

Curriculum vitae **Stefano Bertacchi** – 12/12/21

City: Milan, Lombardy

Nationality: Italian

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Education (University of Milan Bicocca - UNIMIB)

2021: PhD in Converging Technologies for Biomolecular Systems (TeCSBi)

Excellent with honors

Microbial cell factories for biobased processes: the concept of cascading applied to different biomasses and bioproducts in the context of bioeconomy

2014: Master's Degree in Industrial Biotechnology

110/110 cum laude

Pab1 and mRNA metabolism in Saccharomyces cerevisiae: isolation and characterization of industrial interest mutants

2012: Bachelor's Degree in Biotechnology

110/110 cum laude

Engineering of S. cerevisiae for co-fermentation of xylose and cellobiose from lignocellulose hydrolysate for the production of second-generation bioethanol

Work experience

From 2021: Postdoctoral Researcher at the Department of Biotechnology and Biosciences of UNIMIB

2021: Visiting social media influencer at the School of Advanced Studies Sant'Anna – Pisa, Italy

2020: Visiting researcher at the Faculty of Technology of the University of Oulu, Finland

From 2018: Contributing writer for Macplas, magazine of the plastics and rubber industry

From 2017: Social media strategist for Food and Science Festival, held in Mantua, Lombardy

From 2017: Freelance science communicator, content creator, scientific writer, book author, consultant

2014-2017: Researcher for Galatea Biotech Srl, spin-off of the University of Milan – Bicocca

2012-2016: Scientific editor for Oilproject (now WeSchool) the biggest Italian online school

Professional activities

Scientific research: industrial biotechnology, microbial biotechnology, genetic engineering, metabolic engineering, synthetic biology, molecular biology, gene editing, biochemistry, genetics, organic chemistry, green chemistry, first and second generation biorefineries, use of residual biomasses, circular economy, bioeconomy, biotransformations, microbial biodiversity, bioplastics, biofuels, nutraceuticals, fine e bulk chemicals synthesis.

Science communication: speaker, books and articles author, social media manager, strategists, content creator and influencer, communication consultant

Others: Responsible Research and Innovation (RRI), technology transfer, start-ups, spin-offs

Awards and honors

2020: De Paoli Marchetti Award for Science Communication from the Union of Italian Scientific Journalists (UGIS)

Best poster award at the International Forum on Industrial Biotechnologies (IFIB) 2020

Best oral presentation among PhD candidates in Converging Technologies for Biomolecular Systems (TeCSBi)

Bursary for the congress Microbial Stress 2020 by the European Federation of Microbiological Societies (FEMS)

2017: First Prize of the National Award for Science Communication (Premio Nazionale di Divulgazione Scientifica) of the Italian Book Association for Under 35 category with "Geneticamente modificati - Viaggio nel mondo delle biotecnologie". Finalist in 2019, 2020 and 2021 editions with articles and books.

Positions

From 2021: Lecturer for the Master in Nutrition and Applied Dietetics of the Department of Medicine of UNIMIB

From 2020: Lecturer for the course Microbiology and Biotechnology of Extremophiles: case studies to develop soft skills in science (Master's degree course in Biotechnology for the Bioeconomy) at the University of Milan

From 2020: Reviewer for the international peer-reviewed journals Biotechnology for Biofuels, Journal of Environmental Management e Microbial Cell Factories

2020: Professor for the course One health food (Food for prevention and well-being in Covid-19 era)

2020: Lecturer for the Enzyme Engineering and Structural Biology group of the Denmark Technical University (DTU)

From 2019: Master's thesis Co-supervisor

From 2017: Subject matter scholar for the course Biotechnological bioprocesses and biorefineries of UNIMIB

From 2016: Bachelor's thesis co-supervisor

From 2016: Responsible Research and Innovation (RRI) team member for the Cariplo project MYSUSHI (Microalgae and Yeasts SUSTainable fermentation for HIgh quality fish feed formulation)

Affiliations

From 2018: Member of Bicocca cEnter of Science and Technology for FOOD (BEST4FOOD)

Junior member of the Italian Society of General Microbiology and Microbial Biotechnology (SIMGBM)

2015: Founder Member of BicoccaAlumni, association of former students from UNIMIB

Research programs

2019: European Institute of Innovation & Technology (EIT) Raw Materials project ADMA2: Practical training between Academia and Industry during doctoral studies

2018: Food Social Sensor network (Food NET)

2017: Sistemi Alimentari e Sviluppo Sostenibile (SASS)

Scientific publications

1. Interdependence between lignocellulosic biomasses, enzymatic hydrolysis and yeast cell factories in biorefineries. **Bertacchi S.**, Jayaprakash, P., Morrissey J.P., Branduardi P. (2021). *Microbial Biotechnology*, Wiley.
2. Mathematical Analysis and Update of ADM1 Model for Biomethane Production by Anaerobic Digestion. **Bertacchi S.**, Ruusunen M., Sorsa A., Sirviö A., Branduardi, P. (2021). *Fermentation*, 7(4), 237, MDPI.
3. Optimization of Carotenoids Production from *Camelina sativa* Meal Hydrolysate by *Rhodospiridium toruloides*. **Bertacchi S.**, Cantù C., Porro D., Branduardi P. (2021). *Fermentation*, 7(4), 208, MDPI.
4. Camelina sativa meal hydrolysate as sustainable biomass for the production of carotenoids by *Rhodospiridium toruloides*. **Bertacchi S.**, Bettiga M., Porro D., Branduardi P. (2020). *Biotechnology for biofuels*, 13(1), 1-10, Springer.
5. Enzymatic Hydrolysate of Cinnamon Waste Material as Feedstock for the Microbial Production of Carotenoids. **Bertacchi S.**, Pagliari S., Cantù C., Bruni I., Labra M., Branduardi P. (2021). *International journal of environmental research and public health*, 18(3), 1146, MDPI.
6. RRI approach for development and acceptance of novel fish feed formulations in aquaculture. Magoni C., Campanaro A., Galimberti A., Pesciaroli C., **Bertacchi S.**, Branduardi P., Labra M. (2018). In *Governance and sustainability of responsible research and innovation processes* (pp. 65-70). Springer.
7. Using Glycerol to Produce European Sea Bass Feed with Oleaginous Microbial Biomass: Effects on Growth Performance, Filet Fatty Acid Profile, and FADS2 Gene Expression. Terova G., Moroni F., Antonini M., **Bertacchi S.**, Pesciaroli C., Branduardi P., Labra M., Porro D., Ceccotti C., Rimoldi, S. (2021). *Frontiers in Marine Science*, 1115, Frontiersin.
8. The *Saccharomyces cerevisiae* poly (A) binding protein (Pab1): Master regulator of mRNA metabolism and cell physiology. Brambilla M., Martani F., **Bertacchi S.**, Vitangeli I., Branduardi P. (2019). *Yeast*, 36(1), 23-34, Wiley.
9. The *Saccharomyces cerevisiae* poly (A) binding protein Pab1 as a target for eliciting stress tolerant phenotypes. Martani, F., Marano, F., Bertacchi, S., Porro, D., & Branduardi, P. (2015). *Scientific reports*, 5(1), 1-13.

Books

1. Dec 2021: Bertacchi S. *50 grandi idee - Biotecnologie*. Edizioni Dedalo, ISBN 8822069048
2. Feb 2021: Bertacchi S. *Piccoli geni – Alla scoperta dei microrganismi*. Hoepli Editore, ISBN 8820399962
3. Dec 2020: Pistore G., Brusaferrò S., Ricciardi W., Villa R., Galassi F.M., Cartabellotta N., Di Grazia S. Cossarizza A., Silenzi A., Gorini G., Bertacchi S. *Il Virus che non Esisteva: Un viaggio nella Scienza che ci tirerà fuori da questa situazione* (2020) ISBN 979-8584657772.
4. May 2017: Bertacchi S. *Geneticamente modificati - Viaggio nel mondo delle biotecnologie*. Hoepli Editore, ISBN 9788820379834.

Patents

1. Process for cellular biosynthesis of poly d-lactic acid and poly l-lactic acid. Porro D., Branduardi P., Bertacchi S., Berterame N.M. WO2020025694A1

Conferences and events as speaker

- 2021: Microbiotec '21 (Lisbon)
Biotech – a better future, organized by Assobiotec Federchimica (Rome)
Scientific Festival of Alto Vicentino (Schio) – focus on microbiology
Food and Science Festival 2021 (Mantua) – focus in cheesemaking and microbiology
Eta Beta – RAI Radio 1 (Online) – focus on gene editing and CRISP/Cas9
Diversimili – the Biodiversity Festival (Udine) – focus on food microbiology
EIT Raw Materials joint seminar of projects RAISEE and ADMA2 (Online)
Italian Association for Cancer Research (AIRC) – why is the microbiota important for health? (Online)
Strambinaria (Strambino, TO)
- 2020: Food and Science Festival 2020 (Mantua) – focus on yeasts
National Geographic Italy - 50th Earth Day – focus on microbiology (Online)
- 2019: World Usability Day 2019 at Microsoft House – focus on biotechnology (Milan)
Local Conference of Youth (LCOY) on Climate Change Italy – focus on plant biotechnology (Florence)
FameLab Italy 2019 (National final in Milan)
- 2018: BookCity Milano – focus on biotechnology (Milan) – focus on biotechnology

- Raw Materials University Day (Milan)
- Scienza in Vetta (Courmayeur)
- Food and Science Festival 2018 (Mantua)
- Emozioni dal Mondo – Merlot and Cabernet together, congress on winemaking (Bergamo)
- Pint of Science 2018 – focus on yeasts (Milan)
- Darwin Day 2018 – focus on GMOs (Milan)
- 2017: Pharmahub Biotech – focus on synthetic biology (Milan)
- Giovedì Scienza XXXIII Edition – focus on bioplastics (Turin)

Conferences and events as participant

- 2021: European Federation of Biotechnology (EFB) congress (Online)
- 2020: Microbial Stress 2020 congress organized by FEMS (Online)
- International Forum on Industrial Biotechnologies 2020 (IFIB2020)
- 2019: EIT Raw Materials and EIT Digitals-networking event (Oulu, Finland)
- Winter School of Science and Technology Entrepreneurship Promotion (STEP) at UNIMIB
- B Corp Italian Summit 2018 at Fondazione Golinelli (Bologna)
- 7th Congress on Physiology of Yeasts & Filamentous Fungi 2019 (PYFF7) organized by (EFB) at UNIMIB
- Doctoral School in Yeast Industrial Biotechnology - Translating biotechnology research from academia to industry organized by YEASTDOC (Berlin)
- Doctoral School in Yeast Industrial Biotechnology - Knowledge Transfer Workshop organized by YEASTDOC (Berlin)
- 2018: 9th International Forum on Food and Nutrition – organized by Barilla Center for Food and Nutrition
- International Autumn School “From waste to microalgae: an example of circular economy” (Gargnano, BS).
- Industrial Synthetic Biology Congress (Munich)
- International Summer School “Towards a bio-based economy” – II edition at UNIMIB
- Plast 2018– International Fair of Plastic and Rubber Materials (Milan)
- 2017: 8th International Forum on Food and Nutrition – organized by Barilla Center for Food and Nutrition
- Circular Bioeconomy Arena Meeting by Assobiotec, SPRING (Italian Cluster of Green Chemistry), LGCA (Region Lombardy Cluster of Green Chemistry), Intesa Sanpaolo Start-Up Initiative
- Aquafarm 2017 (Pordenone)
- 2015: 2nd European Summer School on Industrial Biotechnology (ESSIB 2015) (Stuttgart)

Language

Italian: Mother tongue

English: Reading C1, Speaking C1, Listening C1