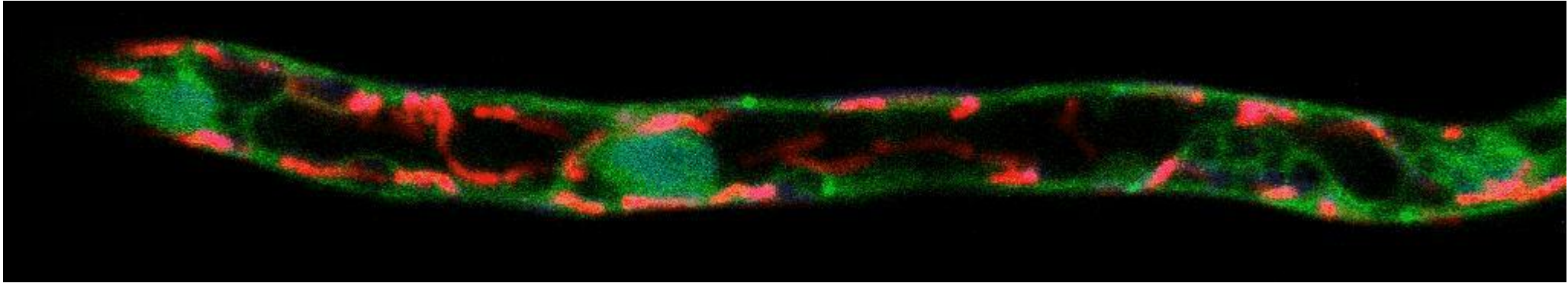


Plant Cell

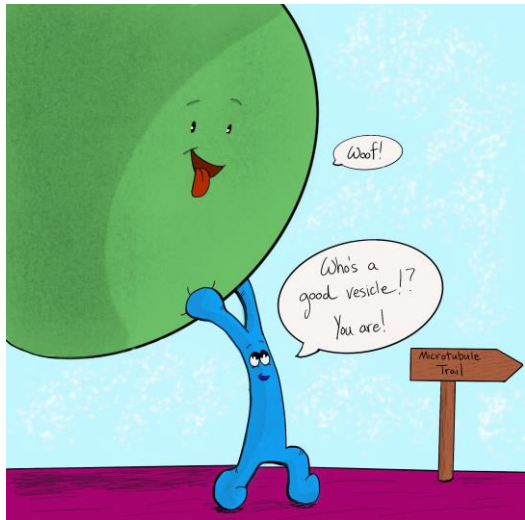
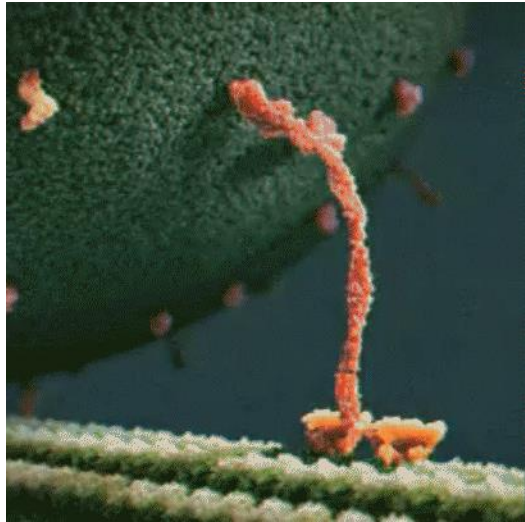


Nucleus

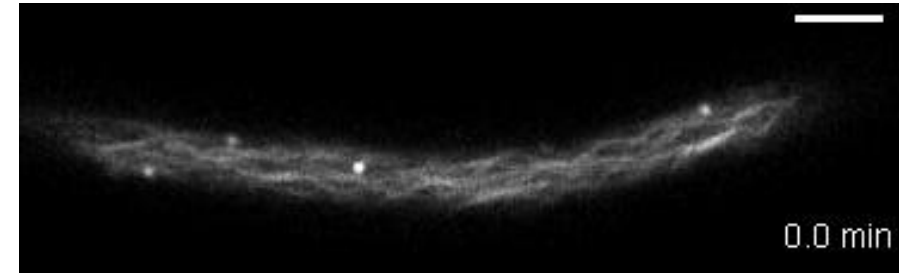
De *Phytophthora* cel



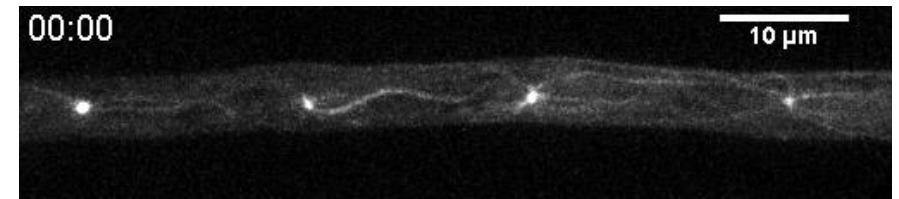
Het cytoskelet – cel infrastructuur



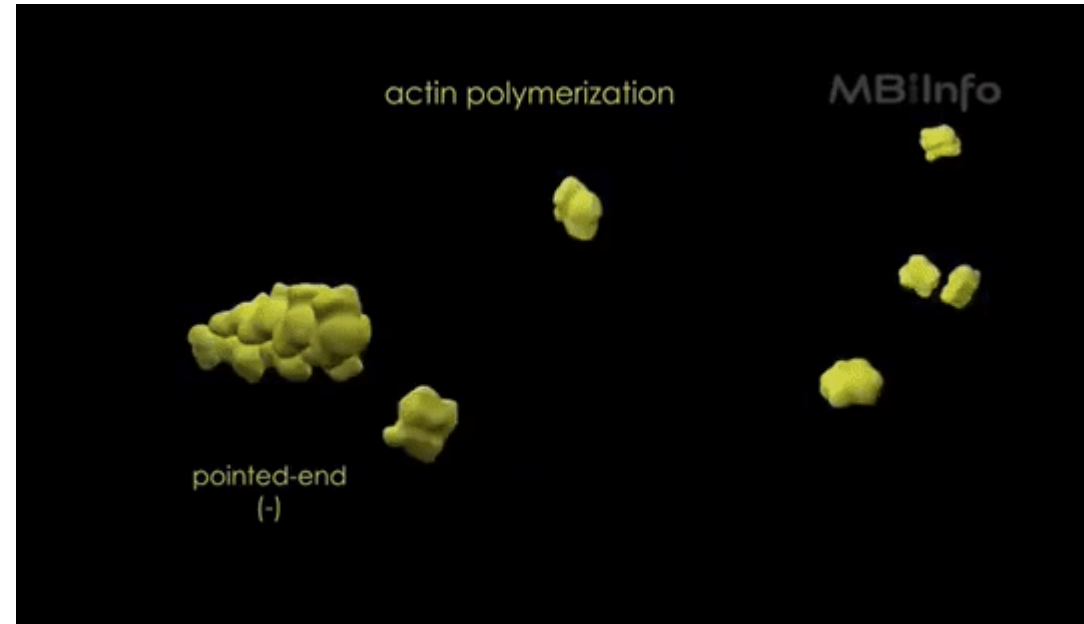
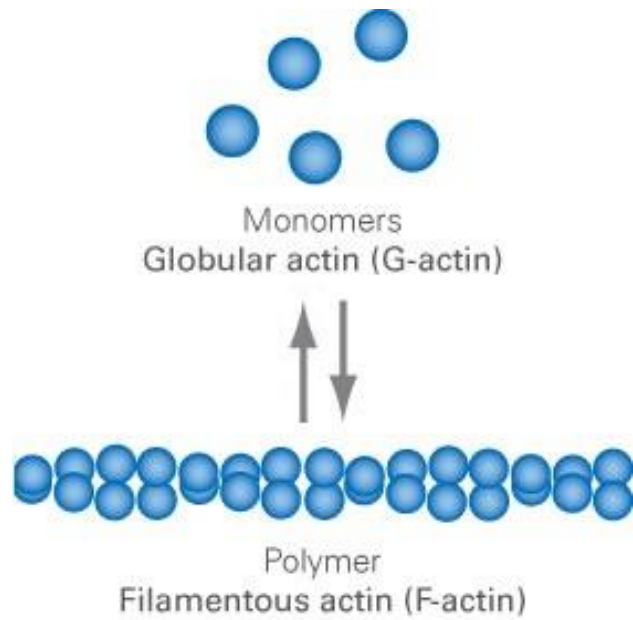
Actin cytoskeleton



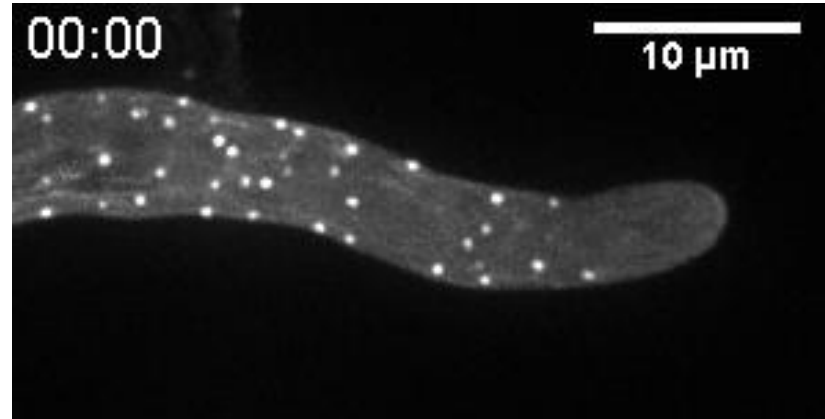
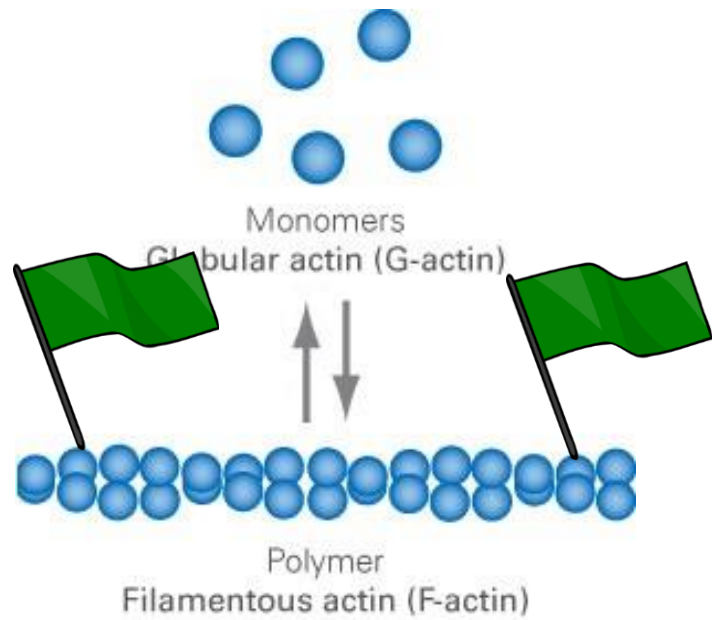
Microtubule cytoskeleton



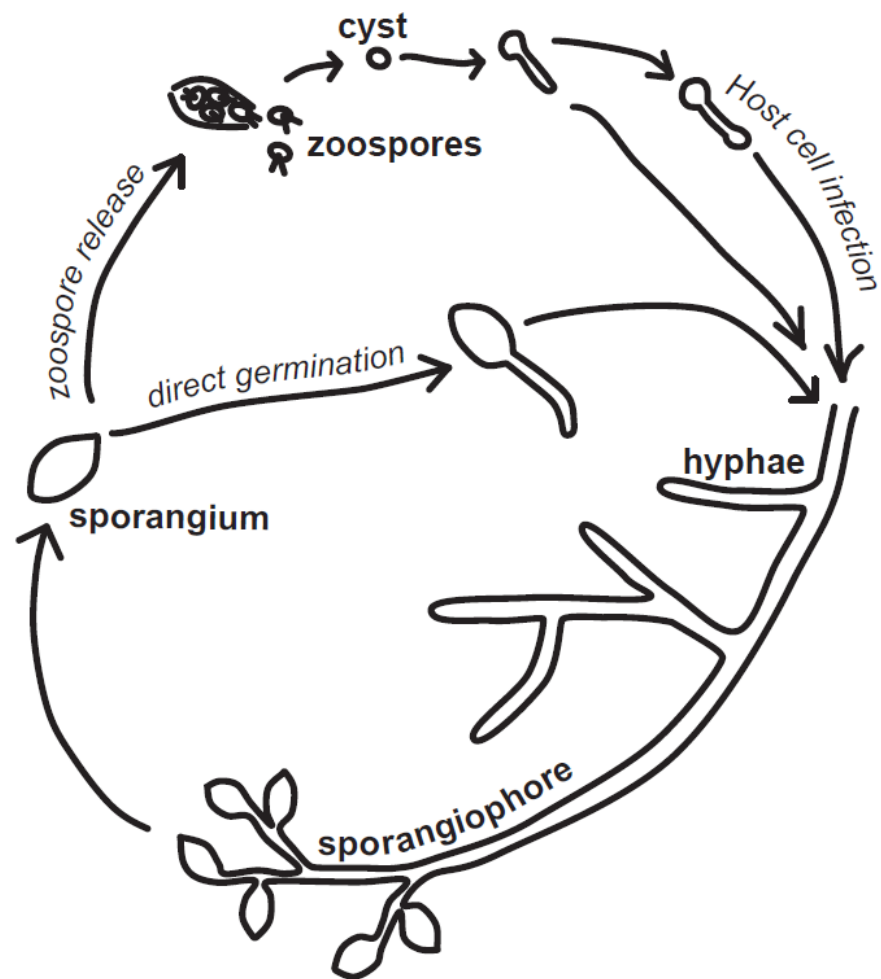
Actine cytoskelet – een dynamisch netwerk



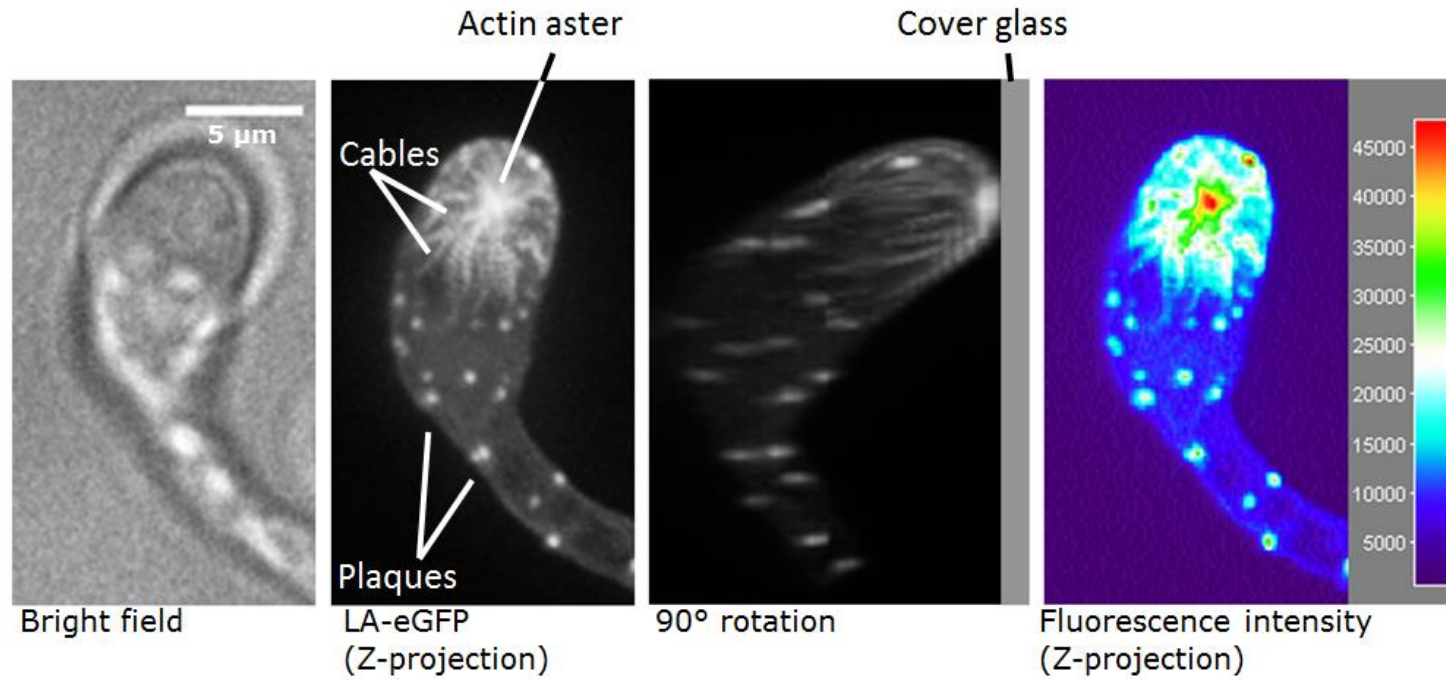
De visualisatie van actine in de cel



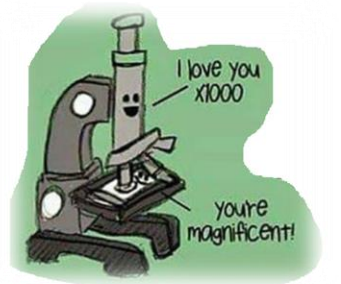
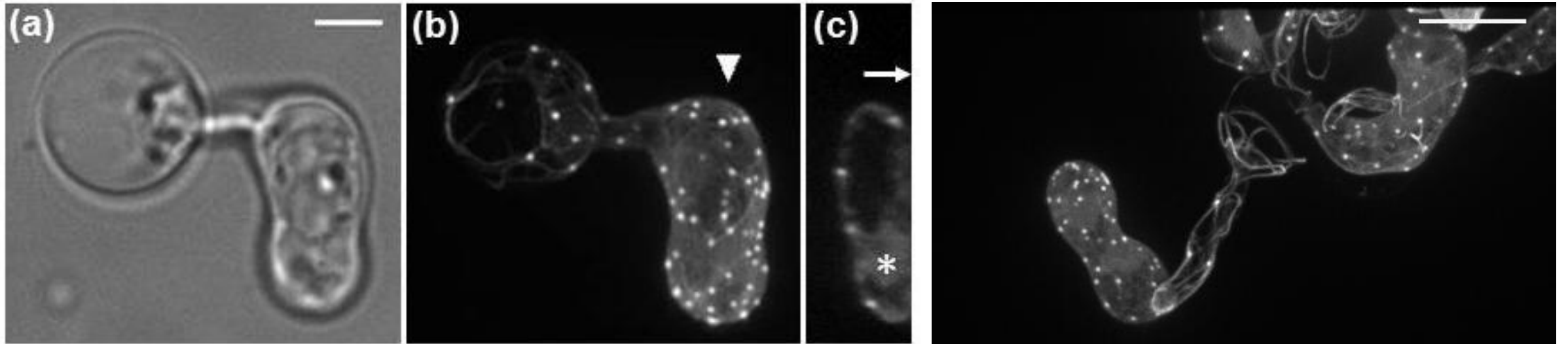
Phytophthora in de aanval



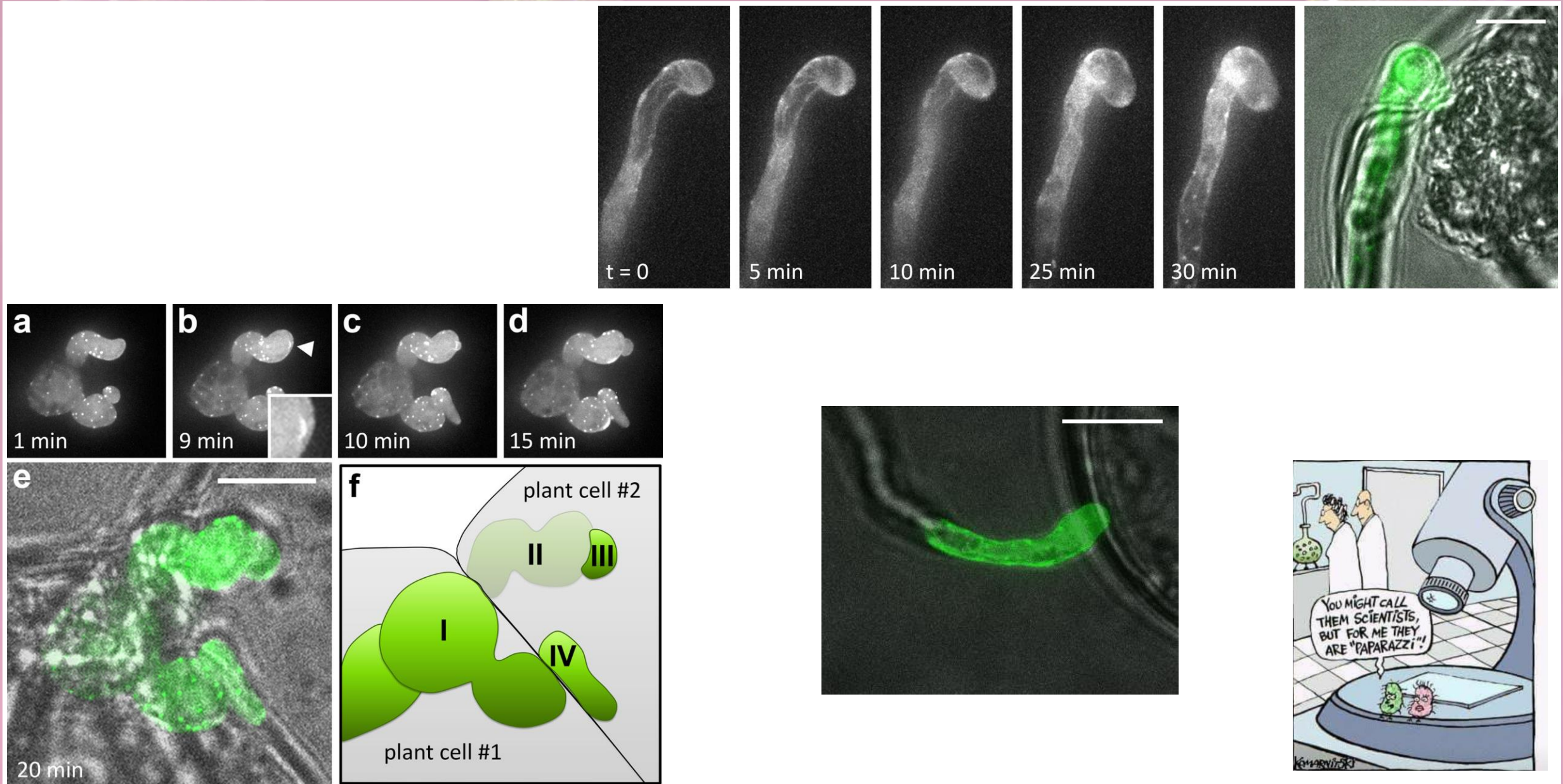
Het actine cytoskelet in invasieve cellen – de actine ster



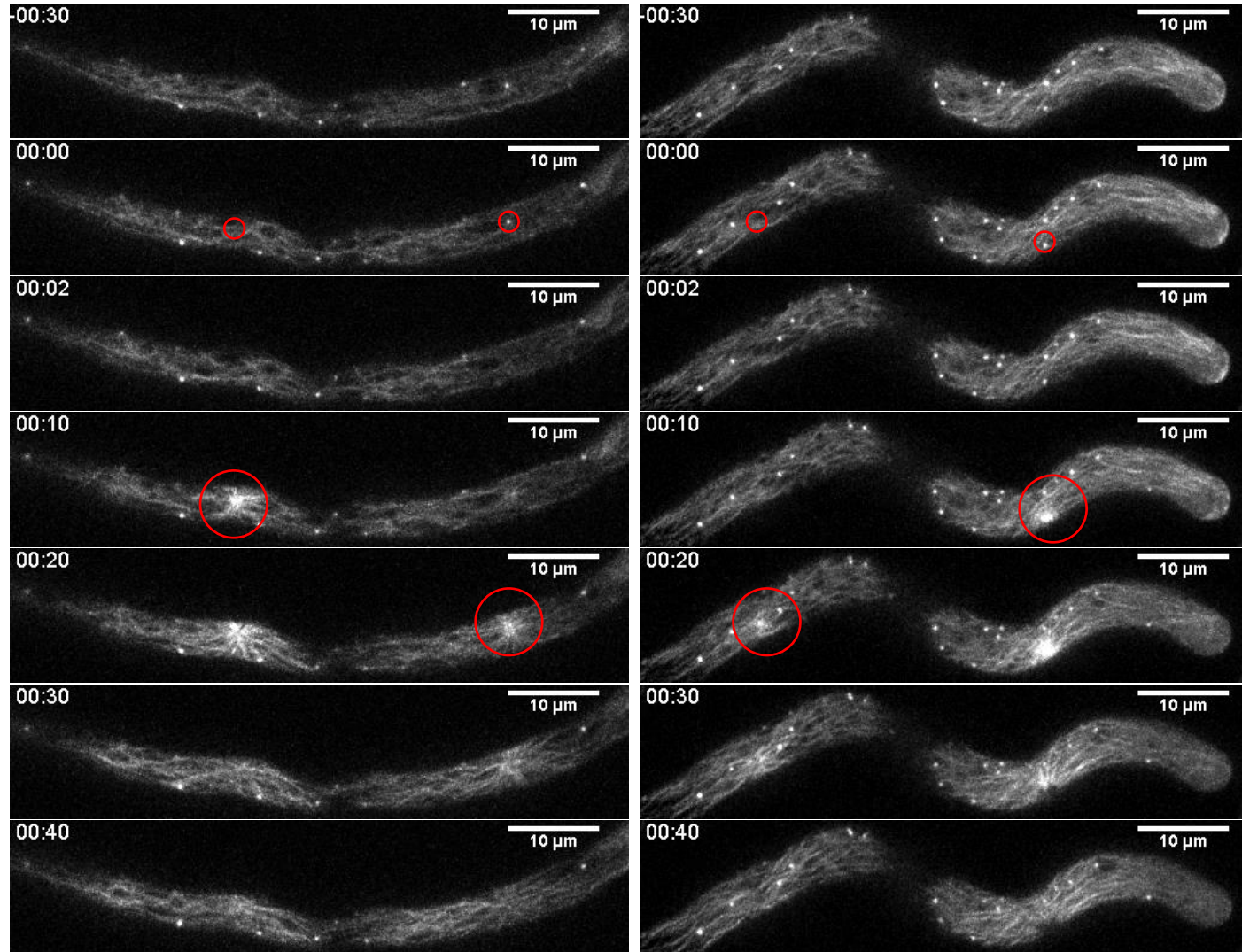
Geen groei – geen actine ster



Het actine cytoskelet tijdens de infectie van de planten cel



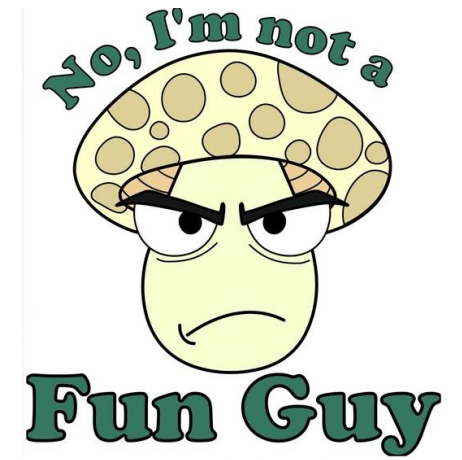
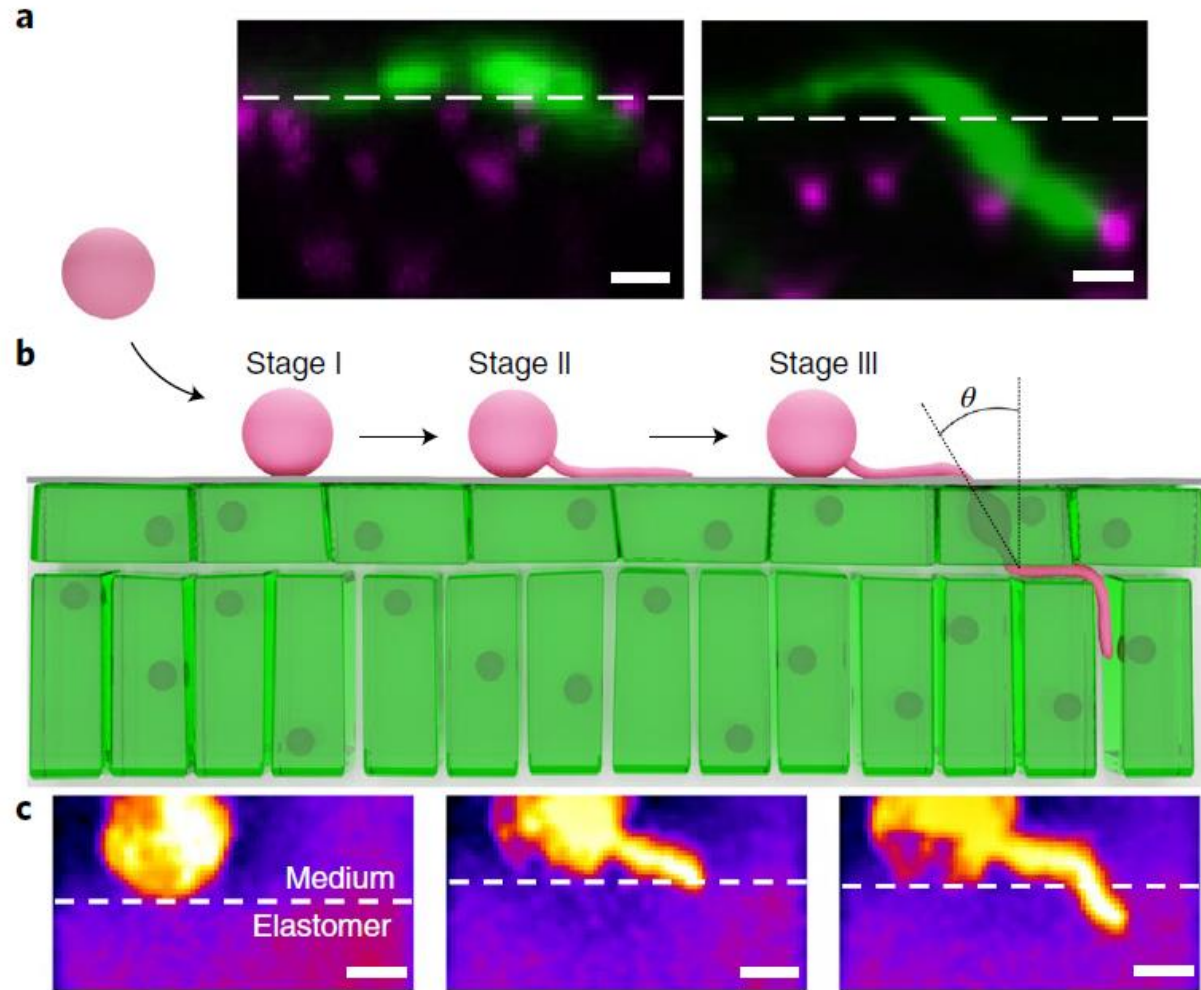
Het actine cytoskelet reageert op 'prikken'



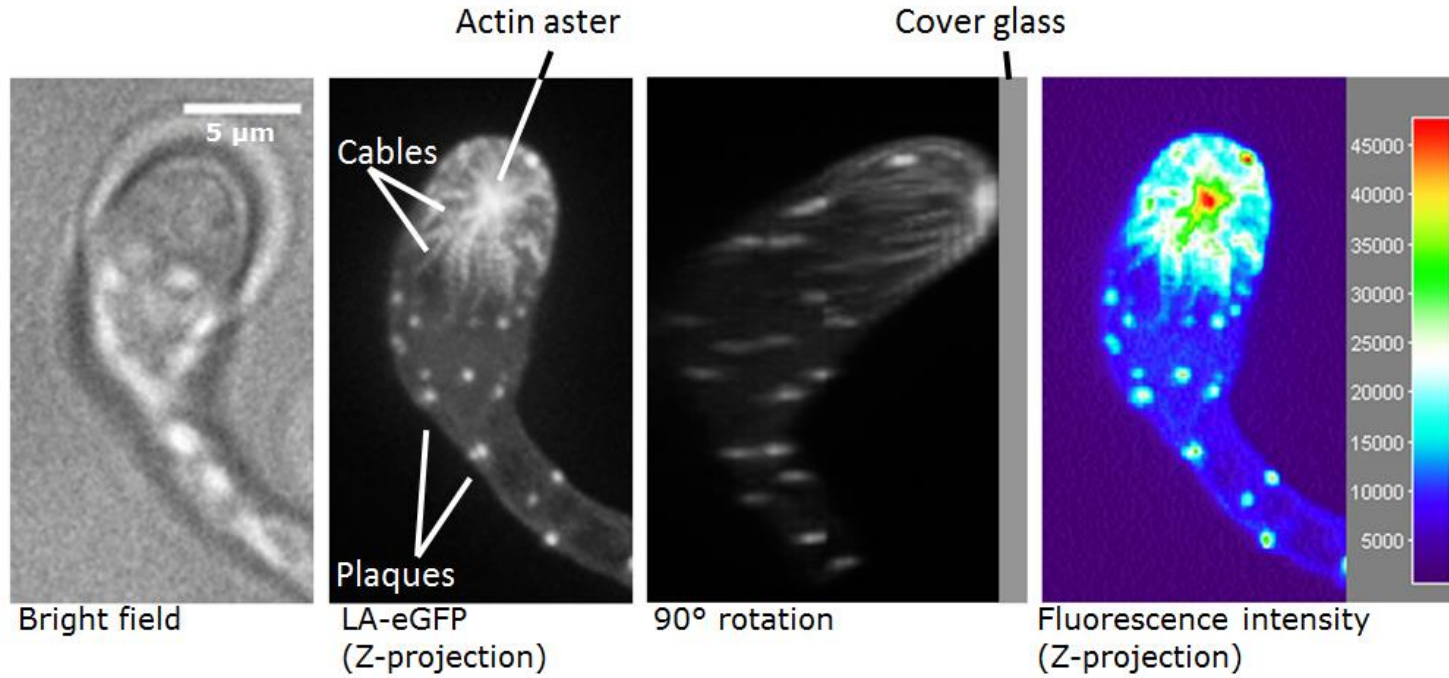
Plantencel infectie op zijn kop



Appressorium?



Wat heb ik geleerd van mijn werk aan *Phytophthora*?



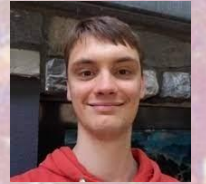
Dank!

Oud leden Pinf groep:

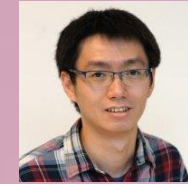
Francine Govers
Klaas Bouwmeester
Johan van den Hoogen
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Shuqing Yang
Sander Rodenburg
Elysa Overdijk
Natalie de Kruijff



Harold Meijer



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Chenlei Hua



Joris Sprakel

Oud leden Cel Biologie groep:

Tijs Ketelaar
Marcel Janson
Henk Kieft
Elysa Overdijk
Han Tang
Norbert de Ruijter



Hari Priwiratama



Michiel Kasteel

Lijst van publicaties

Meijer HJG*, Hua C*, **Kots K**, Ketelaar T, Govers F (2014). "Actin dynamics in *Phytophthora infestans*; rapidly reorganizing cables and immobile, long-lived plaques." Cellular Microbiology 16(6): 948-961.

Hua C*, **Kots K***, Ketelaar T, Govers F, Meijer HJG (2015). "Effect of flumorph on F-Actin dynamics in the potato late blight pathogen *Phytophthora infestans*." Phytopathology 105(4): 419-423.

Kots K*, Meijer HJG*, Bouwmeester K, Govers F, Ketelaar T (2017). "Filamentous actin accumulates during plant cell penetration and cell wall plug formation in *Phytophthora infestans*." Cellular and Molecular Life Sciences 74(5): 909-920.

Bronkhorst J, Kasteel M, Van Veen S, Clough JM, **Kots K**, Buijs J, Van der Gucht J, Ketelaar T, Govers F, Sprakel J. (2021). "A slicing mechanism facilitates host entry by plant-pathogenic *Phytophthora*." Nature Microbiology 6(8): 1000-1006.

Bronkhorst J*, **Kots K***, De Jong D, Kasteel M, Van Boxmeer T, Joemmanbaks T, Govers F, Van der Gucht J, Ketelaar T, Sprakel J (2022). "An actin mechanostat ensures hyphal tip sharpness in *Phytophthora infestans* to achieve host penetration." Science Advances 8(23), eabo0875

*Gelijke bijdrage