

CONFÉRENCE

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Arbuscular Mycorrhizal Fungal Genomics: how we got here we are!

Arbuscular mycorrhizal fungi (AMF) are root-inhabiting fungi that form symbioses with their host plants. AMF are made up of coenocytic networks of hyphae through which nuclei and organelles can freely migrate. Mature AMF spores contain hundreds of nuclei obtained directly from the parent mycelium. To our knowledge, AMF are the only known organisms that do not pass through a uninucleate stage in any part of the life cycle, which allows nuclei to diverge into genetically distinct nuclei within the same cytoplasm. AMF are ecologically relevant and contribute to plant biodiversity. Genetics and genomics of AMF remain largely unexplored. An international genome sequencing project (JGI), has been initiated in 2004 and it turned into a nightmare and genome assembly was challenging. However, mitochondrial genomics represent a promising avenue to explore AMF. In this presentation, I will report the complete mtDNA sequences of a broad range of taxa and focus on some species that showed peculiar structures such as *Gigaspora rosea*. *G. rosea* mtDNA encodes two fragmented genes, one of which undergoes group I intron-mediated trans-splicing. I will also present GenoRem project on environmental genomics and phytoremediation.

Vendredi 17 février 2012 à 11 h 30
Pavillon Claire McNicoll, salle Z-255

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