

**FACULTY GRANTS COMMITTEE
REPORT FORM**

Name: Jean Geary BOAL

Department: Biology

Title of Grant: Sleep in Cuttlefish

Date of Award (e.g. Fall 1998): Spring 2012

Category of Award (e.g. Travel to Present): Research

Amount of Award: \$700. Amount Encumbered:

REPORT:

(150 words) An abstract of a presentation or a report of a manuscript can be substituted and attached where appropriate.

I traveled to the Marine Biological Laboratory to pursue experiments addressing sleep in cuttlefish (*Sepia officinalis*). Our goal for the summer of 2012 was to test specifically whether the sensory threshold for response is different for active and resting cuttlefish. We compared the response of active and quiescent cuttlefish to a variety of different sensory stimuli, including a moving object passing outside the tank (visual stimulation) and vibration (mechanical stimulation). If the cuttlefish's quiescent state is analogous to sleep, the response latency and the magnitude of the stimulus required to elicit a response was expected to be greater for quiescent cuttlefish than for active cuttlefish. We experienced considerable technical difficulties but were able to establish unequivocally that the cuttlefish of a wide range of ages and developmental stages show what appears to be rapid eye movement (REM) sleep. This was a significant result that we are using in intermural grant proposals to support further research.