

## Contributions of flow cytometry and gas chromatography for conservation of *Chelonia mydas* (Testudines, Cheloniidae) in Brazil

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### ABSTRACT

The fibropapillomatosis (FP) is one of the greatest important threats to the survival of green sea turtle (*Chelonia mydas*), which conservation status is endangered by International Union for Conservation of Nature and vulnerable by Red List of Brazilian fauna. Studies attribute the cause of the disease to the association of Chelonid Fibropapilloma-associated Herpesvirus, genetic and environmental factors like polychlorinated biphenyls (PCBs). This study aimed to assess the leukocytes function (phagocytosis and oxidative burst) by flow cytometry and investigate the PCBs presence in blood samples by gas chromatography (GC-MS/MS) correlating these results with hematological data. Specimens of *C. mydas* were caught randomly or rescue in Ubatuba-SP (n=49), a feeding area in Brazil. Were collected biometric data, numbers and distribution of the tumors in accordance to protocols of Projeto TAMAR-ICMBio. The leucocytes were obtained using Percoll Amersham Biosciences®, which corroborated its efficacy in separating mononuclears and granulocytes. The stimuli applied were: Phorbol Miristate-Acetate for oxidative burst and *Saccharomyces cerevisiae* for phagocytosis. The PCBs monitored congeners (28, 52, 101, 118, 138, 153 and 180) were detected. The number of tumors per animal ranged from 1 to 61, with the anterior region (head, eyes, throat and limbs) having the largest number. Animals with FP had a larger size than non-fibropapillomas turtles. The results were similar ( $p \geq 0.05$ ) between afflicted and non-afflicted turtles. Samples from other regions are still being analyzed, which will allow the expansion of the preliminary results and the comparison between the areas of occurrence of *C. mydas* in Brazil.

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