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## How tooth brushing with canine toothpaste affects the oral microbiota in dogs over time

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Lack of dental treatment leads to periodontal diseases which are one of the most common health problems in companion dogs today; although there are many products on the market claiming to prevent dental diseases such as dental diets, dental chews and mouthwash, information states that brushing dogs teeth with canine toothpaste provides the best protection. However, there is a lack of research supporting this statement. In this study Beaphar enzymatic canine toothpaste was used to investigate its efficiency on the oral microbiota of dogs. The number of colony forming units/ml were measured on nutrient agar before brushing (BB), after brushing (AB) and two hours after brushing (2H). The thirteen dogs used in this research were selected randomly based on age, breed, gender and background of treatment. Additionally, the dog owners completed a questionnaire to gain extra information about the dogs. Each individual dog displayed a unique profile of colony forming units/ml made up of a range of bacterial species. However some exhibited a very different bacterial profile at 2H. The majority of dogs displayed more bacteria before brushing than the two swabs after. There was no significant difference in colony number when the dogs were grouped according to size (two-way ANOVA,  $p<0.05$ ) or compared with each individual (Friedman test,  $p<0.05$ ). Gram staining, catalase and oxidase tests identified common colonies as presumptive *Bacteroides* and *Fusobacterium*. Further research is needed to gain a greater understanding of how toothpaste affects the canine oral microflora in addition for further identification of the bacteria present.

### Biography

Sarah Gardner has completed her PhD at Bradford University in 2001 and spent two years pursuing Postdoctoral Research at St James University Hospital in Leeds. Since then she has worked as a Primary Teacher, then as a Technician and Animal Science Lecturer at Writtle College, UK. She has published seven papers in reputable journals and presented at numerous conferences in the UK and abroad.

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