

Characteristics of "Fungal" Pheromones

1. Relatively low mw
2. Produced and released in response to external conditions (sometimes even mating partner)
3. Passively transported to mating partner where it elicits specific morphogenetic and biochemical responses
4. The best known systems:
 - a. Sirenin (chemotaxis) system in *Allomyces* (Chytridiomycota)
 - b. Steroid sex hormone system of *Achlya* (Oomycota)
 - c. Trisporic acid systems of the Mucorales (Zycomycota)
 - d. Peptide mating factor system in *S. cerevisiae* and other Hemiascomycotina and Hetero-basidiomycotina

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Mating-type TA system

1. Subject to overriding nutritional control (probably catabolite repression)
2. Plus 2 other repression systems that --> p+ & p- prohormones
 - a. these are insensitive to derepression by TA (derepression is by appropriate prohormone)
 - b. act differently in the two mating types*

* in plus strains repression prevents synthesis of enzymes necessary to form 4 keto group of TA

* in minus strains it prevents the synthesis of the enzymes forming the 1-carboxyl group

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