

**Incidence of an experimental infection with
Keratinomyces ajelloi and Microsporum
nanum in laboratory animals**

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Reprinted from
Bulletin of Pharmaceutical Research
Institute, No. 85/86, Sept. 1971.

Incidence of an experimental infection with Keratinomyces ajelloi and Microsporum nanum in laboratory animals

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Hair samples were collected from different parts of the body of rabbits, g. pigs, rats and mice, and cultured on Kimmig agar with actidione. The animals were apparently healthy.

The most commonly isolated fungus was Scopulariopsis, then followed by Keratinomyces ajelloi, Microsporum nanum, Hormodendrum and lastly Trichophyton mentagrophytes. which was only once isolated. (see Table 1).

Table 1. Fungi isolated from apparently healthy lab. animals

Animals	No.	No. of Fungi isolated				
		Scopulariopsis	Hormodendrum	K. ajelloi	M. nanum	T. ment.
Rabbits	265	123	3	9	1	1
G. pigs	242	23	—	—	2	—
Mice	250	78	—	2	1	—
Rats	237	27	—	5	—	—

Experimental infection

Keratinomyces ajelloi and Microsporum nanum were used for experimental infection of laboratory animals. With each type, 10 rats, 10 mice, 2 rabbits and 2 hens were infected. Half the animals were previously shaved and scarified. 7 days old cultures were applied to the back of the animals. The animals were then examined daily for one month.

Results

All rabbits showed loss of hairs and inflammation of the infected areas of the skin. However, the lesions disappeared after one month without treatment. Only mice and rats, which were previously shaved and scarified, showed clinical symptoms. The lesions were small, scattered, first red then covered with fine white scales. In these animals selfhealing of the lesions was noticed.

On the comb of hens appeared small white spots on the 3rd day. The lesions involved then the whole comb and persisted for longer than one month. The infection was more inflammatory in case of Microsporum nanum, but more localized.

It is interesting to isolate Keratinomyces ajelloi and Microsporum nanum from laboratory ani-

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mals, although both fungi could not be isolated by us till now from the soil in Egypt. *Keratinomyces ajelloi* was reported by Refai and Ali (1970) to cause skin lesions in man. In man as well as in laboratory animals experimentally infected with these geophilic dermatophytes, the lesions were small, scaly and healed without treatment in one to two months.

Summary

265 rabbits, 242 g.pigs, 250 mice and 237 rats, apparently healthy were examined for dermatophytes. *Scopulariopsis brevicaulis* was the most commonly isolated fungus, then followed by *Keratinomyces ajelloi* (16 times) and *Microsporum nanum* (4 times). *Hormodendrum* was isolated 3 times and *Trichophyton mentagrophytes* was isolated once. Experimental infection of rabbits, rats, mice and hens with *Keratinomyces ajelloi* and *Microsporum nanum* caused clinical symptoms. However, the lesions disappeared without treatment.

References

- Refai, M. und H. Rieth: Das Vorkommen von Dermatophyten in ägyptischem Erdboden. Zbl. Vet.-Med. 11, 200-206 (1964).
Refai, M. and A.H. Ali: Laboratory acquired infection with *Keratinomyces ajelloi*. Mykosen 13, 317-318 (1970).

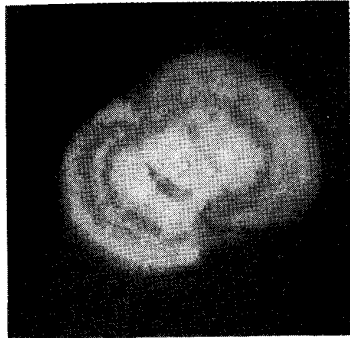


Foto 1. *Keratinomyces ajelloi* one week old on Kimmig agar

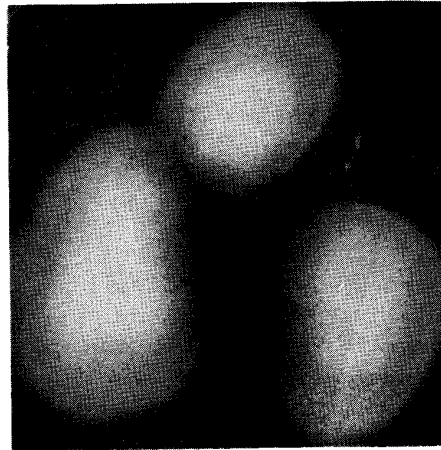


Foto 2. *Microsporum nanum*, 10 days old on Kimmig agar



Foto 3. Lesions on the back of a mouse caused by *M. nanum*



Foto 4. Lesions on the comb caused by *M. nanum*



Foto 5. Lesions on the comb caused by *K. ajelloi*



Foto 6. Lesions on the comb caused by *Trichophyton gallinae*