Curriculum vitae

Family name, First name: Bonduelle, Colin
ORCID identifier: 0000-0002-7213-7861
Date of birth: 25/02/1980
Nationality: French
URL for web site: https://www.lcpo.fr/people/faculties/colin-bonduelle
Google Scholar profile URL: https://scholar.google.com/citations?user=BLAI3ooAAAAJ&hl=en
WebOfScience: https://www.webofscience.com/wos/author/record/1461213

EDUCATION

2018 *Habilitation thesis* (HDR) of the University of Toulouse (defended publicly on 16/11/2018).
2009 *PhD* in Molecular Chemistry, University of Toulouse, France.
2005 *Masters* in Biochemistry and Chemical Biology, University of Toulouse, France.

CURRENT POSITION

2019-present *CNRS researcher* (Protein-like polymers, NCA synthesis and ring-opening polymerization) in the *Polymer and Self-assembly* Team at Lab. Organic Polymer Chemistry (**LCPO**), CNRS, Pessac, France.

PREVIOUS POSITIONS

2014-2018 *CNRS DR researcher* at Lab. Coordination Chemistry (**LCC**), CNRS, Toulouse, France.
Topic: Secondary structures and macromolecular peptidomimetics
2011-2014 *Post-doctoral fellow* at LCPO, University of Bordeaux, Pessac, France.
Topic: Glycopolymers self-assembly
2009-2011 *Post-doctoral fellow* at Dept. of Chemistry, University of Western Ontario (**WU**), Canada.
Topic: Macromolecular grafting and biomaterials
2005-2009 *Grad. student* at Lab. Fundamental and Applied Heterochemistry (**LHFA**, Supervision of Dr. Didier Bourissou), University of Toulouse, France.
Topic: Oxygenated heterocycles: synthesis and reactivity.

SIGNIFICANT FELLOWSHIPS GRANTS AND AWARDS

2021-present **Cadre à Haut Potentiel (CHP)** CNRS
2020-2023 **Young Habilitant Grant recipient**: Sequence-controlled polypeptide copolymers, 120 kE.
2020-2024 **Young researchers grant (French ANR)** "Ring-Opening Polymerization-Induced Self-Assembly", ROPISA, 210 kE.
2017 **Patent issued award**, 2017 Vanguard Awards Winners, Worlddiscoveries (=SATT), London, Ontario, Canada.

Other grants (the one obtained as PI):

2024-2028 ANR ProToPolym: *PhD fellowship* on prebiotic polymer chemistry (220 k€)
2023-2027 ANR OBTAC: *PhD fellowship* on antimicrobial polypeptoid polymers (230 k€)
2023-2026 ANR DINAPO: *Post-doc fellowship* on electro active polypeptide (18 months, 180 k€).
2024 UBx grant (technology transfer): Development engineer (6 months, 50 k€) on thermoresponsive polypeptides.
2023 INC Emergence/UBx Emergence (5 k€ + 8 k€): Aqueous ROP and prebiotic chemistry.
2022-2025 RRI “Frontiers of Life”: *PhD fellowship* on lipopolypeptide design.
2022-2024 ANR Plan de relance: *Post-doc fellowship* on biosourced polypeptide (24 months, 245 k€).
2022-2026 CSC grant (China): *PhD fellowship* on electro active polypeptide polymers.
2022-2023 AST grant (technology transfer): *Development Engineer* (18 months) on antimicrobial polypeptoid polymers (390 k€).
2021-2025 CSC grant (China): *Chinese PhD fellowship* on photo-active polypeptide polymers.
2020-2021 UBx then AST grant (technology transfer): *Development Engineer* (6 + 18 months) on ROPISA (2020, 60 k€, 2021, 180 k€).
2020-2022 CNRS MITI funding: *Running costs* (polypeptide-based nanocomposites, 30 k€).
2020-2025 ECOS funding (UNAM- University of Bordeaux): *Travel exchanges with Mexico* to support the project POLYMERZYME (enzyme like catalysis with polypeptides, about 20 k€).
2017-2021 Conacyt grant (Mexico): *PhD fellowship* on antimicrobial polypeptoid polymers.
2016-2020 Occitanie Region research funding: 1) *PhD fellowship* on "Self-assembly by coordination of peptidic homopolymers" (120 k€). 2) *Post-doc fellowship* on "metal induced structuring of polypeptide" (60 k€).

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

Postdocs

2024 M. Badreldin, post-doc on thermoresponsive polymers (technology transfer).
2024-2025 A. Tronnet, post-doc on electro active polypeptide (ANR)
2022-2024 J. Aujard-Catot, post-doc on biosourced polypeptide developments (technology transfer)
2022-2024 A. Tronnet, post-doc on antimicrobial polymer design (technology transfer)
2021-2022 S. Antoine, post-doc now Emulseo company's sales manager in Pessac.
2020 B. Bizet, post-doc now R&D project leader Bioadhesive Ophtalmics, Paris, France.
2016 M. NGuyen, post-doc now research engineer at Lab. LCC, Toulouse, France.
2015 E. Piedra-Arroni, post-doc now teaching assistant.

PhD students (since HDR degree)

2025-present Ritika Soni, PhD starting September 2025 (ITN Natprime)
2025-present Marie Quincerot, PhD starting October 2025 (ANR ProToPolym)
2025-present Ankita Sahu, PhD starting September 2025 (ANR ProToPolym)
2024-present Enzo Sedru, PhD starting November 2024 (CIFRE Michelin)
2024-present Maura Martinez, PhD starting October 2024 (MRSEI)
2024-present Carolina Castaneda, PhD starting October 2024 (ANR OBTAC)
2023-present Amin El Jarroudi, PhD since October 2023 (ERC COMET)
2023-present Valentin Marrot, PhD since March 2023 (CIFRE Medincell)
2022-present Rosanna Le Scouarnec, PhD since October 2022 (rri FOL)
2022-present Yupei Ma, PhD since October 2022 (CSC)
2021-2025 H. Beauseroy, PhD student, now recruited at DOXANANO.
2021-2025 S. Ji, PhD student since, now in post-doc in China.
2020-2023 M. Badreldin, PhD student, now recruited at DOW.
2018-2022 A. Tronnet, PhD student, now post doc in LCPO.
2017-2021 P. Salas-Ambrosio, PhD student, now post doc in UCLA.
2017-2020 G. Manai, PhD student, now data engineer in Paris.

MSc students

2014-present **14 Masters students**: 6 at LCC, Toulouse, France and 8 at LCPO, Pessac, France.

TEACHING ACTIVITIES

2025 8h: Recent advances in ROP for functional polymeric materials. School of Emergent Soft Matter (UCST, Guangzhou, China)
2023 10h: Sustainable polymer chemistry (UNAM, Mexico, summer school) + 4h: Polymer Biochemistry (UNAM, Mexico, summer school)
2022-present **6h/year in Sustainable polymer chemistry.** University of Perpignan: Master 2 course.
2020 **2 h: Sustainable polymer chemistry**. Summer School, Bordeaux INP (M2 level).
2015-2018 **6h/year in Pharmacy**. Faculty of Pharmacy of Toulouse: Master 1 course "initiation to peptide synthesis"
2006-2008 **64h/year in Chemistry**. University of Toulouse: Licence and Master practical lab classes.

ORGANISATION OF SCIENTIFIC MEETINGS

2019-2023 **Organizer** (seminar officer) of internal seminars at LCPO (every weeks) + invited external seminars (8 foreign scientific leaders/year)
2018 -present **Organizing committed**: *GFP National Meeting* (Polymer sciences), November 2018, Toulouse and November 2023, Bordeaux, France. *BPC International Meeting* (Polymer sciences), June 2022 and June 2026, Bordeaux, France. *ACS Symposium "Polymers and Biology"*, ACS Spring 2023 in Indianapolis, USA. *POLYMAT* (international conference), October 2024, Huatulco, Mexico.
2011-present **Participation in the organization of scientific days** (LCPO and LCC): IUPAC consortium (2011-2013), chemistry-biology days (Toulouse doctoral school, 2015-2017), Bordeaux doctoral school days (2020), LCPO internal seminar 2023 (2 days), etc.

INSTITUTIONAL RESPONSIBILITIES

2023-present **Scientific advisor**, LCPO Transfer (LCPO technological transfer unit)
2022-2024 **Member, ANR CE06** funding committee
2021 **Promotion CHP** CNRS 2021-2022 (Colibri)
2021-present **Member** of the LCPO laboratory Council, Pessac, France (2021), **member** of the carbon footprint group (2022), **member** of the equipment committee (2023).
202-present **Strategic Organizing Committee** member of the Bordeaux Imaging Center
2021 Member, **BQR funding committee**, University of Perpignan, France
2018-present **1 HDR defense committee/12 PhD defense committees** including one at the University of

Birmingham (UK), one at the RCSI (Dublin), one at the CIPF (Spain), one at the University South Australia and one at NAIST (Japan).

2015-2018 **Elected member** of the LCC laboratory Council, Toulouse, France.

COMMISSIONS OF TRUST (amount of evaluation)

2020/2025 **Expert evaluator** for the Academy of Sciences of the Czech Republic.

2014-2022 **Grant evaluator**: national research agency (ANR, ANRT, Chaire Industrielle), IDEX (Cergy University), CONACYT, research agency in Mexico. COFECUB international council, MSC-IF call (H2020, Horizon).

PEER REVIEW

2014-present **Reviewer for**: Nat. Commun., Angew. Chem., Biomacromolecules etc… more than 200 verified reviews.

OUTREACH AND POPULARIZATION

- My research developed at LCPO has been highlighted by the CNRS (Institute of Chemistry and in French) through 5 recent press releases (https://www.inc.cnrs.fr/fr/cnrsinfo/une-synthese-et-un-auto-assemblage-verts-pour-les-polypeptides, https://inc.cnrs.fr/fr/cnrsinfo/un-nouveau-concept-de-fabrication-de-nano-materiaux-hybrides-par-auto-assemblage, https://inc.cnrs.fr/fr/cnrsinfo/des-polymeres-cycliques-contre-les-infections-clostridioides-difficile and https://www.inc.cnrs.fr/fr/cnrsinfo/un-effet-memoire-exceptionnel-dans-des-gels-polymeres-thermosensibles-base-de-proline).
- Several seminars on youtube (including webinaire Chimie des origines): https://amupod.univ-amu.fr/video/35544-webinaire-colin-bonduelle-gt-chimie-des-origines/
- I also took an active part in popularization actions (fête de la sciences, olympiades de la chimie etc...) by getting involved, in particular, with the chemistry and society association (caravane de la chimie, 2018).

MEMBERSHIPS OF SCIENTIFIC NETWORK AND SOCIETIES

2023-2024 Partner Member of the international network P2nanobio (Scientific exchanges and collaborative efforts France/Mexico).

2018-2021 Partner Member of the international laboratory LCMMC (Scientific exchanges and collaborative efforts France/Mexico).

2014-present ACS, GFP (Groupe Français des Polymères) and GFPP (Groupe Français des Peptides et Protéines) membership.

MAJOR COLLABORATIONS

- B. Dupuy, Polypeptoid polymers against C. difficile infections (Institut Pasteur, Paris).
- Simon Tricard, Polypeptide-based nanocomposites (LPCNO, CNRS, Toulouse).
- Marcela Ayala, Artificial metalloenzymes through ring-opening polymerization (Instituto de Biotecnologia, UNAM, Cuernavaca, Mexico).

Summary:

Peer reviewed articles: 62 (24* as corresponding author)

Selected journals: Nature Communication (1*), J. Am. Chem. Soc. (3, 2*), Angew. Chem. Int. Ed. (2*), Chem. Commun. (5, 2*), Macromolecules (3, 1*), Biomacromolecules (9, 3*), Polymer Chemistry (6, 5*).

Citations (26/11/2025)**:** 3075 (GS, 1566 since 2020);

h-index (26/11/2025)**:** 26 (GS, 20, since 2020);

i10-index (26/11/2025): 47 (GS, 32, since 2020);

Patents: 7 granted (2 licences/Vibiosphen), 3 applications

Invited lectures: 21 (13 international including 2 keynote)

Contributed lectures: 17 (9 international mainly ACS (8))

Seminars and worshops: 26 (15 international mainly in Mexico (14))