

INFORMAZIONI PERSONALI

GABRIELE PECATELLI

OCCUPAZIONE PER LA QUALE
SI CONCORRE

POSIZIONE RICOPERTA

Rinnovo assegno di ricerca categoria B, Tipologia I

Assegnista di ricerca categoria B, Tipologia I dal titolo “Valutazione del potenziale di conversione degli scarti di frantoio in fitovaccini tramite machine learning”, per lo svolgimento di attività di ricerca per il Gruppo scientifico disciplinare 05/BIOS 02 Fisiologia Vegetale Settore scientifico disciplinare BIOS 02/A Fisiologia vegetale), relativo al progetto di ricerca: “INWASTE: valorizzazione digitale e biotecnologica degli scarti di frantoio in immunostimolanti vegetali.” da svolgersi presso il Dipartimento di Biologia e Biotecnologie “Charles Darwin” dell’Università degli Studi di Roma “La Sapienza”.

TITOLO DI STUDIO

Dottorato di ricerca

ESPERIENZA
PROFESSIONALE

01/09/2023 - 29/02/2024

Research of six months at the Department of Experimental Plant Biology in Prof. Schwarzerova K. lab Charles University of Prague, Czech Republic.
Research topic: Role of Cell Wall proteins and Cytoskeletal proteins in Plant Cells: Interaction between XTHs and PM Es with Arp2/3 complex”.

ISTRUZIONE E FORMAZIONE

01/12/2021 - 30/11/2024

PhD in Biological and Environmental Sciences and Technologies, University of Salento (Excellent cum Laude).

Research topic: “ Characterization of the different Secretion pathways in the plant Cells”

09/2019 - 10/2021

Master’s degree in Cell Biology and Technology (110/110 cum laude).

Sapienza University of Rome. Master’s degree thesis title: “ Role of Arabidopsis Subtilases in PME activation during Growth and Defence

09/2016 - 10/2019

Bachelor’s degree in Agro industrial biotechnology (106 /110).

Sapienza University of Rome. Bachelor’s degree thesis title: “ Caratterizzazione quali quantitativa di frazioni oligosaccaridiche in reflui oleari

COMPETENZE PERSONALI

Lingua madre

ITALIANO

Altre lingue	COMPRESIONE		PARLATO		PRODUZIONE SCRITTA
	Ascolto	Lettura	Interazione	Produzione orale	
INGLESE	B2	B2	B2	B2	B2
FRANCESE	A1	A1	A1	A1	A1

Competenze professionali

Molecular biology: nucleic acids extraction and purification, nucleic acids amplification by PCR, gel electrophoresis of nucleic acids, RNA reverse transcription, gene expression analysis by semi-quantitative (sqRT PCR) and quantitative (qRT PCR) PCR, molecular cloning (including restriction enzymes and Gateway cloning strategies), expression of recombinant proteins, CRISPR CAS9.

Microbiology: fungal (*Botrytis cinerea*), bacterial (*E. coli*, *Agrobacterium tumefaciens*), alga culture (*Chlorella vulgaris*), preparation of chemically, thermo or electro competent bacterial, bacteria transformation, cellular growth characterization in different media, plasmid purification

Biochemistry: extraction and separation of proteins with one dimensional electrophoresis (IEF/SDS-PAGE), Western blots, detection and quantification of protein on gel and nitrocellulose membrane by chemiluminescence or fluorescence imaging, enzymatic digestion of oligosaccharides, Analysis of sugars by HPAEC-PAD (using an ICS3000 system).

Plant assays: Infiltration for transient expression in *Nicotiana tabacum* adult leaves, *Nicotiana tabacum* protoplast transformation, transient expression in *Arabidopsis thaliana* cotyledon (FAST method), adult *Arabidopsis thaliana* leaves transient (Zhang et al. 2020) and stable (Floral deep) transformation, treatments of *Arabidopsis thaliana* adult leaves with immunity elicitors, ROS quantification by luminescence assays, gene expression, infection with phytopathogens (*Botrytis cinerea*), elicitor-induced protection against pathogens, Brefeldine A treatment, FM4-64 treatment.

Histochemical analyses: Pectoplate (Lionetti 2015), Bradford assay (Bradford 1976).

Research and Bioinformatic software: Microsoft Office systems, BioRender, Photoshop, Image analysis for protein and nucleic acid gels (ImageLab), primer sequences (Primer3, T-DNA express.), ImageJ, sequence analysis for protein and nucleic acids (TAIR, Uniprot, BLAST, ePlant, Eurofins eonomics, SnapGene, SignallP, TMHMM, Chromas, ExPASy) Real-Time PCR (Bio-Rad CFX Maestro), Confocal (ZEN program-Zeiss LSM710 Microscope).

Competenze digitali

AUTOVALUTAZIONE				
Elaborazione delle informazioni	Comunicazione	Creazione di Contenuti	Sicurezza	Risoluzione di problemi
INTERMEDIO	INTERMEDIO	INTERMEDIO	INTERMEDIO	INTERMEDIO

Patente di guida

B

ULTERIORI INFORMAZIONI

Pubblicazioni

1: De Caroli, M.; Rampino, P.; Pecatelli, G.; Girelli, C.R.; Fanizzi, F.P.; Piro, G.; Lenucci, M.S. Expression of Exogenous *GFP-CesA6* in Tobacco Enhances Cell Wall Biosynthesis and Biomass Production. *Biology* **2022**, *11*(8), 1139. doi: [10.3390/biology11081139](https://doi.org/10.3390/biology11081139).

2: De Caroli, M.; Rampino, P.; Curci, L. M.; Pecatelli, G.; Carrozzo, S.; Piro, G. CiXTH29 and CiLEA4 Role in Water Stress Tolerance in *Cichorium intybus* Varieties. *Biology* **2023**, *12*(3), 444; <https://doi.org/10.3390/biology12030444>

3: De Caroli, M., Carrozzo, S., Curci, L. M., Pecatelli, G., Placi, R., Barozzi, F., Semeraro, T., Montefusco, A., Dalessandro, G., Di Sansebastiano, G. P. & Lenucci, M. S.. Highways and detours: routes for protein and polysaccharide secretion into the plant cell wall. *Plant Biosystems - An International Journal Dealing with All Aspects of Plant Biology* **2025**, 1–21. <https://doi.org/10.1080/11263504.2025.2531894>

Poster e partecipazioni ad importanti Convegni Nazionali ed Internazionali

16-19 September/2025	PECATELLI G., COCULO D., CAMINADA G., IAMELE E., DE CAROLI M., LIONETTI V. "Pectin methylesterases as strategic modulators of plant–environment interactions" XIV National Congress of the Italian Society of Plant Biology 2025 (SIBV 2025). 16-19 September 2025, Palermo, Italy (Poster).
16-19 September/2025	COCULO D., PECATELLI G., CAMINADA G., IAMELE E., LIONETTI V. "Structural Barriers Against Xylella: Cell Wall Strategies in Olive Resistance" XIV National Congress of the Italian Society of Plant Biology 2025 (SIBV 2025). 16-19 September 2025, Palermo, Italy (Poster).
16-19 September/2025	LIONETTI V., GRECO M., PECATELLI G., CAMINADA G., COCULO D. "From agro-industrial by-products to immunomodulators for sustainable crop protection" XIV National Congress of the Italian Society of Plant Biology 2025 (SIBV 2025). 16-19 September 2025, Palermo, Italy (Poster).
11-13 September/2024	PECATELLI G., SCHWARZEROVÁ K., PIRO G. AND DE CAROLI M. "What happens before the wall? Interaction between XTH33 and ARP2/3 complex". 119° Congresso della Società Botanica Italiana, X International Plant Science Conference (IPSC) 2024. 11-13 September 2024, Teramo, Italy (Poster).
26-27 June/2024	PECATELLI G., PIRO G., DE CAROLI M. "Mutation of the subunits of the ARP2/3 complex alters the secretion of XTH33 to the Cell Wall". European Plant Cytoskeletal Club (EPCC) 2024. 26-27 June 2024, Prague, Czech Republic (Oral Presentation).
12-14 June/2024	PECATELLI G., PIRO G., DE CAROLI M. "Pectin Methylesterase Secretion Pathway and Stress Response: Analysis on AtPME12, AtPME18 and AtPME34". Riunione annuale gruppi di lavoro Società Botanica Italiana (SBI - Biologia cellulare e molecolare/Biotecnologie e differenziamento) 2024. 12-14 June 2024, Verona, Italy (Oral Presentation).
18-22 June/2023	PECATELLI G., DE CAROLI M., PIRO G. "Plant Cell Wall secretion pathways: analysis on AtPME12, AtPME18 and AtPME34". XVI Plant Cell Wall Meeting 2023. 18-22 June 2023, Malaga, Spain (Poster).
27 January/2023	DE CAROLI M., CURCI L.M., PECATELLI G., CARROZZO S., PIRO G. "XTH29 expression and water stress tolerance in chicory varieties". Società Botanica Italiana sezione regionale Pugliese (SBI 2023). 27 January 2022, Bari, Italy.
28 January/2022	CURCI L.M., PECATELLI G., DE CAROLI M., PIRO G. "Biomassa vegetale: piante che sovraesprimono una subunità del complesso cellulosa sintasi". Società Botanica Italiana sezione regionale Pugliese (SBI 2022). 28 January 2022, Lecce, Italy.
28 June-1 July /2021	DANIELE COCULO, GABRIELE PECATELLI, DANIELE DEL CORPO AND VINCENZO LIONETTI. "Molecular factors underlying Arabidopsis PME activation against Botrytis". Plant Biology Europe 2021 (PBE 2021). 28 June-1 July, 2021, Turin, Italy (Poster).
17-20/02/2020	15° European Conference on Fungal Genetics. Rome, Italy (February 2020).
Borse di studio e premi	SBI (Società Botanica Italiana) scholarship winner for participation in the 119° SBI congress 27/06/2024 Awarded in the "best presentation" section during the "European Plant Cytoskeletal Club (EPCC) 2024 congress in Charles University, Prague (27/06/2024) PhD scholarship, University of Salento . (01/12/2021 – 30/11/2024) Winner of the competition for the path of excellence university in Sapienza University of Rome. With this, he enforced his competence in molecular biology, biochemistry, plant pathology and plant physiology. (05/03/2021 He carried on a lab project about: - Use of Chlorella vulgaris for biofuel application. And he made a thorough research and he wrote a thesis on: - Identification of mechanisms for Xylella fastidiosa olive trees infection and the ultimate discoveries on controlling the spread of bacterium.

Dati personali Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".

Io sottoscritto dichiaro di essere consapevole che il presente *curriculum vitae* sarà pubblicato sul sito istituzionale dell'Ateneo, nella Sezione "Amministrazione trasparente", nelle modalità e per la durata prevista dal d.lgs. n. 33/2013, art. 15.

Data
28/11/2025

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