ADVANCED PROBIOTIC-PREBIOTIC TREATMENT FOR CANINE DIARRHEA

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We recently explored the use of *PetFlora*™ [Vitality Sciences Inc, Oakland Park, FL] – an advanced probiotic-prebiotic formulation – for treatment of canine bacterial diarrhea. This probiotic-prebiotic complex previously was found particularly effective for the treatment of a wide variety of human GI disorders (under the trademark *Prescript-Assist*™).[1,2] The particular breadth of efficacy – relative earlier probiotic treatments – is attributed to the unique complex of its 29 probiotic *soil-based-organisms* (SBOs) and *leonardite*, a prebiotic mix of humic substances that differentially enhance SBO proliferation.[1] Among conditions responding to this probiotic-prebiotic complex were both: "occasional diarrhea" (e.g., travelers); and "chronic diarrhea" such as associated with IBS and Colitis.[2] Results of on-going studies addressing human bacterial diarrhea – together with anecdotal reports of efficacy in treatment of canine and feline patients – prompted our study of canine diarrhea.

Bacterial diarrhea is one of the most common maladies faced both by small-animal veterinarians and physicians working in the third-world. In dogs and humans, a number of bacteria have been commonly associated with diarrhea, including: *Salmonella*, *C. perfringens*, and *C. difficile*. However, these and a variety of other organisms are not uncommonly a part of both healthy canine and human intestinal microflora. Stool studies and related diagnostic approaches consequently may not be particularly timely nor useful when faced with an accelerating outbreak of diarrhea in a closed population – either in a kennel or closely packed village setting. Emphases consequently include immediate treatment to limit the duration of diarrhea and other actions to limit its possible transmission [particularly as untreated diarrhea has been associated with up to 20% deaths in the young].

Ongoing studies of the advanced probiotic-prebiotic treatment for addressing human bacterial diarrhea have indicated an approximate halving of its duration. At one study site in the Ecuadorian lowlands, for example, the probiotic-prebiotic treatment reduced diarrheal duration to a modal <24 hours; whereas, the range for antibiotic treatment was 48-72 hours (with either 7-day courses of *Amoxicillin or Ampicillin,* or the *Sulfamethoxazole-Trimethoprim* combination "*Clotrimoxazol"*). In the highlands, with water supply far more contaminated, the duration with similar antibiotic treatment was 72-96 hours vs. <24-48 hours with the experimental treatment. Initial antidotal reports of the use of the experimental treatment – in canine and feline companions – suggested that both companion species experienced similar proportional reductions in the duration of active diarrhea vs. more traditional antibiotic studies. These reports – augmented with the earlier GI disorder research – altogether argued for the following exploratory study.

PetFlora™ (250mg BID) was administered to 10 dogs suffering from bacterial diarrhea during a recent kennel outbreak. Affected dogs, it is noteworthy, represented a sampling of the assortment of Newfoundland, Golden, and other working breeds that were sent to the kennel for training. This outbreak, representing nearly one-half the kennel capacity,

well-exceeded the potential for individual isolation; hence, treatment had to be conducted *in-situ*. Given this limitation, the kennel areas and animals were first thoroughly cleansed and *all* animals were immediately administered *PetFlora*^{TM} (as a prophylactic for those not showing symptoms). It should be noted that both food and water were made available to all – past experience suggesting that diarrhea could be readily controlled without these traditional restrictions. No signs of diarrhea were seen after 12 hours observation – this was certainly less-than the median of the 24-to-48 hours typical with our traditional treatment (Neomycin generic "Biosol", 1.1cc/10kg, with food and possibility water restrictions). This *PetFlora*^{TM} vs. antibiotic difference in diarrheal duration of was very-highly significant statistically (P<0.002, 2-tailed, *Binomial Sign-Test*).[3]

The exploratory results – reported above – of the advanced Probiotic-Prebiotic combination (*PetFlora*^{TM}) are clinically as well as statistically significant. Indeed, the duration of observed bacterial diarrhea in dogs was less than half that experienced with the more traditional antibiotic approach (that included removal of water and possibly food). These results were, however, in general keeping with experiences in the recently completed studies in human diarrhea patients (ages 2-65 yrs.). It will be interesting to see if the efficacy of *PetFlora*^{TM} will analogously hold across IBS and other conditions where efficacy has been demonstrated in human patients[1,2]. Certainly, the full generality of the potential of an advanced probiotic-prebiotic for treatment of canine bacterial diarrhea and other GI conditions remains to be fully established. The considerable promise seen in the initial results also certainly recommends practitioner exploration of the emerging technology represented by *PetFlora*^{TM}.

References

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