UNIVERSITÀ DEGLI STUDI DI MILANO
FACOLTÀ DI SCIENZE AGRARIE E ALIMENTARI

Curriculum Vitae of Lucia Cavalca

Education

- PhD in Agricultural Ecology, University of Milan.

Professional experiences

- Associate Professor of General and Environmental Microbiology at the University of Milano, Department of Food, Environmental and Nutritional Sciences (2014-present).
- Research Scientist, Delft University of Technology, Department of Biotechnology, The Netherlands (2010-2012).
- Assistant Professor of General and Environmental Microbiology (G260F) (60 hours/year), Bachelor School of Environmental Agro-technology, University of Milano, Italy.
- Assistant Professor of Environmental Microbiology (G57-24B) (60 hours/year), Master School of Agricultural and Environmental Sciences, University of Milano, Italy.
- Professor at the School of Doctorate Soil, Environment and Biodiversity, University of Milano, Italy (2012-present).
- Professor at the School of Doctorate in Food Science Systems, Department of Food, Environmental and Nutritional Sciences, University of Milano, Italy.
- Tutor for Bachelor students at Bachelor School of Environmental Agro-technology, University of Milano, Italy.
- Member of the Italian Society for Food, Agricultural and Environmental Microbiology (SIMTREA) and of the Society for General Microbiology (SGM, UK).
- Italian representative to the European Union COST Action ES1103, Microbial ecology & the earth system: collaborating for insight and success with the new generation of sequencing tools. Domain: Earth System Science and Environmental Management (ESSEM) (2012-2016).

Research fields

- Bacterial metabolism of arsenic and heavy metals
- Biodegradation of chlorinated and not chlorinated organic compounds
- Plant growth promoting bacteria
- Molecular microbial ecology
- Environmental biotechnology

Most significant publications

- Anna Corsini, M. Colombo, Sarah Zecchin, Claudio Gardana, Paolo Simonetti, Lucia Cavalca. Characterization of As(III) oxidizing Achromobacter sp. strain N2: effects on arsenic toxicity and translocation in rice. Annals of Microbiology, May 2018, Volume 68, Issue 5, pp 295–304 DOI 10.1007/s13213-018-1338-y.
- Sarah Zecchin, Ralf C. Mueller, Jana Seifert, Ulrich Stingl, Karthik Anantharaman, Martin von Bergen, Lucia Cavalca, Michael Pester. Rice paddy Nitrospirae encode and express genes related to sulfate respiration: proposal of the new genus Candidatus Sulfobium. AEM Accepted Manuscript Posted Online 15 December 2017 Appl. Environ. Microbiol. doi:10.1128/AEM.02224-17
- Simona Crognale, Stefano Amalfitano, Sarah Zecchin, Stefano Fazi, Barbara Casentini, Anna Corsini, Lucia Cavalca, Simona Rossetti. Phylogenetic structure and metabolic properties of microbial communities in arsenic-rich waters of geothermal origin. Front. Microbiol., 12 December 2017 | https://doi.org/10.3389/fmicb.2017.02468
- Laura Rago, Sarah Zecchin, Stefania Marzorati, Andrea Goglio, Lucia Cavalca, Pierangela Cristiani, Andrea Schievano. A study of microbial communities on terracotta separator and on biocathode of air breathing microbial fuel cells. Bioelectrochemistry. https://doi.org/10.1016/j.bioelechem.2017.11.005 Available online 11 November 2017
- S. Zecchin, A. Corsini, M. Martin, L. Cavalca Influence of water management on the active root-associated microbiota involved in arsenic, iron and sulfur cycles in rice paddies Applied Microbiology and Biotechnology, 101, Issue 17, pp 6725–6738
- Laura Rago, Pierangela Cristiani, Federica Villa, Sarah Zecchin, Alessandra Colombo, Lucia Cavalca, Andrea Schievano. Influences of dissolved oxygen concentration on biocathodic microbial communities in microbial fuel cells. Bioelectrochemistry 2017.
- S. Zecchin, A. Corsini, M. Martin, M. Romani, G.M. Beone, R. Zanchi, E. Zanzo, D. Tenni, M.C. Fontanella and L. Cavalca* “Rhizospheric iron and arsenic bacteria affected by water regime: implications for metalloid uptake by rice”. Soil Biology and Biochemistry (106), March 2017, Pages 129–137
- Pigna M., Caporale A. G., Cavalca L., Sommella A., Violante A. “Arsenic in the Soil Environment: Mobility and Phytoavailability”. Environmental Engineering Science (2015), 32(7): 551-563. doi:10.1089/ees.2015.0018.
- Corsini A., Colombo M., Muyzer G., Cavalca L.* “Characterization of the arsenite oxidizer Aliihoeflea sp. strain 2WW and its potential application in the removal of arsenic from groundwater in combination with Pf-ferritin”. Antonie van Leeuwenhoek (2015). DOI: 10.1007/s10482-015-0523-2.
- L. Cavalca, A. Corsini, E. Canzi, R. Zanchi. “Rhizobacterial communities associated with spontaneous plant species in long-term arsenic contaminated soils” World Journal of Microbiology and Biotechnology (2015), Volume 31, Issue 5, pp 735–746
- Ranya A. Amer, Francesca Mapelli, Hamada El-Gendi, Marta Barbato, Doaa Gouda, Anna Corsini, Lucia Cavalca, Marco Fusi, Sara Borin, Daniele Daffonchio, Yasser Abdel-Fattah. "Bacterial diversity and bioremediation potential of the highly contaminated marine sediments at El-Max district (Egypt, Mediterranean Sea)". Hindawi Publishing Corporation BioMed Research International (2015), Article ID 981829.
- A. Corsini, L. Cavalca, G. Muyzer, P. Zaccheo. “Effectiveness of various sorbents and biological oxidation in the removal of arsenic species from groundwater”. Environmental Chemistry (2014). http://dx.doi.org/10.1071/EN13210.