CURRICULUM VITAE
Europass format

Mattia Grego

PERSONAL INFORMATION

RESEARCH EXPERIENCE

03/2026 – 08/2026

Research internship for TotalEnergies BE

Analytical, Molecular Separation, Identification, Chromatography and Mass Spectrometry Division, TotalEnergies BE, Feluy (Belgium)

Laboratory of Analytical Chemistry (AC-GxABT), Gembloux Agro-Bio Tech – University of Liège, Gembloux (Belgium)

Supervisors: Marco Beccaria, Giorgia Purcaro, Flavio Antonio Franchina

Main activities:

- Analysis of used cooking oils (UCOs).
- Sample preparation (hydrolysis, esterification and extraction procedures) and qualitative and quantitative analysis by GC-FID.
- Qualitative and quantitative analysis by HS-SPME-GC×GC-MS.
- Qualitative and quantitative analysis by NP-HPLC.
- Quantitative analysis by HPTLC.
- Quantitative analysis by volumetric procedures (titration).
- Instrument troubleshooting and optimisation of chromatographic conditions to improve resolution.

09/2025 – 02/2026

Master's thesis research internship (Erasmus+)

Laboratory of Analytical Chemistry (AC-GxABT), Gembloux Agro-Bio Tech – University of Liège, Gembloux (Belgium)

Supervisors: Marco Beccaria, Giorgia Purcaro

Main activities:

- Development and optimisation of microwave-assisted extraction–derivatisation (MAED) protocols for lipid extraction and derivatisation of fatty acids to fatty acid methyl esters (FAMEs) in meat samples.
- Comparison of the developed method with official methods (AOCS, AOAC) for fatty acid profiling.
- Analysis of sterols in olive oil by GC-FID and GC-MS.
- Sample preparation and qualitative and quantitative analysis of lipids in food matrices by GC-FID and flow-modulated GC×GC-FID.
- Instrument troubleshooting and optimisation of chromatographic conditions to improve resolution.

EDUCATION AND TRAINING

2023 – 2026

Master's Degree in Chemical Sciences (Laurea Magistrale in Scienze Chimiche)

University of Ferrara, Ferrara (Italy)

Graduation date: 28/08/2026

Final mark: 110/110 cum laude

Thesis title: Evaluation of Microwave-Assisted Extraction–Derivatization (MAED) for Fatty Acid (FA) Characterization in Meat Samples

Supervisors: Marco Beccaria, Flavio Antonio Franchina, Giorgia Purcaro, Donatella Ferrara

EQF level: 7

2020 – 2023

Bachelor's Degree in Chemistry (Laurea Triennale in Chimica)

University of Ferrara, Ferrara (Italy)

Final mark: 107/110

Thesis title: Development of flow reactors for the photo-oxidation of amines to imines and their use in the organocatalytic synthesis of non-natural amino acids

Supervisor: Graziano Di Carmine

EQF level: 6

CONFERENCE CONTRIBUTIONS

10/2026 **Poster – EuSP 2026 | GSAC 2026, Santiago de Compostela (Spain)**

Insights into the Microwave-Assisted Extraction-Derivatization (MAED) for Fatty Acid Profiling in Meat Matrices

Mattia Grego, Donatella Ferrara, Damien Eggermont, Giorgia Purcaro, Marco Beccaria

07/2026 **Posters – ExTech 2026, Gembloux (Belgium)**

Investigation of Microwave-Assisted Extraction-Derivatization (MAED) for Fatty Acid (FA) Characterization in Meat Samples

Mattia Grego, Donatella Ferrara, Giorgia Purcaro, Marco Beccaria

MASE–SPE Strategy for Rapid and Green Sterol Analysis in Extra Virgin Olive Oil (EVOO)

Nicola Ruin, Donatella Ferrara, Mattia Grego, Chaimae Chaibi, Giorgia Purcaro, Luisa Pasti, Marco Beccaria

LANGUAGE SKILLS

Mother tongue: Italian

Other languages

English

Listening	Reading	Spoken interaction	Spoken production	Writing
B2	B2	B2	B2	B2

French

Listening	Reading	Spoken interaction	Spoken production	Writing
A2	A2	A2	A2	A1

Levels: A1/A2 basic user – B1/B2 independent user – C1/C2 proficient user (Common European Framework of Reference for Languages)

TECHNICAL SKILLS

Chromatography: GC-FID; GC-MS; flow-modulated GC×GC-FID; HS-SPME-GC×GC-MS; NP-HPLC; HPTLC; qualitative and quantitative analysis; troubleshooting and method optimisation

Sample preparation: microwave-assisted extraction; derivatisation of fatty acids to methyl esters (FAMEs); hydrolysis, esterification and extraction procedures; HS-SPME

Lipid analysis: fatty acid profiling in meat; sterols in olive oil; used cooking oils

Other techniques: volumetric analysis (titration)

Synthesis: flow chemistry, photochemistry, organocatalysis (bachelor's thesis)

DIGITAL SKILLS

DigComp self-assessment: proficient user in all five areas (information and data literacy, communication and collaboration, digital content creation, safety, problem solving).

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Il sottoscritto acconsente alla pubblicazione del presente curriculum vitae sul sito dell'Università degli Studi di Ferrara.

Place and date: 12/10/'26