ALLEGATO B

UNIVERSITÀ DEGLI STUDI DI MILANO
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Elisa CLAGNAN
CURRICULUM VITAE

(N.B. IL CURRICULUM NON DEVE ECCEDERE LE 30 PAGINE E DEVE CONTENERE GLI ELEMENTI CHE IL CANDIDATO RITIENE UTILI AI FINI DELLA VALUTAZIONE.
LE VOCI INSERITE NEL FACSIMILE SONO A TITOLO PURAMENTE ESEMPLIFICATIVO E POSSONO ESSERE SOSTITUITE, MODIFICATE O INTEGRATE)

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	**CLAGNAN**
NOME	**ELISA**
DATA DI NASCITA	**03.10.1989**

OCCUPAZIONE ATTUALE

Incarico	Struttura
Assegnista di ricerca	Università degli Studi di Milano

ISTRUZIONE E FORMAZIONE

Titolo	Corso di studi	Università	anno conseguimento titolo
Laurea Triennale	Biology - Curriculum: Cellular and Molecular Biology and Technology (107/110) Thesis: *Histochemical localization of ROS in the lichen Parmotrema perlatum (Huds.) M. Choisy by confocal microscopy.*	Università degli studi di Trieste	2011
Laurea Magistrale o equivalente	Functional Genomics (110/110) Thesis: *Quorum sensing studies in Pseudomonas fuscovaginae UPB 0736 a broad host range emerging plant pathogen.*	Università degli studi di Trieste	2013
Dottorato Di Ricerca	Civil and Structural Engineering Thesis: *Nitrogen source, transformation and fate within intensive dairy systems to inform sustainable intensification.*	University of Sheffield	2018

LINGUE STRANIERE CONOSCIUTE

Lingue	Livello di conoscenza
Inglese	C1
Tedesco	B1

PREMI, RICONOSCIMENTI E BORSE DI STUDIO

anno	Descrizione premio
2022	Research Assistant Fellowship, 1 year - Funded for UNIMI
2020	Research Assistant Fellowship, 2 years - Funded by INAIL for UNIMI
2020	Research Assistant Fellowship, 1 year - Funded for UNIBZ
2019	Research Assistant Fellowship, 1 year - Funded by Fondazione Cariplo for UNIBZ
2013	Walsh Fellowship Award, 4 year - PhD scholarship - Funded by TEAGASC
2012	Gold Medal - European undergraduate session iGEM competition (International Genetically Engineered Machine), M.I.T (Boston, USA)

ATTIVITÀ DI FORMAZIONE O DI RICERCA

descrizione dell'attività	
Aug 2014 – Mar 2019	**Freelance translator** Aglatec 14 Srl, Milano ○ Freelance translator (English>Italian) of European Patents; ○ Areas of expertise: biology, biotechnology, clinical trials, environment and pharmaceutics.
Sep 2013 - May 2018	**PhD in Civil and Structural Engineering - Walsh fellow** University of Sheffield - GPRG and APS groups TEAGASC (The Irish Agriculture and Food Development Authority) - Johnstown Castle ○ Examination of the concept of sustainable intensification in terms of impacts and relationships of drainage systems installed at intensive sites with different soil drainage classes, water quality, N transfer, N transformation, N fate and microbial community in order to develop a management tool; ○ Expertise in physiochemical, gaseous, isotopic, microbial and molecular techniques; ○ Plan, design, validate and carry out fieldwork, experiments and data analyses.
Dec 2014	**Internship trainee** Helmholtz-Centre for Environmental Research – UFZ (Halle) ○ Learning methods for collection, analysis and data analyses of water stable isotopes such as N (NO_3^-, NH_4^+, N_2O and N_2) and H_2O ($\delta^{14/15}N$, $\delta^{1/2}H$ and $\delta^{16/18}O$).
Dec 2012 - Oct 2013	**Internship trainee** ICGEB Trieste - Bacteriology and Plant Bacteriology group ○ Characterisation of the genes associated to the quorum sensing of the bacterium *P. fuscovaginae* for phenotypic and molecular functions; ○ Performing tests for antimicrobial activities, enzymes secretion, movement, exopolysaccharides and IAA production, biofilm formation, oxidative stress resistance, C-sources, growth curves and AHL profiling; ○ Performing cloning techniques, amplifications, ligations, conjugations and RNA sequencing.
Jan 2012 - Nov 2012	**Participant at the Massachusetts Institute of Technology synthetic biology competition - iGEM (International Genetically Engineered Machine)** ICGEB Trieste - Bacteriology and Plant Bacteriology group/Molecular Immunology group Università degli studi di Trieste ○ Engineering of a safe probiotic platform for protein expression; ○ Use of fundamental techniques for the manipulation of the DNA and verification of the results.
Mar 2010 - Dec 2011	**Internship trainee** Università degli studi di Trieste, Department of Life Science ○ Fieldwork and samples collection, storage and preparation; ○ Performing techniques for the perpetuation and the preparation of cultures of lichens in anoxic condition, separation of the two lichenic symbionts and perpetuation of the algal symbiont in solid culture; ○ Qualitative and quantitative study of Reactive Oxygen Species.

ATTIVITÀ PROGETTUALE

Anno	Progetto
Oct 2020 - Currently	**Research assistant and Cultore della materia** Università degli studi di Milano – Ricicla Group (DiSAA) ○ Main project: SAFE BIOREFINERY: Monitoring impacts of new algae-based biorefinery; ○ In charge of microbial community and biostimulants (biofertilizers) characterisation (qPCR, 16S and 18S NGS analyses) for the european project Fertimanure; ○ In charge of microbial community and pathogen characterisation of microalgal biorefinery plants and digesters for project sponsored by INAIL and EU (SABANA - Sustainable Algae Biorefinery for Agriculture aNd Aquaculture) (collaborations with: Tologreen, Aqualia, University of Almeria). ○ In charge of microbial community characterisation for microbial fuel cells, PHA production and PLA degradation
Mar 2020 – Sep 2020	**Research assistant** Free University of Bolzano/Bozen – Environmental and Agricultural Microbiology Group /Agricultural and Agro-Environmental Sciences Group ○ Main project: INSIDE – Effect of the increase in nitrogen deposition on microbial soil communities through techniques based on DNA and RNA analysis in mountain forest ecosystems; ○ In charge of molecular analyses for projects with Università degli Studi di Milano on the evaluation of the microbial communities of alimentary dough through 16S rRNA and ITS genes ARISA.
Mar 2019 - Mar 2020	**Research assistant** Free University of Bolzano/Bozen – Environmental and Agricultural Microbiology Group ○ Main project: TRETILE – A microbe-based value chain: TREatment and valorisation of texTILE wastewater (collaboration with: Politecnico di Milano, Università degli Studi di Milano Bicocca, Università degli Studi di Milano, Lariana Depur s.p.a., Stamperia di Cassina Rizzardi); ○ In charge of molecular analyses for projects with UniTN and Rome CNR on the evaluation of the microbial communities of multiple bioreactors; ○ Evaluation of diversity, distribution and abundance of key algal, fungal and bacterial species. ○ Development of qPCR methods for 16S and nitrogen cycle functional genes; ○ NGS of 16S rRNA genes for bacteria, 18S for algae, Shotgun Sequencing. Tailor-made bioinformatics protocols; ○ Fingerprinting analysis tests (LH-PCR, ARISA); ○ Confocal and epifluorescence microscopy (FISH); ○ Co-supervisor of a B.Sc. student – thesis: Evaluation of the interaction between HDPE micro and nanoplastics and P. abietaniphila and C. sordidicola using flow cytometry.

CONGRESSI, CONVEGNI E SEMINARI

Data	Titolo	Sede
2015	Oral presentation *Beyond nitrate: developing multi-isotopic approaches to quantify the fate and transport of nitrogen within catchments*. N.S. Wells, K. Knoeller, E. Clagnan, O. Fenton, S.F. Thornton, S.A. Rolfe, M. Brauns.	International Symposium on Isotope Hydrology: Revisiting Foundations and Exploring Frontiers – IAEA (International Atomic Energy Agency), Vienna, Austria.
27-29 June 2016	Oral presentation *Nitrogen loss, source, transformation and attenuation within an intensive dairy farm in SE Ireland*. O. Fenton, E. Clagnan, S.F. Thornton, S.A. Rolfe, P. Tuohy, J. Murphy, N.S. Wells, K. Knoeller.	19th Nitrogen Workshop - Sveriges Lantbruks Universitet, Skara, Sweden.
2016	Oral presentation *Nitrogen loss, source, transformation and attenuation on dairy farms in Ireland*. O. Fenton, E. Clagnan, S.F. Thornton, S.A. Rolfe, P. Tuohy, J. Murphy, N. Wells, K. Knöller.	International Drainage Symposium, University of Minnesota, Minneapolis, Minnesota.
2016	Oral presentation *Nitrogen loss, source, transformation and attenuation within an intensive dairy farm in SE Ireland*. E. Clagnan, S.F. Thornton, S.A. Rolfe, P. Tuohy, J. Murphy, N.S. Wells, K.	Groundwater Managing our Hidden Asset - Birmingham University, Birmingham, United Kingdom.

	Knöller, O. Fenton.	
2016	Oral presentation *Does drainage of poorly drained soils affect their nitrogen attenuation capacity? Evidence from six dairy farms in south Ireland*. E. Clagnan, S.F. Thornton, S.A. Rolfe, P. Tuohy, J. Murphy, N.S. Wells, K. Knoeller, O. Fenton.	Resilience Emerging from Scarcity and Abundance - International Annual Meeting of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America. Phoenix, Arizona.
2020	Oral presentation *PN-Anammox for the treatment of textile wastewater: performance and microbial community of a sequencing batch reactor*. E. Clagnan, L. Brusetti, S. Visigalli, M. Bargna, G. Bergna, E. Ficara, R. Canziani, M. Bellucci.	Water Energy Nexus. Online Conference.
2021	Oral presentation *Power to Gas: newsworthy connection between electricity production trend, biochar electrodes and polarizations*. Goglio A., Clagnan E., Pepè Sciarria T., Adani F.	International Society for Microbial Electrochemistry and Technology. Online Conference.
2021	Oral presentation *Wastewater treatment and nutrients enriched medium production for a sustainable agriculture*. Goglio A., Gualtieri M., Clagnan E., Adani F.	Second joint meeting on soil and plant system sciences, Online Conference.

PUBBLICAZIONI

Articoli su riviste

Peer reviewed publications

1. Clagnan E., D'Imporzano G., Dell'Orto M., Bani A., Dumbrell A.J., Parati K., Acién-Fernández F.G, Portillo-Hahnefeld A., Martel-Quintana A., Gómez-Pinchetti J.L., Adani F., 2022. Centrate as a sustainable growth medium: Impact on microalgal inocula and bacterial communities in tubular photobioreactor cultivation systems. Bioresource Technology, 363, 127979. https://doi.org/10.1016/j.biortech.2022.127979
2. Picozzi C., Clagnan E., Musatti A., Rollini M., Brusetti L., 2022. Characterization and analysis of populations dynamics during leavening of bread-like doughs by Zymomonas mobilis wild strains. Foods, 11, 2768. https://doi.org/10.3390/foods11182768
3. Clagnan E., D'Imporzano G., Dell'Orto M., Sanchez-Zuarez A., Acién-Fernandez F.G., Pietrangeli B., Adani F. 2022. *Profiling microalgal cultures growing on municipal wastewater and fertilizer media in raceway photobioreactors*. Bioresource Technology, 360, 127619. https://doi.org/10.1016/j.biortech.2022.127619
4. Villaró S., Sánchez-Zurano A., Ciardi M., Alarcón F.J., Clagnan E., Adani F., Morillas-España A., Álvarez C., Lafarga T., 2022. *Production of microalgae using pilot-scale thin-layer cascade photobioreactors: Effect of water type on biomass composition*. Biomass and Bioenergy, 163, 106534. https://doi.org/10.1016/j.biombioe.2022.106534
5. Clagnan E., Brusetti L., Pioli S., Visigalli S., Turolla A., Jia M., Bargna M., Bergna G., Ficara E., Canziani R., Bellucci M., 2021. *Microbial community and performance of a partial nitritation/anammox sequencing batch reactor treating textile wastewater*. Heliyon, 7, e08445. https://doi.org/10.1016/j.heliyon.2021.e08445
6. Morillas-España A., Sánchez-Zurano A., Gómez-Serrano C., Ciardi M., Acién G., Clagnan E., Adani F., Lafarga T., 2021. *Potential of the cyanobacteria Anabaena sp. and Dolichospermum sp. for being produced using wastewater or pig slurry: Validation using pilot-scale raceway reactors*. Algal Research, 60, 102517. https://doi.org/10.1016/j.algal.2021.102517.

7. Tomei M.C., Mosca Angelucci D., Clagnan E., Brusetti L., 2021. *Anaerobic biodegradation of phenol in wastewater treatment: achievements and limits*. Applied Microbiology and Biotechnology. https://doi.org/10.1007/s00253-021-11182-5
8. Visigalli S., Turolla A., Bellandi G., Bellucci M., Clagnan E., Brusetti L., Jia M., Di Cosmo R., Menin G., Bargna M., Bergna G., Canziani R., 2020. *Autotrophic nitrogen removal for decentralized treatment of ammonia-rich industrial textile wastewater: process assessment, stabilization and modelling*. Environmental Science and Pollution Research. https://doi.org/10.1007/s11356-020-11231-y
9. Mosca Angelucci D., Clagnan E., Brusetti L., Tomei, M.C., 2020. *Anaerobic phenol biodegradation: kinetic study and microbial community shifts under high concentrations dynamic loading*. Applied Microbiology and Biotechnology. https://doi.org/10.1007/s00253-020-10696-8
10. Clagnan E., Thornton S.F., Rolfe S.A., Krol D., Richards K., Lanigan G., Tuohy P., Fenton O., 2020. *Nitrogen transformation processes and gaseous emissions from a humic gley soil at two water filled pore spaces*. Soil and Tillage Research, 198. https://doi.org/10.1016/j.still.2019.104543
11. Clagnan E., Thornton S.F., Rolfe S.A., Wells N.S., Knoeller K., Murphy J., Tuohy P., Daly K., Healy M.G., Ezzati G., von Chamier J., Fenton O., 2019. *An integrated assessment of nitrogen source, transformation and fate within an intensive dairy system to inform management change*. PlosOne, 14(7). https://doi.org/10.1371/journal.pone.0219479
12. Clagnan E., Thornton S.F., Rolfe S.A., Wells N.S., Knoeller K., Fenton O., 2018. *Investigating "net" provenance, N source, transformation and fate within hydrologically isolated grassland plots*. .201, 203, 1–8. https://doi.org/10.1016/j.agwat.2018.02.031
13. Clagnan E., Thornton S.F., Rolfe S.A., Tuohy P., Peyton D., Wells N.S., Fenton O., 2018. *Influence of artificial drainage system design on the nitrogen attenuation potential of gley soils: Evidence from hydrochemical and isotope studies under field-scale conditions*. Journal of Environmental Management, 206, 1028-1038. https://doi.org/10.1016/j.jenvman.2017.11.069

Other publications

1. Wall, D.P., Fenton, O., Clagnan, E., Tuohy, P., Murphy, P., Buckley, C., Bondi, G., 2019. *Nutrient balance and soil condition: effects on dairy grassland productivity*. International Fertiliser Society, proceedings, 828.

ALTRE INFORMAZIONI

TECHNICAL SKILLS

- **Molecular and microbial techniques**: cloning, amplifications, ligations, conjugations, DNA extraction, PCR, q-PCR, T-RFLP, NGS and shotgun sequencing, solid and liquid cultures, strain conservation, tests for bacterial phenotypes, growth curves, AHL profiling, creation of synthetic constructs, western blots.
- **Isotopic techniques**: collection, analysis and data analyses of N (NO_3^-, NH_4^+, N_2O and N_2) and H_2O naturally occurring stable isotopes ($\delta^{14/15}N$, $\delta^{1/2}H$ and $\delta^{16/18}O$) in plant/grass, soil, water substrates, isotopic enrichment incubation studies.
- **Gaseous techniques**: collection, analysis and data analyses of dissolved gases (N_2O, excess-N_2, CO_2 and CH_4) within shallow and groundwater, chamber experiments of gas (N_2O, N_2, CO_2 and CH_4) emissions.
- **Wet chemistry**.
- **Software packages**: DADA2, QIIME2, KRAKEN2, MG-RAST, PICRUSt2, SSPS (Statistical analyses), R Sofware, LIMS, Strider, Peak Scanner Software 2.0.
- Competence in data collections and analysis, experience with **fieldwork** and working with different substrate materials (e.g. plant/grass, soil, water).
- Capable of planning analytical work according to **health and safety directions.**
- **Microscopy techniques**: FISH (familiarity with fluorescence and confocal microscopy).
- Extras: Biosafety/Biosolids Awareness Training - LabSafety.ie; Chemical Safety Awareness & Spill Response Training - LabSafety.ie; Biodiversity Management and Conservation of Small Freshwater Wetlands Training – Trieste Natural History Museum, Biokarstic Studies; 1° Grado AR (Level I Diver) (FIPSAS) - Bolzano Sub/Sporttaucher Club Bozen; 1st Level Speleology Course - Karst Studies Society A.F. Lindner.

Data 20.10.22 Luogo Milano