

CV Chiara Bastiancich (PharmD/PhD)ORCID ID: [0000-0003-2758-5654](https://orcid.org/0000-0003-2758-5654)**EDUCATION**

- 2018 Double PhD in Pharmaceutical & Biomedical Sciences
UCLouvain (Belgium) and Université d'Angers (France)
Thesis title: "*Lauroyl-gemcitabine lipid nanocapsules hydrogel for the local treatment of glioblastoma*"
Promoters: Prof. V. Pr at, Dr. F. Danhier, Prof. F. Lagarce
- 2013 Bachelor & Master in Pharmaceutical Chemistry and Technology
Dpt. Drug Science & Technology, Universit  degli Studi di Torino (UNITO, Italy)

CURRENT POSITIONS

- 2022 - present **Researcher** (*RTD-B, tenure track*)
Dpt. Drug Science & Technology, UNITO (Italy)
- 2022 - present **Visiting Researcher**
Gliomagenesis & Microenvironment team, CNRS UMR7051 - Institute of NeuroPhysiopathology (INP), Aix-Marseille Universit  (AMU, France)
- 2020 - present **Scientific collaborator**
Advanced Drug Delivery & Biomaterials (ADDB), Louvain Drug Research Institute, UCLouvain (Belgium)

PREVIOUS POSITIONS

- 2018 – 2022 Post-doctoral Researcher
Gliomagenesis & Microenvironment team, CNRS UMR7051 – INP, AMU (France)
- 2014 – 2018 Erasmus Mundus PhD fellow
Home lab: ADDB lab, Louvain Drug Research Institute, UCLouvain (Belgium)
Host lab: UMR Inserm 1066 - CNRS 6021 Micro et Nanom decines Biomim tiques, University of Angers (France)
- 2013 – 2014 Laboratory & research assistant
Lab Prof. Cavalli, Dpt. Drug Science & Technology, UNITO (Italy)

FELLOWSHIPS

- 2019 – 2022 Post-doctoral fellowship funded by the ARC Foundation for Cancer Research (n. PDF20190509176)
- 2014 – 2017 Category B Erasmus Mundus NanoFar PhD fellowship funded by EACEA
- 2013 Erasmus Placement mobility fellowship (3 months) funded by EACEA
- 2010 – 2011 Erasmus mobility fellowship (12 months) funded by EACEA

RESEARCH & MOBILITY GRANTS AS PRINCIPAL INVESTIGATOR

- 2023 Institut Cancer et Immunologie (ICI) grant to fund a Master and a PhD Thesis, Aix-Marseille University
- 2021 "Elie Bzoura" research grant, French Society of Oncology Pharmacy & National Academy of Pharmacy
- 2021 Mobility grant, Cancerop le PACA for income mobility of a PhD student to INP
- 2020 Mobility grant, Cancerop le PACA for outgoing mobility to ADDB lab
- 2020 Research grant "Projets ARC 2020 Jeune Chercheur", ARC Foundation for Cancer Research (n. ARCPJA12020060002222)
- 2020 Research grant "Emergence 2021", Cancerop le PACA

SUPERVISION OF GRADUATE STUDENTS

- 2023 1 Master student in Health Technologies (S. Babou), AMU, France
- 2022 1 Master student in Pharmacology (F. Chung Shing), AMU, France
- 2019 - present co-promoter of 1 PhD student (M. Wang), University of Louvain, Belgium
- 2018 - 2021 co-promoter of 1 PhD student (E. Bozzato), University of Louvain, Belgium
- 2021 1 Polytech student (M. Nedelec), AMU, France
- 2020 1 Master student in Neurosciences (E. Snacel-Fazy), AMU, France
- 2019 1 DUT2 student (M. Magro), AMU, France
- 2018 1 visiting PhD student (S. Brunato), University of Louvain, Belgium
- 2017-2018 1 Master student in Pharmaceutical Sciences (U. Luyten), University of Louvain, Belgium

TEACHING ACTIVITIES

- 2022 - 2023 Lectures for 4th year Chemistry and Pharmaceutical Technology students (16 hours per year).
Topic: Design and development of topic and dermatological formulations – UNITO, Italy
- 2022 - 2023 Lectures for 4th and 5th year Pharmacy students (16 hours per year). Topic: Skin aging and

- cutaneous diseases in the elderly: cosmetological and dermatological treatments – UNITO, Italy
- 2018 - 2023 Lecture & supervised work for Master 2 in Health Biology – Oncology (6 ETD hours per year).
Topic: Nanomedicine for cancer treatment – AMU, France
- 2018 - 2023 Article analysis for 3rd year Pharmacy students (4.5 ETD hours per year). Topic: Initiation to
Research in oncopharmacology – AMU, France
- 2018 - 2019 Lecture for Master 1 in Health Biology – Introduction to animal models (3 ETD hours). Topic:
Rodent models in oncology – AMU, France

AWARDS

- 2022 Poster Prize, Brain Tumor Meeting (Berlin, Germany)
- 2022 Merck Poster Prize, 16th European Symposium on Controlled Drug Delivery (Egmond aan Zee, The Netherlands)
- 2020 Nominee [Departmental Prize for Research in Provence](#) – Young Researcher (PACA, France)
- 2019 [Galenic Formulation Thesis Award](#) from the French Academy of Pharmacy (Paris, France)
- 2018 External Researcher Host Award, Town of Marseille (France)
- 2018 PhD Thesis Award, Controlled Release Society Italy Chapter (Italy)
- 2018 Best Publication Award, Journée Recherche Biomédicale Angers-Tours (Tours, France)
- 2017 Best poster Prize, 5th NanoFar School (Nottingham, UK)
- 2016 SANOFI Prize for best oral presentation, SFNano Annual Meeting (Paris, France)

ORGANISATION OF SCIENTIFIC MEETINGS

- 2022 Member of the Organization Committee, Early Career Scientists Committee Satellite event, Controlled Release Society BeNeLux & France Local Chapter / 45 participants / The Netherlands, 12/04/2022
- 2020 Organizer & speaker at the webinar “CRS BNLF Mentorship program: a platform to plan and strategically build the next steps of your career” / 84 participants / Online event, 22/09/2020

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- Since 2022 Member, Associazione Docenti Ricercatori Italiani di Tecnologie e Legislazione Farmaceutiche
- Since 2022 Member, Società Chimica Italiana
- Since 2021 Active member & Mentorship program coordinator, [CRS Young Scientists Committee](#)
- Since 2021 Member, Scientific network [Next Generation of Translational Scientists](#), EATRIS
- Since 2019 Active member (Early career scientists Committee), [CRS BeNeLux & France Local Chapter](#)
- Since 2019 Member, Controlled Release Society
- 2014 - 2017 Member, Research network “[NanoFar](#)”, Erasmus Mundus Programme (Action 2)

OTHER PROFESSIONAL ACTIVITIES

- Present Editor of the [special issue](#) "Molecular Mechanisms and Pathophysiology of Cerebral Gliomas: Towards Development of New Treatments", *International Journal of Molecular Sciences*
- 2021 Guest Editor [special issue](#) “Nanomedicine as a Tool to Improve the Local Delivery of Active Molecules”, journal *Pharmaceutics*
- Since 2017 Frequent reviewer for *Journal of Controlled Release*, *International Journal of Pharmaceutics*, *Scientific Reports*, *Neurosurgical Review*, *International Journal of Nanomedicine*, *Acta Biomaterialia*, *Biomaterials Science*, *ACS Chemical Neuroscience*
- Since 2019 Public outreach activities ([Science popularisation pitch Canceropôle PACA](#), European Researcher’s night, [Declics](#))
- Since 2015 Animal experiments (FELASA level B and C: persons out animal experiments and responsible for directing animal experiments; certificates obtained at UCLouvain)
- 2019 - 2020 Member Ethical Committee for animal experimentation (CE14), France

MAJOR (ACTIVE) COLLABORATIONS

- Since 2021 Prof. R. Rahman, Molecular Neuro-Oncology, School of Medicine, University of Nottingham, UK (1 paper in *Adv Drug Del Rev*, 1 in preparation)
- Since 2018 Prof. B. Guillet, Biomedical imaging, Centre Européen de Recherche en Imagerie Médicale, AMU, France (1 paper in *Biomed Opt Express*, 1 paper in *Pharmaceutics*, 1 in preparation)
- Since 2018 Prof. B. Newland, Material for neurosciences, School of Pharmacy, University of Cardiff, UK (1 paper in *J Control Release*, 1 paper in *Pharmaceutics*, 1 paper in *Biomaterials Science*)
- Since 2014 Prof. V. Pr at, Drug delivery, ADDB lab, Louvain Drug Research Institute, UCLouvain, Belgium (as PhD promoter: 5 papers; As collaborator and after the PhD: 10 papers accepted, 1 patent; we are co-promoters of two PhD students)
- Since 2014 Prof. R. Cavalli, Drug delivery, Dept. of Drug Science & Technology, UniTO, Italy (4 papers, 1 patent; she is my group leader at UNITO)

SCIENTIFIC PRODUCTION

h-index: 16; 792+ citations (WOS); > 40 conference presentations

- 20 original articles published in peer-reviewed scientific journals
- 8 reviews published in peer-reviewed scientific journals
- 2 patents

Original Research articles

1. Wang M, Malfanti A, **Bastiancich C**, Pr at V. Synergistic effect of doxorubicin lauroyl hydrazone derivative delivered by α -tocopherol succinate micelles for the treatment of glioblastoma. *International J Pharmaceutics*: X 5:100147 (2023). [I.F: 5.679]
2. Bozzato E, Tsakiris N, Paquot A, Muccioli GG, **Bastiancich C^{S*}**, Pr at V^{S*}. Dual-drug loaded nanomedicine hydrogel as a therapeutic platform to target both residual glioblastoma and glioma stem cells. *International J Pharmaceutics* 628:122341 (2022). [I.F: 6.510] * *Equal contribution* ^S*Corresponding author*
3. **Bastiancich C***, Fernandez S*, Correard F, Novell A, Larrat B, Guillet B, Est ve MA. Molecular imaging of ultrasound-mediated blood-brain barrier disruption in a mouse orthotopic glioblastoma model. *Pharmaceutics* 14(10):2227 (2022). [I.F: 6.525] * *Equal contribution*
4. Newland B, Starke J, **Bastiancich C**, Gonalves D, Bray L, Wang W, Werner C. Well-Defined Polyethylene Glycol Microscale Hydrogel Blocks Containing Gold Nanorods for Dual Photothermal and Chemotherapeutic Therapy. *Pharmaceutics* 14(3): 551 (2022). [I.F: 6.525]
5. Capart A, Metwally K, **Bastiancich C**, Da Silva A. Multiphysical numerical study of photothermal therapy of the glioblastoma with photoacoustic temperature monitoring in the mouse head. *Biomed Opt Express* 13 (3): 1202-1223 (2022). [I.F: 3.562]
6. Metwally K*, **Bastiancich C***, Correard F, Novell A, Fernandez S, Guillet B, Larrat B, Mensah S, Est ve MA, Da Silva A. Development of a multi-functional preclinical device for the treatment of glioblastoma. *Biomed Opt Express* 12, 2264-2279 (2021). [I.F: 3.921] * *Equal contribution*
7. Lopes A*, **Bastiancich C***, Bausart M, Lambricht L, Vanvarenberg K, Ligot S, Ucar B, Gallez B, Pr at V, Vandermeulen G. A new generation of DNA-based immunotherapy induces a potent immune response and increases the survival in different tumor models, *J ImmunoTher Cancer* 9(4):e001243 (2021) [I.F: 13.751] * *Equal contribution*
8. Brunato S, Mastrotto F, Bellato F, **Bastiancich C**, Travanut A, Garofalo M, Mantovani G, Alexander C, Preat V, Salmaso S, Caliceti P. PEG-polyaminoacid based micelles for controlled release of Doxorubicin: a safety and efficacy study, *J Controlled Release* 335:21-37 (2021) [I.F: 9.776]
9. Scutera S, Argenziano M, Sparti R, Bessone F, Bianco G, **Bastiancich C**, Castagnoli C, Stella M, Musso T, Cavalli R. Enhanced antimicrobial and antibiofilm effect of new colistin-loaded human albumin nanoparticles. *Antibiotics (Basel)* 10(1):57 (2021). [I.F: 4.639]
10. Donalisio M, Argenziano M, Ritt  M, **Bastiancich C**, Civra A, Lembo D, Cavalli R. Acyclovir-loaded sulfobutyl ether- β -cyclodextrin decorated chitosan nanodroplets for the local treatment of HSV-2 infections, *International J Pharmaceutics* 587, 119676 (2020). [I.F: 3.862]
11. Argenziano M, Haimhoffer A, **Bastiancich C**, Jicsinszky L, Caldera F, Trotta F, Scutera S, Alotto D, Fumagalli M, Musso T, Castagnoli C, Cavalli R. In Vitro Enhanced Skin Permeation and Retention of Imiquimod Loaded in β -Cyclodextrin Nanosponge Hydrogel, *Pharmaceutics* 11(3): 138 (2019). [I.F: 3.746]
12. **Bastiancich C***, Bozzato E*, Luyten U, Danhier F, Bastiat G, Pr at V. Drug combination using an injectable nanomedicine hydrogel for glioblastoma treatment, *International J Pharmaceutics*, 559: 220-227 (2019). [I.F: 3.862] * *Equal contribution*
13. Zhao M, Danhier F, **Bastiancich C**, Joudiou N, Ganipineni LP, Tsakiris N, Gallez B, des Rieux A, Jankovski A, Bianco J, Pr at V. Post-resection treatment of glioblastoma with an injectable nanomedicine-loaded photopolymerizable hydrogel induces long-term survival, *International J Pharmaceutics* 548: 522-529 (2018). [I.F: 3.862]
14. **Bastiancich C**, Lemaire L, Bianco J, Danhier F, Pr at V, Franconi F, Bastiat G, Lagarce F. Evaluation of Lauroyl-gemcitabine loaded hydrogel efficacy in glioblastoma rat models. *Nanomedicine (Lond)*, 13: 1999-2013 (2018). [I.F: 5.005]
15. Ganipineni P, Ucar B, Joudiou N, Bianco J, Danhier P, Zhao M, **Bastiancich C**, Gallez B, Danhier F, Pr at V. Magnetic targeting of paclitaxel-loaded poly(lactic-co-glycolic acid)-based nanoparticles for the treatment of glioblastoma. *International J Nanomedicine*, 13: 4509-4521 (2018). [I.F: 4.370]
16. Joris F, De Backer L, Van de Vyver T, **Bastiancich C**, De Smedt SC, Raemdonck K. The repurposing of cationic amphiphilic drugs to induce lysosomal escape of siRNA: towards simple adjuvants of siRNA-mediated gene silencing. *J Controlled Release* 269: 266-276 (2018). [I.F: 7.786]
17. **Bastiancich C**, Bianco J, Vanvarenberg K, Ucar B, Joudiou N, Gallez B, Bastiat G, Lagarce F, Pr at V, Danhier F. Injectable nanomedicine hydrogel for local chemotherapy of glioblastoma after surgical resection. *J Controlled Release* 264: 45-54 (2017). [I.F: 7.786]

18. Bianco J*, **Bastiancich C***, Joudiou N, Gallez B, des Rieux A, Danhier F. Novel model of orthotopic U-87 MG glioblastoma resection in athymic nude mice. *J Neuroscience Methods* 284:96-102 (2017). [I.F: 2.053] * *Equal contribution*
19. **Bastiancich C**, Vanvarenberg K, Ucakar B, Pitorre M, Bastiat G, Lagarce F, Pr at V, Danhier F. Lauroyl-gemcitabine-loaded lipid nanocapsule hydrogel for the treatment of glioblastoma. *J Controlled Release* 225:283-93 (2016). [I.F: 7.786]
20. **Bastiancich C**, Scutera S, Alotto D, Cambieri I, Fumagalli M, Casarin S, Rossi S, Trotta F, Stella M, Cavalli R, Musso T, Castagnoli C. Cyclodextrin-Based Nanosponges as a Nanotechnology Strategy for Imiquimod Delivery in Pathological Scarring Prevention and Treatment. *J Nanopharmaceutics Drug Delivery* 2,311-324 (2014).

Review articles

21. Wang Y, **Bastiancich C**, Newland B. Injectable local drug delivery systems for glioblastoma: a systematic review and meta-analysis of progress to date. *Biomaterials Science*. 2023; *in press*. Doi: 10.1039/d2bm01534j [I.F: 7.590]
22. **Bastiancich C***, Malfanti A*, Pr at V, Rahman R. Rationally designed drug delivery systems for the local treatment of resected glioblastoma. *Advanced Drug Delivery Reviews*, 177: 113951 (2021) [I.F: 15.470] * *Equal contribution*
23. **Bastiancich C***[§], Bozzato E*, Henley I, Newland B. Does local drug delivery still hold therapeutic promise for brain cancer? A systematic review. *J Controlled Release* 337: 296-305 (2021) [I.F: 9.776] [§]*Corresponding author* * *Equal contribution*
24. **Bastiancich C**[§], Da Silva A, Est ve MA. Photothermal therapy for the treatment of Glioblastoma: potential & preclinical challenges. *Front Oncol* 10: 610356 (2021). [I.F: 4.848] [§]*Corresponding author*
25. Bozzato E, **Bastiancich C**, Pr at V. Nanomedicine: a useful tool against cancer stem cells. *Cancers (Basel)* 13(1):9 (2020). [I.F: 6.126]
26. **Bastiancich C**, Bastiat G, Lagarce F. Gemcitabine & Glioblastoma: challenges and current perspectives. *Drug Discovery Today*, 23:416-423 (2018). [I.F: 6.369]
27. Bianco J*, **Bastiancich C***, Jankovski A, des Rieux A, Pr at V, Danhier F. On glioblastoma and the search for a cure: where do we stand? *Cellular and Molecular Life Sciences*. 74(13):2451-2466 (2017). [I.F: 5.694] * *Equal contribution*
28. **Bastiancich C**, Danhier P, Pr at V, Danhier F. Anticancer drug-loaded hydrogels as drug delivery systems for the local treatment of glioblastoma. *J Controlled Release* 243: 29-42 (2016). [I.F: 7.786]

Publications in refereed conference proceedings

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- Capart A, Metwally K, **Bastiancich C**, Da Silva A. Development of a realistic phantom of a mouse's head : application to photoacoustic temperature monitoring during photothermal therapy. *Opto-Acoustic Methods and Applications in Biophotonics V*, Vol. 11923 of SPIE Proceedings, paper 119230R. DOI: 10.1117/12.2615910. (European Conferences on Biomedical Optics - Opto-Acoustic Methods and Applications in Biophotonics V 20-25 June 2021)
 - Metwally K, **Bastiancich C**, Dumas N, Correard F, Novell A, Chaspoul F, Jones N, Tselikov G, Popov A, Al-Kattan A, Kabashin AV, Larrat B, Braguer D, Mensah S, Est ve MA, Da Silva A. In Situ Temperature Monitoring with PhotoAcoustics during Photothermal Therapy and Perspectives for Glioblastoma Treatment Monitoring. *Clinical and Preclinical Optical Diagnostics II*, Vol. EB101 of SPIE Proceedings, paper 11077_8. DOI: 10.1117/12.2527060. (European Conference on Biomedical Optics 2019, Munich Germany, 23-25 June 2019)
 - Lopes A, **Bastiancich C**, Ligot S, Bausart M, Vandermeulen G, Pr at V. The antitumor activity of a DNA vaccine encoding glioma-associated antigens is enhanced by surgical resection in a GL261 glioblastoma orthotopic model. *Human gene therapy*, Vol. 30, Issue 11, pages: A117-A118, meeting abstract P342. (ESGCT 27th Annual Congress in collaboration with SETGyc Meeting, Barcelona Spain, 22–25 October 2019 ISSN: 1043-0342).

Patents

- I. *International patent*. Title: "Modified vesicular stomatitis virus glycoprotein and uses thereof for the treatment of brain tumors"; International publication number: WO2021058684 (A1). Concession date: 01/04/2021
- II. *Italian patent*: Title: "New nanoparticles for the delivery of antibiotics to fight antimicrobial-resistance"; Application number: 102020000022984. Concession date: 11/10/2022