

5. Title Support Activities  
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The major support efforts were diagnostic services which were provided the U.S. Embassy Medical Unit, the 5th U.S. Field Hospital or referrals from SMRL physicians. One hundred twenty eight specimens were received and fungi recovered include: Candida albicans (24), Microsporium canis (5), Trichophyton mentagrophytes (14), Trichophyton rubrum (13). Tinea versicolor was diagnosed in 15 individuals.

The mycology section has been serving as a reference laboratory for the identification of yeasts isolated in the venereal disease studies or recovered from the intestinal tract as part of the total flora determinations in the diarrhea studies.

Histoplasmin skin tests were applied as a diagnostic aid on six referred patients.

In July three specimens in holding medium were received, from Viet Nam, for fungus culture. Pseudomonas pseudomallei was recovered from these specimens thereby confirming one of the first cases of melioidosis to occur in U.S. personnel in Viet Nam.

#### GENERAL SUMMARY

1. Three thousand six hundred ninety lifetime residents from seven areas of Thailand (Korat-central plateau; Chiangmai-north; Udonthani and Ubol-northeast; Bangkok-central plains; Chanthaburi-southeast and Songkhla-southern peninsula) were skin tested with histoplasmin. The greatest number of reactors was found to be in the southern peninsula where the hypersensitivity rate exceeded 24 per cent. Rates in the central plains and southeast approximated 18 to 19 per cent while rates in the central plateau and the northeast areas of Thailand were between 5 and 6 per cent. These data indicate a low endemicity for Histoplasma capsulatum in most areas of Thailand.

2. Cryptococcus neoformans was isolated from pigeon and cuckoo habitats, and constitutes the first isolations from natural substrates in Thailand. Isolations have been made from materials collected in Udonthani (northeast) Bangkok (two sites) and Chanthaburi (three sites). These isolations confirm the ecologic habitat of the organism, its widespread distribution and the reason cryptococcosis is one of the most important systemic mycotic diseases in Thailand.

3. No isolations of Histoplasma capsulatum have been made from 84 soil samples processed, using animal inoculation. Rodents and bats processed for recovery of pathogenic fungi have failed to reveal the existence of naturally acquired mycotic infections. Microsporium gypseum was isolated from soil using a hair-baiting technique.

4. Cultures obtained from approximately 2000 patients seen at the dermatology clinics of three Bangkok hospitals revealed the most frequently isolated organisms to be Candida albicans, 38.6%; Trichophyton rubrum, 34.2%; Trichophyton mentagrophytes, 15.1%; Epidermophyton floccosum, 6.6%; Microsporium canis, 1.9%; Microsporium gypseum, 1.9%; Trichophyton tonsurans, 0.9%; Microsporium audouinii, 0.8% and Trichophyton concentricum, 0.2%. Unusual strain of Trichophyton rubrum have been isolated which differ in gross colonial appearance from those seen in the United States.

5. A variant of Microsporium canis causing dermatophytic lesions in gibbons and having characteristics of both M. canis and M. audouinii has also been isolated from human disease.

6. Antibodies in the serum of patients with tinea versicolor have been demonstrated using an indirect fluorescent antibody technique. Tinea versicolor (pityriasis versicolor) is a superficial fungus infection with widespread distribution in Thailand.

7. A comparative study to determine the most reliable method for identification of Candida albicans indicates rice medium with 1% tween 80 to be the method of choice. More than 100 recently isolated strains of C. albicans were tested using four conventional media and three "rapid" techniques.

8. The pathogenicity of Candida albicans can be determined by intravenous inoculation into embryonated chicken eggs. The embryonated egg is a less costly and more rapid method than the classical adult rabbit pathogenicity test.

#### PUBLICATIONS

1. Occurrence of Microsporum gypseum in Thailand Soils, Robert L. Taylor, Mycologia LVIII: 648, 1966
2. Superficial Dermatophytes at Women's Hospital, Renoo Kotrajaras and Robert L. Taylor, Trans. Thailand Medical Assoc. 1966.
3. Occurrence of Dermatophytes among patients at three Bangkok Hospitals, Robert L. Taylor, Renoo Kotrajaras, and Vinita Jotisankasa. Trans. Thailand Medical Assoc. 1966.
4. Superficial Dermatophytes in Dermatological Clinics, Bangkok, Thailand. Renoo Kotrajaras and Vinita Jotisankasa. Dermatologia Tropica, in press.

Table 1

Histoplasmin Sensitivity among Thai nationals

Location	No. tested	Males	Females	Reactors		
				Male (%)	Female (%)	Total
Korat	610	532	78	31/532(5.8)	2/78(2.6)	5.4%
Chiengmai	542	278	264	14/278(5.0)	12/264(4.5)	4.8%
Udon	646	633	13	44/633(6.9)	0/13 (0)	6.8%
Ubol	592	582	10	34/582(5.8)	0/10 (0)	5.7%
Bangkwang (Bangkok)	500	500	—	90/500(18)	—	18.0%
Chanthaburi (Prison)	208	203	5	39/203(18.7)	1/5 (20)	19.2
Chanthaburi (Navy)	77	77	—	11/77(14.3)	—	14.3
Songkhla	515	482	33	122/482(25.3)	3/33(9.1)	24.3
Totals	3690	3287	403	385/3287(11.7)	18/403(4.5)	10.9%

Fig. 1. Frequency distribution of histoplasmin reaction sizes

