Alessia Peluso

Email address: alessia.peluso@uniroma1.it

Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi dell'art. 13 d. lgs. 30 giugno 2003 n. 196 - "Codice in materia di protezione dei dati personali" e dell'art. 13 GDPR 679/16 - "Regolamento europeo sulla protezione dei dati personali

WORK EXPERIENCE

ITALIAN NATIONAL INSTITUTE OF HEALTH - SAPIENZA UNIVERSITY OF ROME – ROMA, ITALY

Department CeNSiA - Centro Nazionale per la Sicurezza delle Acque (National Center for Water Safety)

PHD IN CHEMICAL SCIENCES – 1 NOV 2023 – CURRENT

- Prepare culture media and growth broths for microbial cultivation
- Perform microbiological analysis of wastewater and surface water, including filtration, bacterial enumeration (plate count, Quanti-Tray®), and microbial cultivation through inoculation (streaking and pour plate) and isolation on selective and non-selective media
- Use of optical microscopy techniques, including bacterial staining methods
- Identify microorganisms using MALDI-TOF MS (Bruker MALDI Biotyper Sirius) and VITEK® 2 system (bioMérieux)
- Focus on antibiotic-resistant bacteria by conducting Kirby-Bauer disk diffusion method, antimicrobial susceptibility testing, using VITEK® 2 system (bioMérieux) with AST cards
- Type microbial strains using IR Biotyper® (Bruker) for rapid and accurate classification
- Perform spectroscopic analysis using MicroNIR for rapid microbial or chemical profiling
- Analyze MicroNIR spectra using chemometric methods including PCA, PLS, and PLS-DA models
- Preserve microbial strains using Microbank™ systems and glycerol stocks
- Organize and process microbiological data

SAPIENZA UNIVERSITY OF ROME – ROMA, ITALY

INTERNSHIP FOR MASTER'S THESIS IN ANALYTICAL CHEMISTRY (CLASS LM-54) – 16 MAR 2023 – 20 OCT 2023

- Developed innovative analytical protocols for the detection of cocaine in oral fluids using near-infrared (NIR) spectroscopy
- Designed and performed analytical procedures independently
- Analyzed biological, food, and inorganic samples using MicroNIR; processed spectral data through chemometric analysis (PCA, PLS, PLS-DA) using UNSCRAMBLER X
- Prepared and analyzed liquid and solid samples using thermogravimetric analysis (TGA); interpreted thermograms
- Performed qualitative and quantitative analyses using GC-MS, including calibration curve construction and method validation
- Applied SPME extraction techniques for highly volatile samples prior to GC-MS injection

UNIVERSITY OF SIENA – SIENA, ITALY

INTERNSHIP FOR BACHELOR'S THESIS IN CHEMICAL SCIENCES (CLASS L-27) – 19 JAN 2021 – 29 OCT 2021

Research project on degradation rates of conventional and biodegradable plastics

- Designed and independently managed the research workflow
- Selected and prepared polymer materials for experimental procedures
- Performed UV-Vis spectrophotometric analysis on river water samples to monitor organic matter release from different plastic types
- Conducted FT-IR spectroscopic analysis to characterize polymeric materials

LET – LABORATORIO ENOLOGICO TOSCANO (TUSCAN ENOLOGICAL LABORATORY) – SIENA, ITALY

TRAINING INTERNSHIP – 1 SEP 2016 – 15 SEP 2016

- Conducted water quality analyses
- Performed must and wine composition testing
- Analyzed olive oil samples for quality parameters
- Assessed soil samples for fertility and composition

HOSPITAL-UNIVERSITY CENTRE OF SIENA – SIENA, ITALY

TRAINING INTERNSHIP – 1 JUL 2015 – 23 JUL 2015

- Performed bacterial culture on agar plates
- Conducted bacterial counting and quantification
- Executed gel electrophoresis analysis

EDUCATION AND TRAINING

1 NOV 2023 – CURRENT Roma, Italy
PHD IN CHEMICAL SCIENCES Italian National Institute of Health (CeNSiA) - Sapienza University of Rome

Thesis "Multidisciplinary Analytical Approach Applied to the Environmental Surveillance of Waterborne Antibiotic-Resistant Microorganisms"

1 OCT 2021 – 20 OCT 2023
MASTER'S DEGREE IN ANALYTICAL CHEMISTRY (CLASS LM-54) Sapienza University of Rome

Thesis "Development of an innovative analytical protocol for the determination of cocaine in oral fluids using near-infrared spectroscopy and chemometric analysis"

1 OCT 2018 – 29 OCT 2021
BACHELOR'S DEGREE IN CHEMICAL SCIENCES (CLASS L-27) University of Siena

Thesis "Investigation of degradation rates of conventional and biodegradable plastics"

9 JUL 2025 – 10 JUL 2025
TRAINING COURSE:"BRUKER MBT FT-IR BIOTYPER" Bruker Italia S.r.l. Daltonics Division

27 JUN 2025
TRAINING COURSE:"BRUKER MALDI BIOTYPER SIRIUS GP SISTEM" Bruker Italia S.r.l. Daltonics Division

19 JAN 2025 – 25 JAN 2025 Genova
TRAINING SCHOOL IN MULTIVARIATE DATA ANALYSIS University of Genoa

23 MAR 2024 Roma - Online
TRAINING COURSE: "FORMAZIONE GENERALE SALUTE E SICUREZZA SUL LAVORO PER LAVORATORI ED EQUIPARATI" Unitelma Sapienza

1 APR 2025 – 13 APR 2025
SAMPLING EXPERIENCE OF SEAWATER ABOARD THE TRAINING SHIP "AMERIGO VESPUCCI" FOR THE "SEA CARE" PROJECT, IN COLLABORATION WITH THE ITALIAN NAVY Italian National Institute of Health - Sapienza University of Rome

15 JAN 2025 – 15 FEB 2025 Roma, Italy
TRAINING COURSE: "SPETTROSCOPIA DI FLUORESCENZA: UN APPROCCIO PRATICO" Sapienza University of Rome

3 FEB 2025 – 3 MAR 2025 Roma, Italy
TRAINING COURSE: "SOSTANZE ORGANICHE NATURALI E DI INTERESSE ALIMENTARE E FARMACEUTICO" Sapienza University of Rome

8 APR 2025 – 27 JUN 2025 Roma, Italy
TRAINING COURSE: "SVILUPPO DI NUOVI FARMACI. DAL DRUG DISCOVERY ALLA PRODUZIONE, ASPETTI CHIMICO SINTETICI E ANALITICI" Sapienza University of Rome

1 JUN 2024 – 20 JUL 2024 Roma, Italy
TRAINING COURSE: "CHEMIOMETRIA APPLICATA CON ELEMENTI DI MATLAB" Sapienza University of Rome

10 APR 2024 – 20 JUL 2024 Roma, Italy
TRAINING COURSE: "METABOLOMICA: TRATTAMENTO DEI DATI E APPLICAZIONI" Sapienza University of Rome

1 MAR 2024 – 8 MAY 2024 Roma, Italy
TRAINING COURSE: "METABOLOMICA: TEORIA, PRINCIPI E TECNICHE ANALITICHE" Sapienza University of Rome

1 DEC 2023 – 23 DEC 2023 Roma, Italy
TRAINING COURSE: "CORSO DI FORMAZIONE NAZIONALE PER TEAM LEADER PER L'IMPLEMENTAZIONE DEI PIANI DI SICUREZZA DELL'ACQUA (PSA)" Italian National Institute of Health - Sapienza University of Rome

15 APR 2023 – 7 JUL 2023 Roma - Online
TRAINING COURSE: "SCIENZE DELLA SOSTENIBILITÀ" Sapienza University of Rome

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B1	B1	B1	B1	B1
SPANISH	A2	A2	A2	A2	A2

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

PUBLICATIONS

2025
Global mapping and environmental drivers of epipelagic bacterial communities in the open oceans

Luca Vitanza1 , Anna Maria Coccia1 , Alessia Peluso1 , David Brandtner 2 , Anna Muratore1 , Fulvio Ferrara1 , Luca Lucentini 1 , Andrea Piccioli 3 , Giuseppina La Rosa1 , Rossella Briancesco1 * and The sea care team

Publisher: Frontiers in marine sciences

2025
Poster: "Isolation and genomic characterization of vancomycin-resistant Enterococcus faecium from wastewater influents and effluents"

Alessia Peluso 1, Simonetta Della Libera 1, Luca Vitanza 1, Anna M. Coccia 1, Monica Monaco 2, Maria Del Grosso 2, Romina Camilli 2, Giulia Errico 2, Sara Giancristofaro 2, Giuseppina La Rosa 1, and Rossella Briancesco 1

2024
Poster: "Characterisation of the bacterial community structure of offshore Mediterranean seawater samples"

Luca Vitanza, Anna M. Coccia, Alessia Peluso, Anna Muratore, Fulvio Ferrara, Giuseppina La Rosa, Luca Lucentini, Andrea Piccioli And Rossella Briancesco

SKILLS

Microsoft Office | Microsoft Word | Microsoft Excel | Microsoft Powerpoint | Outlook | Google Drive | Good listener and communicator | Organizational and planning skills | Motivated | Team-work oriented | Decision-making | Reliability | Gmail | Internet user | Responsibility | Flexibility | Critical thinking

CONFERENCES AND SEMINARS

19 SEP 2025 – 22 SEP 2025 University of Catania
Conference: "53° Congresso Nazionale della Società Italiana di Microbiologia (SIM)"

Poster presenter: "Isolation and genomic characterization of vancomycin-resistant Enterococcus faecium from wastewater influents and effluents"

15 SEP 2025 Online - Ambiente ingegneria ambientale
Webinar: "PIANI DI SICUREZZA DELL'ACQUA"

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9 JUL 2025 Italian National Institute of Health, Rome
Conference: " La valorizzazione delle cure termali attraverso la ricerca scientifica e l'innovazione"

Participant

9 JUN 2025 Sapienza University of Rome
Seminar: "Enantioselective HPLC: a versatile tool for stereochemical stability determination and chiral recognition analysis"

Participant

6 JUN 2025 Roma
Webinar: "SAgacia25: l'importanza del riciclo delle REE"

Participant

4 JUN 2025
Webinar: "The genetic basis of parasitism in the gastrointestinal parasite Strongyloides

Participant

5 MAY 2025 Sapienza University of Rome
Seminar: "I nuovi indicatori dell'etica ambientale"

Participant

5 MAR 2025 Italian National Institute of Health, Rome
Workshop: "Gaps and implementation of innovative models of OH genomic evaluation for emerging/ reemerging pathogens"

Participant

27 FEB 2025 Italian National Institute of Health, Rome
Workshop: "La gestione sostenibile degli oceani: One Health come salute degli oceani e dell'umanità"

Participant

18 FEB 2025 – 19 FEB 2025 Italian National Institute of Health, Rome
Meeting: "EPI-MOD PNRR PE13 INF-ACT"

Participant

12 FEB 2025 Sapienza University of Rome
Seminar: "Brown to white Analytical chemistry: new frontiers for a sustainable sample preparation"

Participant

11 DEC 2024 Sapienza University of Rome
Seminar: "Sintesi e caratterizzazione di nanoparticelle d'oro idrofobe per applicazioni nell'optoelettronica e sensoristica"

Participant

5 DEC 2024 Sapienza University of Rome
Seminar: "Chimica dinamica covalente dissipativa applicata alla realizzazione di assemblaggi transienti"

Participant

20 NOV 2024 Italian National Institute of Health, Rome
Conference: "La resistenza agli antimicrobici: nuovi dati ed evidenze dalla sorveglianza alla ricerca"

Participant

6 NOV 2024 Sapienza University of Rome
Seminar:" Development and applications of Hybrid (QM/MM) computational methods for the study of complex systems"

Participant

25 SEP 2024 Sapienza University of Rome
Seminar:" Sintesi totale di composti naturali ad azione antitumorale"

Participant

8 SEP 2024 – 11 SEP 2024 University of Pavia
Conference: "52° Congresso Nazionale della Società Italiana di Microbiologia (SIM)"

Participant

5 SEP 2024 Sapienza University of Rome
Seminar: "Sviluppo di strategie di monitoraggio e analisi per la ricerca di contaminanti antropici persistenti in matrici acquose e ambienti marini"

Participant

18 JUL 2024 Sapienza University of Rome
Seminar: "Probiotoci e piante medicinali come strumenti 'green' per la tutela delle api e dei prodotti dell'alveare da sostanze chimiche"

Participant

11 JUL 2024 Sapienza University of Rome
Seminar: "Ossidazione selettiva dei legami C-H tramite processi di trasferimento di atomo di idrogeno (HAT)"

Participant

13 JUN 2024 Italian National Institute of Health, Rome
Conference: "Cure termali: esperienze a confronto per la condivisione delle buone pratiche"

Participant

11 APR 2024 Sapienza University of Rome
Seminar: “Deep eutectic solvents as “green” solvents in extraction procedures from natural matrices”

Participant

26 MAR 2024 Italian National Institute of Health, Rome
Conference: “La Plastica - il caso del PVC nella prospettiva Salute e Servizi Sanitari”

Participant

21 MAR 2024 – 22 MAR 2024 Roma
Conference: "Le indagini forensi ed il contributo della spettrometria di massa"

Participant

19 MAR 2024 Sapienza University of Rome
Seminar “Solventi eutettici profondi a base di acqua: proprietà chimico fisiche e opportunità emergenti”

Participant

7 MAR 2024 Online
Webinar: “Un anno dal D.Lgs. 18/2023”

Participant

8 FEB 2024 Sapienza University of Rome
Seminar: “Peptide-based hydrogels and their biological applications”

Participant

11 JAN 2024 Sapienza University of Rome
Seminar: "Liquidi ionici: sintesi, design e applicazioni nel campo delle batterie"

Participant

4 MAR 2025 Italian National Institute of Health, Rome
Conference: "INTERNATIONAL HPV AWARENESS DAY - Giornata di sensibilizzazione sull’HPV”

Participant

11 DEC 2023 Sapienza University of Rome
Seminar: "Caratterizzazione in operando di reticoli metallorganici attraverso tecniche basate sui raggi X"

Participant

30 NOV 2023 Sapienza University of Rome
Seminar: "Utilizzo di fuel chimici per sistemi dissipativi"

Participant

15 NOV 2023 Sapienza University of Rome
Seminar: “Esplorando i diversi contributi alla driving force di formazione di solventi a eutettico profondo”

Participant

13 OCT 2023 Italian National Institute of Health, Rome
Workshop: “Primi indirizzi applicativi del Decreto Legislativo 18/2023”

Participant

15 JUN 2023 Italian National Institute of Health, Rome
National Congress: “Mare e Salute - Comprendere e controllare i nessi tra oceano globale e salute umana attraverso la cooperazione scientifica e la partnership istituzionale”

Participant

18 MAY 2023 Sapienza University of Rome
Event: "Sapienza Career Days STEM - Sessione Plenaria e panel tematici istituzionali e Sessione Parallela 1: Focus su Chimica - Scienze Biologiche - Biotecnologie - Beni Culturali"

Participant

31 MAR 2023 Sapienza University of Rome
Seminar: "Recent advances on the thermochemistry and thermal stability of organic compounds. The case of some heterocyclic derivatives"

Participant