Dataset name: **Metatranscriptomic**

|  |  |
| --- | --- |
| Parameter: | * **List of expressed genes** |

PROJECT TITLE: **MOBYDICK**

Oceanographic cruise: **MOBYDICK**

Start date: **18/02/2018**

End date: **27/03/2018**

Project manager: **Bernard Quéguiner** [bernard.queguiner@mio.osupytheas.fr](mailto:bernard.queguiner@mio.osupytheas.fr)

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**Observatoire Océanologique de Banyuls sur mer**

**66650 Banyuls sur mer, France**

Geographic information: **Indian sector of the Southern Ocean**

Latitude: **49.5°S – 52.5°S**

Longitude: **67,0°E – 74.5°E**

Parameter supervisor: **Pavla Debeljak**

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# OPERATIONS

## Sampling device(s)

Water samples were collected from the Niskin bottles in the uppermost surface water layer (10m or 15m).

## List of stations sampled

M2\_1 (CTD-09), M4\_1 (CTD-11), M3 (CTD-21), M2\_2 (CTD-27), M1 (CTD-36), M4\_2 (CTD-46), M2\_3 (CTD-49), and M3\_3 (CTD-58).

# INSTRUMENTS

Instrument Type: **Peristaltic pump**

Manufacturer: **Cole Parmer**

Model: **Masterflex L/S Easy-Load II**

Instrument Features / Calibration: **N/A**

# DESCRIPTION of PARAMETERS

## Measurement details

10 L of seawater (in triplicates) were prefiltered through a 0.8 µm polycarbonate filter (142 mm) and then onto a 0.2 µm Supor plus membrane (142 mm).

## Analytical procedure

The Supor filters were stored in RNA-later at –80°C. For RNA extraction, frozen filters will be vortexed with PowerSoil beads (MOBIO, Carlbad, CA, USA) in 2 ml RTL buffer (Qiagen, Valencia, CA, USA), and then processed following the instructions of the RNAeasy Kit (Qiagen, Valencia, CA, USA). DNA will be removed from the extracted RNA using the turboDNAse RNA (Applied Biosystems, Austin, TX, USA). All further steps (rRNA depletion, library preparation and sequencing) will be done at the sequencing company Fasteris.

## Units

N/A

## Sensor precision

N/A

## Post-cruise data analysis/treatment required

N/A

## Estimated Date of Delivery

End of 2018.

# BIBLIOGRAPHY

Beier S., Gálvez M.J., Molina V., Sarthou G., Queroué F., Blain S., Obernosterer I., 2015. The transcriptional regulation of the glyoxylate cycle in SAR11 in response to iron fertilization in the Southern Ocean. *Environmental Microbiology Reports*, **7**(3):427-34. doi: 10.1111/1758-2229.12267

Beier S., Rivers A.R., Moran M.A., Obernosterer I., 2014. The transcriptional response of prokaryotes to phytoplankton-derived DOM in seawater. *Environmental Microbiology*, **17**(10), 3466–3480. doi: 10.1111/1462-2920.12434.