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## Early neutering of kittens: breeders practices in France

B Duc, T Guillet, Sylvie Chastant

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an excellent marker of colostrum intake, although it does not allow any corrective actions. Thus, early applicable predictive methods, such as the weigh-suckle-weigh method, would be desired to control the colostrum intake and eventually replace colostrum in puppies at the risk of colostrum deficit. The aim of the study was to describe weigh-suckle-weigh values obtained in puppies during the first 48 h of life and to evaluate their factors of variation. A total of 794 puppies from 115 litters and from 22 dog breeds were weighed right before and right after a suckling session (15 min) of their dam at least once during the first 48 h of life. According to 1981 measures obtained, weight gain during a single suckling session varied between 0 and 28.5 g, with a median value of 2.5 g. The mean coefficient of variation among puppies from the same litter was 66.4%. Weigh-suckle-weigh values obtained depended on the age of the puppy (1.7 g at D0 vs. 2.7 g at D1; Wilcoxon test;  $p = .007$ ) and its breed size (3.2 g in large, 2.7 g in medium, and 2.0 g in small breed sized puppies; ANOVA test;  $p < .001$ ) but not its sex. Results obtained in this study allow characterizing for the first time and on a great number of puppies weigh-suckle-weigh method of canine newborns' monitoring. Further analyses are needed to evaluate if this method allows an early prediction of colostrum intake and survival in puppies.

### OC 3.6 | Effect of maternal supplementation with live yeast *S. boulardii* I-1079 on the gut microbiota of newborn puppies

I. Bendahmane<sup>1</sup>; E. Apper<sup>2</sup>; Q. Garrigues<sup>3</sup>; S. Chastant<sup>3</sup>; A. Meynadier<sup>4</sup>; H. Mila<sup>3</sup>

<sup>1</sup>NeoCare, GenPhySE, Toulouse; <sup>2</sup>Lallemand, Blagnac; <sup>3</sup>NeoCare, ENVT, Toulouse; <sup>4</sup>GenPhySE, Castanet Tolosan, France

Gut microbiota (GM) is known to play a critical role in the health of neonates. Maternal diet can influence the gut microbiota of their offspring, consequently driving developmental programming. Thus, one of the ways to promote healthy microbiota could be by adding live yeast to the diet of the mother. Therefore, this study aimed to explore the effect of adding yeast to the mothers' diet on the GM of their puppies and its potential role in preventing microbial drift in low birth weight (LBW) puppies. *Saccharomyces boulardii* I-1079 or placebo was administered orally from day 28 of gestation until day 56 postpartum to 10 bitches (5 per group). Faeces of their 47 puppies were collected via rectal swabs on postnatal day 0 (D0) and 2 (D2). Bacterial DNA was extracted and amplified using V3-V4 regions of 16S RNA gene and sequenced by Illumina MiSeq (Illumina). According to the Partial Least-Squares Discriminant Analysis (PLS-DA), the dam's supplementation in yeast led to a significant modification of the GM of their puppies at D0 and D2. It was found that at D2 some bacteria responsible for carbohydrates fermentation such as *Lactobacillus* unknown species (US) were more abundant in puppies from yeast-treated dams, whereas some other potentially pathogenic such as *Clostridium colinum*, *Staphylococcus* US and *Providencia* were less abundant (Mann-Whitney test,  $p < .05$  for all comparisons) compared with placebo. Interestingly, such

difference in GM profile was particularly pronounced in LBW treated vs LBW placebo puppies. This study showed that adding yeast to the mother's diet from day 28 of gestation until day 56 postpartum is a possible tool to promote a healthy gut microbiome in their puppies.

### OC 4.1 | Early neutering of kittens: Breeders practices in France

B. Duc; T. Guillet; S. Chastant

NeoCare, Université de Toulouse, ENVT, Toulouse, France

Early neutering (i.e. before the age of 16 weeks) of kittens is a controversial practice. The objective of this study was to gain knowledge about the motivations of feline breeders to perform (or not) early neutering on the sold kittens. An on line survey (Sphinx Software) has been shared with French feline breeders through FaceBook and by emailing to the breeders involved into NeoCare network. Among the 567 participating feline breeders, 68% declared performing early neutering on a systematic basis, 8% sometimes, 24% never, both for male and for female kittens. Breeders were asked to select 5 motivations for performing (or not) early neutering. Each reason was classified according to its target (the kitten, the breeder or the future owner). Among the arguments given to perform early neutering ( $n = 1701$ ), 38% were related to the comfort of the breeder, 33% to the one of the future owner and 29% to animal welfare. The reasons the most frequently cited were: because the post-operative impact of the surgery is more limited (40% of answers), to prevent future owners to organize reproduction of their kittens (35%), because owners ask for a neutered animal (12%). The arguments given for not performing neutering before adoption ( $n = 305$ ) were mostly related to kittens welfare (72%), and secondarily to breeder (17%) and future owners (17%). The most frequently reasons were because of a negative impact on kitten's health (54%), on kitten's growth (38%) or because judged useless. An objective evaluation of the consequences of early neutering on kittens would be useful to guide feline breeders.

### OC 4.2 | Sarda breed: Even cryptorchid rams play a role

C. Nassif<sup>1</sup>; M. Gallus<sup>2</sup>; F. Chessa<sup>2</sup>; L. Mara<sup>2</sup>; F. Melis<sup>2</sup>; A. Cannas<sup>1</sup>; A. Fatet<sup>3</sup>; M. Dattena<sup>2</sup>

<sup>1</sup>Dipartimento di Agraria, Sezione di Scienze Zootecniche, Università di Sassari, Italy; <sup>2</sup>AGRIS Sardegna, Loc. Bonassai, Sassari, Italy; <sup>3</sup>INRAE UE1373 FERLUS, Les Verrines, Lusignan, France

Bilateral cryptorchidism in rams may naturally occur and is characterized by azoospermia [1]. Cryptorchid rams usually have a normal behaviour toward ewes. Azoospermic animals can serve as a safe tool to detect estrous females for various purposes without risking impregnation. Ten cryptorchid Sarda breed rams aged between 2 and 3 years old, with previously confirmed azoospermia, were tested according to pen libido test [2]. Each male was introduced