Oiled Wildlife Care Network
Wildlife Health Center

PROJECT ABSTRACT

State the objectives, specific aims and the significance of the project, and describe the methodology used to achieve these goals. Avoid summaries of past accomplishments. The abstract is meant to serve as a succinct and accurate description of the work when separated from other portions of the proposal. Do not exceed the space allowed; 10 pt. font and single-spacing is allowed for this section only. Do not use abbreviations in the title.

P.I. NAME and AFFILIATION: Kirk C. Klasing

FUNDING AMOUNT REQUESTED: $65,000

PROJECT TITLE: Investigation into the Dietary Needs of Faunivorous Seabirds undergoing Rehabilitative Care

Abstract:

The Oiled Wildlife Care Network may be presented with hundreds to thousands of live-captured wild birds in need of treatment during a large spill. Nutritional support for these animals during the rehabilitation process currently proceeds despite little published information on the needs of affected species. The clinically debilitated state in which oiled birds are typically presented complicates captive management. Large proportions of oiled birds are received for care markedly emaciated, anemic, and/or hypoproteinemiac. To identify which nutrients emaciated birds have catabolized and thus which require replacement, carcasses of emaciated birds that die in care will be compared to carcasses of healthy body condition individuals by complete carcass nutritional analysis. Carcass composition will be used as a gold standard along with morphometrics to create objective functional body condition indices for use on live oiled birds. To evaluate critical care diets and feeding regimens in regards to digestibility and ability to promote achievement of a positive energy and nitrogen balance, nutrient content of gavage input and droppings output will be compared by analysis of percents nitrogen, fat, and ash, using acid-insoluble ash as a dietary marker. Energy expenditures over time in captivity will be evaluated by injection of birds with stable isotopes of water (D2O18), and repeat isotopic evaluation of distilled blood plasma. Resting metabolic rate will be assessed through indirect calorimetry. Clinical improvement through the rehabilitation process will be monitored by daily body weight measurement, packed cell volume, total plasma protein, and reticulocyte response to anemia. All information will be used to identify shortcomings in current procedures and improve the nutritional support given to OWCN patients through use of diets based on the specifically identified digestive abilities and energetic needs of these species. The primary hypothesis of this study is that survival to release of oil spill affected faunivorous birds may be improved through administration of evidence-based appropriate and specific nutritional support.