

Elia Bari

PERSONAL DATA

Born in Bellano (LC) in 1992.
Resident in Porlezza (CO).

CURRICULUM VITAE ET STUDIORUM

Scientific high school diploma obtained in 2011 at the Liceo Scientifico "E. Vanoni" of Menaggio (CO). Degree in Pharmacy with honour from the University of Pavia in 2016. Qualification to practice as a pharmacist in 2016 from the University of Pavia. PhD in Chemical and Pharmaceutical Sciences (XXXII cycle) at the University of Pavia from 2016 to 2019. Post-doctoral researcher, scientific disciplinary sector CHIM/09, at the Department of Drug Sciences of the University of Pavia from 2019 to 2022. From February 2022, he is a fixed-term researcher (RTDA) for the scientific disciplinary sector CHIM/09 at the Department of Pharmaceutical Sciences of the University of Eastern Piedmont.

The main scientific skills are in advanced therapies and regenerative medicine, with particular emphasis on the pharmaceutical use of silk proteins (sericin and fibroin) and secretome from mesenchymal stem cells.

Teaching skills are related to pharmaceutical technology and legislation.

UNIVERSITY CAREER

2024-	Fixed-term researcher (RTDB), University of Eastern Piedmont
2022-2024	Fixed-term researcher (RTDA), University of Eastern Piedmont
2019-2022	Post-doctoral researcher, University of Pavia
2016-2019	PhD student, University of Pavia

MAIN FIELDS OF INTEREST

1. Advanced Therapy Medicinal Products
2. Micro and nano-drug delivery systems
3. Formulation

CURRENT ISSUES OF RESEARCH

- 1. Medicinal products based on extracellular vesicles and secretomes from mesenchymal stem cells for the regenerative medicine and the therapy of rare diseases**

The research activity concerns the development of large-scale GMP-compliant procedures for the secretome isolation from cell culture supernatants by validated, scalable and GMP-compliant manufacturing processes and the formulation of the secretome in a standardized medicinal product for regenerative medicine and the treatment of rare pathologies.

2. Silk micro and nano-drug delivery systems and scaffolds

The research activity concerns the employment of silk proteins (sericin and fibroin) to formulate micro and nano-drug delivery systems and three-dimensional scaffolds for regenerative medicine and drug screening.

3. Development of three-dimensional *in vitro* models based on the use of biological substrates for the study of tumor pathologies in human and veterinary medicine

The research activity involves the development of a three-dimensional system capable of reproducing an *in vitro* tumor model useful both for the study of the dynamics of tumor development and invasion, and for the evaluation of the efficacy of antitumor active ingredients used in preclinical studies.

FUNDED PROJECTS

Year	Project's details
2023-ONGOING	Principal investigator of the project: "RESALE – Enhancing drug and bioactive food compounds delivery by a carrier-in-carrier platform: sericin nanoparticles embedded in milk-derived extracellular vesicles". UPO research grant for projects coordinated by young researchers. FUNDED CONTRIBUTION: €45.000
2022-2023	Responsible of the operative unit CHIM/09 in the project: "Sviluppo di un modello in vitro tridimensionale basato sull'impiego di substrati biologici applicati allo studio di patologie tumorali in medicina umana e veterinaria" (internal code MINSAL_INVITRO_TUMOR, CUP E85F21003590001). FUNDED CONTRIBUTION: €23.000

TOP FIVE PAPERS

1. **Bari E**, Perteghella S, Di Silvestre D, Sorlini M, Catenacci L, Sorrenti M, Marrubini G, Rossi R, Tripodo G, Mauri P, Marazzi M, Torre ML (2018). Pilot production of mesenchymal stem/stromal freeze-dried secretome for cell-free regenerative nanomedicine: a validated GMP-compliant process. *Cells* 7, 190; DOI: 10.3390/cells7110190.
2. **Bari E**, Di Silvestre D, Mastracci L, Grillo F, Grisoli P, Marrubini G, Nardini M, Mastrogiacomo M, Sorlini M, Rossi R, Torre ML, Mauri P, Sesana G and Perteghella S (2020). GMP-compliant sponge-like dressing containing MSC lyo-secretome: proteomic network of healing in a murine wound model. *European Journal of Pharmaceutics and Biopharmaceutics*, 155, 37-48; DOI: 10.1016/j.ejpb.2020.08.003.
3. **Bari E**, Scocozza F, Perteghella S, Sorlini M, Auricchio F, Torre ML, Conti M (2021). 3D bioprinted scaffolds containing mesenchymal stem/stromal lyosecretome: next generation controlled release device for bone regenerative medicine. *Pharmaceutics* 13, 515; DOI: 10.3390/pharmaceutics13040515.
4. **Bari E**, Serra M, Paolillo M, Bernardi E, Tengattini S, Piccinini F, Lanni, C, Sorlini M, Bisbano G,

Calleri E, Torre ML, Perteghella S (2021). Silk Fibroin Nanoparticle Functionalization with Arg-Gly-Asp cyclopentapeptide Promotes Active Targeting for Tumor Site-Specific Delivery. *Cancers* 13, 1185; DOI: 10.3390/cancers13051185.

5. **Bari E**, Ferrera F, Altosole T, Perteghella S, Mauri P, Rossi R, Passignani G, Mastracci L, Galati M, Astone GI, Mastrogiacomo M, Castagnola P, Fenoglio D, Di Silvestre D, Torre ML, Filaci G (2023). Trojan-horse silk fibroin nanocarriers loaded with a re-call antigen to redirect immunity against cancer. *Journal for ImmunoTherapy of Cancer* 2023;11:e005916; doi:10.1136/jitc-2022-005916.

HONOUR AND AWARDS

1. Best poster presentation, Advanced School in Nanomedicine, Pula, Italia, 25-28 settembre 2017.
2. Best oral presentation, 1st EVIta symposium, Palermo, Italia, 6-8 novembre 2019.