

Topic 9: Introduction to Subcutaneous Mycoses and Dematiaceae

The Subcutaneous Mycoses

1. Chromoblastomycosis^{#**+}
2. Subcutaneous Phaeohyphomycosis⁺⁺⁺
3. Mycotic Mycetoma^{**++}
4. Subcutaneous Zygomycosis^{*}
5. Lobomycosis (*Loboa lobo*)⁺⁺⁺
6. Sporotrichosis (*Sporothrix schenckii*)^{# +?}

#	=	classical subcutaneous mycosis
*	=	caused by a number of species or presumed species (form-species)
+	=	caused exclusively by black fungi
++	=	often caused by black fungi
+++	=	<i>Lacazia lobo</i> (newest)

Note: Dermatomyces = disease caused by black fungus^{**} vs Dermatophytosis vs Dermatomyces

****Dematiaceae - Form-Family**
Moniliales - Form-Order
Hyphomycetes - Form-Class (mostly).

Dematiaceae* - Restrictive Definition

Fungal form-family with members that are Blastomycetes, Hyphomycetes, and possibly some Coelomycetes, which form brown to black vegetative and reproductive structures due to the deposition of melanin in their cell walls.

* Form-family technically of black Hyphomycetes, but examples of possibly closely related forms, if sexual cycles were known, among Blastomycetes and Coelomycetes. Also dimorphic and polymorphic form-species may be among latter.

* Dematiaceous fungi = melanized black fungi = phaeoid fungi

* DNA sequencing suggests most are members of the Chaetothyriomycetales order of Loculoascomycetes (Chaetothyriomycetes), although some may be members of the Dothidiales order of Loculoascomycetes (Dothidiomycetes: see p. 3 of your Reference Guide to Classification).

Dematomyces*

Mycoses caused by dematiaceous (phaeoid) fungi

1. Chromoblastomycosis²
2. Cladosporiosis (Cerebral Chromomycosis)³
3. Dematiaceous Phaeohyphomycosis^{1,2,3}
4. Dematiaceous Mycetoma²= Black Grain Mycetoma
5. Tinea nigra¹
6. Piedra (Black)¹

* Thus, superficial,¹ and subcutaneous² and systemic³

Dematomyces
vs
Dermatomyces
vs
Dermatophytoses

Most agents of these "Dematomyces" are Fungi Imperfecti, Hyphomycetes, Moniliales, Dematiaceae.

Main Agents of "Dematomyces"*

Mycosis	Agent
Chromoblastomycosis	a. <i>Cladophialophora carrionii</i>
	b. <i>Fonsecaea pedrosoi</i> **
	c. <i>F. compacta</i>
	d. <i>Phialophora verrucosa</i> **+
Cladosporiosis	e. <i>Cladophialophora bantiana</i> **+
	f. <i>Ramichloridium mackenziei</i> **
Dematiaceous Phaeohyphomycosis (subcutaneous Phaeohyphomycosis)	g. <i>Exophiala jeanselmei</i> +
	h. <i>E. spinifera</i>
	i. <i>P. richardsiae</i>
	j. <i>P. parasitica</i>
	k. <i>Wangiella dermatitidis</i> **+***
Dematiaceous mycetoma (black grain mycetoma)	l. <i>E. jeanselmei</i>
Tinea nigra	m. <i>Maderella mycetomatis</i>
Black Piedra	n. <i>Hortaea werneckii</i> ++
	o. <i>Piedraia hortae</i> ++ (teleomorphic name)

*Some authors include all as agents of Phaeohyphomycosis

** also cerebral chromomycosis/phaeohyphomycosis)

***Some authors prefer *Exophiala dermatitidis*

+ systemic phaeohyphomycosis

++ superficial phaeohyphomycosis