

SIMONA FELLETTI, PhD

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Sex F, Nationality: Italian

WORK EXPERIENCE

- 08/2020 - present **Internship – Cannabinoid purification**
KNAUER Wissenschaftliche Geräte GmbH, Berlin (DE)
- Method development and scale-up (HPLC to preparative LC) for cannabinoids analysis and purification
 - Purification of CBD extracts by means of Simulated Moving Bed (SMB)
- 11/2019 - present **Post-Doctoral Research Fellow - Analytical Chemistry (CHIM/01)**
University of Ferrara, Tecnopolo Terra&Acqua Tech
- Purification of therapeutic peptides through continuous chromatography
 - Purification of oligonucleotides
- 07/2019 – 07/2020 **Drug & API Quality Control - Collaboration**
Acme Drugs, Corte Tegge RE
- testing the drug formulation (API and impurities)
 - analysis of pharmaceutical raw materials according to Ph. Eur X
 - redaction of validation protocols and formulation process

EDUCATION AND TRAINING

- 11/2016 – 02/2020 **Doctor of Philosophy (Ph.D.) - Chemical Sciences**
University of Ferrara, Department of Chemistry and Pharmaceutical Sciences
- study of mass transfer processes in porous media;
 - determination of adsorption isotherms;
 - optimization of purification protocols of peptides
- 04/2019 – 05/2019 **Visiting PhD Student**
University of Pécs, Department of Analytical and Environmental Chemistry (Pécs, Hungary)
- Supercritical Fluid Chromatography (SFC)

- 09/2017 – 03/2018 **Academic Guest**
Eidgenössische Technische Hochschule Zürich (**ETH, Zürich**, Switzerland)
- Cell cultures for the production of proteins (E. Coli)
 - Split-intein **affinity chromatography** for protein purification;
 - Modeling of optimal purification conditions (yield, column utilization, productivity, etc.) through a theoretical simulation model
- 09/2013 – 03/2016 **2nd cycle degree – Master in Chemistry (LM-54)**
University of Ferrara, Department of Chemistry and Pharmaceutical Sciences
- 01/2014 – 12/2014 **1st level Master's degree - Science Technology and Management (MaSTeM)**
University of Ferrara
- 09/2010 – 07/2013 **1st level degree - Degree/Bachelor in Chemistry (L-27)**
University of Ferrara, Department of Chemistry and Pharmaceutical Sciences

DIDACTICS

- 2017, 2019 **Laboratory Tutor – Piano Lauree Scientifiche**
University of Ferrara, Department of Chemistry and Pharmaceutical Sciences
- 02/2019-05/2019 **Laboratory Tutor**
University of Ferrara, Department of Chemistry and Pharmaceutical Sciences
- Teaching assistant for Analytical Chemistry Laboratory I and II (LT Chimica)
- 01/2019-02/2019 **Tutor**
University of Ferrara, Department of Biology and Evolution
- Teaching assistant for Biological Sciences written exams

PROFESSIONAL QUALIFICATIONS

- 04/2020 **Cultore della Materia – CHIM/01 (Analytical Chemistry)**
University of Ferrara
- 11/2018 **State Examination for professional license - Chemistry**
University of Ferrara
- 2017 - present **Member of Italian Chemical Society**
Analytical Chemistry Divisional Group and Interdivisional Group of Separation Sciences

PERSONAL SKILLS

| Foreign Languages | Mother tongue Italian | | COMPREHENSION | | SPEAKING | WRITING |
|-------------------|-----------------------|---------|---------------|--|----------|---------|
| | Listening | Reading | | | | |
| | English | B2 | B2 | First Certificate in English, level B2 | | B2 |
| French | B2 | B2 | | | B1 | B1 |
| Spanish | B1 | B1 | | | A2 | A1 |
| German | A1 | A1 | | | A1 | A1 |

Publications

1. C. De Luca, S. Felletti, G. Lievore, A. Buratti, S. Vogg, M. Morbidelli, A. Cavazzini, M. Catani, M. Macis, A. Ricci, W. Cabri "From batch to continuous chromatographic purification of a therapeutic peptide through Multicolumn Countercurrent Solvent Gradient Purification", *J. Chromatogr. A* 1625 (2020) 461304 (IF 4.049, RANK: 14/86)
2. C. De Luca, S. Felletti, G. Lievore, A. Buratti, M. Sponchioni, A. Cavazzini, M. Catani, M. Macis, A. Ricci, W. Cabri "Boosting the Purification Process of Biopharmaceuticals by Means of Continuous Chromatography" *LC-GC Europe* (2020) 6, 38, 30-34 (IF 1.482)
3. C. De Luca, S. Felletti, G. Lievore, A. Buratti, T. Chenet, L. Pasti, M. Morbidelli, A. Cavazzini, M. Catani, M. Macis, A. Ricci, W. Cabri "Determination of the Thermodynamic Behavior of a Therapeutic Peptide in Overloading Conditions in Gradient Elution Chromatography", *J. Chromatogr. Sep. Tech.* 11 (2020) 428 DOI: 10.35248/2157-7064.20.11.428 (IF 1.01)
4. T. Chenet, E. Sarti, V. Costa, A. Cavazzini, E. Rodeghero, G. Beltrami, S. Felletti, L. Pasti, A. Martucci "Influence of Caffeic Acid on the Adsorption of Toluene onto Organophilic Zeolites", *J. Env. Chem. Eng.* (2020) 8, 5, 104229 (IF 4.300, RANK: 29/143)
5. G. Mazzocanti; S. Manetto; A. Ricci; W. Cabri; A. Orlandin; M. Catani; S. Felletti; A. Cavazzini; M. Ye; H. Ritchie; C. Villani, F. Gasparri "High-throughput enantioseparation of N α -Fmoc proteinogenic amino acids through fast and ultra-fast chiral chromatography on witterionic-teicoplanin stationary phases", *J. Chromatogr. A* 1624 (2020) 461235 (IF 4.049, RANK: 14/86)
6. S. Felletti, C. De Luca, G. Lievore, G. Mazzocanti, S. Manetto, F. Gasparri, A. Cavazzini, M. Catani, "Is there still room for innovation in chiral stationary phases for liquid chromatography? The fortunate case of the zwitterionic-teicoplanin", *LC-GC Europe* (2020) 33 n. s5 27-32 (IF 1.482)
7. S. Felletti, C. De Luca, G. Lievore, L. Pasti, T. Chenet, G. Mazzocanti, F. Gasparri, A. Cavazzini, and M. Catani "Investigation of mass transfer properties and kinetic performance of high-efficiency columns packed with C18 sub-2 μ m fully and superficially porous particles", *Journal of Separation Science* (2020) 43:1737–1745 (IF 2.878, RANK: 32/86)
8. C. De Luca, S. Felletti, M. Macis, W. Cabri, G. Lievore, T. Chenet, L. Pasti, M. Morbidelli, A. Cavazzini, M. Catani, A. Ricci "Modeling the nonlinear behavior of a bioactive peptide in reversed-phase gradient elution chromatography", *J. Chromatogr. A*, 1616 (2020) 460789 (IF 4.049, RANK: 14/86)
9. Felletti S., De Luca C., Ismail O.H., Pasti L., Costa V., Gasparri F, Cavazzini A., Catani M. "On the effect of chiral selector loading and mobile phase composition on adsorption properties of latest generation fully- and superficially-porous Whelk-O1 particles for high-efficient ultrafast enantioseparations", *J. Chromatogr. A*. 1579 (2018) 41–48 (IF 3.858)
10. O. H. Ismail, S. Felletti, C. De Luca, L. Pasti, N. Marchetti, V. Costa, F. Gasparri,

- A. Cavazzini, M. Catani, "The Way to Ultrafast, High-Throughput Enantioseparations of Bioactive Compounds in Liquid and Supercritical Fluid Chromatography", *Molecules*, 2018, 23, 2709; doi:10.3390/molecules23102709 (IF 3.060, RANK 67/172)
11. Felletti, S., Ismail, O.H., De Luca, C. Costa V., Gasparri F, Pasti L, Marchetti N, Cavazzini A., Catani M. "Recent Achievements and Future Challenges in Supercritical Fluid Chromatography for the Enantioselective Separation of Chiral Pharmaceuticals", *Chromatographia* (2018). <https://doi.org/10.1007/s10337-018-3606-1> (IF 1.552)
 12. M. Catani, S. Felletti, O. H. Ismail, F. Gasparri, L. Pasti, N. Marchetti, C. De Luca, V. Costa and A. Cavazzini "New frontiers and cutting edge applications in ultra high performance liquid chromatography through latest generation superficially porous particles with particular emphasis to the field of chiral separations", *Anal Bioanal Chem.* 2018 , 410 (10), 2457-2465 (IF 3.431)
 13. O. H. Ismail, M. Antonelli, A. Ciogli, C. Villani, A. Cavazzini, M. Catani, S. Felletti, D. S.Bell, F. Gasparri "Future perspectives in high efficient and ultrafast chiral liquid chromatography through zwitterionic teicoplanin-based 2- μ m superficially porous particles", *J. Chromatogr. A.* 2017, 1520, 91-102 (IF 3.761)
 14. M. Catani, O. H. Ismail, S. Felletti, F. Gasparri, L.Pasti, V. Costa and A. Cavazzini "Pirkle-type chiral stationary phases for ultra-high performance ultra-fast enantioseparations", *American Pharmaceutical Review*, 2017, 20 (4)
 15. M. Catani, O. H. Ismail, F. Gasparri, M. Antonelli, L. Pasti, N. Marchetti, S. Felletti and A. Cavazzini "Recent advancements and future directions of superficially porous chiral stationary phases for ultrafast high-performance enantioseparations", *Analyst*, 2017, 142, 555-566 (IF 3.885)

Congresses

- Poster, XVI Giornata della Chimica dell'Emilia Romagna, 19 December 2016, **Ferrara (Italy)**.
- Poster, **HPLC 2017**, 18-22 June 2017, **Prague, (Czech Republic)**.
- Oral, Giornate di Chimica Analitica, 10-11 July 2017, **Ferrara (Italy)**.
- Poster, XXVI Congresso Nazionale della Società Chimica Italiana, 10-14 September 2017, **Paestum (Italy)**
- Poster, 42nd International Symposium on Capillary Chromatography (**ISCC**), 13-18 maggio 2018, **Riva del Garda (Italy)**
- Poster, XXVII Congresso della Divisione di Chimica Analitica, 16-20 September 2018, **Bologna (Italy)**
- Poster, 32nd International Symposium on Chromatography **ISC 2018**, 23-27 September 2018, **Cannes (France)**
- Oral. Incontri di Scienza delle Separazioni, 8-9 November 2018, **Roma (Italy)**
- Oral, **Merck & Elsevier Young Chemists Symposium**, 19-21 November 2018, **Rimini (Italy)**
- Poster, XVIII Giornata della Chimica dell'Emilia Romagna, 17 December 2018, **Parma (Italy)**
- BIO & PHARMA Forum 2019 - Waters, 5 March 2019, **Florence (Italy)**
- Oral, **HPLC 2019**, 16-20 June 2019, **Milan (Italy)**
- Poster, **HPLC 2019**, 16-20 June 2019, **Milan (Italy)**
- Oral, 12th Balaton Symposium on High-Performance Separation Methods, 11-13 September 2019, **Siófok, (Hungary)**
- Oral, XXVIII Congresso della Divisione di Chimica Analitica, 22-26 September 2019, **Bari (Italy)**
- Oral, **Merck & Elsevier Young Chemists Symposium**, 25-27 November 2019, **Rimini (Italy)**
- Oral, Incontri di Scienza delle Separazioni, 28-29 November 2019, **Napoli (Italy)**

- Communication skills
- Good communication skills gained through my experience in international congresses, teaching activities and internships
 - Good writing skills
 - Ability to relate to people with different cultures and to work in a team

- Organizational / managerial skills
- Leadership
 - Good organizational skills
 - Adaptability
 - Teamwork

Job-related skills

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| Chromatography | (U)HPLC - DAD, RID, Fluorimeter (Agilent 1100, Agilent 1290 Infinity, Shimadzu Prominence-i LC, Knauer AZURA) | Advanced |
| | Preparative (Contichrom Cube, ÄKTA Pure 25) | Medium-Advanced |
| | SFC (Waters UPC ²) | Medium |
| | GC-MS & LC-MS | Basic |
| | van Deemter curves measurement van Deemter curves interpretation (A,B,C terms) Excess adsorption isotherms Absolute adsorption isotherms (Inverse Method, Frontal Analysis) | Advanced |
| Further Techniques | SDS-Page Cell cultures Titrations Semipreparative turbo-emulsifier Muffle Karl Fisher Optic Microscope | |
| Sample treatment | Sterile Filtration Lyophilization Autoclave Liquid Nitrogen handling Laminar flow hoods | |

- Computer skills
- Fortran, Matlab, Latex, Beamer, Gnuplot, Origin
 - Excel, Word, Power Point
 - Photo Studio, Gimp
 - Kdenlive, Audacity

I do hereby declare that the above statements mentioned in my CV are true and correct to the best of my knowledge and belief.

Date:
8 August 2020

Simona Felletti

