

... d'autres intelligences

Un poulpe...

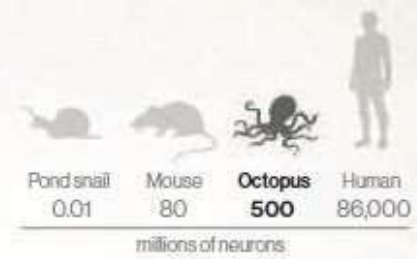
Le Poulpe et le bocal séance d'apprentissage

Laboratoire de biologie marine
île Tatihou

<https://www.youtube.com/watch?v=uvllspjLQcc>

Armed With Intelligence

In number of neurons, octopuses and their relatives far exceed other invertebrates and put rodents, frogs, and many other vertebrates to shame. An octopus's nervous system processes information not just in the brain but also throughout all eight arms and the suckers that line them.



Nervous system chain of command

35 percent
Brain

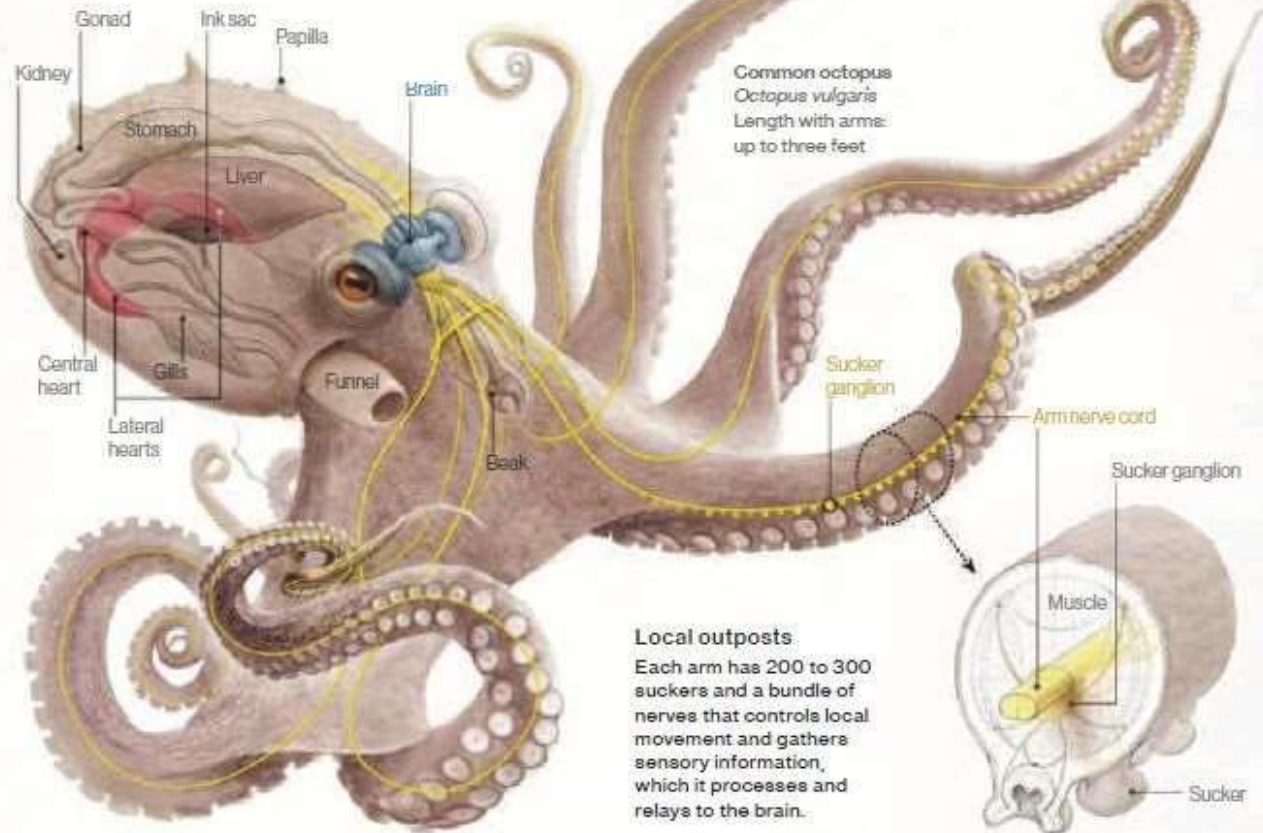
65 percent
Arms

Head office

The brain contains one-third of an octopus's neurons. It handles higher executive functions, such as decision-making, learning, and memory, as well as coordination of complex movements.

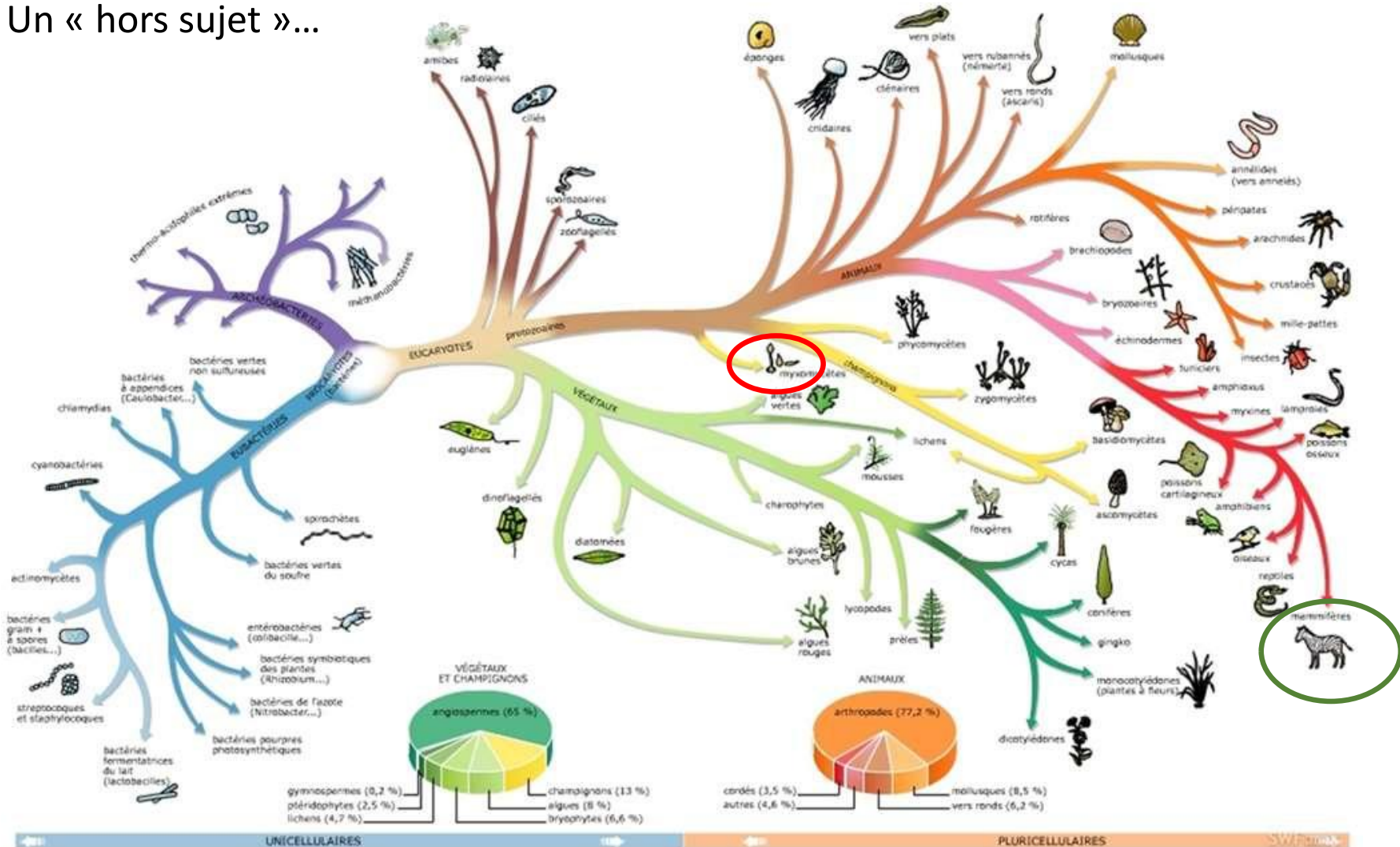
Regional networks

Most of an octopus's neurons are in its arms. Each has interlinked control centers, or ganglia, that relay information to the brain and also independently control movements such as extending or twisting an arm.



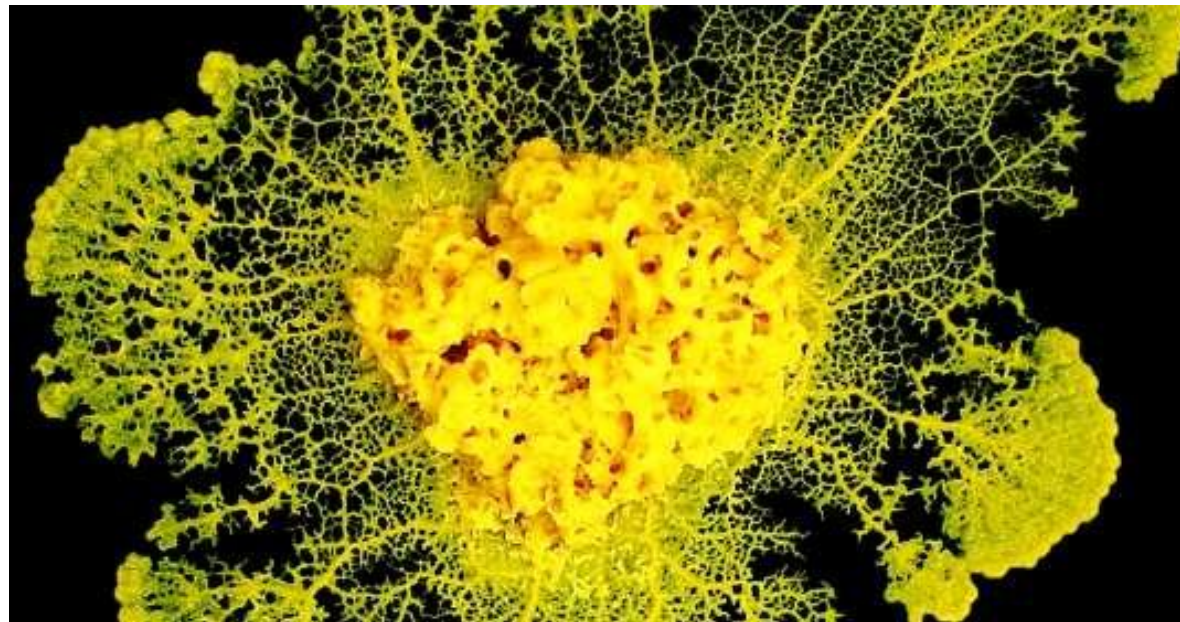
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Un « hors sujet »...



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- ▶ Le « blob » : *Physarum polycephalum*, organisme unicellulaire à plusieurs noyaux (plasmode), ni animal, ni végétal, ni champignon ; embranchement des Amibozoaires, classe des Myxomycètes.



<https://lejournel.cnr.fr/videos/le-blob-la-cellule-qui-apprend>

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Adamatzky (2011)

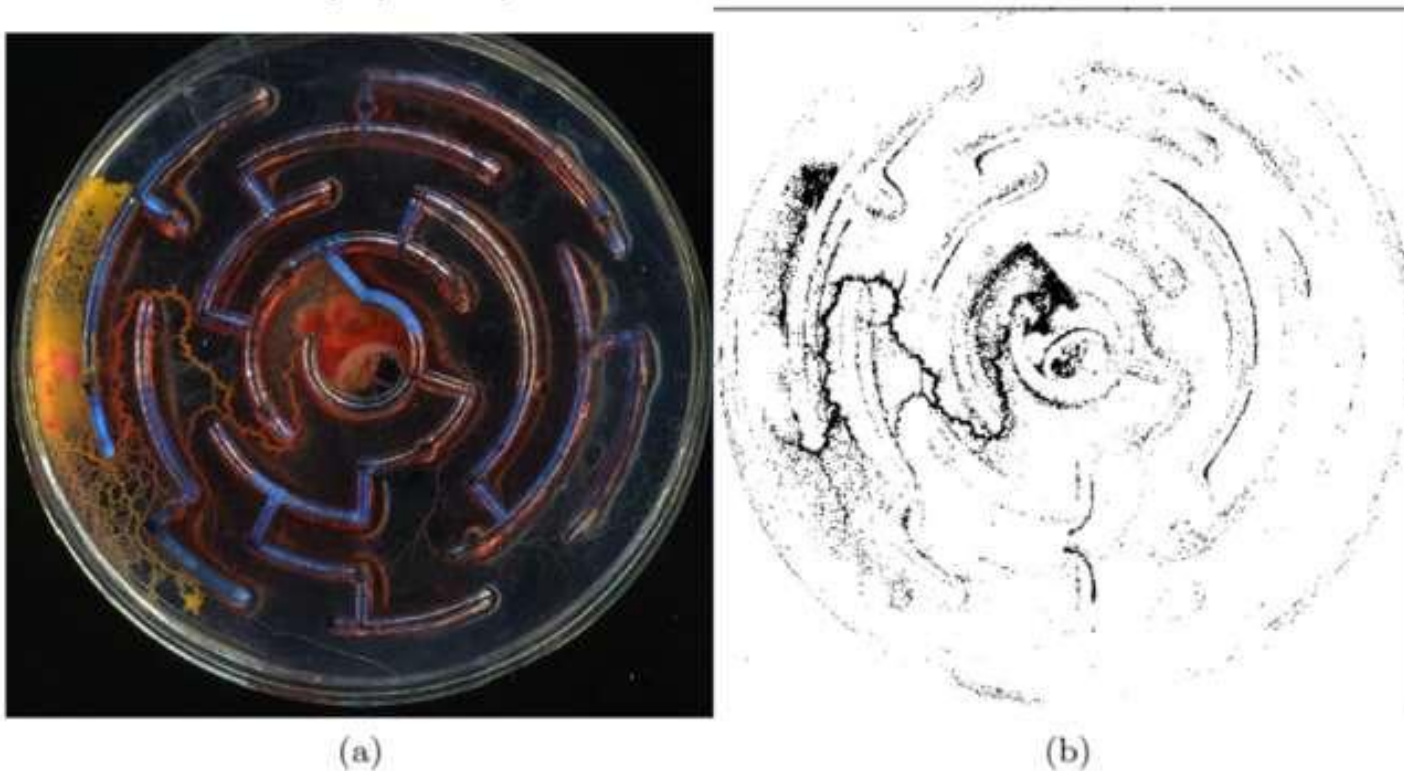
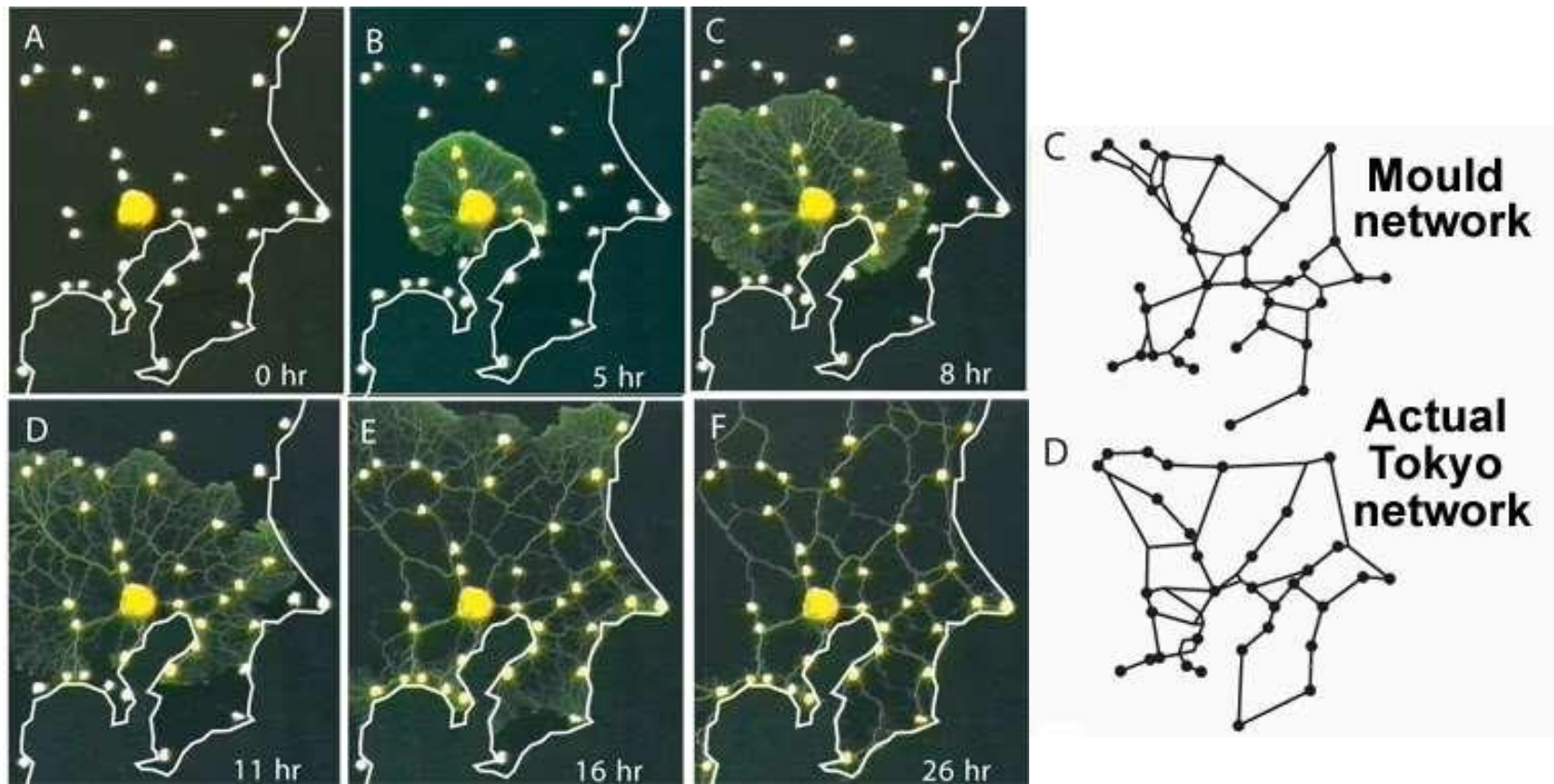


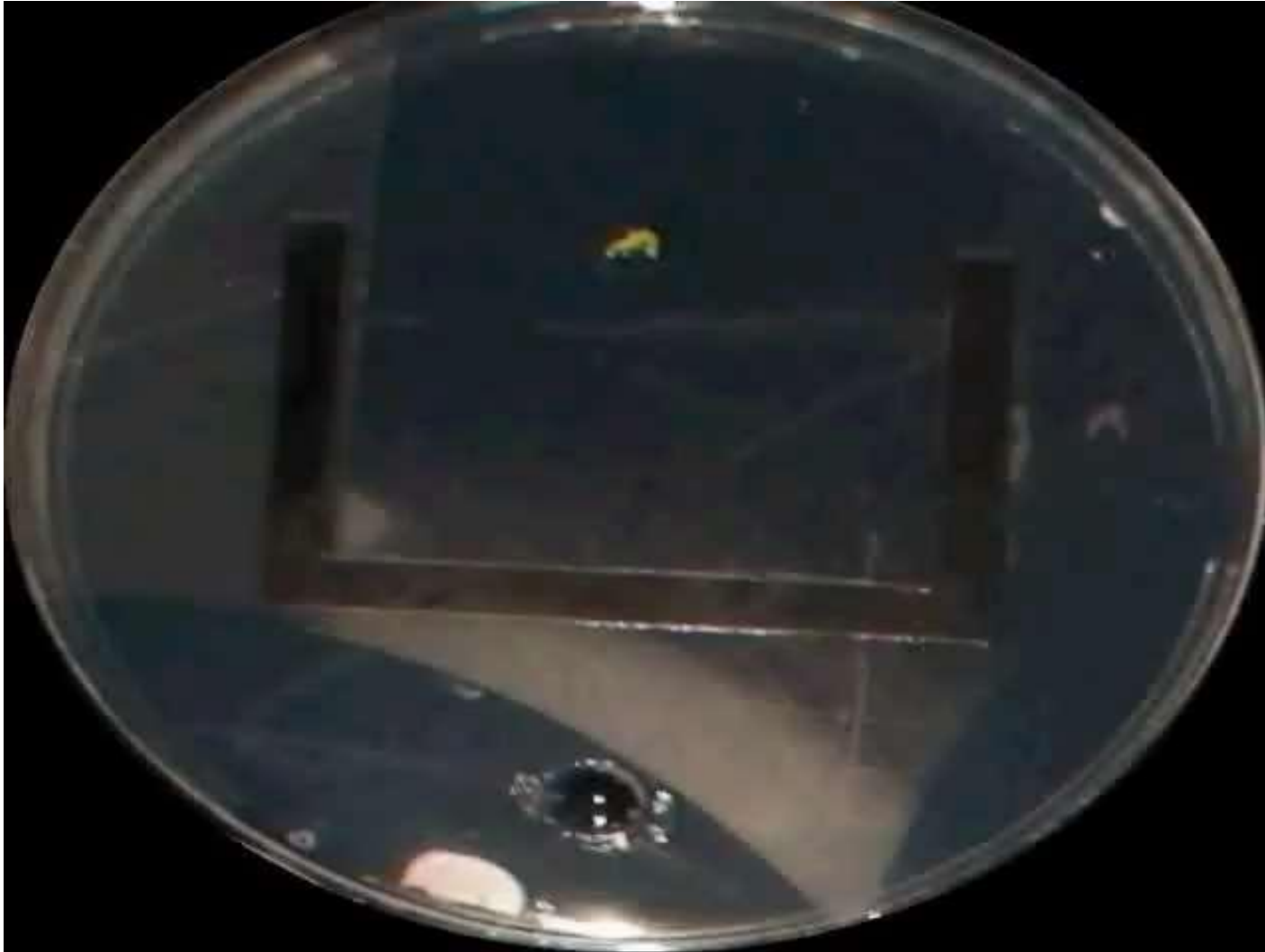
Figure 3: Experimental maze-solving with plasmodium of *P. polycephalum* : plasmodium is inoculated in central chamber and a virgin flake is place in the most peripheral channel, west of the maze. (a) photo of experimental maze, (b) binarised image.

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Tero, A... & Nakagaki, T. (2010). *Science*, 327(5964), 439-442.

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... pour conclure

- ▶ L'intelligence serait-elle la chose la mieux partagée ?
- ▶ La taille du cerveau ne permet pas de prédire les performances cognitives
- ▶ Qu'est-ce qui est plus coûteux :
 - L'**instinct** qui offre une réponse adaptée à toutes les situations ?
 - L'**intelligence** qui permet de construire les solutions en fonction des apprentissages passés ? (cf. intelligence artificielle)
- ▶ Et qu'est-ce qui est le plus efficace ?

... pour conclure



► Est-ce la question la plus importante ?