

Curriculum vitae

Personal Information

Laura Perini

Born 7 December 1989 in Chioggia (Italy)

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Current Position

Research stay at the Natural History Museum (NHM)

Department: Life Sciences

Division: LS Division of Diversity and Informatics

Cromwell Rd, London SW7 5BD (UK)

Academic and Scientific Career

- Laurea (**110 /110 cum laude**) in Health Biotechnologies (2008–2011), University of Padova (Italy). She graduated with the highest scores and with excellent thesis result
- Master Degree (**110 /110 summa cum laude**) in Biotechnology Applied to Food Security and Nutrition (2011–2013), University of Padova (Italy) with a thesis entitled “*Molecular characterization of Escherichia coli isolates from macroalgae in the Venice Lagoon*”. She graduated with the highest score, and with outstanding thesis results (which have been recently published, see Quero GM, Fasolato L, Vignaroli C, Luna GM [2015] *Scientific Reports* 5:10969. The article has won the Italian Award UNASA 2016)
- Post-graduate research activity (as volunteer) at the National Research Council of Italy – Institute of Marine Science (CNR – ISMAR) in Venice (January–March 2014)
- Research Fellowship at the CNR – ISMAR in Venice (April 2014–March 2015) within the EU Project *BALMAS – BALLast water Management for Adriatic Sea protection* (www.balmas.eu)
- Research Fellowship at the CNR – ISMAR in Venice (April 2015–until March 2016) within the EU Project *BALMAS – BALLast water Management for Adriatic Sea protection*
- Research stay at the ICM – Institute of Marine Sciences in Barcelona (April – May 2016) under the supervision of Dr Josep M. Gasol and Dr Marta Sebastián (*ECORARE* project)
- Research stay at the NHM – Natural History Museum in London (June – September 2016) under the supervision of Dr Anne Jungblut (within the project: “A frozen asset: can south georgia’s glaciers safeguard the biocomplexity of a biodiversity hotspot in meltdown?” funded by National Geographic Society)

Publications and research outputs

• Peer review publications (ISI)

- 1) **Perini L.**, Quero G.M., Serrano E., Luna G.M. (2015) Distribution of *Escherichia coli* around the city of Venice, Italy: temporal patterns and the role of tidal forcing. *Water Research* 87: 155-165 (Impact Factor 5.528)

- 2) Quero G.M., Cassin D., Botter M., **Perini L.**, Luna G.M. (2015) Patterns of benthic bacterial diversity in coastal areas contaminated by heavy metals and polychlorinated biphenyls (PCBs). *Frontiers in Microbiology* 6:1053 (Impact Factor 3.900)
- 3) **Perini L.**, Quero G.M., Luna G.M. Seasonal patterns and genetic diversity of fecal indicator bacteria in the Venice Lagoon. In preparation for *Environmental Science & Technology*
- 4) Quero G.M., **Perini L.**, Pesole G., Bastianini M., Marini M., Luna G.M. Seasonality drives patterns of planktonic and benthic bacterial diversity in a microtidal lagoon and the adjacent open sea. Manuscript submitted to *ISME Journal*
- 5) Luna G.M., Quero G.M., **Perini L.** Next generation sequencing reveals different fecal pollution signatures in aquatic sediments across gradients of anthropogenic influence. Manuscript submitted to *Advances in Oceanography and Limnology*

- **Non peer review publications (non ISI)**

- 1) Technical Report Oceanographic Cruise “*BioLig - Biodiversity, ecosystem functioning and pelagic-benthic coupling in Ligurian submarine canyons*” (June 2013). Co-author of the paragraphs 7.1.2 “Biodiversity of planktonic Bacteria and Archaea, phytoplankton abundance and diversity” (pag. 20) and 7.2.3 “Biodiversity of benthic Bacteria and Archaea, abundance and diversity” (pag. 46)
- 2) Technical Report Oceanographic Cruise “Venus3” (4 – 18 August 2015). Co-author of the paragraph “Biodiversity and abundance of planktonic Bacteria and viruses”
- 3) Technical Report Oceanographic Cruise “Ocean-Certain” (18 – 31 August 2015). Co-author of the paragraph “Biodiversity and abundance of planktonic Bacteria and viruses”
- 4) Mauro Bastianini, Fabrizio Bernardi Aubry, Stefania Finotto, Elisa Camatti, Marco Pansera, Laura Perini, Federico Perini. 2015. Port of Venice (Italy): Baseline Surveys for Harmful Aquatic Organisms and Pathogens. Final Report. BALMAS project. Work package 5. Activity 5.1, pp.49

- **Abstract to Conferences**

- 1) Luna G.M., Quero G.M., **Perini L.** (2014) *Pathogenic bacteria of fecal origin in environmental reservoirs along the Italian coastline, detected using novel molecular methods*. Annual workshop “RITMARE” Project, Bologna, 14 April 2014. (Poster co-author)
- 2) Luna G.M., **Perini L.**, Quero G.M., Serrano E. (2015) *Quantitative PCR for rapid detection of bacterial HAOPs in port and ballast waters*. Annual workshop “BALMAS” Project, Durres (Albania), 24 March 2015 (Oral communication, co-author)
- 3) Luna G.M., **Perini L.**, Quero G.M., Serrano E. (2015) *Distribution of fecal indicator bacteria around the city of Venice, Italy: temporal patterns, reservoirs and the role of tidal forcing*. Water Microbiology Conference, University of North Carolina (USA), May 2015 (Oral communication, co-author)
- 4) **Perini L.**, Quero G.M., Serrano E., Luna G.M. (2015) *Distribution of Escherichia coli around the city of Venice, Italy: temporal patterns and the role of tidal forcing*. Conference of the Italian association of Limnology and Oceanography (AIOL), Verbania, 28 September – 1 October 2015 (Oral communication, presenting author).
- 5) Quero G.M., Cassin D., Botter M., **Perini L.**, Luna G.M. (2015) *Patterns of benthic bacterial diversity in coastal areas contaminated by heavy metals and polychlorinated biphenyls (PCBs)* Conference of the Italian association of Limnology and Oceanography (AIOL), Verbania, 28 September – 1 October 2015 (Oral communication, co-author).

Funding, prizes & awards

- 1) Recipient of a Travel Grant Award to participate to the *XXII Conference of the Italian association of Limnology and Oceanography (AIOL)*, Verbania, 28 September – 1 October 2015
- 2) Recipient of Travel Award to attend the BALMAS 3rd regular meeting 7–9 October 2014, Kotor (Montenegro)
- 3) Recipient of Travel Award to attend BALMAS meeting of the Italian partners 26 February 2015, Ancona (Italy)
- 4) Recipient of Travel Award to attend BALMAS 4th regular meeting 24–26 of March 2015, Durres (Albania)

Research interests and laboratory skills

Her researches focus on the ecology and evolution of pathogenic bacteria of fecal origin in aquatic ecosystems. She possesses optimal skills in the microbiological analysis of aquatic samples (water, sediment and macroalgae), identification, molecular characterization and quantitative detection of microorganisms (*E. coli*, Enterococci and *Vibrio*). Well-known techniques: conventional microbiological techniques (culturing bacteria on agar plates and liquid media), membrane filtration techniques, molecular biology techniques (conventional PCR, multiplex-PCR, RAPD-PCR, ERIC-PCR, Real-time PCR), CARD-FISH and BONCAT techniques, DNA extraction using different protocols from a variety of matrices (bacterial isolates, seawater, sediments and viral concentrate), gel electrophoresis. She has basic knowledge on the methods to study the diversity and function of microbial communities in the ocean, using next generation sequencing (NGS) high-throughput techniques of marker genes.

She has training on viral cultures techniques as plaque assay, isolation of phages from marine samples, and she has performed experimental analysis with phages as host range analysis. Also she has recently learnt the flow cytometry technology.

Other Activities

Participation to research project:

- EU research project BALMAS (BALlast water Management for Adriatic Sea protection)
- Italian Flagship project *RITMARE – The Italian Research for the Sea*

Participation to oceanographic cruises:

- 1) BioLig - Biodiversity, ecosystem functioning and pelagic-benthic coupling in Ligurian submarine canyons, II Leg, R/V Minerva Uno, Genoa (7–20 May 2013) in the Ligurian Sea
- 2) Ritmare, II Leg, R/V Dallaporta, Ancona (14–17 December 2014) in the Adriatic Sea
- 3) “Ocean Certain” cruise (I and II Leg) onboard the R/V Minerva Uno, Palermo (4–31 August 2015) in the Western Mediterranean Sea
- 4) Several sampling cruises in the lagoon of Venice and the Po River Delta onboard the research boat Litus and other vessels

Informatic skills

- ECDL (European Computer Driving Licence, 2007);
- Good knowledge of Microsoft and Office (Word, Excel, PowerPoint, Internet Explorer);
- Good knowledge of the bioinformatics tools ClustalW, MEGA5, Blast, Primer6, Chromas Lite;

- Basic knowledge of the bioinformatics tools Qiime, Cytoscape, R and MINE (Maximal Information-based Nonparametric Exploration).

Language skills

- English: B2 level, good command in written and spoken.

Additional skills

- Scuba diver license Open Water Diver (ESA)

FIRMA

A handwritten signature in black ink that reads "Laura Perini". The signature is written in a cursive style with a large initial 'L'.