



# SCAR 2020

Antarctic Science -  
Global Connections

**SCAR OPEN SCIENCE CONFERENCE 2020**

# FULL ABSTRACT BOOK



ABSTRACTS SUBMITTED TO THE (CANCELLED) SCAR 2020 OSC IN HOBART



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SESSION 1

**ASTRONOMY AND GEO-SPACE  
OBSERVATIONS FROM ANTARCTICA**



Tony Travouillon  
Lucilla Alfonsi, Adriana Gulisano, Jennifer Cooper

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## Detection of specific immunoglobulins G (IgG) against canine distemper virus in Antarctic seals

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The first tests to detect the presence of canine distemper virus(CDV) and phocine distemper virus(PDV) antibodies in different species of Antarctic seals were done in the 80s. Current information about diseases in Antarctic wildlife including seals is scarce and fragmented. We analyzed 33 blood serum samples from three Antarctic seals species: *Lobodon carcinophaga*(CS), *Hydrurga leptonyx*(LS) and *Leptonychotes weddelli*(WS), collected at Cierva Cove, Western Antarctic Peninsula. Indirect immunoenzymatic assays (ELISA tests) were performed for the detection of specific IgG against CDV, with a commercial kit INGEZIM MOQUILLO IgG. We found positive serology for 100%LS, 90%WS and negative serology for CS. Since IgG are characteristics of the secondary immune response, the presence of IgG antibodies in LS and WS suggests that they have been probably infected in the past. This infection could be caused by the presence of sled dogs years ago although infections due to seal migratory movements cannot be ruled out as previously suggested. Negative serology for CS could be due to they were not infected or because antibodies were not detected using IgG. Further studies e.g. IgM, against CDV are necessary to strengthen our knowledge and be able to identify recent contact with the virus. Although mass mortality events in Antarctica are highly unusual, considering environmental changes observed in the region due to global change and that alien species and pathogens can be resilient to them, the study of viral infections and associated biosecurity measures become fundamental for conservation prospective and more research on this topic is needed.