



Luca Zuliani

Science and nature enthusiast. Fascinated about the environment and sustainable resources.
Curious about what is next.

Post-Doc Fellowship at BIB Lab

Università di Verona, Biochemistry and Industrial Biotechnology Lab,
November 2020 – present

PhD in Biotechnology

Università di Verona, October 2017 – October 2020

Study on the molecular mechanisms at the basis of photosynthesis
toward microalgae domestication

Visiting Scientist at UC Berkeley

University of California Berkeley, USA, September 2018 – December 2018

Study of excess light dissipation in *Chlamydomonas reinhardtii* via an
in vivo and *in vitro* approach

Research Fellow

Università di Verona, March 2017 – October 2017

Biotechnological improvement of *Nannochloropsis gaditana* to
produce omega-3 and carotenoids

Master's degree in Agri-food Biotechnology (LM7)

Università di Verona, 2014 – 2017

Molecular mechanisms of activation of thermal dissipation of the
light absorbed by *Chlamydomonas reinhardtii*

Final grades: 110 cum laude

Bachelor's degree in Industrial Biotechnology (L2)

Università di Verona, 2011 – 2015

Microalgae cultivation on anaerobic digestate of municipal
wastewater, sewage sludge and agro-waste

Final grades: 100

High School Diploma in Computer Science

I.T.I.S. G. Marconi, Verona, 2011

Detail

Address:

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Date and place of birth:

August 20th 1992, Verona (Italy)

Available to relocate

Highly proficient in spoken and
written English

Other activities and Interests

- Teaching and tutoring;
- Creation and management of
websites;
- Digital photography and its
post-production;
- Green thumb.

Autorizzo il trattamento dei miei dati
personalini ai sensi del Decreto
Legislativo 30 giugno 2003, n. 196
"Codice in materia di protezione dei
dati personali".



Publications and Professional Accolades

- **Biodiesel, Biogas and Fermentable Sugars Production from Spent Coffee Grounds: a Cascade Biorefinery Approach** - Battista F., Zuliani L., Rizzioli F., Fusco S., Bolzonella D. - *Bioresource Technology*, September 2021
- **Biorefinery Gets Hot: Thermophilic Enzymes and Microorganisms for Second-Generation Bioethanol Production** - Zuliani L., Serpico A., De Simone M., Frison N., Fusco S. - *Processes*, September 2021
- **The Role of Acidic Residues in the C Terminal Tail of the LHCSR3 Protein of *Chlamydomonas reinhardtii* in Non-Photochemical Quenching** - Camargo F. V. A., Perozeni F., de la Cruz Valbuena G., Zuliani L., Sardar S., Cerullo G., D'Andrea C., Ballottari M. - *The Journal of Physical Chemistry Letters*, July 2021
- **LPA2 protein is involved in Photosystem II assembly in *Chlamydomonas reinhardtii*** - Cecchin M., Jeong J., Son W., Kim M., Park S., Zuliani L., Cazzaniga S., Pompa A., Kang C. Y., Bae S., Ballottari M., Jin E. - *The Plant Journal*, July 2021
- **Identification of distinct pH-and zeaxanthin-dependent quenching in LHCSR3 from *Chlamydomonas reinhardtii*** - Troiano J. M., Perozeni F., Moya R., Zuliani L., Baek K., Jin E., Cazzaniga S., Ballottari M., Schlau-Cohen G. S. - *eLife Sciences* 10, January 2021
- **Premio Giovane Biologo Vegetale 2017** - Società Italiana di Biologia Vegetale
- **Microalgae Cultivation on Anaerobic Digestate of Municipal Wastewater, Sewage Sludge and Agro-Waste** - Zuliani L., Frison N., Jelic A., Fatone F., Bolzonella D., Ballottari M. - *International Journal of Molecular Sciences*, October 2016

Student Tutoring

- Mattia Ambrosi
Isolation of Novel Thermophilic Microorganism and Enzymes from a Local Biogas Plant
- Nicola Bonetti
Valorization of Spent Coffee Grounds with a Cascade Biorefinery Approach
- Matteo Albuge
Producing Saffron metabolites in *Chlamydomonas reinhardtii*
- Edoardo Ceschi
Expression of the BKT enzyme in *Nannochloropsis oceanica* to achieve astaxanthin accumulation

Conferences and seminars

- **IFIB 21 Congress**
Virtual edition, 30 September - 1 October 2021
Poster presentation: Untreated Lignocellulose Feedstock Fermentation by Locally Sourced Enriched Thermophilic Consortia
- **SIB 2021 Congress**
Virtual edition, 23-24 September 2021
Oral and Poster presentation: Lignocellulolytic enzymes secreted by mesophilic and thermophilic microbial consortia enriched on mushrooms litter
- **EFB 2021**
Virtual conference, 10-14 May 2021
Flash and Poster presentation #1: Hunting for novel lignocellulolytic microorganisms and enzymes from a local biogas plant
Flash and Poster presentation #2: Cascade biotechnological production of chemical building blocks from municipal wastewater-derived cellulose
- **First Workshop AISAM Young**
Firenze, Italy, October 2019
Poster presentation: Towards Production of Saffron metabolites in *C. reinhardtii*

- XI SIBV Congress
Padova, Italy, September 2019
Poster presentation: Towards Production of Saffron metabolites in *C. reinhardtii*
- First European Congress on Photosynthesis Research
Uppsala, Sweden, June 2018
Oral (junior session) and Poster presentation: *In vivo and in vitro investigation of protonatable residues putatively involved in triggering non-photochemical quenching of the light absorbed in green algae*
- 7th Int. CeBiTec Research Conference
Bielefeld, Germany, September 2017
Poster presentation: *Molecular Mechanism for Feedback Activation of Thermal Dissipation of the Light Absorbed by *C. reinhardtii**
- Joint Congress SIBV-SIGA
Pisa, Italy, September 2017
Poster presentation: *In vivo and in vitro investigation of protonatable residues putatively involved in triggering non-photochemical quenching of the light absorbed in green algae*
- The 7th International Conference on Algal Biomass, Biofuels and Bioproducts
Miami (FL), USA, June 2017
Poster presentation: *Microalgae Cultivation on Anaerobic Digestate of Municipal Wastewater, Sewage Sludge and Agro-Waste*
- Winter School in Plant Biotechnology and Environmental Sustainability
Canazei, Italy, January 2017

Lab Skills

Biochemistry

- Expression, purification, and in vitro reconstitution of proteins;
- SDS-PAGE (traditional, gradient gels and 2D);
- Western blot (wet, semidry, dot blot);
- Immunoprecipitation;
- Chromatography of proteins (gel filtration, affinity, ion exchange);
- Pulse and chase experiments;
- Protein quantification;
- AZO enzymatic activity assays.

Molecular Biology

- PCR;
- Traditional cloning techniques (e.g. restriction enzymes, ligation);
- Site-directed mutagenesis;
- Nucleic acids purification;
- Production of mutant algal strains via CRISPR/Cas RNP delivery;

Miscellaneous

- Microalgal culture maintenance in small (80 ml photobioreactor) to medium scale (3 L reactors);
- Non-model microalgae transformation;
- Cell count (hemocytometer);
- UV/Vis spectrophotometry;
- HPLC;

Photosynthetic parameters measurements

- Chlorophyll absorbance and fluorescence (PAM, Videoimaging);

- Fluorescence lifetime decay of *in vitro* reconstituted protein and whole cells (time-domain spectrofluorometer);
- Oxygen evolution (oxygen electrode);
- Electrochromic shift measurements.