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BOTTLENOSE DOLPHINS IN HUMAN CARE: EVALUATING THE ROLE OF DAILY SCHEDULED ACTIVITIES IN ANIMAL WELL-BEING

By

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ABSTRACT

Public animal welfare concerns and the issue of exhibiting cetaceans have encouraged many oceanaria to consider the effects of human-dolphin interaction programmes on animal welfare. These studies have typically endeavoured to measure 'stress' in dolphins through behavioural observations or by measuring adrenal hormones to attempt to quantify the physiological stress response. Few studies have combined both behavioural and physiological measures for a more complete understanding of cetaceans' subjective experiences. Additionally, little work has investigated how dolphins in oceanaria respond to various daily activities including public presentations, routine training and enrichment sessions. The overall aim of this study is to develop and validate reliable physiological and behavioural indicators of well-being, towards improving the management and welfare of dolphins in human care.

In this presentation, we will share preliminary results of an experiment investigating how participation in public presentations may influence behaviour and adrenal hormone function in offshore bottlenose dolphins (*Tursiops truncatus*), housed at Sea World, Gold Coast. An enzyme immunoassay (EIA) for cortisol was physiologically validated for dolphins using saliva samples collected pre- and post- routine vaccination and associated handling, i.e., a potential stressor. An experiment was conducted to measure changes in salivary cortisol pre- and post-performance over treatments of differing workload, i.e., zero, two or three presentations per day. Behavioural observations were also conducted using ZooMonitor to determine daily activity budgets for the dolphins, and trainer scores were used to quantify dolphin willingness to participate in presentations. The benefits and challenges of collecting saliva samples for adrenal hormone analysis, validation of the cortisol assay, and how dolphins react to changes in their workload, and the broader implications of this study on cetacean welfare will be discussed.

BIOGRAPHY

Bella Reboul is a PhD candidate at The University of Queensland, Australia. Bella is working in collaboration with Sea World, Gold Coast on her project investigating the role of daily activities such as public presentations and enrichment sessions in enhancing animal welfare. This project takes an integrated approach considering both endocrine and behavioural parameters to gain a better understanding of how dolphins cope with their environment in oceanaria.