

**A pilot study to measure metabolic rate and test for the presence of Ca-ATPase in benthic foraminifera**

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We would like to request \$1,900 to conduct a physiological pilot study on benthic foraminifera. This study would have two objectives:

- 1) To test for the presence of Ca-ATPase in benthic foraminifers at the site of calcification. (A test of the hypothesis of McConnaughey [1989a,b])
- 2) To measure the metabolic rate of benthic foraminifers at specific intervals during the ontogenetic process. (A test of the hypothesis of Berger *et al* [1979])

Conducting these experiments will provide strict tests of two models proposed to explain physiological stable isotopic fractionation in benthic and planktic foraminifera.