

POTENTIAL OF LYME DISEASE INFECTION FROM TICKS CARRIED BY ALBATROSS

S O'Connell¹, IC Grant², PN Trathan³, PT Marquis¹

¹Southampton General Hospital, Southampton, United Kingdom, ²British Antarctic Survey Medical Unit, Plymouth, United Kingdom, ³British Antarctic Survey, Cambridge, United Kingdom

Introduction: Health information from UK researchers working with Albatross on sub Antarctic Islands indicated a number of incidents whereby staff presented with symptoms that reflected those associated with the early onset of Lyme Disease, a zoonosis caused by the spirochaete *Borrelia Burgdorferi*. The bacterium is passed to humans by infected ticks, *Ixodes ricinus*. While some infected people have no symptoms, others may suffer from a distinctive rash and complain of aches, pains, tiredness and be feverish with enlarged lymph glands. Over a period of months to years the disease may cause further systemic, neurological, rheumatic and cardiac complications. The prevalence of ticks on Albatross at Bird Island near South Georgia

(Lat' 54 00' S , Long' 38 03 W) was confirmed by staff of the BioSciences Division of the British Antarctic Survey in July 2004.

Seabirds have , in the Northern hemisphere, been implicated as a substantial reservoir of *Borrelia* infection. To investigate whether this was also true in the South Georgia seabird population, and thus to help in the diagnosis and treatment of health complaints mentioned above, it was decided collect and analyse ticks so that future treatment would take into account the possibility or otherwise of Lyme Disease being a factor.

Methods: During the period October 2005 to March 2006 approximately 60 ticks were collected from a number of Albatross that nest at Bird Island. These were sent back to the UK as both live sample and also stored in 95% ethanol. PCR analysis was then undertaken at the Lyme Borreliosis Unit, HPA Microbiology Laboratory, Southampton General Hospital, UK.

Results: The PCR analysis is still being undertaken at the time of this abstract submission. Full results will be available by the time of the SCAR / COMNAP meeting in Hobart, July 2006. Early indications from the ticks analysed to date show negative for *Borrelia burgdorferi*, with the controls being sound so that the end results should be robust.

Discussion: Control of Lyme Disease is by education and prevention thus results from this study will help researchers decide on the level of protective clothing required in such locations and help health professionals in the diagnosis of Lyme Disease type symptoms.