

**IOLANDA FRANCOLINI – Curriculum Vitae**

Rome, 06/11/2025

**PART I – GENERAL INFORMATION**

|                       |                                                                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Full Name</b>      | Iolanda Francolini                                                                                                                                                  |
| <b>ORCID</b>          | 0000-0002-0180-2334                                                                                                                                                 |
| <b>Google Scholar</b> | <a href="https://scholar.google.com/citations?user=4IU9j9QAAAAJ&amp;hl=it&amp;oi=ao">https://scholar.google.com/citations?user=4IU9j9QAAAAJ&amp;hl=it&amp;oi=ao</a> |

**PART II - EDUCATION**

| Type                                   | Year | Institution                                 | Notes                                                                                                                                                           |
|----------------------------------------|------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PhD in Industrial Chemical Processes   | 2005 | Sapienza University of Rome                 | Cycle XVII, obtained on 16/02/2005, defending a thesis entitled "Polymers with antimicrobial properties: synthesis, characterization and biological evaluation" |
| Master Degree in Industrial Chemistry  | 2000 | Sapienza University of Rome                 | Full Marks (110/110 e lode)                                                                                                                                     |
| Qualification for Chemistry Profession | 2000 | Sapienza University of Rome                 | Obtained in November 2000                                                                                                                                       |
| Pre-doctorate training                 | 2001 | Italian Association of Macromolecules (AIM) | First European Polymer Federation School, XXIII "Mario Farina", School topic: "Training in Elastomers and Rubber Materials", Brescia, June 4-8, 2001            |
| Pre-doctorate training                 | 2002 | Turin University, Biotechnology Foundation  | National School of Nuclear Magnetic Resonance, Turin, 2-6 September 2002                                                                                        |
| ASN                                    | 2018 | MUR                                         | Full Professor SC 03/B2, SSD CHIM/07                                                                                                                            |
| ASN                                    | 2023 | MUR                                         | Full Professor SC 03/C2, SSD CHEM04/A (ex CHIM/04)                                                                                                              |

**PART III – APPOINTMENTS****III.A. ACCADEMIC APPOINTMENTS**

| Start      | End     | Institution                                    | Position                                                |
|------------|---------|------------------------------------------------|---------------------------------------------------------|
| 01/09/2020 | Current | Sapienza University of Rome, Dept of Chemistry | Associate Professor, SSD CHEM04/A, Industrial Chemistry |

|      |      |                                                   |                                                |
|------|------|---------------------------------------------------|------------------------------------------------|
| 2004 | 2020 | Sapienza University of Rome,<br>Dept of Chemistry | Researcher, SSD CHEM04/A, Industrial Chemistry |
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### III.B. OTHER APPOINTMENTS

| Start | End     | Institution                                       | Position                                                                                                                                                                                                                                                                                            |
|-------|---------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2022  | Current | Sapienza University of Rome,<br>Dept of Chemistry | Junior Research Fellow, Classe Accademica di Scienze e Tecnologie, Scuola Superiore di Studi Avanzati (SSAS) per il triennio 2022-2025, Disposizione di nomina N. 21/2022 Prot n.0000255 del 07/11/2022, e per il triennio 2025-208, Disposizione di nomina N. 50/2025 Prot n.001228 del 06/11/2025 |
| 2010  | 2010    | IRCCS-Fondazione Santa Lucia,<br>Rome, Italy      | Visiting researcher in the Laboratory of Microbial Biofilm                                                                                                                                                                                                                                          |
| 2003  | 2003    | Montana State University<br>(USA)                 | Visiting Scientist at the Center for Biofilm Engineering (CBE)                                                                                                                                                                                                                                      |
| 2001  | 2001    | Italian Institute of Health (ISS),<br>Rome, Italy | Research contract at the Department of Ultrastructures                                                                                                                                                                                                                                              |

### III.C PARTICIPATION TO PHD THESIS COMMISSIONS ABROAD

|      |                                                                                                                                                                                                                                            |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025 | <i>External examiner</i> for the PhD thesis of the student Bahaa Daous, PhD in Applied Chemistry and Polymeric Materials, Universidad del País Vasco, San Sebastian, Spain. Examination on 21/05/2025                                      |
| 2021 | <i>External examiner</i> for the PhD thesis of the student Sophie Rebecca Goodwin, PhD in EngD Carbon Capture and Storage and Cleaner Fossil Energy, University of Nottingham, Nottingham, UK. <i>Viva voce</i> examination on 09/07/2021. |

### III.D PARTICIPATION TO PHD ADMISSION COMMISSIONS

|      |                                                                                                                                          |
|------|------------------------------------------------------------------------------------------------------------------------------------------|
| 2023 | <i>President for the Commission</i> for the admission to the PhD in Chemical Sciences Cycle XXXIX, Sapienza University of Rome.          |
| 2021 | <i>Member for the Commission</i> for the admission to the Green PhD in Chemical Sciences, PON Cycle XXXVII, Sapienza University of Rome. |
| 2021 | <i>Member for the Commission</i> for the admission to the PhD in Chemical Sciences Cycle XXXVII, Sapienza University of Rome.            |

## PART IV – ORGANIZATION ACTIVITIES

| Period         | Role                                                                                                                                        |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 2023 – 2025    | Member of the Commission “Grandi Attrezzature” of the Sapienza University of Rome, con decreto N. 1105/2023 Prot. N. 0040887 del 04/05/2023 |
| 2022 – current | President of the Departmental Commission “Ricerca e Terza Missione”, Dept. Chemistry, Sapienza University of Rome, Italy                    |

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|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2020 – current | Member of the “Comitato di Monitoraggio” of the Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome.                                                     |
| 2018 – 2020    | President of the CGAQ Commission (Commissione di Gestione dell’Assicurazione della Qualità)” of the degrees in Industrial Chemistry, Dept. Chemistry, Sapienza University of Rome, Italy |

## PART V - MEMBERSHIP IN SCIENTIFIC SOCIETIES AND CENTERS

|                |                                                                                                                 |
|----------------|-----------------------------------------------------------------------------------------------------------------|
| 2015-current   | <i>Member</i> of the “Consorzio Interuniversitario Nazionale per la Scienza e Tecnologia dei Materiali” (INSTM) |
| 2012-current   | Member of the Research Center for Nanotechnologies applied to Engineering (CNIS), Sapienza University of Rome   |
| 2024 - Current | <i>Member</i> of the Associazione Italiana di Macromolecole (AIM)                                               |
| 2023 - 2024    | <i>Member</i> of the Società Chimica Italiana – Divisione di Chimica Industriale                                |

## PART VI - TEACHING ACTIVITIES

### VI.A. COURSES

|                                                                                                                                  |                             |                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2005/06<br>2006/07<br>2007/08<br>2008/09<br>2009/10                                                                              | Sapienza University of Rome | <i>Lecturer</i> of the course: “Laboratorio di Chimica delle Macromolecole” (8 CFU), SSD CHIM/05, Bachelor degree in Industrial Chemistry, Department of Chemistry.     |
| 2005/06<br>2006/07<br>2007/08<br>2008/09<br>2009/10                                                                              | Sapienza University of Rome | <i>Lecturer</i> of the course “Scienza e Tecnologia dei Materiali” (2 CFU, 1 modulo), SSD ING/IND 22, Bachelor degree in Industrial Chemistry, Department of Chemistry. |
| 2010/11<br>2011/12<br>2012/13<br>2013/14<br>2014/15<br>2015/16<br>2016/17<br>2017/18<br>2018/19<br>2019/20<br>2020/21<br>2021/22 | Sapienza University of Rome | <i>Lecturer</i> of the course: “Scienza e Tecnologia dei Materiali Polimerici” (9 CFU), SSD CHIM/04, Master Degree in Industrial Chemistry, Department of Chemistry.    |
| 2021/22<br>2022/23<br>2023/24<br>2024/25                                                                                         | Sapienza University of Rome | <i>Lecturer</i> of the course: “Fondamenti di Scienze Macromolecolari” (9 CFU), SSD CHIM/04, Bachelor Degree in Chemical Sciences, Department of Chemistry.             |

## VI.B. OTHER TEACHING ACTIVITIES

|      |         |                                                                                             |                                                                                                                                                                                 |
|------|---------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025 | -       | Sapienza University of Rome, Dept of Chemistry                                              | Lecturer in “Percorsi Formazione Insegnanti 60 cfu”, CHEM04/A, “Didattica della chimica applicata alla realtà”, 1 CFU, A028                                                     |
| 2024 | Current | Scuola Superiore degli Studi Avanzati (SSAS) Sapienza University of Rome, Dept of Chemistry | Member of the “Comitato tecnico-scientifico del Corso interdisciplinare” of the Superior School for Advanced Studies of the Sapienza University.                                |
| 2023 | Current | Sapienza University of Rome, Dept of Chemistry                                              | Lecturer (1 CFU) “Food Packaging” in the II level Master Course “Tecniche Scientifiche di Indagine nel Settore Alimentare”                                                      |
| 2022 | Current | Sapienza University of Rome, Dept of Chemistry                                              | Member of the Scientific Teaching Board of the II level Master Course “Tecniche Scientifiche di Indagine nel Settore Alimentare”                                                |
| 2019 | 2019    | Università degli studi di Camerino                                                          | Lecturer (8 hours): “Biomaterials for medical applications” at the Specialization School in Animal health, breeding and livestock production, Matelica (Ma) – March/April 2019. |
| 2006 | Current | Sapienza University of Rome, Dept of Chemistry                                              | Member of the PhD board of the PhD School in “Chemical Sciences”                                                                                                                |
| 2005 | Current | Sapienza University of Rome                                                                 | Tutor of 29 Master Thesis and 34 Bachelor Thesis                                                                                                                                |

## PART VII – CONFERENCE ACTIVITIES

### VII.A. INVITED TALKS

|      |                                                                                                                                                                                                                                                                                         |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025 | <i>Invited Speaker</i> , European Polymer Federation Conference EPF2025, Groningen, The Netherlands, 22-27 June, 2025. Presentation title: Synthesis of bio-inspired phenol-based hydrogels and nanogels as bioactive coatings or drug delivery systems (on 23/06/2025, 14.00)          |
| 2024 | <i>Keynote Speaker</i> , AIM (Associazione Italiana di Macromolecole) Conference, Naples, Italy (8-11/09/2024). Presentation title: “Functional polymers from bio-based feedstocks”.                                                                                                    |
| 2023 | <i>Keynote Speaker</i> , The 4th UoN Polymer Symposium 2023, Nottingham University, UK, School of Chemistry, 17 March 2023, Presentation title: “Functional Polymers from Renewable Feedstocks”.                                                                                        |
| 2023 | <i>Invited Speaker</i> , Nanoscience and Nanotechnology annual meeting, May 29th – June 1st 2023. National Institute of Nuclear Physics (INFN), Frascati, Rome. Presentation title: “Self-assembled chitosan-sodium usnate nano drug delivery systems against osteosarcoma 143B cells”. |
| 2020 | <i>Invited speaker</i> , UoN Polymer Symposium 2020, Nottingham University, UK, Department of Chemistry, Webinar 19/June/2020. Presentation title: “Antimicrobial Polymers: from structural design to applications in the biomedical field”.                                            |
| 2019 | <i>Invited speaker</i> , Bristol University, Colston AMR Society Symposium, Bristol 13-14/November/2019. Presentation title: “Antimicrobial biomaterials: chemical and physical approaches”.                                                                                            |

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| 2018 | <i>Keynote speaker</i> at the “Word Congress on Advanced Biomaterials and Tissue Engineering”, Rome, 17- 18/10/2018. Presentation title: “Polymeric and inorganic nanomaterials as promising tools for the battle against microbial biofilms”.                   |
| 2018 | <i>Keynote speaker</i> at the International Conference on Microbiology & Infectious Diseases, Rome, 23-25/07/2018. Presentation title: “The Application of Nanotechnology for Prevention and Treatment of Microbial Biofilm based Infections”.                   |
| 2016 | <i>Invited Speaker</i> at the “6th Clinical Microbiology Conference”, Rome, 20-22/10/2016. Presentation title: “Development of innovative coatings for antibiofilm medical devices”.                                                                             |
| 2009 | <i>Invited Speaker</i> at the “First European Congress on Microbial Biofilm”, Rome, 2-5, September, 2009. Presentation title: “Novel strategies to prevent and control biofilm growth on central venous catheters”.                                              |
| 2003 | <i>Selected Speaker at the</i> American Society for Microbiology Conference “Biofilms 2003”, Victoria British Columbia, Canada, 1-6/November/2003. Presentation title: “Controlled ultrasonic antibiotic release from hydrogel coatings for biofilm prevention”. |

#### VII.B. SEMINARS AT NATIONAL AND INTERNATIONAL INSTITUTES AND UNIVERSITIES

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|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025 | <i>Seminar</i> , CNRS, Institute Charles Gerhardt Montpellier, France (on 10/06/2025). Presentation title: Functional polymers from bio-based feedstock as antimicrobial coatings or nanostructured drug delivery systems.          |
| 2025 | <i>Seminar</i> , CIC biomaGUNE Seminar Series, San Sebastián, Spain (on 25/04/2025). Presentation title: Functional polymers from bio-based feedstock as antimicrobial coatings or nanostructured drug delivery systems.            |
| 2025 | <i>Chemistry Seminar Research Lecture</i> , Chemistry Department, Nazarbayev University, Astana, Kazakhstan (on 24/01/2025). Presentation title: Antimicrobial Macromolecular Systems: Applications as Coatings and Nanostructures. |
| 2024 | <i>Seminar</i> , Pharmacy Department, University of Federico II, Naples, Italy (on 30/09/2024). Presentation title: Antimicrobial polymers: from structural design to applications in the biomedical field                          |

#### VII.C. MEMBER IN SCIENTIFIC AND ORGANIZING COMMITTEES

|      |                                                                                                                                                                                                |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2024 | <i>Co-Chair</i> of the Second Symposium for Young Chemists (SYNC) 2024, an International Conference held in Rome, Department of Chemistry, Sapienza University of Rome, Italy (24-28/06/2024). |
| 2024 | <i>Member of the Scientific Committee</i> , Young NanoInnovation, Rome, 11-13 September 2024                                                                                                   |
| 2023 | <i>Vice-Chair</i> , “Second International Conference on Technologies for Smart Green Connected Societies (ICTSGS)”, 22-24 July 2023.                                                           |
| 2023 | <i>Member of the Scientific Committee</i> of “AMYC2023” - Autumn Meeting for Young Chemists in Biomedical Sciences, Florence, 16-18 October 2023.                                              |
| 2022 | <i>Co-Chair</i> of the First Symposium for Young Chemists (SYNC) 2022, an International Conference held in Rome, Department of Chemistry, Sapienza University of Rome, Italy (20-23/06/2022).  |
| 2019 | <i>Member of the Scientific Committee</i> of the VIII Conference “Young Researchers” 2019, Department of Chemistry, Sapienza University of Rome, Italy (25-26/06/2019).                        |
| 2018 | <i>Member of the Scientific Committee</i> of the “International Conference on Microbiology & Infectious Diseases”, Rome 23- 25/07/2018.                                                        |
| 2014 | Member of the Organizing Committee of the International Meeting e “Biofilm-based healthcare-associated infections: from microbiology to clinics”, Rome, 9-10/10/2014.                          |

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| 2009 | Member of the Organizing Committee of the “First European Congress on Microbial Biofilm”, Rome, 2-5, September 2009. |
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#### VII.D ORAL PRESENTATIONS TO CONFERENCES

|      |                                                                                                                                                                                                                                                                                                                                                 |
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| 2024 | <i>Speaker</i> at the IUPAC Macro Conference, Warwick (UK), July 1-4, 2024. Presentation title: “Using natural phenols as building blocks for the synthesis of bio-based and bioactive polymers”.                                                                                                                                               |
| 2023 | <i>Speaker</i> at the 6th EuChemS Conference on Green and Sustainable Chemistry, Salerno (Italy), September 3-6, 2023. Presentation title: “Natural phenols as raw materials for the synthesis of bioactive polymers”.                                                                                                                          |
| 2023 | <i>Speaker</i> at the international conference “Bio-based polymers at the forefront of innovation in materials science”, Bertinoro (Italy), April 12-14, 2023. Presentation title: “Bio-inspired eugenol-based polymers with antioxidant and antimicrobial properties”.                                                                         |
| 2010 | <i>Speaker</i> at the XXXIII International Conference on Microbial Ecology and Disease, Athene, Greece, il 6-10/September/2010. Presentation title: “Novel intrinsically antimicrobial polymers to control biofilm formation on medical devices”.                                                                                               |
| 2006 | <i>Speaker</i> at the 34° Congress of the Italian Society for Microbiology, Genova, 15-18/October/2006. Presentation title: “Poliuretani funzionalizzati a rilascio combinato di rifampicina/cefamandolo e polietilenglicole sono in grado di prevenire la colonizzazione batterica e l’insorgenza di antibiotico-resistenza”.                  |
| 2005 | <i>Speaker</i> at the I workshop Nazionale “Biofilm microbici 2005”, Rome 20-21/June/2005. Presentation title: “Biomateriali a rilascio di agenti antimicrobici per lo sviluppo di dispositivi medici antibiofilm”.                                                                                                                             |
| 2004 | <i>Speaker</i> at the 32° Congress of the Italian Society for Microbiology, Milan, 26-29/September/2004. Presentation title: “L’acido usnico inibisce la formazione di biofilm in <i>S. aureus</i> e interferisce con i fenomeni di quorum sensing in <i>P. aeruginosa</i> ”.                                                                   |
| 2001 | <i>Speaker</i> at the XV Congress of the Italian Association of Macromolecules (AIM), Trieste, Italy, 24-27/September/2001. Presentation title: “Preparazione di superfici polimeriche antibatteriche per la prevenzione di infezioni”.                                                                                                         |
| 2001 | <i>Speaker</i> at the 29° Congress of the Italian Society for Microbiology, Genova, Italy, 7-10/November/2001. Presentation title: “Efficacia dell’adsorbimento di antibiotici per la prevenzione delle infezioni associate ai cateteri: nuovi approcci sperimentali”.                                                                          |
| 2001 | <i>Speaker</i> at the 21° Congress of the Italian Society for Chemotherapy, Florence, Italy, 2-5/December/2001. Presentation title: “Adsorbimento multistrato di un antibiotico sperimentale beta lattamico a matrici polimeriche diverse: un nuovo approccio sperimentale per la prevenzione delle infezioni associate ai cateteri vascolari”. |

#### PART VIII - AWARDS AND HONORS

| Period | Description                                                                                                                                                                  |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2003   | <i>Travel Award</i> for best contribution at the American Society for Microbiology (ASM) Conference “Biofilms 2003”, November 1-6, 2003, Victoria, British Columbia, Canada. |
| 2016   | <i>Award</i> as Worthy Oral Presentation at the 6th Clinical Microbiology Conference, 20-22/10/2016, Rome.                                                                   |

#### PART IX – EDITORIAL ACTIVITIES

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|----------------|--------------------------------------------------------------------|
| 2024 - current | Guest Editor of the Special Issue “SYNC2024”, ChemPlusChem, Wiley. |
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| 2020 – 2024    | Member of the Editorial Board of “Open Chemistry”, DE GRUYTER publisher                                                                                               |
| 2022           | Guest Editor of the Focus Collection “Focus on Nanotechnology and Sustainability”, IoP Nanotechnology, IoP Science Publisher.                                         |
| 2021           | Guest Editor of the Special Issue “Bioactive Packaging Materials”, International Journal of Molecular Science, MDPI Publisher.                                        |
| 2021           | Guest Editor of the Special Issue “Polymer-Based Strategies for Fighting Microbial and Viral Infections”, International Journal of Molecular Science, MDPI Publisher. |
| 2019 – current | Member of the Reviewer Board of “Polymers”, MDPI Publisher.                                                                                                           |
| 2019 – 2002    | <i>Guest Editor</i> of the Special Issue “Chitosan Functionalizations, Formulations and Composites”, International Journal of Molecular Science, MDPI Publisher.      |
| 2018           | Guest Editor of the Special Issue: “Polymeric Systems as Antimicrobial or Antifouling Agents”, International Journal of Molecular Science, MDPI Publisher.            |
| 2016           | <i>Guest Editor</i> of the Special Issue "Antimicrobial Polymers", International Journal of Molecular Science, MDPI Publisher.                                        |
| 2014 – 2019    | <i>Co-author of 4 Book chapters</i> for RSC publisher, Woodhead Publisher and Springer                                                                                |
| 2013           | Member of the Editorial Board of International Journal of Molecular Science), MDPI Publisher.                                                                         |

## PART X – FUNDING INFO

### X.A. GRANTS AND RESEARCH CONTRACTS AS PI-PRINCIPAL INVESTIGATOR

| Year | Title                                                                                                                                                                        | Program                                                                                                                                                                                                               | Grant value       |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 2025 | Coordinator of the Project MSCA-Doctoral Network 2024: “HEAL-4WARD - doctoral network for Wound infection Advanced care and Rapid Diagnosis”                                 | HORIZON-EU action: document Ref. Ares(2025)2155032                                                                                                                                                                    | 3.304.008,36 euro |
| 2025 | Principal Investigator of the Research Project: “NANODIG Antimicrobial nanomaterials”.                                                                                       | Sapienza-Rome Technopole for the Research Internationalization” (Project ECS 00000024, Rome Technopole - Piano Nazionale di Ripresa e Resilienza - Missione 4 Istruzione e Ricerca - Componente 2 - Investimento 1.5) | 20.000,00 euro    |
| 2024 | Principal Investigator of the Research Project: “Natural antioxidants as rubber stabilizers”.                                                                                | Research Project with Bridgestone Europe NV/SA                                                                                                                                                                        | 25.000,00 euro    |
| 2023 | Principal Investigator of the Sapienza Research Unit of the project: “Efficienza energetica dei prodotti e dei processi industriali” of the Piano Triennale di ricerca ENEA. | Ministero della transizione ecologica:ENEA-Codice Progetto-PTR_22_24_ENEA_1_6                                                                                                                                         | 60.034,00 euro    |
| 2022 | Principal Investigator of the Research Project: “Bile acids-based macromolecular antimicrobials for biomedical applications”.                                                | Sapienza University of Rome Progetto n. RG12218166483FFD                                                                                                                                                              | 73.890,00 euro    |

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| 2022 | Principal Investigator of the Research Project: "Sviluppo di resine poliamminoammide-epicloridrina (PAE) di nuova generazione per l'industria cartaria".                                                          | Research Project with Gima Waters and Air srl            | 20.000,00 euro |
| 2021 | Principal Investigator of the Research Project: "Study of efficacy of natural antioxidants as rubber stabilizers alternative to conventional oil-based products to produce environmentally compatible materials". | Research Project with Bridgestone Europe NV/SA           | 25.000,00 euro |
| 2021 | Principal Investigator of the Research Project: "Sviluppo e caratterizzazione di matrici 2D a base di alginato e composti bioattivi di origine naturale per il wound healing".                                    | Sapienza University of Rome Progetto n. RP12117A5C501A93 | 4.000,00 euro  |
| 2019 | Principal Investigator of the Research Project: "Sintesi di polimeri bioattivi a base di eugenolo".                                                                                                               | Sapienza University of Rome Progetto n. RP11916B459A8D63 | 4.000,00 euro  |
| 2017 | Principal Investigator of the Research Project: "Sviluppo di nanomateriali polimerici antimicrobici"                                                                                                              | Sapienza University of Rome Progetto n. RP11715C785E4434 | 3.200,00 euro  |
| 2016 | Principal Investigator at the Research Project: "Sviluppo di matrici polimeriche bioattive per il wound healing"                                                                                                  | Sapienza University of Rome Progetto n. RP116154C95A8DC4 | 4.000,00 euro  |
| 2015 | Principal Investigator at the Research Project: "Sviluppo di nanoparticelle magnetiche funzionalizzate per l'immobilizzazione enzimatica"                                                                         | Sapienza University of Rome Progetto n. C26A15LP27       | 4.000,00 euro  |
| 2014 | <i>Principal Investigator</i> at the Research Project: "Polimeri antimicrobici a base di sostanze naturali bioattive".                                                                                            | Sapienza University of Rome Progetto n. C26A14584K       | 8.000,00 euro  |
| 2013 | <i>Principal Investigator</i> at the Research Project: "Cationic polymer nanoparticles for the treatment of lung infections by inhalation therapy".                                                               | Sapienza University of Rome Progetto n. C26A13YYBK       | 12.000,00 euro |

#### PART X.B - GRANTS AS I-INVESTIGATOR

|      |                                                                                                                                                                                                                                |                                                          |                |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------|
| 2023 | Investigator at the Research Project of the Department of Chemistry: "Chemistry for a Sustainable Development: new strategies for renewable fuels, removal of environmental pollutants and development of ecofriendly drugs to | Sapienza University of Rome Progetto n: RD12318AAD1CD97A | 60.270,00 euro |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------|

|      |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                             |                |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------|
|      | fight antimicrobial resistance and biofouling"                                                                                                                                                                                                                                                                                                                                             |                                                                                                                             |                |
| 2023 | Investigator at the Research Project "Multimethodological Investigation Of Fresh Vegetables And Fruits During The Gastrointestinal Tract Progression (VEG-FRU_GAP)" (Spoke 4) all'interno del Partenariato Esteso PE10 (Modelli per un'alimentazione sostenibile) ON Foods - Research and innovation network on food and nutrition Sustainability, Safety and Security – Working ON Foods. | PE10 ON Foods - Research and innovation network on food and nutrition Sustainability, Safety and Security – Working ON Food | - euro         |
| 2023 | Investigator at the Research Project "Advanced and automated innovation labs for diagnostic and therapeutic biopharma solutions" Flagship 7 (FP7) Rome Technopole                                                                                                                                                                                                                          | Flagship 7 (FP7) Rome Technopole                                                                                            | - euro         |
| 2022 | Investigator at the Research Project "LIFE MUSCLES: Mussel Sustainable production (re)cyCLES" funded by European Community                                                                                                                                                                                                                                                                 | LIFE PROJECT Project n: LIFE20 ENV/IT/000570                                                                                | 90.000,00 euro |
| 2021 | Investigator at the Research Project "Sviluppo di nanosistemi basati su sostanze di origine naturali nel trattamento delle infezioni da virus respiratori e dei processi infiammatori a esse associate" funded by Lazio region in the framework of the nell'ambito del Regional Operational Program (POR).                                                                                 | Regional Operational Program (POR). Project n: A0375-2020-36535. POR FESR LAZIO-2014-2020                                   | 54.551,43 euro |
| 2020 | Investigator at the Research Project "Scaffold biomimetici a base di chitosano reticolato per l'ingegneria tissutale: preparazione e caratterizzazione". Principal Investigator Prof. A. Piozzi, Dept. Chemistry, Sapienza University of Rome.                                                                                                                                             | Sapienza University of Rome Progetto n: RM120172A83AD932                                                                    | 15.000,00 euro |
| 2018 | Investigator at the Research Project "BioCerMat" funded by Lazio region in the framework of the nell'ambito del Regional Operational Program (POR).                                                                                                                                                                                                                                        | Regional Operational Program (POR). Project n: A0112-2016-13358                                                             | 80.980,65 euro |
| 2018 | Investigator at the Research Project: "Studio delle transizioni di polimeri allo stato amorfo mediante spettroscopia MTFTIR e calorimetria DSC". Principal Investigator Prof. A. Piozzi, Dept. Chemistry, Sapienza University of Rome.                                                                                                                                                     | Sapienza University of Rome Progetto n: RM11816435F88EF6                                                                    | 14.000,00 euro |

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|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------|
| 2011      | Investigator, at the Research Project: "Nanovettori magnetici core-shell a base di ferrite di manganese per il rilascio mirato di acido usnico" Principal Investigator Prof. A. Piozzi, Dept. Chemistry, Sapienza University of Rome.                                                                                                          | Sapienza University of Rome<br>Progetto n: C26A11SWNJ                                           | 32.818,00 euro                              |
| 2010      | Investigator, at the Research Project: "Polimeri intrinsecamente antimicrobici per la prevenzione ed il controllo della contaminazione batterica di dispositivi medici" Principal Investigator Prof. A. Piozzi, Dept. Chemistry, Sapienza University of Rome.                                                                                  | Sapienza University of Rome<br>Progetto n: C26A10A8WM                                           | 9.000,00 euro                               |
| 2009      | Investigator, at the Research Project: "Nuove strategie per la preparazione di scaffold per l'ingegneria tissutale" Principal Investigator Prof. A. Piozzi, Dept. Chemistry, Sapienza University of Rome                                                                                                                                       | Sapienza University of Rome<br>Progetto n: C26F09F9FN                                           | 7.760,00 euro                               |
| 2008      | Investigator, at the Research Project: "Macromolecole biodegradabili di interesse farmaceutico: sintesi e caratterizzazione" Principal Investigator Prof. Lucio D'Ilario, Dept. Chemistry, Sapienza University of Rome                                                                                                                         | Sapienza University of Rome<br>Progetto n: C26A08EE8N                                           | 10.000,00 euro                              |
| 2008      | Investigator, at the Research Project: "Processi di cristallizzazione di poliesteri impiegati in campo medico" Principal Investigator Prof. A. Piozzi, Dept. Chemistry, Sapienza University of Rome                                                                                                                                            | Sapienza University of Rome<br>Progetto n: C26F08W43A                                           | 5.000,00 euro                               |
| 2007      | Investigator, at the Research Project: "Sistemi nanostrutturati ferrite/albumina per rilascio mirato di farmaci: caratterizzazione chimico-fisica e biologica" Principal Investigator Prof. Lucio D'Ilario, Dept. Chemistry, Sapienza University of Rome                                                                                       | Sapienza University of Rome<br>Progetto n: C26A07RZPP                                           | 12.000,00 euro                              |
| 2007-2009 | Investigator, Scientific Research Project of relevant National Interest (PRIN) dal titolo: "Materiali bioattivi a base di poliesteri: sintesi, modificazioni e caratterizzazione" Principal Investigator Prof. Emo Chiellini, Università di Pisa. Local Principal Investigator Prof. M. Delfini, Dept. Chemistry, Sapienza University of Rome, | PRIN 2006 – prot. 2006038548<br>Italian Ministry of University<br>Education and Research (MIUR) | 350.000,00 euro<br>Unità:<br>52.760,00 euro |

|           |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                     |                                          |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------|
| 2006      | Investigator, at the Research Project: "Preparazione di particelle composite polimeriche magnetiche per applicazioni nel settore biomedico" Principal Investigator Prof. Lucio D'Ilario, Dept. Chemistry, Sapienza University of Rome                                                                                                                                                     | Sapienza University of Rome<br>Progetto n: C26A06B7PB                                               | 8.000,00 euro                            |
| 2005      | Investigator, at the Research Project: "Preparazione ed ottimizzazione di nuove formulazioni polimeriche a rilascio di molecole biologicamente attive" Principal Investigator Prof. Lucio D'Ilario, Dept. Chemistry, Sapienza University of Rome                                                                                                                                          | Sapienza University of Rome<br>Progetto n: C26A050931                                               | 9.500,00 euro                            |
| 2004-2006 | Investigator, Scientific Research Project of relevant National Interest (PRIN): "Formulazione di Nuovi Materiali Polimerici Bioattivi per Applicazioni nel Settore dell'Ingegneria Tissutale", Principal Investigator Prof. Emo Chiellini, Università di Pisa. Local Principal Investigator Prof. A. Piozzi, Dept. Chemistry, Sapienza University of Rome.                                | PRIN 2004 – Italian Ministry of University Education and Research (MIUR)                            | 540.000,00 euro<br>Unità: 38.300,00 euro |
| 2002-2004 | Investigator, Scientific Research Project of relevant National Interest (PRIN): "Nuovi sistemi polimerici nanostrutturati per azioni mirate di principi attivi macromolecolari in tecniche emergenti di ingegneria tissutale e farmacologia avanzata", Principal Investigator Prof. Emo Local Principal Investigator locale Prof. A. Piozzi, Dept. Chemistry, Sapienza University of Rome | PRIN 2002 – Italian Ministry of University Education and Research (MIUR). Project n. 2002034343_005 | 542.000,00 euro<br>Unità: 69.500,00 euro |

## PART XI – RESEARCH ACTIVITIES

### XIA. RESEARCH TOPICS

Synthesis and characterization of polyesters and polyacrylates, antimicrobial polymers, antioxidant polymers, nanostructured polymer systems for drug delivery, biocomposites for environmental applications.

| Keywords               | Brief Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antimicrobial Polymers | Antimicrobial polymers represent a very promising class of materials with unique characteristics for fighting microbial infections and microbial resistance development. In this context, different approaches have been pursued over the years including i) drug loading onto properly functionalized polymers (mainly polyurethanes); ii) synthesis of intrinsically bioactive cationic polymers (mainly polyacrylates); and iii) Synthesis of antifouling polyethylene-glycol (PEG)-based polymers. The research has also concerned the physicochemical characterization |
| Polyurethanes          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Cationic Polyacrylates |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Microbial Biofilms     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Medical devices        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

of polymers by several techniques (FTIR,  $^1\text{H-NMR}$ , thermal analysis (DSC, TGA), mechanical tests (stress-strain), dynamomechanics and wettability) to find out possible relationship between structure and antimicrobial performance of these materials. The developed polymers have been investigated as coatings for implantable medical devices or as matrices for wound dressings.

|                      |
|----------------------|
| Antioxidant polymers |
| Catechols            |
| Chitosan             |
| Polyacrylates        |
| Phenols              |

Oxidative stress has been identified as a key factor in many diseases, including vascular damage, neurodegenerative diseases and cancer, as well as among the causes of failure of implantable medical devices. Systemic delivery of antioxidants is hampered by poor absorption, loss of bioactivity, and limited half-life. In this framework, antioxidant polymers have been emerged as promising materials for localized, sustained antioxidant activity. Research in this field concerns the synthesis of phenol and catechol-bearing polymers obtained by either polymerization of acrylic monomers containing phenol or catechol groups or by functionalization of biopolymers (mainly chitosan) with natural antioxidant. Physico-chemical and biological characterization of the synthesized polymeric matrices is carried out and application of the developed antioxidant polymeric derivatives in the biomedical field, in the food industry and in the analytical field is investigated.

|                |
|----------------|
| Drug delivery  |
| Polyesters     |
| Poly-L-lactide |
| Cell tracking  |

Drug delivery systems (DDS) offer a promising approach for treating diverse diseases, including cancer and infectious disorders. Their effectiveness lies in enhancing drug stability and solubility, reducing toxicity, and improving safety and therapeutic efficacy, outcomes strongly dependent on nanocarrier design. Among the available platforms, polymeric nanoparticles (NPs) stand out for their tunable structures and physicochemical properties, enabling precise and controlled drug release. In our studies, aliphatic polyester-based nanocarriers such as branched PLLA and poly(di)glyceroladipates are designed with variable amphiphilic balance to enable efficient loading of hydrophobic drugs and polymer self-assembly in aqueous media. These systems are also further functionalized to enhance therapeutic performance against cancer, infectious diseases, and other conditions. Additionally, polydiacetylenes (PDAs), characterized by their delocalized  $\pi$ -electron network and unique chromatic properties, are being investigated as materials to be blended with polyester matrices to produce theragnostic NPs, thus combining controlled drug release with cell-tracking functionality.

|                          |
|--------------------------|
| Polymer composites       |
| Cyclodextrin polymers    |
| Extraction of pollutants |
| Water remediation        |

Polymer composites are extensively used in a wide range of applications, particularly as solid supports for analytical and environmental purposes, thanks to their excellent properties and their ability to integrate the advantages of different materials. The incorporation of suitable fillers can significantly enhance the mechanical and thermal performance of polymers. Within this context, the present research is focused on the preparation and physico-chemical characterization of biopolymer-based composites, employing polyesters, cyclodextrin polymers, and recovered cellulose acetate as matrices, combined with titania, ferrites, and activated carbon as fillers. So far, the resulting materials were tested as solid supports for solid-phase extraction of organic pollutants, including dyes, pharmaceuticals, and pesticides.

## XIB. INTERNATIONAL RESEARCH COLLABORATIONS

| Name                       | Institution                                                                            | Notes                                                                                                                                         |
|----------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Dr. Vincenzo Taresco       | University of Nottingham, Dept. of Chemistry, Nottingham, UK                           | Co-authoring of publications, Hosting the PhD student Benedetta Brugnoli, under my supervision, Co-partner of the HORIZON-MSCA-DN2024 project |
| Professor Steve Howdle     | University of Nottingham, Dept. of Chemistry, Nottingham, UK                           | Co-authoring of publications                                                                                                                  |
| Professor Derek Irvine     | University of Nottingham, Dept. of Chemistry, Nottingham, UK                           | Co-authoring of publications                                                                                                                  |
| Dr. Sylvain Caillol        | Centre National De La Recherche Scientifique (CNRS), University of Montpellier, France | Hosting the PhD student Riccardo Sergi                                                                                                        |
| Professor Benoit Couturaud | Centre National De La Recherche Scientifique (CNRS), ICMPE, Paris, France              | Co-authoring of publications, Co-partner of the HORIZON-MSCA-DN2024 project                                                                   |
| Professor Pamela Pasetto   | Institut des Molécules et Matériaux du Mans, Le Mans Université, France                | Hosting and co-tutoring the Master Student in Industrial Chemistry Greta Perna                                                                |
| Dr. Wafi Siala             | Catholic Univ Louvain, Louvain Drug Res Inst, Belgium                                  | Co-authoring of 1 publication                                                                                                                 |
| Professor Steven Percival  | University of Liverpool, Surface Science Research Centre, UK                           | Co-authoring of 2 publications                                                                                                                |
| Professor J.B. Kaplan      | University of Medicine and Dentistry of New Jersey, Newark, USA                        | Co-authoring of 1 publication                                                                                                                 |
| Professor Paul Stoodley    | Ohio State University, Ohio, USA                                                       | Co-authoring of publications                                                                                                                  |

## PART XII. SUMMARY OF SCIENTIFIC PRODUCTION

| Product type                                                       | Number | Data Base         |
|--------------------------------------------------------------------|--------|-------------------|
| Papers on international peer-review journals                       | 105    | Scopus            |
| Book Chapters                                                      | 7      | Scopus            |
| Book Chapters                                                      | 1      | Sito web Elsevier |
| Conference paper                                                   | 1      | Scopus            |
| Papers <i>Epub ahead of print</i>                                  | 0      |                   |
| Total number of publications including papers and Book Chapters    | 114    |                   |
| H index (considering 105 publications in Scopus)                   | 34     | Scopus            |
| Total Number of citations (considering 105 publications in Scopus) | 3558   | Scopus            |

|                                                                                                  |                         |        |
|--------------------------------------------------------------------------------------------------|-------------------------|--------|
| Average citations per paper                                                                      | <b>33,9</b>             | Scopus |
| Total Impact Factor (considering IF of publication year = IF <sub>py</sub> and 104 publications) | <b>432,71</b>           | Scopus |
| Average Impact Factor per publication                                                            | <b>4,12</b>             | Scopus |
| Number of papers in the last 10 years (value SSD Full Professor 03/C2: 30)                       | <b>66</b> (2015-2025)   | Scopus |
| Number of citations in the last 15 years (value SSD Full Professor 03/C2: 898)                   | <b>2447</b> (2010-2025) | Scopus |
| H index in the last 15 years (value SSD Full Professor 03/C2: 18)                                | <b>27</b> (2010-2025)   | Scopus |

## PART XIII- LIST OF PUBLICATIONS

### XIII.A – PUBLICATIONS IN PEER-REVIEWED JOURNALS

\*Corresponding Author; I.F.<sub>py</sub>=Impact Factor publication year

| Paper                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | I.F. <sub>py</sub> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <b>105.</b> Brugnoli B, Axioti E, Jacob PL, Berfi NA, Lei L, Couturaud B, Chauhan VM, Cavanagh RJ, Galantini L, <b>Francolini I*</b> , Taresco V*. Tailoring the Properties of Polydiacetylene Nanosystems for Enhanced Cell Tracking Through Poly (glycerol Adipate) Blending: an In Vitro and In Vivo Investigation. <i>Macromol. Chem. Phys.</i> <b>2025</b> , e00259. <a href="https://doi.org/10.1016/j.carpta.2025.100915">https://doi.org/10.1016/j.carpta.2025.100915</a> | 2.70               |
| <b>104.</b> Ciarlantini C, Garcia RB, Lacolla E, <b>Francolini I</b> , Fernández-García M, Nuñez CM, Muñoz Bonilla A, Piozzi A. Nanofibrous scaffolds based on polyelectrolyte complexes of chitosan-alginate-COLLAGEN and chitosan-hyaluronic acid for tissue Engineering. <i>Carbohydr. Polym. Technol. Appl.</i> <b>2025</b> , 100915. <a href="https://doi.org/10.1016/j.carpta.2025.100915">https://doi.org/10.1016/j.carpta.2025.100915</a>                                 | 6.50               |
| <b>103.</b> Brugnoli, B., Lancia, C. A., Piozzi, A., <b>Francolini I*</b> . Multi-Parameter Characterization and Photocatalytic Activity of Biodegradable Poly-L-Lactide and Polyhydroxybutyrate-co-Hydroxyhexanoate Films Incorporating TiO <sub>2</sub> . <i>J Appl Polym Sci</i> <b>2025</b> , e57545. <a href="https://doi.org/10.1002/app.57545">https://doi.org/10.1002/app.57545</a>                                                                                       | 2.80               |
| <b>102.</b> Alfano S, Ceparano L, Brugnoli B, Forcina G, Pellegrino L, Lauti FC, Rusconi R, <b>Francolini I</b> , Piozzi A, Martinelli A. Self-Surfactant poly-3hydroxybutyrate-co-3hydroxyhexanoate (phbhhx) for the preparation of usnic acid loaded antimicrobial nanoparticles using nontoxic chemicals. <i>ACS Applied Bio Materials</i> <b>2025</b> 13 (15), 4657-4670. <a href="https://doi.org/10.1021/acsabm.5c00676">https://doi.org/10.1021/acsabm.5c00676</a> .       | 4.70               |
| <b>101.</b> Ciarlantini C, Romano S, Amici GM, Lacolla E, <b>Francolini I</b> , Girelli AM, Martinelli A, Piozzi A. Synthesis and Characterization of Magnetic Molecularly Imprinted Polymer Sorbents (Fe <sub>3</sub> O <sub>4</sub> @MIPs) for Removal of Tetrabromobisphenol A. <i>Int J Mol Sci.</i> <b>2025</b> ;26(16):7686. <a href="https://doi.org/10.3390/ijms26167686">https://doi.org/10.3390/ijms26167686</a> .                                                      | 4.90               |
| <b>100.</b> Cuzzucoli Crucitti V, Hajiali H, Dundas AA, Jayawarna V, Tomolillo D, <b>Francolini I</b> , Vuotto C, Salmeron-Sanchez M, Dalby MJ, Alexander MR, Wildman RD, Rose, F RAJ, Irvine DJ. Modulation of the biological response to surfaces through the controlled deposition                                                                                                                                                                                             | 6.10               |

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| of 3D polymeric surfactants. <i>J Mat Chem B</i> <b>2025</b> 13 (15), 4657-4670                                                                                                                                                                                                                                                                                                                                                                                                                            |       |
| 99. Felli N, Filardi D, Sergi R, Migneco LM, De Cesaris MG, Antonelli L, <b>Francolini I*</b> , Gentili A*. Exploring the extraction capabilities of natural cyclodextrin-nanosponges: The improvement moving from $\alpha$ - to $\gamma$ -cyclodextrin-based polymers. <i>Adv Sample Prep</i> <b>2025</b> , 14, 100169.                                                                                                                                                                                   | 5.20  |
| 98. Axioti E, Dixon EG, Jepras T, Tin He F, Hartman PJV, Hopkins B, Di Bari V, Suksiriworapong J, Cuzzucoli Crucitti V, Galantini L, <b>Francolini I</b> , Cavanagh RJ, Taresco V. Enzymatic Synthesis of Functional PEGylated Adipate Copolymers. <i>ChemPlusChem</i> <b>2025</b> , 90 (5), e202400668. <a href="https://doi.org/10.1002/cplu.202400668">https://doi.org/10.1002/cplu.202400668</a>                                                                                                       | 3.00  |
| 97. Felli N, Migneco LM, <b>Francolini I</b> , Gentili A, Hernandez-Borges J. Hypercrosslinked $\beta$ -cyclodextrin polymer for the dispersive solid-phase extraction of organic pollutants from sea water and wastewater. <i>Talanta</i> <b>2025</b> , 290, 12773                                                                                                                                                                                                                                        | 5.60  |
| 96. Di Caprio F, Pedram N, Brugnoli B, <b>Francolini I</b> , Altamari P, Pagnanelli F. Exploring different processes for starch extraction from microalgae and synthesis of starch-chitosan plastic films. <i>Bioresour. Technol.</i> <b>2024</b> ; 413, 131516. <a href="https://doi.org/10.1016/j.biortech.2024.131516">https://doi.org/10.1016/j.biortech.2024.131516</a>                                                                                                                               | 9.70  |
| 95. Felli N, Lorenzet A, Di Lisio V, Bussetti V, Dal Bosco C, Migneco LM, Gentili A, <b>Francolini I</b> . Cyclodextrin-based nanosponges for the dispersive-solid phase extraction of pesticides from environmental waters. <i>Microchem. J.</i> <b>2024</b> ; 207:112135. <a href="https://doi.org/10.1016/j.microc.2024.112135">https://doi.org/10.1016/j.microc.2024.112135</a>                                                                                                                        | 4.90  |
| 94. Wang J, Brugnoli B, Foglietta F, Andreana I, Longo G, Dinarelli S, Girasole M, Serpe L, Arpicco S, <b>Francolini I</b> , Di Meo C, Matricardi P. Tuning stiffness of hyaluronan-cholesterol nanogels by mussel-inspired dopamine-Fe <sup>3+</sup> coordination: Preparation and properties evaluation. <i>Int. J. Biol. Macromol.</i> <b>2024</b> ; 135553. <a href="https://doi.org/10.1016/j.ijbiomac.2024.135553">https://doi.org/10.1016/j.ijbiomac.2024.135553</a>                                | 7.70  |
| 93. De Cesaris MG, Felli N, Antonelli L, <b>Francolini I</b> , D'Orazio G, Dal Bosco C, Gentili A. Recovery of cellulose acetate bioplastic from cigarette butts: realization of a sustainable sorbent for water remediation. <i>Sci Total Environ.</i> <b>2024</b> ;929:172677. <a href="https://doi.org/10.1016/j.scitotenv.2024.172677">https://doi.org/10.1016/j.scitotenv.2024.172677</a> .                                                                                                           | 9.80  |
| 92. Axioti E, Dixon EG, Reynolds-Green M, Alexander ECH, Brugnoli B, Keddle DJ, Couturaud B, Suksiriworapong J, Swainson SME, <b>Francolini I</b> , Howdle SM, Jacob PL, Cavanagh RJ, Chauhan VM, Taresco V. Glycerol- and diglycerol-based polyesters: Evaluation of backbone alterations upon nano-formulation performance. <i>Colloids Surf B Biointerfaces.</i> <b>2024</b> ;236:113828. <a href="https://doi.org/10.1016/j.colsurfb.2024.113828">https://doi.org/10.1016/j.colsurfb.2024.113828</a> . | 5.80  |
| 91. Ciarlantini C, Lacolla E, <b>Francolini I</b> , Fernández-García M, Muñoz-Núñez C, Muñoz-Bonilla A, Piozzi A. Development of Antioxidant and Antimicrobial Membranes Based on Functionalized and Crosslinked Chitosan for Tissue Regeneration. <i>Int J Mol Sci.</i> <b>2024</b> ;25(4):1961. <a href="https://doi.org/10.3390/ijms25041961">https://doi.org/10.3390/ijms25041961</a> .                                                                                                                | 5.60  |
| 90. Brugnoli B, Perna G, Alfano S, Piozzi A, Galantini L, Axioti E, Taresco V, Mariano A, Scotto d'Abusco A, Vecchio Cipriotti S, <b>Francolini I*</b> . Nanostructured poly-L-lactide and polyglycerol adipate carriers for the encapsulation of usnic acid: A promising approach for hepatoprotection. <i>Polymers</i> <b>2024</b> ;16(3):427. <a href="https://doi.org/10.3390/polym16030427">https://doi.org/10.3390/polym16030427</a> .                                                               | 5.00  |
| 89. Krumins E, Lentz JC, Sutcliffe B, Sohaib A, Jacob PL, Brugnoli B, Cuzzucoli Crucitti V, Cavanagh RJ, Owen R, Moloney C, Ruiz-Cantu L, <b>Francolini I</b> , Howdle SM, Shusteff M, Rose F.R.A.J., Wildman RD, He Y, Taresco V. Glycerol-based sustainably sourced resin for volumetric printing. <i>Green Chem</i> <b>2024</b> , 26(3), 1345-1355. <a href="https://doi.org/10.1039/D3GC03607C">https://doi.org/10.1039/D3GC03607C</a>                                                                 | 9.80  |
| 88. Ciarlantini C, <b>Francolini I</b> , Silvestro I, Mariano A, d'Abusco AS, Piozzi A. Design of bioactive and biomimetic scaffolds based on chitosan-alginate polyelectrolyte complexes for tissue engineering. <i>Carbohydr Polym.</i> <b>2024</b> ;327:121684.                                                                                                                                                                                                                                         | 11.20 |

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|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|     | <a href="https://doi.org/10.1016/j.carbpol.2023.121684">https://doi.org/10.1016/j.carbpol.2023.121684</a> .                                                                                                                                                                                                                                                                                                                                                                                                     |       |
| 87. | Di Caprio F, Amenta S, <b>Francolini I</b> , Altimari P, Pagnanelli F. Microalgae biorefinery: Optimization of starch recovery for bioplastic production. <i>ACS Sus Chem Eng</i> <b>2023</b> , <a href="https://doi.org/10.1021/acssuschemeng.3c04133">https://doi.org/10.1021/acssuschemeng.3c04133</a>                                                                                                                                                                                                       | 8.40  |
| 86. | Brugnoli B, Mariano A, Simonis B, Bombelli C, Sennato S, Piozzi A, Taresco V, Chauhan VM, Howdle SM, Scotto d'Abusco A, <b>Francolini I*</b> . Self-assembled chitosan-sodium usnate drug delivery nanosystems: Synthesis, characterization, stability studies, in vitro cytotoxicity and in vivo biocompatibility against 143 B cells. <i>Carbohydr. Polym. Technol. Appl.</i> <b>2023</b> , 6,100373. <a href="https://doi.org/10.1016/j.carpta.2023.100373">https://doi.org/10.1016/j.carpta.2023.100373</a> | 5.50  |
| 85. | Sergi R, Brugnoli B, Sturabotti E, Piozzi A, Galantini L, Taresco V, <b>Francolini I*</b> . Colorimetric Transition of Polydiacetylene/Cyclodextrin Supramolecular Assemblies and Implications as Colorimetric Sensors for Food Phenolic Antioxidants. <i>Macromol Chem Phys</i> <b>2023</b> , 224(16), 2300098. <a href="https://doi.org/10.1002/macp.202300098">https://doi.org/10.1002/macp.202300098</a>                                                                                                    | 2.996 |
| 84. | Mallamaci G, Brugnoli B, Mariano A, Scotto d'Abusco A, Piozzi A, Di Lisio V, Sturabotti E, Alfano S, <b>Francolini I*</b> . Surface modification of polyester films with polyfunctional amines: effect on bacterial biofilm formation. <i>Surf. Interfaces</i> <b>2023</b> , 102924. <a href="https://doi.org/10.1016/j.surfin.2023.102924">https://doi.org/10.1016/j.surfin.2023.102924</a>                                                                                                                    | 6.137 |
| 83. | <b>Francolini I</b> , Galantini L, Rea F, Di Cosimo C, Di Cosimo P. Polymeric Wet-Strength Agents in the Paper Industry: An Overview of Mechanisms and Current Challenges. <i>Int J Mol Sci</i> <b>2023</b> ; 24(11): 9268. <a href="https://doi.org/10.3390/ijms24119268">https://doi.org/10.3390/ijms24119268</a> .                                                                                                                                                                                           | 6.208 |
| 82. | Jacob PL, Brugnoli B, Del Giudice A, Phan H, Chauhan VM, Beckett L, Gillis RB, Moloney C, Cavanagh RJ, Krumins E, Reynolds-Green M, Lentz JC, Conte C, Cuzzucoli Crucitti V, Couturaud B, Galantini L, <b>Francolini I</b> , Howdle SM, Taresco V. Poly (diglycerol adipate) variants as enhanced nanocarrier replacements in drug delivery applications. <i>J Colloid Interface Sci.</i> <b>2023</b> ;641:1043-1057. doi: 10.1016/j.jcis.2023.03.124.                                                          | 9.965 |
| 81. | Di Consiglio M, Sturabotti E, Brugnoli B, Piozzi A, Migneco LM, <b>Francolini I*</b> . Synthesis of sustainable eugenol/hydroxyethylmethacrylate-based polymers with antioxidant and antimicrobial properties. <i>Polym Chem</i> <b>2023</b> ;14:432-442 <a href="https://doi.org/10.1039/D2PY01183B">https://doi.org/10.1039/D2PY01183B</a> .                                                                                                                                                                  | 5.364 |
| 80. | Taresco V, Tulini I, <b>Francolini I*</b> , Piozzi A. Polyglycerol Adipate-Grafted Polycaprolactone Nanoparticles as Carriers for the Antimicrobial Compound Usnic Acid. <i>Int J Mol Sci.</i> <b>2022</b> ;23(22):14339. <a href="https://doi.org/10.3390/ijms232214339">https://doi.org/10.3390/ijms232214339</a> .                                                                                                                                                                                           | 6.208 |
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La sottoscritta Iolanda Francolini presenta questo curriculum firmato come dichiarazione sostitutiva di certificazione ai sensi del DPR 445/2000. La sottoscritta autocertifica mediante l'apposizione di firma non soggetta ad autentica che le informazioni presenti nel curriculum vitae sono vere (dichiarazione di veridicità) e conformi agli originali in suo possesso.

Rome, 06/11/2025

Professor Iolanda Francolini

A handwritten signature in blue ink, reading "Iolanda Francolini". The signature is written in a cursive style, with the first letter of each word being capitalized and prominent.