Dr Kate Hendry

Antarctic Science Ltd

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Letter of support for Dr Dahlia Foo Antarctic Science Bursary Application:

The influence of foraging behaviour on long-term survival of newly weaned southern elephant seals

Dear Kate,

This is a letter of support for Dr Dahlia Foo, who is working with my group at IMAS. Although not a salaried employee of the Institute, she does hold an Adjunct Research position here. She will be doing this work as part of my lab’s overall research program and under my direct supervision. As such the work will be supported by IMAS, which will be able to hold the bursary funds for her. The funds will be used to support her living in Hobart for 6 months while working on the project.

I am particularly keen to see this work done, because the factors that determine adult foraging strategies are of fundamental importance in understanding how populations will adopt and respond to changing environmental circumstances. Studying the early life of marine organisms provides invaluable insights into how these features become fixed in a population. Elephant seals are an excellent model for this question as newly weaned pups depart their terrestrial breeding grounds 6 weeks after their mothers, and therefore start their life at sea completely naïve with respect to the best places to forage. Do they simply disperse at random, with successful individuals encountering productive foraging areas by chance, or do they have some innate mechanisms which help them? The study at Macquarie Island has tracking data from 50 newly weaned seals for their first 6 months at sea and, uniquely data on the long-term survival of those individuals. The latter data come from the intensive mark-recapture study of the elephant seal population at Macquarie conducted during the 1990s and early 2000s which means we know the ultimate fate of individuals in the study, which can be related to their behaviour during their first trips to sea.

So, I fully support this application. Dahlia is a very promising young scientist, and the bursary will enable her to produce an influential paper that will greatly strengthen her CV, while at the same time making an important contribution to Southern Ocean biology.

Yours sincerely,

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Mark Hindell