



CALL FOR APPLICATIONS

for scientists based in ECORD Member Countries to participate in

IODP Expedition 370: "T-Limit of the Deep Biosphere off Muroto" on-board the Drilling Vessel *Chikyu* / shore-based at KCC, Kochi, Japan

DEADLINE to apply: 10th June, 2016

The European Consortium for Ocean Research Drilling (ECORD) offers you the unique opportunity to participate in IODP Expedition 370 as member of the science party, either on-board *D/V Chikyu* or as shore-based scientist at the **Kochi Core Center (KCC)** in Kochi, Japan. The expedition is planned by the Center for Deep Earth Exploration (CEDEX) in the framework of the International Ocean Discovery Program (IODP), an international research program for drilling at sea. Using the drilling vessel *Chikyu*, Expedition 370 will explore the limits of sub-seafloor life and the biosphere in the proto-thrust zone of the Nankai accretionary prism off Cape Muroto, Japan. IODP Expedition 370 will be from 10th September to 10th November in 2016, including 3 days of port call, and accompanied by shore-based activities at KCC. This expedition is based on IODP Proposal 865, "Constraining the temperature limit of the microbial deep biosphere in the Nankai Trough subseafloor" (<http://www.iodp.org/active-proposals>).

Goals: IODP Expedition 370 aims (1) to study the factors that control biomass activity and diversity of microbial communities in a sub-seafloor environment where temperatures increase from ~30°C to ~130°C, and which thus likely encompasses the biotic-abiotic transition zone, and (2) to determine geochemical, geophysical and hydrogeological characteristics in sediments and the underlying basaltic basement, and elucidate if the supply of fluids containing thermogenic and/or geogenic nutrient and energy substrates may support sub-seafloor microbial communities in the Nankai accretionary complex. To achieve these scientific objectives, sediment and basalt core samples will be retrieved from a site near ODP Site 1174 (ODP Leg 190, completed in 2000), located in the landward proto-thrust zone of the Nankai Trough accretionary prism down to ~1.2 km below seafloor (water depth: 4730 m).

Science party: The IODP Expedition 370 science party will generate samples and data using shipboard facilities of *D/V Chikyu* as well as shore-based facilities at **KCC** to meet major scientific objectives. To this end, the science party will consist of two groups: one aboard *D/V Chikyu* and the other at KCC. The shipboard team will be and responsible for sampling, quality assurance/quality control (QA/QC) including contamination assessments, time-sensitive (bio-)geochemical and microbiological analyses, and IODP standard measurements. The shipboard team will include professional researchers (and graduate students) in the following specialties:

Microbiologists, Organic and Inorganic Geochemists/Biogeochemists, Physical Properties Specialists, Sedimentologists, Structural Geologists, Paleontologists, Paleomagnetists, Petrologists and Hydrogeologists.

The shore-based team will gather at KCC on around 27th September for additional, but essential, microbiological and (bio-)geochemical sub-sampling and analyses to achieve major scientific goals in the IODP T-Limit project. This set of analyses will include, but is not limited to, cell count of low-biomass samples, molecular analysis, isotopic analysis, biomarker analysis, etc., which will be implemented concurrently with shipboard activities using anaerobically packed whole round core samples directly sent from *D/V Chikyu*. The shore-based team activity at KCC is 8 hrs through 7 days a week. CDEX will provide



the accommodation and per diem expenses during the shore-based team activity. Both groups of the IODP Expedition 370 Science Party are responsible for the IODP Expedition Report, and all members of the science party will have access to samples and data according to IODP policies.

Applicants to join the science party of Expedition 370 are encouraged to read the summary prospectus from the science operator's expedition website (<http://www.jamstec.go.jp/chikyu/e/exp370/index.html>) and to contact their program member office. The total of ~30 scientists (including graduate students) will be assigned to shipboard and shore-based teams based on their research plans and skills. Applicants are encouraged to document any preferences between shipboard and shore-based teams according to their scientific purposes.

For more information about the *Chikyu* Expedition 370 and the expedition science objectives see <http://www.jamstec.go.jp/chikyu/e/exp370/index.html> - this includes links to the individual expedition web pages that provide the original IODP proposal and expedition planning information.

The Application Process in relation to this call is open to scientists in all ECORD member countries. Please download the *Apply to Sail* general application forms from the ESSAC webpage:

- Form Expedition 367: http://www.essac.ecord.org/flyer/Apply_to_sail_webform_370.doc

Please, fill out all applicable fields and send it to the ESSAC office by email (essac@geomar.de) with the following additional documents:

1. A letter of interest outlining your specific expertise, previous involvement in DSDP/ ODP/ IODP expeditions, research interests, primary research goals of your proposed participation.
2. CV and publication list.
3. Young researchers must additionally provide a letter of support from their host institution, including information on post-cruise science support.

All applications should include a statement how you intend to achieve the proposed scientific objectives, with information on the funding scheme and support from your institution or national funding agencies. For more information see: http://www.essac.ecord.org/flyer/Guidelines_for%20Applying_to_sail.pdf

In addition to the ESSAC application, all applicants *must inform their national office or national delegate* and send a copy of the application documents. The national offices or national delegates can also provide information regarding travel support, post-cruise funding opportunities, etc.

See <http://www.essac.ecord.org/index.php?mod=about&page=ESSAC> for a list of the national contact persons.

For further information or questions, please contact the ESSAC Office:

ECORD Science Support & Advisory Committee
Jan Behrmann (ESSAC Chair)
Hanno Kinkel (ESSAC Science Coordinator)
GEOMAR | Helmholtz Centre for Ocean Research Kiel
Wischofstrasse 1-3
24148 Kiel, Germany
essac@geomar.de
Tel: +49 431 600 2418
Fax: +49 431 600 2922

