

## The History of *Penicillium marneffe* (Penicilliosis)

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*Penicillium marneffe* was described as a new species by Gabriel Segretain in 1959 (6). Dr. Segretain was head of the Mycology Unit at the Pasteur Institute (Paris, France). He received a *Penicillium* strain isolated from bamboo rats (*Rhizomys sinensis*) for species level identification. This strain had been isolated by Capponi et al. from rats native to the highlands of Central Vietnam and maintained in captivity for experimental infections at the Pasteur Institute of Indochina (a former French colony) at Dalat, South Vietnam (1). Three rats died from a spontaneous disseminated mycosis involving the reticuloendothelial system.

The *Penicillium* strain was isolated and an experimentally infected mouse was sent by airplane to the Pasteur Institute in Paris for further studies. Gabriel Segretain identified the fungus as a new species and named it *marneffe*, in honor of Hubert Marneffe, Director of the Pasteur Institute in Indochina (6).

Dr. Segretain accidentally pricked his finger with a needle used to inoculate hamsters with the yeast form. Nine days later a small nodule appeared at the site of inoculation followed by lymphangitis and axillary lymph node hypertrophy. The excised nodule produced a positive culture but the puncture aspiration of the lymph node did not grow (7). This was the first indication of the possible pathogenicity to humans. At that time, Edouard Drouhet was performing clinical studies with nystatin. He demonstrated the high *in vitro* susceptibility of the strain to this polyene which was given orally to Dr. Segretain (20 million units a day for 30 day). The infection resolved but the role of nystatin is uncertain (7).

The first natural infection was described in 1973 by Di Salvo et al. in an American patient living in Southeast Asia with Hodgkin's disease who underwent a splenectomy (3). In 1984-1988 several autochthonous cases were published in Southern China including Guangxi Province and Hong Kong. Some of them were initially misdiagnosed as histoplasmosis. In Thailand, imported cases in non-AIDS patient were reported (2, 5). *P. marneffe* was isolated from other rat species: *Rhizomys pruinosus*, *R. sumatrensis* and *Cannomys badius* and from soil in burrows of bamboo rats (4). In 1988, the first cases were reported in AIDS patients who had traveled in Southeast Asia and were diagnosed in the United States, Europe and Australia (4). Penicilliosis became a common opportunistic infection in patients with AIDS living in endemic area (5).

### Reading List:

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3. Disalvo AF, Fickling AM, Ajello L. Infection caused by *Penicillium marneffe*: a description of first natural infection in man. *Am J Clin Pathol* 1973;60:259-263.
4. Drouhet E. Penicilliosis due to *Penicillium marneffe*: a new emerging systemic mycosis in AIDS patients travelling or living in Southeast Asia. Review of 44 cases reported in HIV infected patients during the last 5 years compared to 44 cases of non AIDS patients reported over 20 years. *J Mycol Méd* 1993;4:195-224.
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6. Segretain G. *Penicillium marneffe* n. sp., agent d'une mycose du système réticulo-endothélial. *Mycopathol Mycol Appl* 1959;11:327-353.
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