



Fosca Errante

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Work: Via Ugo Schiff 6, 50019 Sesto Fiorentino (FI) (Italy)

WORK EXPERIENCE

Tecnologist

Università degli Studi di Firenze [1 Feb 2023 – Current]

City: Sesto Fiorentino (FI) | Country: Italy

Project title: "Immunogenicity study of anti-TNF α drugs. Plasmon surface resonance based monitoring and comparison between originators and bio-similars"

The purpose of this project to evaluate the anti-TNF α different drugs predisposition in generating anti-drug antibodies (ADA) that could be detected taking advantage of the affinity between antibody and antigens measured by surface plasmon resonance. Once the immunogenic regions will be detected, they will be synthetically reproduced as peptide sequences and optimized to be used for diagnostical purposes.

Postdoctoral Research Fellow

Università degli Studi di Firenze [1 Feb 2022 – 31 Jan 2023]

City: Sesto Fiorentino (FI) | Country: Italy

Project title: "Development of peptides for biocompatible scaffolds".

The purposes of this project are the design, development, and synthesis on medium/small scale of peptide sequences for the production of hydrogels, such as biocompatible scaffolds for tissue engineering applications. Nature-inspired synthetic peptide hydrogels in fact are intrinsically biocompatible and their high similarity with the extracellular matrix makes them suitable for use as 3D scaffold materials.

PhD student

Università degli Studi di Firenze [1 Nov 2018 – 30 Jan 2022]

City: Sesto Fiorentino (FI) | Country: Italy

PhD thesis title: "Design, synthesis and biological evaluation of bioactive peptides: collagen turnover modulators for cosmeceutical use and Sars-CoV-2 virus antigens for diagnostic and vaccinal uses."

I personally carried out synthesis, purifications, and characterizations by HPLC-MS of all the peptides developed during my PhD. In collaboration with a group of mass spectrometrists from the University of Florence, I have developed a new analytical method for the evaluation of the stability of cosmeceutical peptides to dermal proteases. I actively participated to the design of a new cosmeceutical peptide ingredient, and I am one of the inventors of the related international patent. Moreover, I worked with specific cell cultures and I evaluated peptides activity in increasing collagen concentration and decreasing inflammation-derived cyclooxygenases *in vitro*. During my PhD I participated to national and international scientific events, both in presence and virtual, where I had the opportunity to present (orally) my research to various peptide science audiences, as I am member of both the Italian Peptide Society and the European Peptide Society. In particular, in 2018 I was invited to be a young testimonial of the European Peptide Society and I participated as a staff member to the international symposium in Dublin.

Scientific laboratory technician

Espikem srl [2 May 2017 – 31 Jan 2023]

City: Prato (PO) | Country: Italy

The mission of Espkem Srl, ex spin-off of the University of Florence, is the development of new bioactive peptides as cosmeceuticals ingredients. The Company also offers peptide custom synthesis services. I am the only employed

person in Espikem and this led me to manage several tasks, including peptide custom design and synthesis for various purposes (e.g., academic research or diagnostics). I personally maintain all the laboratory instruments and I keep the relationship with customers at the technical level. During my experience in Espikem I was also involved in a project in collaboration with the University of Florence and funded by Tuscany Region, which led to the development of new cosmeceutical products, based on a bioactive peptide. Moreover, as part of a collaboration with a Florentine cosmetic company, I personally followed the marketing procedure to release these products, and I also participate to a national exhibition in order to promote the product.

Collaborator

Le Macchine Celibi s.c.ar.l. [1 Jun 2018 – 30 Jun 2018]

City: Firenze | Country: Italy

OpenLab activity at "ScienzaEstate2018"
Evening opening of academic laboratories for divulgative event.

Collaborator

Le Macchine Celibi s.c.ar.l. [1 Jun 2017 – 30 Jun 2017]

City: Firenze | Country: Italy

OpenLab activity at "ScienzaEstate2017"
Evening opening of academic laboratories for divulgative event.

EDUCATION AND TRAINING

PhD - Dottorato in Area del Farmaco e Trattamenti Innovativi

Università degli Studi di Firenze [1 Nov 2018 – 31 Jan 2022]

Address: Via Ugo Schiff 6, 50019 Sesto Fiorentino (FI) (Italy)

Master Degree - Laurea in Chimica e Tecnologie Farmaceutiche

Università degli Studi di Firenze

Address: Via Ugo Schiff 6, 50019 Sesto Fiorentino (FI) (Italy) | Thesis: Synthesis and in vitro evaluation of peptides derivated from serpin A1 and its conjugates for cosmeceutical applications

CONFERENCES AND SEMINARS

[26 Oct 2023 – 28 Oct 2023] Imperial Hotel Tramontano, Sorrento (NA), Italy

A Decade of Peptide Materials Sorrento 2013- Sorrento 2023 Poster presentation: Next-generation silk-based materials for tissue regeneration: a peptide functionalization of degummed silk fibroin fibers

[16 Oct 2023 – 17 Oct 2023] University of Birmingham, UK

Network EUniWell Start-Up Exchange Partecipation as Espikem srl and MoD&LS (University of Florence) staff member.

[28 Aug 2022 – 2 Sep 2022] Hotel Melia Sitges, Barcellona (Spain)

36th European Peptide Symposium Poster presentation: "Peptides as collagen turnover modulators for cosmeceutical applications"

[15 Jun 2022 – 15 Jun 2022] Partenope Conference Centre, Napoli, Italy

4th National Congress Italian Peptide Society Oral presentation: "New generation of collagen turnover modulators peptides: an opportunity for cosmetic applications"

[13 Dec 2021 – 13 Dec 2021] Centro Congressi "Auditorium al Duomo", Firenze, Italy

MS-Hybrids 2021

[12 Nov 2021 – 12 Nov 2021] Firenze, Italy (virtual event)

Scientific Meeting of the Italian Peptides Society dedicated to Young Researchers - Vittorio Erspamer

Scientific Award Oral presentation: "Design, synthesis and biological evaluation of collagen turnover modulators for cosmeceutical use"

[27 Jun 2021 – 30 Jun 2021] Firenze, Italy (virtual event)

40th Advanced Course of Medicinal Chemistry and "E. Duranti" National Seminar for PhD student, ESMEC Poster presentation: "Collagen turnover modulators for cosmeceutical uses"

[25 Apr 2021 – 28 Apr 2021] Firenze, Italy (virtual event)

13th Young Medicinal Chemist's Symposium Oral presentation: "Design and synthesis of SARS-CoV-2 antigens for diagnostics and vaccinology"

[11 Dec 2020 – 11 Dec 2020] Roma, Italy (virtual event)

III Meeting of the Italian Peptide Society Oral presentation: "Design and synthesis of SARS-CoV-2 antigens for diagnostics and vaccinology"

[27 Aug 2019 – 29 Aug 2019] Grand Hotel Salerno, Salerno, Italy

Chemistry meets Industry & Society (CIS2019) Oral presentation: "Anti-ageing peptides derived from serpin A1 for cosmeceutical uses"

[22 May 2019 – 22 May 2019] Polo Scientifico Sesto Fiorentino (FI), Italy

PhDday10 the day dedicated to PhD students Poster presentation: "Peptides in skin remodeling"

[4 May 2019 – 7 May 2019] Fiera di Primiero (TN,) Italy

37th Informal Meeting on Mass Spectrometry Member of the STAFF

[25 Aug 2018 – 30 Aug 2018] Dublin City University (Ireland)

35th European Peptide Symposium Poster presentation: "Serpin A1 derivatives as collagen turnover modulators for cosmeceutical uses"

[Young testimonial of the European Peptide Society](#)

[11 Dec 2017 – 11 Dec 2017] Aula Magna Rettorato, Piazza San Marco, Firenze, Italy

50 anni in "MS-Tandem": dove siamo arrivati e dove andiamo?

[9 Feb 2016 – 11 Feb 2016] Via San Gallo 25, Firenze, Italy

1st Mass Spectrometry Peptide Day

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING B2 READING B2 WRITING B1

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Digital skills

Zotero (scientific literature managing software) - advanced / Microsoft Office (Excel PowerPoint Word) - advanced level / ChemDraw - Utente avanzato / UCSF ChimeraX / Meeting Platforms (Zoom, Teams, Google Meet, ...)

Personal skills

Team Motivation / Social skills (Adaptable and flexible; sociable; team work; work ethic) / Organizational and planning skills

PUBLICATIONS

[2024]

Surface Plasmon Resonance in the Development of TGF- β Activators for Cosmeceutical Use Authors: Ledwoń

P., **Errante F.**, Real-Fernández F., Rovero P., Latajka R.

Published in: Int. Ann. Sci.

doi: 10.21467/ias.14.1.1-9

[2024]

A retro-inverso collagen modulator peptide derived from serpin A1 with enhanced stability and activity in

vitro. Authors: **Errante F.**, Pallecchi M., Bartolucci G., Frediani E., Margheri F., Giovannelli L., Papini A.M., Rovero P.

Published in: J.Med.Chem.

doi: 10.1021/acs.jmedchem.4c00137

[2023]

Therapeutic proteins immunogenicity: a peptide point of view Authors: Real-Fernandez F., **Errante F.**, Di Santo

A., Papini A.M., Rovero P.

Published in: Exploration of Drug Science

doi: 10.37349/eds.2023.00025

[2023]

Influence of the modification of the cosmetic peptide Argireline on the affinity toward copper(II) ions Authors

: Wyrzykowski D, Wieczorek R., Kloska A., **Errante F.**, Papini A.M., Makowska J.

Published in: J Pept Sci.

doi: 10.1002/psc.3547

[2023]

Biomaterial Inks from Peptide-Functionalized Silk Fibers for 3D Printing of Futuristic Wound-Healing and

Sensing Materials Authors: Ceccarini M.R., Palazzi V., Salvati R., Chiesa I., De Maria C., Bonafoni S., Mezzanotte P.,

Codini M., Pacini L., **Errante F.**, Rovero P., Morabito A., Beccari T., Roselli L. and Valentini L.

Published in: Int. J. Mol. Sci.

doi: .10.3390/ijms24020947

[2022]

Peptide-Functionalized Silk Fibers as a Platform to Stabilize Gelatin for Use in Ingestible Devices Authors:

Valentini L., Pacini L., **Errante F.**, Morchio C., Sanna B., Rovero P., Morabito A.

Published in: Molecules

doi: 10.3390/molecules27144605

[2022]

A SARS-CoV-2 Spike Receptor Binding Motif peptide induces anti-spike antibodies in mice and is recognized by COVID-19 patients Authors: Pratesi F.*, **Errante F.***, Pacini L.*, Pena-Moreno I. C., Quiceno S., Carotenuto A., Balam S., Konaté D., Diakite M., Arevalo-Herrera M., Kajava A. V., Rovero P., Corradin G., Migliorini P., Papini A. M., Herrera S. *equally contributed
Published in: Front. Immunol.

doi: 10.3389/fimmu.2022.879946

[2022]
Seroreactivity of the Severe Acute Respiratory Syndrome Coronavirus 2 Recombinant S Protein, Receptor-Binding Domain, and Its Receptor-Binding Motif in COVID-19 Patients and Their Cross-Reactivity with Pre-COVID-19 Samples From Malaria-Endemic Areas Authors: Traoré A., Guindo M. A., Konaté D., Traoré B., Diakité S. A., Kanté S., Dembélé A., Cissé A., Incandela N. C., Kodio M., Coulibaly Y. I., Faye O., Kajava A. V., Pratesi F., Migliorini P., Papini A. M., Pacini L., Rovero P., **Errante F.**, Diakité M., Arevalo-Herrera M., Herrera S., Corradin G., Balam S.
Published in: Front. Immunol.

doi: 10.3389/fimmu.2022.856033

[2021]
Peptides as Active Ingredients: A Challenge for Cosmeceutical Industry Authors: Ledwoń P., **Errante F.**, Papini A.M., Rovero P. and Latajka R.
Published in: Chem. Biodiversity

doi: 10.1002/cbdv.202000833

[2021]
Susceptibility of cosmeceutical peptides to proteases activity: Development of dermal stability test by LC-MS/MS analysis Authors: **Errante F.**, Menicatti M., Pallecchi M., Giovannelli L., Papini A.M., Rovero P., Bartolucci G.
Published in: J. Pharm. Biomed. Anal.

doi: 10.1016/j.jpba.2020.113775

[2020]
Cosmeceutical Peptides in the Framework of Sustainable Wellness Economy Authors: **Errante F.**, Ledwoń P., Latajka R., Rovero P., Papini A.M.
Published in: Frontiers Chem.

doi: 10.3389/fchem.2020.57292

[2018]
Serpin A1 and the modulation of type I collagen turnover: effect of the C-terminal peptide 409-418 (SA1-III) in human dermal fibroblasts. Authors: Cipriani C., Pascarella S., **Errante F.**, Menicacci B., Magnelli L., Mocali A., Rovero P., Giovannelli L.
Published in: Cell Biol. Int.

doi: 10.1002/cbin.11018

PATENTS

[5 Jun 2020]

Bioactive Peptides and Compositions Comprising Them

Inventors: **Errante F.**, Giovannelli L., Papini A.M., Rovero P.

Applicants: Espikem Srl, Università degli Studi di Firenze

Patent Specification:

International application number: PCT/IB2020/055291

International publication number: WO 2020/245772 (10.12.2020 Gazette 2020/50)

HONOURS AND AWARDS

[Aug 2024] European Peptide Society

37th EPS GRANT Registration Fee Waivers - 37th European Peptide Symposium (Florence, 2024)

[23 Sep 2023] ItPS Italian Peptide Society

Carlo Pedone Award 2023 Winner of the first edition of the Carlo Pedone Award for the best doctoral thesis in peptide science.

[Aug 2022] European Peptide Society

36th EPS GRANT Registration Fee Waivers - 36th European Peptide Symposium (Sitges, 2022)