

**CV Chiara Bastiancich (PharmD/PhD)**

## Contact information:

46 Traverse Parangon 13008, Marseille (France)  
 chiara.bastiancich@univ-amu.fr  
 +33 618848391

**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**

- 2024- present **CRCN CNRS researcher**  
 UMR7051 - Institute of Neurophysiopathology (INP, Aix-Marseille Universit   AMU)

**PREVIOUS POSITIONS**

- 2022 - 2023 **Assistant Professor in Pharmaceutical Technology (RTD-B, tenure track)**  
 Dpt. Drug Science & Technology, UNITO (Italy)
- 2022 - 2023 **Visiting Researcher**  
 Gliomagenesis & Microenvironment team, CNRS UMR7051 – INP, AMU (France)
- 2020 - 2023 **Scientific collaborator**  
 Advanced Drug Delivery & Biomaterials (ADDB), Louvain Drug Research Institute, UCLouvain (Belgium)
- 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)

**KEY QUALIFICATIONS**

- 2023 National Scientific Habilitation to the functions of University Associated Professor in the competition sector 03/D2 - Technology, socioeconomics and medicinal regulations
- 2021 Translational Medicine Explained TMex Certificate, EATRIS
- 2020 Qualification as University Associate Professor by the French National Council of Universities
- 2018 Translational Medicine Certificate, Universit   Libre de Bruxelles, Belgium
- 2016 Laboratory Animal Experiments certificate (FELASA B and C), UCLouvain, Belgium
- 2013 Habilitation to the profession of pharmacist in Italy and Belgium (ID 132131)

**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 Research grant "Projets ARC 2023 Jeune Chercheur", ARC Foundation for Cancer Research (n. ARCPJA2023070006751)
- 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 – present	co-promoter of 1 PhD student (R. Stacchini), AMU, France
2023	1 visiting PhD student (L. Gomez), AMU, France
2023	1 Erasmus Master student in Pharmaceutical Sciences (G. Maritano), AMU, France
2023	1 Master student in Health Technologies (S. Babou), AMU, France
2022	1 Master student in Pharmacology (F. Chung Shing), AMU, France
2019 – 2023	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 4 <sup>th</sup> 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 4 <sup>th</sup> and 5 <sup>th</sup> 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 3 <sup>rd</sup> 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, 16 <sup>th</sup> European Symposium on Controlled Drug Delivery (Egmond aan Zee, The Netherlands)
2020	Nominee <a href="#">Departmental Prize for Research in Provence</a> – Young Researcher (PACA, France)
2019	<a href="#">Galenic Formulation Thesis Award</a> 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 2023	Member, European Association for Cancer Research
Since 2022	Member, Associazione Docenti Ricercatori Italiani di Tecnologie e Legislazione Farmaceutiche
Since 2021	Active member & Mentorship program coordinator, <a href="#">CRS Young Scientists Committee</a>
Since 2021	Member, Scientific network <a href="#">Next Generation of Translational Scientists</a> , EATRIS
Since 2019	Active member (Early career scientists Committee), <a href="#">CRS BeNeLux &amp; France Local Chapter</a>
Since 2019	Member, Controlled Release Society
2014 - 2017	Member, Research network “ <a href="#">NanoFar</a> ”, Erasmus Mundus Programme (Action 2)

**OTHER PROFESSIONAL ACTIVITIES**

Present	Editor of the <a href="#">special issue</a> "Molecular Mechanisms and Pathophysiology of Cerebral Gliomas: Towards Development of New Treatments", <i>International Journal of Molecular Sciences</i>
2021	Guest Editor <a href="#">special issue</a> “Nanomedicine as a Tool to Improve the Local Delivery of Active Molecules”, journal <i>Pharmaceutics</i>
Since 2017	Frequent reviewer for <i>Journal of Controlled Release</i> , <i>International Journal of Pharmaceutics</i> , <i>Scientific Reports</i> , <i>Neurosurgical Review</i> , <i>International Journal of Nanomedicine</i> , <i>Acta Biomaterialia</i> , <i>Biomaterials Science</i> , <i>ACS Chemical Neuroscience</i>
2019 - 2020	Member Ethical Committee for animal experimentation (CE14), France

**SCIENTIFIC PRODUCTION****h-index: 17; 880+ citations (WOS);**

- 21 original articles published in *peer-reviewed* scientific journals
- 8 reviews published in *peer-reviewed* scientific journals
- 2 patents
- 40+ conference presentations

ORCID ID: [0000-0003-2758-5654](https://orcid.org/0000-0003-2758-5654)

**Original Research articles**

1. Wang M, Bergès R, Malfanti A, Prémat V<sup>§</sup>, **Bastiancich C<sup>§</sup>**. Local delivery of Doxorubicin prodrug via lipid nanocapsule-based hydrogel for the treatment of glioblastoma. *Drug Delivery and Translational Research*. (2023) [I.F: 5.671] <sup>§</sup>*Corresponding author*
2. Wang M, Malfanti A, **Bastiancich C**, Prémat V. Synergistic effect of doxorubicin lauroyl hydrazone derivative delivered by  $\alpha$ -tocopherol succinate micelles for the treatment of glioblastoma. *International J Pharmaceutics: X* 5:100147 (2023). [I.F: 5.679]
3. Bozzato E, Tsakiris N, Paquot A, Muccioli GG, **Bastiancich C<sup>§\*</sup>**, Prémat V<sup>§\*</sup>. 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* <sup>§</sup>*Corresponding author*
4. **Bastiancich C\***, Fernandez S\*, Correard F, Novell A, Larrat B, Guillet B, Estève 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*
5. Newland B, Starke J, **Bastiancich C**, Gonçalves 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]
6. 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]
7. Metwally K\*, **Bastiancich C\***, Correard F, Novell A, Fernandez S, Guillet B, Larrat B, Mensah S, Estève 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*
8. Lopes A\*, **Bastiancich C\***, Bausart M, Lambricht L, Vanvarenberg K, Ligot S, Ucakar B, Gallez B, Prémat 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*
9. 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]
10. 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]
11. Donalizio M, Argenziano M, Rittà M, **Bastiancich C**, Civra A, Lembo D, Cavalli R. Acyclovir-loaded sulfobutyl ether- $\beta$ -cyclodextrin decorated chitosan nanodroplets for the local treatment of HSV-2 infections, *International J Pharmaceutics* 587, 119676 (2020). [I.F: 3.862]
12. 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  $\beta$ -Cyclodextrin Nanosponge Hydrogel, *Pharmaceutics* 11(3): 138 (2019). [I.F: 3.746]
13. **Bastiancich C\***, Bozzato E\*, Luyten U, Danhier F, Bastiat G, Prémat V. Drug combination using an injectable nanomedicine hydrogel for glioblastoma treatment, *International J Pharmaceutics*, 559: 220-227 (2019). [I.F: 3.862] \* *Equal contribution*
14. Zhao M, Danhier F, **Bastiancich C**, Joudiou N, Ganipineni LP, Tsakiris N, Gallez B, des Rieux A, Jankovski A, Bianco J, Prémat 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]
15. **Bastiancich C**, Lemaire L, Bianco J, Danhier F, Prémat 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]
16. Ganipineni P, Ucakar B, Joudiou N, Bianco J, Danhier P, Zhao M, **Bastiancich C**, Gallez B, Danhier F, Prémat 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]

17. 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]
18. **Bastiancich C**, Bianco J, Vanvarenberg K, Ucakar 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]
19. 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*
20. **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]
21. **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

22. 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*. 11(5):1553-1566 (2023) [I.F: 7.590]
23. **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*
24. **Bastiancich C\*<sup>§</sup>**, 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] <sup>§</sup>*Corresponding author* \* *Equal contribution*
25. **Bastiancich C<sup>§</sup>**, 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] <sup>§</sup>*Corresponding author*
26. 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]
27. **Bastiancich C**, Bastiat G, Lagarce F. Gemcitabine & Glioblastoma: challenges and current perspectives. *Drug Discovery Today*, 23:416-423 (2018). [I.F: 6.369]
28. 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*
29. **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

- 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

1. *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

**Public Outreach activities**

- The Talented Researchers Popularize the Science. 9° Séminaire annuel du Canceropôle 2022, Saint-Raphael (France). Title of pitch (in french): "Est-il plus avantageux d'utiliser une gaufre ou une crème caramel pour éviter les récives de tumeurs cérébrales ?"
- Speed-searching pour la Nuit européenne des chercheur.e.s 2021
- Déclics 2019: action de médiation à destination des lycéens