



20ª REUNIÃO ANUAL DO INSTITUTO DE BOTÂNICA

25 a 29 de novembro de 2013

Tema - Botânica: diversidade de cores e formas

Mating system studies in *Flaviporus* (Polyporales) species

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The mating type genes of basidiomycetes are responsible for determining sexual compatibility between different individuals. Polypore species that require different mating types for cell fusion and reproduction are called heterothallic and can be of two types: bipolar or tetrapolar. The bipolar species present multiallelic genes in a single locus (A) and two mating types can be segregated from a single basidiome. Tetrapolar species, on the other hand, present multiallelic genes in two loci (A and B) and four mating types can be segregated from one basidiome. The biology of the polypore genus *Flaviporus* is poorly studied and information on mating system is known only for *Flaviporus venustus*, which presents bipolarity. In order to expand the knowledge on biological characteristics of the genus, mating type studies were conducted on *Flaviporus subhydrophilus* and *Flaviporus liebmannii*. Sporeprints were obtained from fresh basidiomes collected in southern Brazil and inoculated on PDA and Water Agar. Due to the difficulty of spore germination in *F. liebmannii* in previous attempts, the plates were dusted with activated charcoal after the inoculation of basidiospores in order to remove inhibitory substances in agar. *F. subhydrophilus* spores germinated 5-6 days after inoculation, while *F. liebmannii* germination started only a month after inoculation. Pairings of ten monosporic cultures of *F. liebmannii* and *F. subhydrophilus* showed that both present a tetrapolar mating system. The difficulty of spore germination in some *Flaviporus* species can be a hindrance in biology studies of the genus. This is the first record of spore cultures in these species. In polypores, the occurrence of more than one mating type in a single genus is known but uncommon. Further studies including morphology, polarity and molecular data are necessary to clarify this question and help understand the biology and systematic of the group and its relation with other genera.

Key words: basidiomycota, polatiry, culture compability.

Financial support: FAPESP.