

## Diversity of smut fungi – from taxonomy to evolution

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Systematics of smut fungi dates back to early studies of fungal diversity. However, their morphological and molecular diversity is only studied in the last decades. The talk will introduce the the relevant steps in understanding the phylogeny of this group of plant parasites. Morphological and anatomical data will be presented to highlight the diversity of smut fungi. Molecular phylogenies will be used to link these morphological data to phylogeny and evolution. Finally, comparative genomics will present some insight into the understanding of potential effects of selection in this group of fungi.