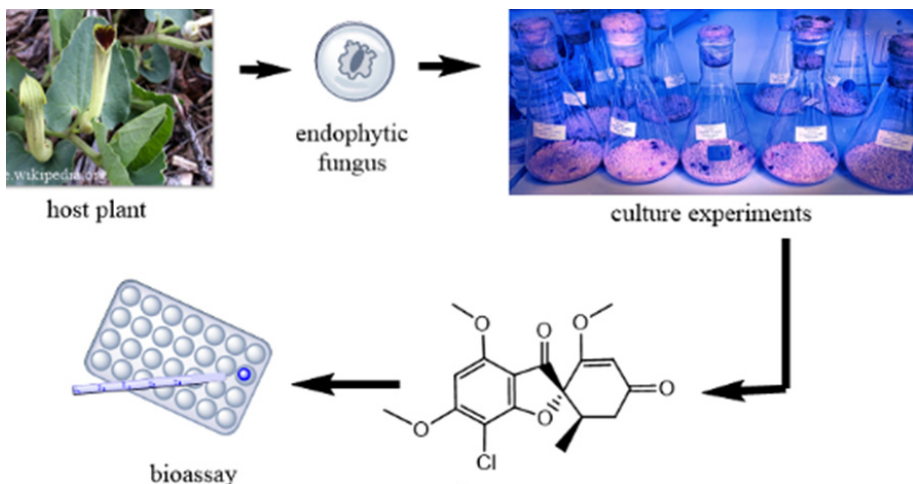


OSMAC and co-culture approaches for diversifying secondary metabolites from endophytic fungi



Endophytic fungi are an important source for bioactive secondary metabolites that can be of potential use as lead compounds for pharmaceutically relevant drugs. This fact encourages us to employ different culture approaches such as OSMAC (One Strain Many Compounds) and co-cultivation of fungi with bacteria to endophytic fungi isolated from plants or marine organisms collected from biodiversity hot spots. Isolated fungal compounds are investigated for their anti-tumor and antibiotic activity in collaboration with other groups within the GRK. Active compounds are subjected to structure elucidation using one and two dimensional NMR spectroscopy, HRESIMS spectrometry, and in case of chiral compounds electronic circular dichroism (ECD) spectroscopy or X ray diffractometry. As part of my studies, the endophytic fungus *Stemphylium globiliferum* was investigated and 16 compounds were obtained, from which three proved to be new natural products. Further studies are presently being carried out on endophytic fungi by applying the co-culture and OSMAC (One Strain Many Compounds) approach, in order to enhance and diversify the production of bioactive secondary metabolites.

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