

Dominique LAMY, PhD

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Born the 16th of March 1979 in Caen (France, Calvados)



PROFESSIONAL EXPERIENCE

■ RESEARCH

- Since 2011** **Associate professor** at the University Pierre et Marie Curie (Paris), UMR CNRS 7208 BOREA
Research topic: Interactions between organic matter (OM) and planktonic prokaryotes (bacteria and archaea) in marine and lake ecosystems; Structure of prokaryotic communities and their responses (functions and functional diversity) to the changes of origin, quantity and quality of the MO
- 2009 – 2011** **Post-doc researcher** at the University of Vienna, Department of Marine Biology (Austria) & Royal NIOZ Institute (Texel, The Netherlands) supported by a Marie Curie fellowship (ARCADIA project) and by the MOCA project
Research topic: Abundance, activity (nitrification, fixation of inorganic carbon) and phylogenetic composition of marine aggregate-associated Bacteria et Archaea (primarily lithogenic versus biogenic particles) over a seasonal cycle in the Adriatic Sea
Supervisor: Pr. Gerhard Herndl
- 2007 – 2008** **Post-doc researcher** at the Laboratoire d'Océanographie Biologique de Banyuls-sur-mer (France), UMR CNRS 7621, Université Pierre et Marie Curie (France)
Research Topic: Ecology of aerobic anoxygenic phototrophic (AAnP) bacteria in contrasted oligotrophic sites in the Mediterranean Sea
Supervisor: Pr. Philippe Lebaron
- 2006 - 2007** **Teacher and Research Assistant** at the Maison de la Recherche en Environnements Naturels, UMR CNRS 8187 LOG, Université du Littoral - Côte d'Opale (Calais, France)
Research Topic: Structure of bacterial assemblages (major bacterial groups) and their spatio-temporal patterns in relation with the course of the phytoplankton blooms (including *Phaeocystis globosa*) in the eastern English Channel
Supervisor: Pr. Urania Christaki
- 2002 - 2006** **PhD in Biological Oceanology** at the Université du Littoral - Côte d'Opale, Maison de la Recherche en Environnements Naturels, UMR CNRS 8013 (Calais, France)
Research Topic: Bacterial dynamics in the eastern English Channel - Relation with *Phaeocystis globosa* blooms
Supervisors: Pr. Jean-Michel Brylinski and Dr. Luis Felipe Artigas

■ TEACHING AND MENTORING

- Teaching for under- and graduate students in biostatistics, histology, general and marine ecology, microbial ecology
- Since 2011** **Associate professor** at the Université Pierre et Curie (Paris, France); Hours: between 190 to 210 hrs per year
- Mars 2008** **MARBEF Training course** "Fluorescent *in situ* hybridization for the study of aquatic microbes"; Co-organisation of conferences; teaching for PhD students and post-doc researchers (duration = 1 week)
- 2002 - 2007** **Teacher assistant** at the Université du Littoral - Côte d'Opale (Calais, France); Hours: between 60 to 100 hrs per year
- Since 2004** **Mentor and supervisor for trainees**
Levels: BTS, 2nd year in Biology; Master degree, 1st and 2nd year in Marine Ecology and Biological Oceanology; *Duration*: 1 to 6 months

EDUCATION

- June 2006** **PhD in Biological Oceanology** - Université du Littoral - Côte d'Opale (Calais, France)
Title : Bacterial dynamics in the eastern English Channel - Relation with *Phaeocystis globosa* blooms (obtained with honors and jury felicitations)
- July 2002** **Master degree in Science, second year**: Biological Oceanology and Marine Ecology.
Université du Littoral Côte d'Opale, Calais, France (obtained with honors)
- June 2001** **Master degree in Science, first year**: Environmental Sciences and Biological Oceanology.
Université Pierre et Marie Curie, Paris VI, France (obtained with honors)
- June 2000** **Bachelor in Science**: Biology of Organisms. Université Pierre et Marie Curie, Paris VI,
France

TECHNICAL AND SCIENTIFIC SKILLS

- Sampling instruments in pelagic studies
- Epifluorescence microscopy, image analysis and flow cytometry applied to the study of prokaryotic cells
- Molecular biology approaches applied to the study of marine bacterial assemblages
 - Genetic and functional diversity through CARD-FISH / MICRO-CARD-FISH
 - Sequencing (454 sequencing, cloning) and fingerprinting methods (ARISA, TRFLP)
 - Quantification of functional genes (qPCR)
- Bacterial strain isolation
- Radioactivity incorporation methods (³H-Thymidine, ³H-Leucine) for bacterial & archaeal (¹³C-bicarbonate) production assays
- Stable isotope incorporation methods (¹⁵N-Leucine, ¹⁵N-Ammonium chloride, ¹³C-Bicarbonate) dedicated to RamanFISH and NanoSIMS analyses
- Biochemical analyses of bacterial exoenzymatic activities (fluorogenic substrates for the estimation of lipase, aminopeptidase, glucosidase and phosphatase activities)
- Statistical analyses (parametric, non parametric, multivariate)
- Data processing using R software, Systat, XL-Stat, PRIMER, CANOCO
- Mapping and image analysis softwares: SURFER, ODV, ImagePro +
- Reviewer for peer scientific journals (Aquatic Microbial Ecology; Applied and Environmental Microbiology, Journal of Sea Research)
- Spoken languages: French (native speaker) ; English (written, fluently spoken) ; German (basics)

OCEANOGRAPHIC CRUISES

- 2010** Archimedes IV/MOCA project; Atlantic Ocean; R/V Pelagia (30 days)
- 2009 - 2010** ARCADIA project; Adriatic Sea; R/V Sagita (1/2 day every 2 months)
- 2008** BOUM project (Biogeochemistry from Oligotrophy to Ultra-oligotrophy in the Mediterranean Sea); Mediterranean Sea; R/V L'Atalante (35 days)
- 2001 - 2005** PNEC and CPER « *Phaeocystis* » projects; eastern English Channel; R/V Sépia II and R/V Côtes de la Manche (1 to 7 days per month)
- 2000** «DiVerFlux PNEC ART1» project; eastern English Channel; R/V Côtes de la Manche (5 days)

PUBLICATIONS

- Swan, B.K., Martinez-Garcia, M., Preston, C.M., Sczyrba, A., Woyke, T., **Lamy, D.**, Reinthaler, T., Poulton, N.J., Masland, E.D.P., Lluésma Gomez, M., Sieracki, M.E., DeLong, E.F., Herndl, G.J., Stepanauskas, R. (*accepted*). Ubiquitous dark ocean bacteria fix carbon and contain RuBisCO and sulfur oxidation genes. *Science* (IF 2011 = 31.20)
- Causse, R., Ozouf-Costaz, C., Koubbi, P., **Lamy, D.**, Eléaume, M., Dettai, A., Duhamel, G., Busson, F., Pruvost, P., Post, A., Beaman, R.J. & Riddle, M.J. (2011). Demersal ichthyofauna shelf communities from the Dumont d'Urville Sea (East Antarctica). *Polar Science*, doi: 10.1016/j.polar.2011.03.004
- Lamy, D.**, Jeanthon, C., Cottrell, M.T., Kirchman, D.L., Van Wambeke, F., Ras, J., Dahan, O., Pujo-Pay, M., Oriol, L., Bariat, L., Catala, P., Cornet-Barthaux, V. & Lebaron, P. (2011) Ecology of aerobic anoxygenic phototrophic bacteria along an oligotrophic gradient in the Mediterranean Sea. *Biogeosciences* (IF 2011 = 3.86), 8:973-985
- Agogué, H.*, **Lamy, D.***, , Neal, P., Sogin, M. & Herndl, G. (2011) Bacterial assemblage composition in the North Atlantic Ocean revealed by massively parallel tag sequencing. *Molecular Ecology* (IF 2011 = 5,52), 20:258-274 (***the authors contributed equally to this work**)
- Lamy, D.**, De Carvalho-Maalouf, P., Cottrell, M.T., Lami, R., Catala, P., Oriol, L., Caparros, J., Kirchman, D.L. & Lebaron, P. (2011) Seasonal dynamics of aerobic anoxygenic phototrophs in a Mediterranean lagoon. *Aquatic Microbial Ecology* (IF 2011 = 2.39), 62:153-163
- Lamy, D.**, Obernosterer, I., Laghdass, M., Breton, E., Catala, P., Artigas, L.F., Lebaron, P. & Christaki, U. (2009) Seasonal changes in bacterial abundance, activity and community composition in the eastern English Channel: a case study during a *Phaeocystis globosa* bloom. *Aquatic Microbial Ecology* (IF 2009 = 1.74), 58: 95-107.
- Hubas, C., **Lamy, D.**, Artigas, L.F. & Davout, D. (2007) Seasonal variability of intertidal bacterial metabolism and growth efficiency in an exposed sandy beach during low tide. *Marine Biology* (IF 2007 = 2.21), 151: 41-52.
- Lamy, D.**, Artigas, L.F., Jauzein, C., Lizon, F. & Cornille, V. (2006) Coastal bacterial viability and production in the eastern English Channel: a case study during a *Phaeocystis globosa* bloom. *Journal of Sea Research* (IF 2006 = 1.76), 57: 227-238.

■ ORAL COMMUNICATIONS

- Lamy, D.**, Agogué, H., Neal, P., Sogin, M. & Herndl, G.J. Water mass-specificity of bacterial communities in the North Atlantic. *Conference entitled: "Microorganisms facing their environment"*, Muséum National d'Histoire Naturelle, Paris, 27-28 October 2011.
- Lamy, D.**, Agogué, H., Neal, P., Sogin, M. & Herndl, G. Bacterial assemblage composition in the North Atlantic Ocean revealed by massively parallel tag sequencing. *Workshop "The microbial view of marine biogeochemical cycles"*, Banyuls-sur-mer, France; 19 – 21 May 2010
- Lamy, D.**, Dahan, O., Cottrell, M.T., Van Wambeke, F., Ras, J., Kirchman, D.L., Jeanthon, C. & Lebaron, P. Abundance and culturable diversity of aerobic anoxygenic phototrophs in the Mediterranean Sea. *ASLO meeting*, Portland, USA; 22 – 26 February 2010
- Lamy, D.**, Agogué, H., Neal, P., Sogin, M. & Herndl, G. Bacterial assemblage composition in the North Atlantic Ocean revealed by massively parallel tag sequencing. *11th Symposium on Aquatic Microbial Ecology (SAME 11)*, Piran, Slovenia; 31 Août – 4 September 2009.
- Agogué, H., **Lamy, D.**, Neal, P., Sogin, M. & Herndl, G.J. (2009) Bacterial assemblage composition in the North Atlantic Ocean revealed by massively parallel tag sequencing. *ICOMM Meeting*, Boston, USA; 6 - 10 April 2009.
- Lamy, D.**, De Carvalho-Maalouf, P., Intertaglia, L., Catala, P., Oriol, L., Caparros, J., & Lebaron, P. Dynamics of aerobic anoxygenic phototrophs in a Mediterranean lagoon system. *ASLO meeting*, Nice, France; 25 – 30 January 2009

Lamy, D., Obernosterer, I., Laghdass, M., Breton, E., Catala, P., Artigas, L.F., Lebaron, P. & Christaki, U. (2009) Temporal changes of major bacterial groups and bacterial heterotrophic activity during a *Phaeocystis globosa* bloom in the eastern English Channel. *Workshop "Marine dissolved organic matter and heterotrophic bacteria: from bulk measurements to molecular analyses"* Banyuls-sur-mer, France; 22 - 23 October 2007

Lamy, D., Laghdass, M., Marc, A.C., Breton, E., Catala, P., Artigas, L.F., Obernosterer, I., Lebaron, P. & Christaki, U. Seasonal changes in bacterial abundance, activity and community composition in the eastern English Channel: a case study during a *Phaeocystis globosa* bloom. *10th Symposium on Aquatic Microbial Ecology (SAME 10)*, Faro, Portugal; 2 - 9 September 2007

Artigas, L.F., **Lamy, D.**, Kowalski, V., Nejstgaard, J., Sazhin, A., Jauzein, C., Lizon, F., Antajan, E., Delmas, D., Fell, M. & Purdie, D. Phytoplankton fate through microbial loop processes and trophic transfers in the eastern English Channel, during *Phaeocystis globosa* spring outbursts. *SCOR Phaeocystis Working Group 120 Final Meeting*; Gröningen, The Netherlands; 30 August - 3 September 2005

Lamy, D., Kowalski, V., Artigas, L.F. & Delmas, D. Exoenzymatic activities and bacterial dynamics in the eastern English Channel. *International Plankton Symposium III*, Figueira da Foz, Portugal; 17 - 19 March 2005

Lamy, D., Artigas, L.F., Jauzein, C., Lizon, F. Seasonal patterns of the heterotrophic bacterial compartment during a spring bloom succession in two areas of the eastern English Channel. *International Plankton Symposium II*, Vigo, Spain; 16 - 19 October 2003

Artigas, L.F., Antajan, E., **Lamy, D.**, Lizon, F., Nejstgaard, J., Sazhin, A., Ibáñez, S., Jauzein, C., Labry, C., Purdie, D. Phytoplankton and bacterial production and trophic transfer in the eastern English Channel, during a spring phytoplankton succession characterized by *Phaeocystis globosa* outbursts. *International Plankton Symposium II*, Vigo, Spain; 16 - 19 October 2003

■ POSTERS

Kowalski, V., **Lamy, D.**, Artigas, L.F., Cornille, V., Guiselin, N. Microbial contribution to phytoplankton-derived organic matter degradation in spring in the eastern English Channel. *9th Symposium on Aquatic Microbial Ecology (SAME 9)*, Helsinki, Finlande ; 21 - 26 August 2005

Lamy, D., Artigas, L.F. Bacterial dynamics during a phytoplankton bloom succession in the eastern English Channel. *8th Symposium on Aquatic Microbial Ecology (SAME 8)*, Taormina, Italy ; 25 - 30 October 2002.