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Numerous studies have documented changes in many aspects of both innate and adaptive immunity that can affect the susceptibility to new diseases in the transition cow. Higher susceptibility to infections is accompanied by reduced migration of blood neutrophils and monocytes to the site of infection, and can be identified by lower expression of adhesion molecules on cells surface. The aim of this study was to examine the changes in expression of adhesion molecules (CD62L and CD11b) of leukocytes at early lactation in Friesian cows. At three points (calving, 15 and 35 day) jugular blood samples from twenty-nine cows were collected. Blood was incubated with saturating amounts of PE-conjugated anti-CD62L mAb (clone FMC46) and APC-conjugated anti-CD14 mAb (clone TUK4), to determine the expression of L-selectin on neutrophils and monocytes; with FITC-conjugated anti-CD11b mAb (clone CC126) to determine the expression of CD11 on neutrophils. Flow cytometric assay was performed on FC500 cytometer (Beckman Coulter Inc). Monocytes were identified as CD14 cells; neutrophils were identified based on forward and side-scattered characteristics. The percentage of positive cells for each marker was calculated after plotting FITC and PE fluorescence associated histogram, the mean fluorescence intensity (MFI) was computed in the geometric linear mode. Flow cytometry data were analysed using Kaluza Analysis 1.3 Software (Beckman Coulter, Inc). Statistical comparisons involved Student's t-test and Proc GLM in SAS (SAS Institute Inc., Cary, NC, USA) to assess differences between cows and lactation stage. The results showed significant differences in MFI of CD62L on neutrophils and monocytes between the three stages ($p < .05$); no significant difference was found in MFI of CD11b on neutrophils. The percentage of neutrophils and monocytes CD62L and neutrophils CD11b showed no significant differences between stages. Furthermore, a great individual variability of CD62L expression was found within cows, with MFI on neutrophils ranged from 20.45 to 90.47 and MFI on monocytes ranged from 37.40 to 95.27. Lower variability of CD11b expression was found, with MFI on neutrophils ranging from 48.7 to 90.20. Because of the significant individual variability, these preliminary results indicate that L-selectin could be used as immunological marker to evaluate disease resistance.

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Milk intake in relation to growth in hand-reared fallow deer (*Dama dama* L., 1758) fawns

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In wild Cervids, a substantial forage consumption starts at about one month of age, however nutrition in the first days of life is crucial for the survival and growth of fawns, and little is known about milk intake in the post-natal period. In order to describe some growth performances in fallow deer (*Dama dama*), this study examined the consumption of milk and the increase in body weight in the first 45 days of life of hand-suckled fawns.

Six fawns, three males and three females, were fed with colostrum in the first 3 days of life and then artificially fed ad libitum three times a day (8 am, 12 pm, 18 pm) with acidified dried milk for lamb. The feed was composed by 60% of dried skim milk (46.6% lactose, 22.6% crude protein, 18.5% crude fat, 7.3% ash, 0.2% crude fibre) and complemented with dried whey, coconut oil, lard, tallow, corn starch, and soy lecithin. Milk was prepared by dissolving 150g of feed in 1 litre of water until the 4th week of life, then feed concentration was augmented to 180g/l. Intake was measured by weighting milk before and after each meal, and body weight was measured weekly. Milk consumption and average daily gain were analysed with a Generalised Linear Model (GLM). The daily milk intake (g milk/kg body weight·day⁻¹) in male fallow deer fawns was higher than in females ($p < .003$). The maximum milk intake occurred around the 18th day of age, when male and female fawns consumed respectively 199.12 and 160.24 g milk/kg body weight·day⁻¹. Then, intake declined to 145.44 and 133.11 g/kg day⁻¹ at the age of 45 days. Both male and female fawns displayed a similar ingestive behaviour among the three daily meals: milk consumption was the highest in the morning and the least in the midday, while an intermediate amount of milk was ingested in the late afternoon. Average daily gains were 181.75 g/day for male fawns and 130.9 g/day for females, and slightly increased during the study period ($p < .053$). Male fawns displayed a greater, but not significant, precocity in body weight growth and attained 11.94 kg at 45 days, while in females of the same age body weight was 10.12 kg.

This study revealed that dried skim milk for lambs represents a suitable feed for fallow deer fawns when maternal milk is not available. In the first 45 days of life, milk intake and average daily gains are higher for male fawns. Live weight growth, however, is similar for the sexes suggesting a greater efficiency of food conversion for female fawns in fallow deer.