

Title: INVESTIGATING THE RELATIONSHIP BETWEEN LYING LATERALIZATION AND RESPONSE TO NOVELTY IN DAIRY CALVES

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Background: Behavioural lateralization has been demonstrated in many species, including dairy cattle. Cow laterality preferences increase in response to novelty and aversive stimuli; they prefer to observe these stimuli using their left field of view. This phenomenon is not well understood in calves.

Hypothesis: There would be a relationship between lying side preference and behaviours in the T-maze thought to be influenced by emotional reactivity, such as latency to approach and exploration of a novel object.

Objectives: Determine if calf response to a novel object is related to lateralized lying behaviour.

Methods: Calf lying behaviour (on right or left side) was scored from video by AM using a two-hour period in the calves' home pen without human interaction (n = 6 calves). Calves were then placed in a T-maze with a novel object. Latency to approach and exploration time was collected by WM as part of her graduate research. Data were analyzed using descriptive statistics and Spearman's correlations.

Results: In general, calves preferred to lie on their left side compared to their right side (mean = 71%; min = 54%; max = 100% of the 2 h period). Lying on the right side appeared to be positively correlated with latency to approach the novel object ($r = 0.71$) but was not well-correlated with exploration time ($r = -0.02$).

Conclusion: This pilot study provides preliminary evidence that calves who spend more time lying on their right side (reflecting a higher use of their left field of vision) may take longer to approach a novel object.

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Field of Research: Neurosciences