

**Spatial variation in preneoplastic cellular alterations of the genital epithelium of California sea lions along their breeding range**

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Urogenital carcinoma has increased markedly in the past decades in California sea lions from the US Pacific coast. This pathology has not been detected in other areas of their distribution. One of the aims of this study was to characterize cellular transformation of the genital epithelium of California sea lions along their breeding range in Mexico. SMM awarded funds for travel to field sites and laboratory reagents for detection of apoptosis (caspase immunodetection). With the awarded funds, I have completed sampling in the Mexican Pacific and added these samples to the ones collected in the Gulf of California (Funded with concurrent funds). Swab, DNA and RNA genital sampling of sea lions at Benitos rookeries took place in July 2014. Morphological characterization of these samples and those collected earlier from six rookeries has been completed. Caspase immunodetection was not completed due to lack of success in immunodetection trials. Thus, in order to assess apoptosis as per the study's objectives, RT-qPCR has been attempted. A kit for high efficiency reverse transcription was purchased and all RNA samples were converted to cDNA. Expression of key apoptosis genes P53, P16 and P27 are currently being assessed. Results should be completed in the next months and a publication will be prepared for submission.