return to a normal state, namely CADESI < 12, PVAS < 2.5 and a medication score < 10. Dropout cases were evenly distributed in all groups and 23 dogs finished the study (ILIT n = 10, SCIT n = 6 and SLIT n = 7); adverse events were rare. Groups were not statistically different at inclusion. After 12 months of ASIT treatment, a reduction of CADESI and pruritus score was obvious in the ILIT and the SCIT ($P < 0.05$ for both for all scores). All three scores deteriorated in the SLIT group. Return to the normal state was achieved in 6/10 (60%) of dogs receiving ILIT, compared to one of six (17%) and one of seven (14%) in the SCIT and SLIT groups, respectively. Our study is the first one comparing several protocols of immunotherapy in dogs; SCIT and ILIT were both effective, but ILIT was associated with a much higher "return to normal rate".

Source of funding: WALTHAM Foundation "Albert-Heim-Stiftung".

Conflicts of interest: None declared.

Clinical efficacy of sublingual allergen-specific immunotherapy in cats with nonflea nonfood-induced hypersensitivity dermatitis against mites

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Sublingual immunotherapy (SLIT) has shown beneficial effects in humans and dogs with atopic dermatitis. So far, no studies have been reported on SLIT efficacy in cats with hypersensitivity reactions. This study aimed to evaluate the clinical efficacy of SLIT in cats with nonflea nonfood-induced hypersensitivity dermatitis associated with storage or house dust mites (HDM). Twenty-two cats with clinical signs and dermatological lesions compatible with mites hypersensitivity were treated with SLIT for six months. After three and six months of SLIT administration, dermatological lesions evaluated through Scoring Feline Allergic Dermatitis (SCORFAD) were significantly reduced from 22 to 7.8 and 5.7, respectively ($P < 0.001$ for both), and owner pruritus score from 7.9 to 4.9 and 3.6, respectively ($P < 0.001$ for both). Improvement in clinical signs was followed by a significant decrease in specific IgE levels against HDM from 115 to 87.5 and 53.3 at three and six months, respectively ($P \leq 0.05$ for both). There were no changes observed in HDM-specific IgG levels at follow-up. Three cats were withdrawn from the study for reasons unrelated to the treatment. None of the animals presented adverse effects associated with the administration of the SLIT. In conclusion, HDM-specific SLIT induced a significant improvement of clinical signs and pruritus in hypersensitive cats after three months of treatment. Therefore, SLIT should be considered a rapid, effective and safe treatment in cats with nonflea nonfood-induced hypersensitivity dermatitis.

Source of funding: Animal Health, B.U. Laboratorios LETI.

Conflicts of interest: Rubén Foj and Pilar Brazis are employees of Laboratorios LETI. They participated in the design of the study and helped to the draft of the manuscript. No conflicts of interest have been declared by the other authors.

Dermis and subcutis of healthy dogs lack of a bacterial microbiota

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Studies using highly sensitive molecular techniques have recently detected bacterial communities below the human epidermis. Depending on their abundance and composition, this finding could be clinically relevant. This possibility, however, has not been investigated in the dog so far. The aim of this study was to determine if bacteria can be detected in the dermis and subcutaneous tissue of dogs using two different approaches: traditional cultures and next-generation sequencing (NGS) of the V4 region of bacterial *16S* rRNA gene. Seven healthy dogs were included and two sets of samples were collected from each subject. Samples sets comprised one environmental blank sample, one skin surface swab and one 6 mm sterile abdominal skin biopsy, split in epidermis, dermis and subcutis. From each dog, one set of samples was submitted for bacterial culture and the other one for bacterial DNA amplification and sequencing. Five different bacterial genera (*Staphylococcus*, *Bacillus*, *Corynebacterium*, *Streptococcus* and *Enterococcus*) were isolated in five of seven epidermal surface samples with traditional culture methods. Cultures from all of the other samples were negative in all seven subjects. Interestingly, the bacterial isolates were not the most abundant bacteria constituting the skin microbiota according to the NGS results. Although some DNA could be amplified from epidermal, dermal and subcutaneous tissue samples, the results of the NGS were similar to those of the blanks, revealing the absence of a microbiome. The results of this study do not support the presence of a dermal or subcutaneous microbiota in healthy dogs.

Source of funding: Self-funded.

Conflicts of interest: None declared.