## **Supporting Information**

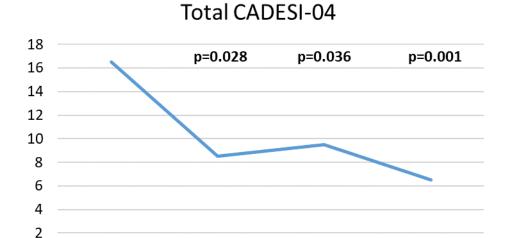
Day 0

0

Figure S1 Median values for total and regional CADESI-04 scores and PVAS scores.

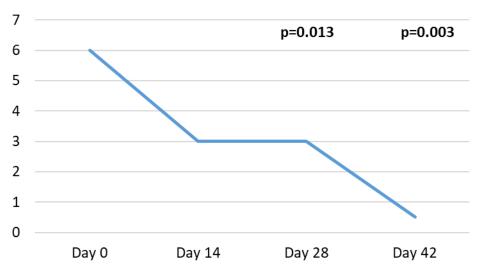
Day 28

Day 42



## Regional CADESI-04

Day 14

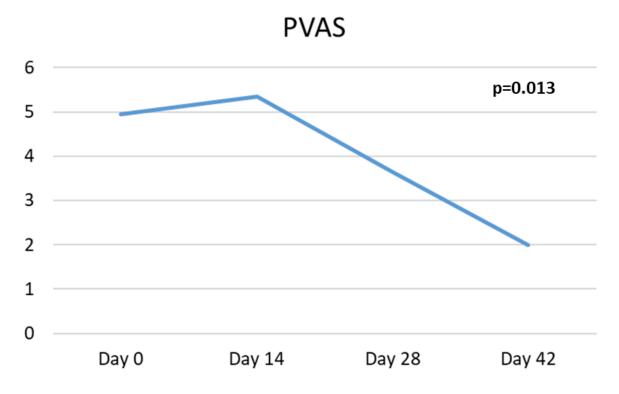


Groups were compared using Friedman's followed by Dunn's multiple comparison tests.

CADESI Canine Atopic Dermatitis Extend and Severity Index

**PVAS Pruritus Visual Analog Scale** 

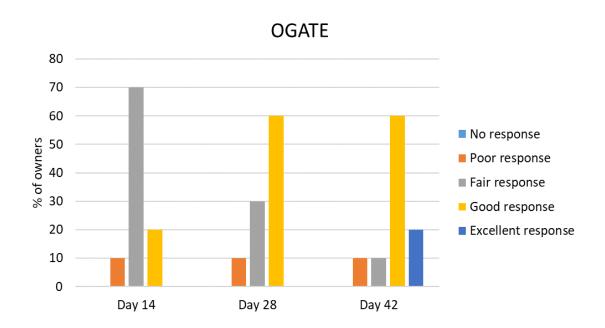
Figure S2 Median values for Pruritus Visual Analog Scale



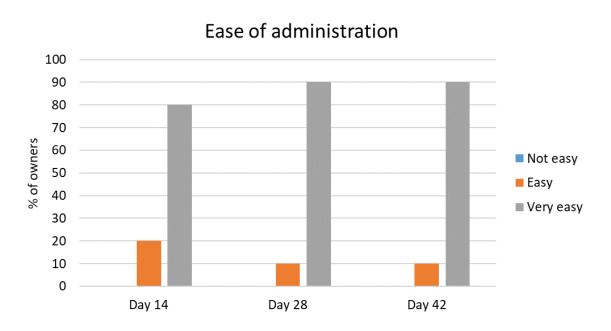
Groups were compared using Friedman's followed by Dunn's multiple comparison tests.

PVAS Pruritus Visual Analog Scale.

Figure S3 OGATE and ease of administration of the Lactobacilli-based spray for 10 atopic dogs (and owners).



OGATE: owner global assessment of treatment efficacy.



The graphs show the percentages of owner participating in the study.

Figure S4 The distribution of the top 20 operational taxonomic units at genus level in the axillae samples from 10 dogs

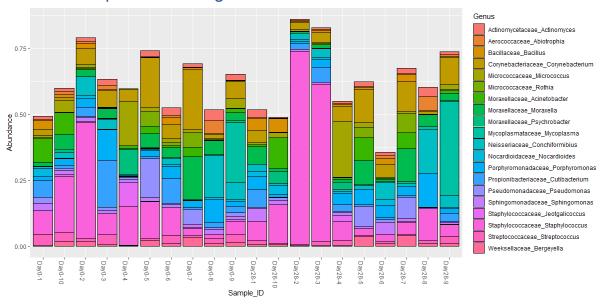


Figure S5 Principal coordinates analysis at genus level in the axillae samples based on Bray-Curtis dissimilarity matrices

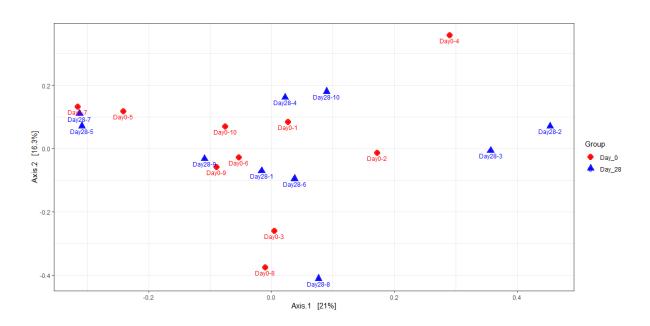


Figure S6 The distribution of the top 20 operational taxonomic units at family level in the axillae samples

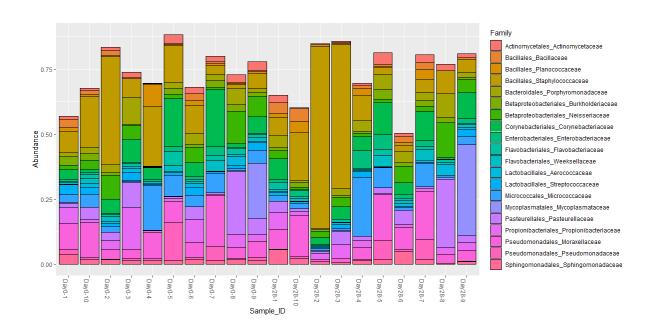


Figure S7 Principal coordinates analysis at family level in the axillae samples based on Bray-Curtis dissimilarity matrices

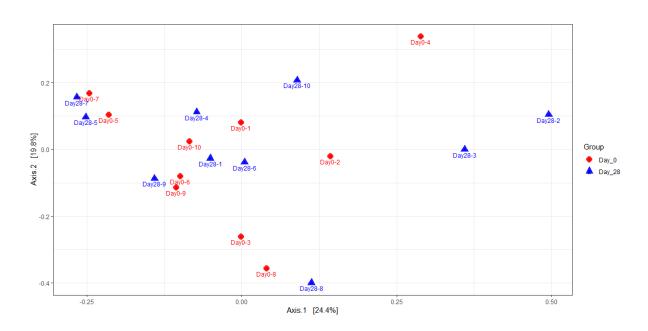


Figure S8 The distribution of the top 20 operational taxonomic units at genus level in the inguinal samples

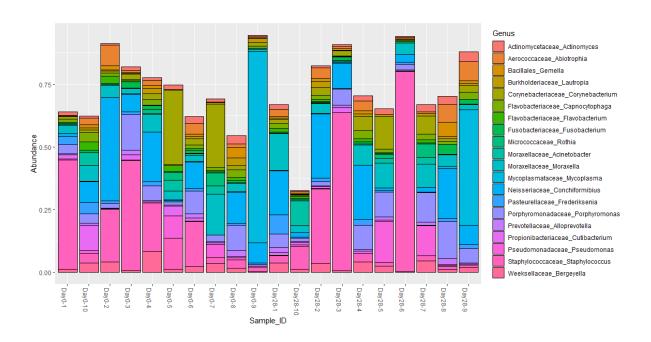


Figure S9 Principal coordinates analysis at genus level in the inguinal samples based on Bray-Curtis dissimilarity matrices

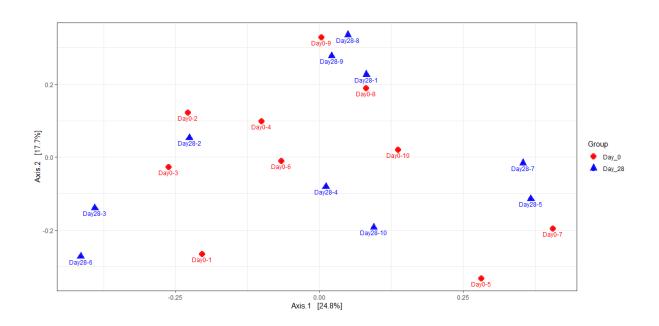


Figure S10 The distribution of the top 20 operational taxonomic units at family level in the inguinal samples  $\boldsymbol{\mu}$ 

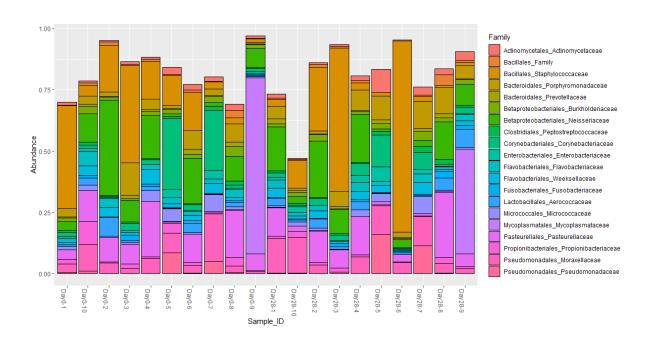


Figure S11 Principal coordinates analysis at family level in the inguinal samples based on Bray-Curtis dissimilarity matrices

