



PhD opportunity in paleoceanography and geochemistry:

Sea ice, nutrient utilization, and primary production on the Wilkes Land Margin

Primary supervisor:

Dr. Christina Riesselman, Departments of Geology and Marine Science,
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Co-advisors:

Assoc. Prof. Rebecca Robinson, Graduate School of Oceanography, University of Rhode Island
Dr. Robert Van Hale, Department of Chemistry, University of Otago

We seek an enthusiastic and motivated student to undertake a **PhD project in Pliocene Antarctic paleoceanography and isotope geochemistry** at the University of Otago in Dunedin, New Zealand.

The East Antarctic Ice Sheet is generally accepted to act as a stable, permanent feature of the Antarctic cryosphere, however diverse lines of evidence suggest that its marine margin may be prone to retreat during episodes of global warmth. This project aims to reconstruct fluctuations in sea ice and primary productivity, which respond directly to changes in climate and proximity to the ice sheet, during the mid-Pliocene (~3.5 to 3 Ma), the most recent geologic interval with a similar climate to that predicted for the coming century. The project will employ a variety of biological and geochemical proxies from two marine sediment cores collected on the Wilkes Land margin during IODP Expedition 318. The successful applicant will have the opportunity to conduct analytical work at both Otago and the University of Rhode Island (URI).

We encourage applications from prospective students who have demonstrated academic and research excellence at the bachelor's or Master's level, with a strong foundation in the geosciences, chemistry, or a related quantitative discipline. The selected candidate will be funded by a competitive University of Otago PhD Scholarship, which includes a 3-year stipend of NZ\$ 25,000 per year (tax-free; includes a fee waiver), and the NZ Marsden Fund, which provides travel support to national and international conferences and collaborative research opportunities with the URI Graduate School of Oceanography. Both New Zealand and international students are encouraged to apply. The successful applicant may select Geology or Marine Science as a primary department.

Review of applications will begin on **September 15** and will continue until the position is filled. The start date is flexible. Applicants should submit a single pdf file by e-mail to christina.riesselman@otago.ac.nz with: 1) a cover letter including preferred start date, 2) a complete CV, 3) academic transcripts (unofficial ok), and 4) the names and contact information of at least three referees.

The University of Otago is New Zealand's premier research university. Situated on the South Island in the Pacific coastal city of Dunedin, Otago is home to ~ 22,000 students and 3750 dedicated staff (faculty). Further information about the departments of Geology, Marine Science, and Chemistry can be found at <http://www.otago.ac.nz/geology>, <http://www.otago.ac.nz/marinescience>, and <http://neon.otago.ac.nz/chemistry>.