

PERSONAL INFORMATION

Francesco Bellamoli



(Italy)

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WORK EXPERIENCE

03/2019–05/2019

Didactic Lab Tutor

University of Verona, Verona (Italy)

Didactic laboratories tutor for the Molecular Biology course (2nd year of Biotechnology Bachelor's Degree)

03/2018–05/2018

Didactic Lab Tutor

University of Verona, Verona (Italy)

Didactic laboratories tutor for the General Biology course (1st year of Biotechnology Bachelor's Degree)

16/01/2017–08/07/2017

Research assistant

MUSE - Museo delle Scienze, Trento (Italy)

- Research activity within the "RACE-TN" project (development of near-infrared video acquisition hardware solution for aquatic invertebrates; development of an ImageJ-based software workflow for video-based motion analysis to evaluate behavioral effects of drugs, pesticides, PCPs and fragrances in target species of freshwater invertebrates; epifluorescence microscopy image processing; analysis of genotoxicity and eco-toxicological data; project mid-term report co-writing)
- Collaboration in the planning of "Contaminanti emergenti nei fiumi trentini" congress (Fondazione Caritro, Trento, 18 maggio 2017)
- Member of the Organizing Committee of the "20th International Symposium on Chironomidae" (MUSE, 2-8 July 2017) and the Editorial Board (Assistant Editor) of the conference Abstract Book (ISBN 978-88-531-0050-4)

07/11/2016–31/12/2016

Research assistant

MUSE - Museo delle Scienze, Trento (Italy)

Research activity within the "RACE-TN" project (epifluorescence microscopy image processing; analysis of genotoxicity and eco-toxicological data; project mid-term report co-writing) and "Monitoraggio della zanzare tigre a mezzo ovitrappe nella città di Trento" project (Web-GIS implementation on the Museum website of the weekly updated readings of the monitored ovitrap stations for *Aedes albopictus* eggs)

02/05/2016–05/10/2016

Research assistant

MUSE - Museo delle Scienze, Trento (Italy)

Research activity within the "RACE-TN" project (Field sampling of benthic freshwater invertebrates; acute toxicity tests on target species; SCGE genotoxicity tests on target species; epifluorescence microscopy image processing; analysis of genotoxicity and eco-toxicological data; co-writing of project-related scientific papers, updating section bibliography) and "Monitoraggio della zanzare tigre a mezzo ovitrappe nella città di Trento" project (Participation to *Aedes albopictus* monitoring with ovitraps in Trento Municipality; co-organization of public-related events and collaboration for the research and divulgation activities of the Department)

01/01/2016–30/04/2016

Volunteer

MUSE - Museo delle Scienze, Trento (Italy)

Cataloging, elaboration and analysis of comet assay slides; rearing in laboratory conditions of freshwater invertebrates; updating the department bibliography and data bank

01/08/2015–31/12/2015

Research assistant

MUSE - Museo delle Scienze, Trento (Italy)

Development of a Single Cell Gel Electrophoresis (SCGE) protocol to evaluate the ecogenotoxicological effects of organic and inorganic pollutants in target species of freshwater invertebrates (acute toxicity tests, comet assay, epifluorescence image processing), statistical analysis of ecotoxicological data (R software)

01/2012–03/2013

Trainee

Università degli Studi di Verona, Verona (Italy)

Development and experimental verification of a combinatorial DNA library generation algorithm that also allows an efficient permutation of a set of genes of interest.

05/2009–01/2010

Trainee

Università degli Studi di Verona, Verona (Italy)

Microbiological and phylogenetic characterization of *Bacillus mycoides* SeTE01, an environmentally relevant bacterial strain with an elevated resistance to selenite and tellurite oxyanions.

EDUCATION AND TRAINING

01/10/2017–Present

PhD in Biotechnology

EQF level 8

Università degli Studi di Verona, Verona (Italy)

- Project title: "Improving photosynthetic Solar Energy conversion in microalgae cultures for the production of biofuels and high value products: genetic manipulation of selected microalgae species in order to tune the induction of photoprotective mechanisms", nell'ambito del progetto europeo H2020 ERC SOLENALGAE
- Scientific supervisor: Prof. Matteo Ballottari

13/09/2019–21/11/2019

Visiting Student

Hanyang University, Seoul (South Korea (Republic of Korea))

Generation of CRISPR/Cas9 mutants of the green alga *Chlamydomonas reinhardtii* on carbon fixation and cell signaling proteins; generation of multiple CRISPR/Cas9 mutants of the diatom *Phaeodactylum tricornutum*

26/09/2018–08/11/2018

Visiting Student

Hanyang University, Seoul (South Korea (Republic of Korea))

Using DNA-free CRISPR/Cas9 genome editing technique on the model green alga *Chlamydomonas reinhardtii* to generate mutants of the photosynthetic apparatus

2010–2013

Master's Degree in Molecular and Industrial Biotechnology

EQF level 7

Università degli Studi di Verona, Verona (Italy)

- Thesis title: "Production of gene libraries by multiple XPCR"
 - Supervisor: Prof.ssa Giuditta Franco
- Main topics: Protein Biosynthesis, Microorganism Genetics, Infobiotics, Production and Characterization of Recombinant Proteins, Biophysics, Structural and Genomic Bioinformatics, Gene Design and DNA Arrays, Genomes, Proteomics, Biocrystallography, Biopolymers and NMR Analysis, Industrial Biotechnological Processes, Industrial Microbiology, Intellectual Property,

Enzymology, Physical Chemistry, Bioreactors.

2005–2010 Bachelor's Degree in Agro-industrial Biotechnology

EQF level 6

Università degli Studi di Verona, Verona (Italy)

- Thesis title: "Trasformazione di selenito e tellurito da parte del ceppo batterico *Bacillus mycoides* SeITE01".
 - Supervisor: Prof. Giovanni Vallini
- Main topics: General and Inorganic Chemistry, Organic Chemistry, Biochemistry, Analytical Chemistry and Biochemistry, General Microbiology, Applied Microbiology, Molecular Biology of Microorganisms, General Molecular Biology, Physics, Mathematics, Biology, Genetics, Cellular Culture Techniques, Plant Physiology and Biochemistry, Biomolecular Databases, Bioethics, Food Technology, Immunology.

2000–2005 Secondary School Diploma - Scientific Studies

EQF level 4

Liceo Scientifico Statale "Galileo Galilei", Verona (Italy)

PERSONAL SKILLS

Mother tongue(s) Italian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C1	C1	B2
IELTS Academics, valutazione 8 su 9					

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills

- Excellent interpersonal skills
- Excellent communication skills acquired both in academic and work settings

Organisational / managerial skills

- Excellent scientific project management skill, acquired during the thesis, museal and doctoral work

Job-related skills

- Molecular Biology:
target design and verification for CRISPR/Cas9 mutant generation, also for DNA-free systems; PCR and RT-PCR experimental design; artificial oligonucleotide design (with specific chemical physical properties) for the construction of DNA libraries; production of combinatorial DNA libraries; purification of PCR products; DNA and RNA extraction from plants, algae and bacteria; plasmid cloning and extraction; PCR primer design; agarose gel electrophoresis of nucleic acids; production and extraction of recombinant proteins; *in vitro* characterization of recombinant proteins; protein purification and separation (SDS-PAGE, ND-PAGE, IEF, HPLC, IMAC, size-exclusion and affinity chromatography, dialysis); UV-visible spectrophotometry; Western blot; Southern blot; Comet assay (SCGE).
- Bioinformatics:
Biological sequence database querying; managing protein structural homology modelling; construction of HMM models for sequence and domain search; phylogenetic analysis; sequence alignment, also NGS; RNA-Seq data quantification and analysis.
- Plant physiology:
Measurement of photosynthetic parameters including Fv/Fm, NPQ, ECS, respiration, state transitions, antenna size, qL OJIP; determination of microalgal strains growth curves; thylakoid extraction from algal strains.
- Microbiology:
Isolation of total colonies; determination of Colony-Forming Unit (CFU) and Minimal Inhibiting Concentration (MIC); toxicity tests; Gram staining; experimental determination of growth curve;

enrichment cultures; insulation of pure strains; cryopreservation; optical microscopy (bright field, dark field, phase contrast); epifluorescence microscopy; cell staining.

■ Ecotoxicology

Development of comet assay protocols (SCGE) on non-target species; genotoxicity tests and data analysis; acute toxicity tests; development of hardware solutions for invertebrate behavioural studies; video software analysis for behavioural studies; aquatic invertebrates rearing in laboratory settings; capture and sampling of aquatic invertebrates; measurement of physical and chemical parameters of aquatic systems.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem-solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital skills - Self-assessment grid

- Excellent knowledge of GNU/Linux, Windows ed OS X operating systems; of Microsoft Office - LibreOffice suites and computer hardware and network architecture;
- Very good knowledge of LaTeX typesetting language and of QGIS, Inkscape, GIMP, Adobe Photoshop, Adobe InDesign, ImageJ/FIJI softwares;
- Basic knowledge of Mathematica software and of R, Python, Bash, MATLAB, Arduino, Ruby, Java programming languages.

Other skills

- Speleology: President of the "Gruppo Amici della Montagna" (GAM Verona, established in 1968) caving club, elected member since 2015 of the Scientific Committee of the "Federazione Speleologica Veneta" (FSV, Venetian Speleological Federation), member of Korean Society of Cave Environmental Science (KSCES) since 2019;
- Electronics: customization and repair of several consumer and scientific electronic equipment and PCs; prototyping with embedded systems such as Arduino, Raspberry Pi;
- Cave, macro and landscape photography;
- Travel;
- Cinematography;
- Italian and Ethical cooking.

Driving licence

B

ADDITIONAL INFORMATION

Publications

- Peer-reviewed publications on International journals
 - Stefano Cazzaniga*, Minjae Kim*, Francesco Bellamoli*, Jooyoen Jeong, Sangmuk Lee, Federico Perozeni, Andrea Pompa, EonSeon Jin & Matteo Ballottari "Photosystem II antenna complexes CP26 and CP29 are essential for non-photochemical quenching in *Chlamydomonas reinhardtii*" *Plant, cell & environment*, 2019
 - Valeria Lencioni, Francesco Bellamoli, Paola Bernabò, Francesco Miari & Alberto Scotti "Response of *Diamesa* spp. (Diptera: Chironomidae) from Alpine streams to newly emergent contaminants and pesticides" *Journal of Limnology*, 2018
 - Sara Villa, Valeria Di Nica, Francesco Bellamoli, Tanita Pescatore, Claudia Ferrario, Antonio Finizio & Valeria Lencioni "Effects of a treated sewage effluent on behavioural traits in *Diamesa cinerella* and *Daphnia magna*" *Journal of Limnology*, 2018
 - Sara Villa, Valeria Di Nica, Tanita Pescatore, Francesco Bellamoli, Francesco Miari, Antonio Finizio, & Valeria Lencioni "Comparison of the behavioural effects of pharmaceuticals and pesticides on *Diamesa zemyi* larvae (Chironomidae)" *Environmental Pollution*, 2018
 - Paola Bernabò, Matteo Gaglio, Francesco Bellamoli, Gabriella Viero, Valeria Lencioni "DNA damage and translational response during detoxification from copper exposure in a wild

population of *Chironomus riparius*" *Chemosphere*, 2017

■ Oral communications

- Francesco Bellamoli, Minjae Kim, Stefano Cazzaniga, Jooyoen Jeong, Sangmuk Lee, Federico Perozeni, Andrea Pompa, EonSeon Jin & Matteo Ballottari "Photosystem II antenna complexes CP26 and CP29 are essential for non-photochemical quenching in *Chlamydomonas reinhardtii*" *33rd Korean Society of Phycology conference*, Kunsan National University, Gunsan-si, Republic of Korea, 25-25 October 2019
- Valeria Lencioni, Francesco Bellamoli, Paola Bernabò, Francesco Miari & Alberto Scotti "Response of *Diamesa* spp. from glacier-fed streams to temperature variations, emerging contaminants and pesticides" *20th International Symposium on Chironomidae* Trento, Italy, July 2-8 2017
- Valeria Lencioni, Valentina Grazioli, Matteo Gaglio, Francesco Bellamoli, Bruno Rossaro & Paola Bernabò "The molecular effects of pesticides employed in organic agriculture (copper and azadirachtin) on a wild population of *Chironomus riparius* (Diptera Chironomidae)" *XXXIII International Society of Limnology Congress (SIL 2016)* Turin, Italy, July 31, 2016 – August 5, 2016

■ Posters

- Francesco Bellamoli & Matteo Ballottari "Identification of putative G-proteins in green microalgae by genome and transcriptome analysis" *EPC7 - 7th European Phycological Congress*, 25-30 August 2019, Zagreb (Croatia)
- Francesco Bellamoli & Matteo Ballottari "Identification of putative G-proteins in green microalgae by genome and transcriptome analysis" *SIBV - SIB 2019 - XI Congress of the Italian Society of Plant Biology - 114th Congress of the Italian Botanical Society (VI International Plant Science Conference)*, 4-6 September 2019, Padova (Italy)
- Francesco Bellamoli, Laura Girolomoni, Tomas Morosinotto & Matteo Ballottari "Zeaxanthin role on NPQ induction in *Chlorella vulgaris*" *First European Congress on Photosynthesis Research - ePS1*, Uppsala, Sweden, June 25-28, 2018
- Valeria Di Nica, Valeria Lencioni, Francesco Bellamoli, Tanita Pescatore, Claudia Ferrario & Sara Villa "Urban sewage effluents into an alpine stream: are information on behavioural effects on *Daphnia magna* suitable to protect alpine cold adapted species?" *SETAC EUROPE 2018* Rome, Italy, May 13-17 2018
- Sara Villa, Tanita Pescatore, Francesco Bellamoli, Valeria Di Nica & Valeria Lencioni "Behavioural effects of emerging contaminants and pesticides on *Diamesa zemyi* from a glacier-fed stream" *20th International Symposium on Chironomidae* Trento, Italy, July 2-8 2017
- Tanita Pescatore, Francesco Bellamoli, Valeria Di Nica, Francesco Miari, Sara Villa & Valeria Lencioni "Behavioural effects of pesticides and pharmaceuticals on chironomid larvae (*Diamesa zemyi*) from a glacier-fed stream" *SETAC EUROPE 2017* Brussels, Belgium, May 7–11 2017

■ Flash Talks

- Francesco Bellamoli, Laura Girolomoni, Tomas Morosinotto & Matteo Ballottari "Zeaxanthin role on NPQ induction in *Chlorella vulgaris*" *First European Congress on Photosynthesis Research - ePS1*, Uppsala, Sweden, June 25-28, 2018
- Francesco Bellamoli, Laura Girolomoni, Tomas Morosinotto & Matteo Ballottari "Zeaxanthin role on NPQ induction in *Chlorella vulgaris*" *ePS-1-Young*, Uppsala, Sweden, June 24-25, 2018

■ Accepted papers

■ Preprints

- Giuditta Franco, Francesco Bellamoli & Silvia Lampis "Experimental Analysis of XPCR-based protocols" arXiv:1712.05182v

References References are available upon request.

Personal data I hereby authorize the use of my personal data in accordance to the GDPR 679/16 - "European regulation on the protection of personal data".

Francesco Bellamoli

Mother tongue(s)
Italian

Foreign language(s)
English

English				
Self-assessment of language skills				
UNDERSTANDING		SPEAKING		WRITING
 Listening	 Reading	 Spoken interaction	 Spoken production	 Writing
C2 Proficient user	C2 Proficient user	C1 Proficient user	C1 Proficient user	B2 Independent user
Certificates and diplomas				
Title	Awarding body		Date	Level*
IELTS Academics, valutazione 8 su 9	British Council		12/12/2013	–

Common European Framework of Reference for Languages - Self-assessment grid

		A1 Basic user	A2 Basic User	B1 Independent user	B2 Independent user	C1 Proficient user	C2 Proficient user
Understanding	 Listening	I can understand familiar words and very basic phrases concerning myself, my family and immediate concrete surroundings when people speak slowly and clearly.	I can understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment). I can catch the main point in short, clear, simple messages and announcements.	I can understand the main points of clear standard speech on familiar matters regularly encountered in work, school, leisure, etc. I can understand the main point of many radio or TV programmes on current affairs or topics of personal or professional interest when the delivery is relatively slow and clear.	I can understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. I can understand most TV news and current affairs programmes. I can understand the majority of films in standard dialect.	I can understand extended speech even when it is not clearly structured and when relationships are only implied and not signalled explicitly. I can understand television programmes and films without too much effort.	I have no difficulty in understanding any kind of spoken language, whether live or broadcast, even when delivered at fast native speed, provided I have some time to get familiar with the accent.
	 Reading	I can understand familiar names, words and very simple sentences, for example on notices and posters or in catalogues.	I can read very short, simple texts. I can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus and timetables and I can understand short simple personal letters.	I can understand texts that consist mainly of high frequency everyday or job-related language. I can understand the description of events, feelings and wishes in personal letters.	I can read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints. I can understand contemporary literary prose.	I can understand long and complex factual and literary texts, appreciating distinctions of style. I can understand specialised articles and longer technical instructions, even when they do not relate to my field.	I can read with ease virtually all forms of the written language, including abstract, structurally or linguistically complex texts such as manuals, specialised articles and literary works.
Speaking	 Spoken interaction]	I can interact in a simple way provided the other person is prepared to repeat or rephrase things at a slower rate of speech and help me formulate what I'm trying to say. I can ask and answer simple questions in areas of immediate need or on very familiar topics.	I can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar topics and activities. I can handle very short social exchanges, even though I can't usually understand enough to keep the conversation going myself.	I can deal with most situations likely to arise whilst travelling in an area where the language is spoken. I can enter unprepared into conversation on topics that are familiar, of personal interest or pertinent to everyday life (e.g. family, hobbies, work, travel and current events).	I can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible. I can take an active part in discussion in familiar contexts, accounting for and sustaining my views.	I can express myself fluently and spontaneously without much obvious searching for expressions. I can use language flexibly and effectively for social and professional purposes. I can formulate ideas and opinions with precision and relate my contribution skilfully to those of other speakers.	I can take part effortlessly in any conversation or discussion and have a good familiarity with idiomatic expressions and colloquialisms. I can express myself fluently and convey finer shades of meaning precisely. If I do have a problem I can backtrack and restructure around the difficulty so smoothly that other people are hardly aware of it.
	 Spoken production	I can use simple phrases and sentences to describe where I live and people I know.	I can use a series of phrases and sentences to describe in simple terms my family and other people, living conditions, my educational background and my present or most recent job.	I can connect phrases in a simple way in order to describe experiences and events, my dreams, hopes and ambitions. I can briefly give reasons and explanations for opinions and plans. I can narrate a story or relate the plot of a book or film and describe my reactions.	I can present clear, detailed descriptions on a wide range of subjects related to my field of interest. I can explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.	I can present clear, detailed descriptions of complex subjects integrating sub-themes, developing particular points and rounding off with an appropriate conclusion.	I can present a clear, smoothly-flowing description or argument in a style appropriate to the context and with an effective logical structure which helps the recipient to notice and remember significant points.
Writing	 Writing	I can write a short, simple postcard, for example sending holiday greetings. I can fill in forms with personal details, for example entering my name, nationality and address on a hotel registration form.	I can write short, simple notes and messages. I can write a very simple personal letter, for example thanking someone for something.	I can write simple connected text on topics which are familiar or of personal interest. I can write personal letters describing experiences and impressions.	I can write clear, detailed text on a wide range of subjects related to my interests. I can write an essay or report, passing on information or giving reasons in support of or against a particular point of view. I can write letters highlighting the personal significance of events and experiences.	I can express myself in clear, well-structured text, expressing points of view at some length. I can write about complex subjects in a letter, an essay or a report, underlining what I consider to be the salient issues. I can select a style appropriate to the reader in mind.	I can write clear, smoothly-flowing text in an appropriate style. I can write complex letters, reports or articles which present a case with an effective logical structure which helps the recipient to notice and remember significant points. I can write summaries and reviews of professional or literary works.

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