

**Hematology and Plasma Biochemistry of Reared Beluga Whale (*Delphinapterus leucas*)
– Differences in Season and Gender**

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The goal of this study was to establish the baseline hematologic and plasma biochemical ranges for belugas reared in National Museum of Marine Biology and Aquarium in Taiwan. The specific objectives were to evaluate the effects of season variation and beluga's gender to the hematological and plasma chemical characteristics of these belugas between 2002 and 2013. In the 12-year period, hematology and plasma biochemical data of these 8 belugas were measured and recorded monthly from clinically normal individuals. The collected information was then analyzed and built as the references of the belugas reared in Taiwan. The reference values of each index was calculated and set as mean \pm 3 standard deviation. Seasonal differences between means were determined with Kruskal-Wallis test followed by post-hoc Dunn's multiple comparisons test. To compare the means of each index between genders, Mann-Whitney U test was performed. In the results, significant seasonal variation was observed in MCV, AST, ALT, LDH, cholesterol, creatinine, BUN, iP, Ca²⁺, K⁺, Cl⁻, total CO₂ and lactate. Several hematology and plasma biochemistry values were found significantly different in gender, except MCH, WBC count and differential, GGT, creatinine, iP, Ca²⁺, fibrinogen, cortisol, T3 and T4.