APPENDIX III

DETERMINING CYCLOHEXIMIDE RESISTANCE OF AN ISOLATE

I. Purpose

To rule out or help confirm the presence of a possible dimorphic fungus or dermatophyte. Normally used in the identification of white moulds.

The following pathogenic fungi are resistant to Cycloheximide:

Blastomyces dermatitidis
Histoplasma capsulatum
Coccidioides immitis
Sporothrix schenckii
Paracoccidioides brasiliensis
Trichophyton sp.
Microsporum sp.
Epidermophyton floccosum

Cycloheximide inhibition rules out the above fungi. Resistance to cycloheximide **may** indicate one of the above pathogens.

II. Procedure

1. Subculture the isolate to Potato Dextrose Agar (PDA) and Mycosel Agar (MYC) and incubate at 28^0C (or RT). MYC contains cycloheximide.

2. Observe periodically for 7-10 days or until good growth on one or both media.

III. Interpretation

i) PDA+/ MYC + : Fungus **MAY** be one of the above listed pathogens.

ii) PDA +/ MYC - : Fungus is **NOT** one of the ABOVE listed pathogens.

iii) PDA -/ MYC - : Test invalid, repeat.

NB: *Penicillium marneffeii* (dimorphic fungus) is inhibited by cycloheximide.

IV. Reference

M.R. McGinnis. Laboratory Handbook of Medical Mycology1980, Academic Press.