CURRICULUM VITAE OF LUCA BANFI

Carreer

- Born at Lissone (Monza e Brianza)
- 1981 (january): Master Degree in Chemistry at the University of Milano with a thesis on the total synthesis of a natural substance (advisors: C. Scolastico and C. Gennari).
- 1981-1983: University of Milano. Research in the field of the synthesis and biosynthesis of natural substances, in stereoselective syntheses and in the synthesis of potential drugs or API.
- 1983-1998: Assistant Professor of Organic Chemistry at the University of Genova, Faculty of Sciences (group of Prof. G.. Guanti).
- 1986-1987 (13 months): Secondment period in the U.S.A., at MIT and Indiana University, in the group of W. R. Roush.
- 1999-2000: Associate Professor of Organic Chemistry at the University of Genova, Faculty of Sciences.
- From 1/11/2000 to today: Full Professor of Organic Chemistry at the University of Genova, Faculty of Sciences, Department of Chemistry and Industrial Chemistry.

Research

During all his scientific activity, Luca Banfi has conducted researches in the field of organic synthesis stressing especially four aspects: a) the synthesis of biologically active substances; b) asymmetric synthesis, either with the aid of more traditional systems, or of biological means (enzymes, microorganisms); c) 'diversity oriented synthesis' taking advantage of multicomponent reactions; d) green chemistry, synthesis from building blocks derived from biomass, exploitation of agricultural waste. These last two aspect has been increasingly pursued from 1998 to date. Moreover, Luca Banfi has always carried out researches in collaboration with private companies, especially in the pharmaceutical realm.

- Co-author of 192 publications, including 167 indicized (Scopus o WOS) articles or book chapters, 14 books or book chapters (not indicized), 8 patents and 3 editorials.
- Hirsch index (H-index): 40 (Scopus)
- Total citations: 4789

Prizes

- Medaglia Ciamician della Divisione di Chimica Organica della S.C.I. (1992)
- Medaglia Mangini della Divisione di Chimica Organica della S.C.I. (2016)

Teaching

Luca Banfi has given lectures in several modules of organic chemistry, starting in 1993. During the last 10 years:

- Organic Chemistry and Laboratory (present) (B.Sc. in Material Sciences and Biological Sciences) (9 credits)
- Organic Chemistry 3 (present) (B.Sc. in Chemistry and Chemical Technologies) (6 credits)
- Bioorganic Chemistry (present) (B.Sc. in Chemistry and Chemical Technologies) (2 out of 4 credits)
- Special Orgaic Synthesis and Techniques (present) (M.Sc. in Chemical Sciences) (4 credits)
- Module of Organic Chemistry (up to a.y. 2023/2024) (B.Sc. in Prevention Techniques in the Working Places and in the Environment) (4 credits)
- Organic Chemistry 2 (up to a.y. 2022/2023) (M.Sc. in Pharmaceutical Chemistry and Technologies) (3 out of 8 credits).
- Organic Chemistry 1 (up to a.y. 2021/2022) (B.Sc. in Biotechnologies) (8 credits)

Managing Activities

- Vice-president of degree council in Chemistry (1998-2009)
- President of degree council in Chemistry (2009-2015)
- Didactic coordinagtor of the Faculty of Sciences (2009-2015)
- Vice-President of the Faculty of Sciences (2011-2012)
- Coordinator of Ph.D. programme in Chemical Sciences and Technologies (2004-2012)
- Director of the Ph.D. School in Sciences and Technologies of Chemistry and Materials (2005-2012)
- Responsible for the School of Sciences for the entrance tests (2014-2020)
- Member of the committee for the unified entrance test TELEMACO (2020-present)
- Member of the Quality Board and of the Didactic Commission of the University of Genova (2012- 2015)
- Member of the Recruitment Committee of the University of Genovba (2014)
- Reference person for the Employment Service for laureates of the Department of Chemistry and Industrial Chemistry (1998-present).
- Director, Department of Chemistry and Industrial Chemistry (from november 2018 to october 2024).
- Member of Academic Senate (from november 2021 to october 2024)

Selected recent publications

- Vitali Forconesi, G., Basso, A., Banfi, L., Gugliotta, D., Lambruschini, C., Nola, M., Riva, R., Rocca, V. and Moni, L., "Total Synthesis of 4-epi-Bengamide E", *Molecules* **2024**, *29*, 1715.
- Moni, L., Banfi, L., Basso, A., Mori, A., Risso, F., Riva, R. and Lambruschini, C., "A Thorough Study on the Photoisomerization of Ferulic Acid Derivatives", *European Journal of Organic Chemistry* **2021**, 1737-1749.
- Banfi, L., Basso, A., Lambruschini, C., Moni, L. and Riva, R., "The 100 facets of the Passerini reaction", *Chemical Science* **2021**, *12*, 15445-15472.
- Pinna, A., Basso, A., Lambruschini, C., Moni, L., Riva, R., Rocca, V. and Banfi, L., "Stereodivergent access to all four stereoisomers of chiral tetrahydrobenzo f 1,4 oxazepines, through highly diastereoselective multicomponent Ugi-Joullie reaction", *RSC Advances* **2020,** *10*, 965-972,
- Moni, L., Banfi, L., Cartagenova, D., Cavalli, A., Lambruschini, C., Martino, E., Orru, R. V. A., Ruijter, E., Saya, J. M., Sgrignani, J. and Riva, R., "Zinc(ii)-mediated diastereoselective Passerini reactions of biocatalytically desymmetrised renewable inputs", *Organic Chemistry Frontiers* **2020,** *7*, 380-398,
- Tomaselli, S., La Vitola, P., Pagano, K., Brandi, E., Santamaria, G., Galante, D., D'Arrigo, C., Moni, L., Lambruschini, C., Banfi, L., Lucchetti, J., Fracasso, C., Molinari, H., Forloni, G., Balducci, C. and Ragona, L., "Biophysical and in Vivo Studies Identify a New Natural-Based Polyphenol, Counteracting Aβ Oligomerization in Vitro and Aβ Oligomer-Mediated Memory Impairment and Neuroinflammation in an Acute Mouse Model of Alzheimer's Disease", *ACS Chemical Neuroscience* **2019,** *10*, 4462-4475.
- Lambruschini, C.; Basso, A.; Moni, L.; Pinna, A.; Riva, R.; Banfi, L., "Bicyclic Heterocycles from Levulinic Acid through a Fast and Operationally Simple Diversity-Oriented Multicomponent Approach", *European Journal of Organic Chemistry*, **2018**, 5445-5455. DOI: 10.1002/ejoc.201801129.
- Caputo, S.; Banfi, L.; Basso, A.; Galatini, A.; Moni, L.; Riva, R.; Lambruschini, C. "Diversity-Oriented Synthesis of Various Enantiopure Heterocycles by Coupling Organocatalysis with Multicomponent Reactions", *European Journal of Organic Chemistry*, **2017**, 6619-6628. DOI: 10.1002/ejoc.201701328.
- Lambruschini, C.; Galante, D.; Moni, L.; Ferraro, F.; Gancia, G.; Riva, R.; Traverso, A.; Banfi L.; D'Arrigo, C., "Multicomponent, Fragment-Based, Synthesis of Polyphenol-containing Peptidomimetics and their Inhibiting Activity on Beta Amyloid Oligomerization", *Org. Biomol. Chem.*, **2017**, *15*, 9331-9351. DOI: 10.1039/C7OB02182H.
- Moni, L.; Banfi, L.; Basso, A.; Spallarossa, M.; Riva, R., "Access to Polycyclic Alkaloid-like Structures by Coupling the Ugi Reaction with Two Sequential Metal-Catalyzed Cyclizations", *Adv. Synth. Cat.*, **2016**, *358*, 2940-2948. doi: 10.1002/adsc.201600638.
- Lambruschini, C.; Banfi, L.; Guanti, G., "Switching the Photochromic Activity of Acenaphthylene Derivatives through a Tandem Nucleophile Promoted Addition Reaction", *Chem. Eur. J.*, **2016**, 13831-13834. DOI: 10.1002/chem.201602912.
- Caputo, S., Basso, A., Moni, L., Riva, R., Rocca, V. and Banfi, L., "Diastereoselective Ugi reaction of chiral 1,3-aminoalcohols derived from an organocatalytic Mannich reaction", *Beilstein Journal of Organic Chemistry* **2016,** *12*, 139-143. DOI: 10.3762/bjoc.12.15.
- Cini, E., Banfi, L., Barreca, G., Carcone, L., Malpezzi, L., Manetti, F., Marras, G., Rasparini, M., Riva, R., Roseblade, S., Russo, A., Taddei, M., Vitale, R. and Zanotti-Gerosa, A., "Convergent Synthesis of the Renin Inhibitor Aliskiren

Based on C5–C6 Disconnection and CO2H–NH2 Equivalence", *Organic Process Research & Development* **2016**, *20*, 270-283. DOI: 10.1021/acs.oprd.5b00396

- Moni, L.; Banfi, L.; Basso, A.; Martino, E.; Riva, R., "Diastereoselective Passerini Reaction of Biobased Chiral Aldehydes: Divergent Synthesis of Various Polyfunctionalized Heterocycles", *Org. Lett.*, **2016**, *18*, 1638-1641. *Errata corrige: 3306*. DOI: 10.1021/acs.orglett.6b00487. DOI of errata corrige: 10.1021/acs.orglett.6b01574.
- Moni, L.; Basso, A.; Banfi, L.; Carcone, L.; Rasparini, M.; Riva, R., " Ugi and Passerini Reactions of Biocatalytically Derived Chiral Aldehydes: Application to the Synthesis of Bicyclic Pyrrolidines and of Antiviral Agent Telaprevir", *J. Org. Chem.*, **2015,** 80, 3411-3428.