

## Curriculum Vitae Stéphanie, H.M JACQUET

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Citizenship, sex: French, female

Date of birth: August 21 1979

### **Present position**

October 2002-present, PhD student in Marine Biogeochemistry at the Department of Analytical and Environmental Chemistry, Vrije Universiteit Brussel, Belgium, under the supervision of F. Dehairs (promoter) and B. Quéguiner (co-promoter, COM, Marseille, France). *Barium proxy in the Southern Ocean.*

### **Research interests**

Marine biogeochemistry, interactions of element cycles, global biogeochemical cycles, biological carbon pump, Barium & barite proxy of organic carbon export, mesopelagic zone mineralization, frontal systems, Southern Ocean, stable and natural radioactive isotopes.

### **Former education & training**

2001-2002: Master (DEA) in Marine Environmental Sciences - Biogeochemistry, Université de la Méditerranée, Centre d'Océanologie de Marseille (COM)

2000-2001: « MAITRISE » in Marine Environmental Sciences, Université de la Méditerranée, COM

1999-2000: « LICENCE » in Earth Sciences, Université de la Méditerranée, COM

1997-1999: « DEUG » in Earth Sciences, Université de la Méditerranée, COM

1996-1997: Scientific Baccalaureat

#### \* Training programmes:

- February -June 2002: Dissolved Barium in the frontal system of the Crozet - Kerguelen basin (ANTARES-4 expedition). Ba determination by ICP-MS. Supervisor: F. Dehairs ANCH (Department of Analytical Chemistry), VUB Brussels.
- April -August 2001: LHMA (Laboratory of Hydrology and aquatic molysmology). « Comportement des tensio-actifs anioniques et de leurs métabolites dans l'environnement marin (traceurs dans les sédiments de Cortiou) ». Determination by HPLC-UV.
- September 2000: Water treatment STEREAU/SAUR Marseille.
- April 2000: UIM de Cagnes sur Mer.

### **Publications**

Jacquet S.H.M., F. Dehairs and S. Rintoul, 2004. A high resolution transect of dissolved barium in the Southern Ocean, *Geophysical Research Letters*, 31, L14301, doi: 10.1029/2004GL20016

Jacquet, S.H.M., F. Dehairs, D.B. Cardinal, J. Navez and B. Delille, 2005. Barium distribution across the Southern Ocean frontal system in the Crozet–Kerguelen Basin, *Marine Chemistry*, 95, 149-310.

Jacquet S.H.M., J. Navez and F. Dehairs, ICP-MS and HR-ICP-MS analyses of barium in seawater by isotope dilution, submitted to *Spectrochimica Acta B*.

Jacquet S.H.M., F. Dehairs, N. Savoye, M. Elskens and D. Cardinal, Barium-cycle dynamics in the Australian sector of the Southern Ocean, submitted to *Marine Chemistry*

### **Communications at international symposia**

#### *Oral presentation*

Jacquet S.H.M., F. Dehairs, D. Cardinal, N. Savoye and T. Trull. Dynamics of dissolved and particulate barium in the mesopelagic waters and fluxes of Ba in the deep sea of the Southern Ocean along 142°E: Clues for the barite formation process and the fate of exported carbon, *European Geosciences Union*, Nice, France, 25-30 April 2004.

Dehairs F., D. Cardinal, N. Savoye, S. Jacquet; A. Luc and M. Elskens, 2005. A trace element and isotope proxy approach for the study of the biological carbon pump: a Southern Ocean case study, *International Ocean Research Conference*, The Oceanography Society, UNESCO-IOC, 6-10 June, 2005, Paris.

Cardinal, D., N. Savoye, S.H.M. Jacquet, L. André, D. Wolf-Gladrow, F. Dehairs, 2005. Silicon isotopes, <sup>234</sup>Thorium and mesopelagic Barium to constrain the dynamics of a Southern Ocean diatom bloom induced by in situ iron fertilization (EIFEX), ASLO Summer Meeting, 19-23 June, 2005, Santiago de Compostela, Spain.

Jacquet S.H.M., J. Navez and F. Dehairs,

Colloquium Spectroscopicum Internationale XXXIV, 4-9 September 2005, Antwerp

#### *Poster presentation*

Jacquet S.H.M., T. Cattaldo, D. Cardinal, J. Navez and F. Dehairs. Dissolved Ba in the complex frontal system of the Crozet – Kerguelen basin and comparison with other Southern Ocean frontal zones, EGS-AGU-EUG Joint Assembly, Nice, France, 6-11 April 2003.

Cardinal D., L. André, F. Dehairs, M. Elskens, S.H.M. Jacquet, N. Savoye and T. Trull. Use of the Ba<sub>xs</sub> proxy through the water column of the Southern Ocean, EGS-AGU-EUG Joint Assembly, Nice, France, 6-11 April 2003.

Jacquet S., A. de Brauwere, F. Dehairs, M. Elskens, C. Jeandel, N. Metzl, S. Rintoul and T. Trull, 2005. Comparison of dissolved Barium with Nutrients and Physico-chemical Conditions along 30°E and 145°E across the Southern Ocean, European Geosciences Union 2005, *Geophysical Research Abstracts*, Vol. 7, 06312, 2005.

de Brauwere A., S. Jacquet, F. Dehairs, F. De Ridder, R. Pintelon and J. Schoukens, 2005. Refinement of Optimum Multiparameter approach for water mass analysis European Geosciences Union 2005, *Geophysical Research Abstracts*, Vol. 7, 06424, 2005.

### **Communications at national symposia**

#### *Oral presentation*

Jacquet S.H.M. and F. Dehairs. Dissolved Barium distribution in Southern Ocean frontal systems. BELCANTO II user committee meeting, Bruxelles, 12 November 2003.