

## **Project Update: November 2018**

We used 26 blubber frozen samples from bottlenose dolphins to conduct reproductive hormone analysis. We identified 14 females and 12 males, using the Polymerase Chain Reaction (PCR) technique. We validated, extracted and measured four steroid hormones from each sample: cortisol, corticosterone, progesterone and testosterone. Preliminary data shows that cortisol hormones tend to be higher during the high season of tourism in comparison to low season. Sex steroids, progesterone and testosterone were measured in 11 females and 12 males, respectively. Due to the small size of some samples, the concentration of the hormones was not enough to be detected by the assay, reducing the samples size to 10 males and nine females. Although more samples are needed to confirm the effect of boat traffic on individual stress, our preliminary data indicates that stress hormones (cortisol) increase during boat interactions. These findings agree with previous data about negative effects of boat traffic on dolphin's health, and should be considered a priority in our boat management within Dolphin bay.



A pregnant female. © Betzi Pérez.



Dolphin jumping. © Betzi Pérez.



Dolphin swimming. © Betzi Pérez.



Researcher working on hormone analyses. © Betzi Pérez.