

UNIVERSITÀ DEGLI STUDI DI MILANO

selezione pubblica per n. 1 posto di Ricercatore a tempo determinato ai sensi dell'art.24, comma 3, lettera a) della Legge 240/2010 per il settore concorsuale 03/C1 - Chimica Organica, settore scientifico-disciplinare CHIM/06 - Chimica Organica presso il Dipartimento di Chimica, (avviso bando pubblicato sulla G.U. n. 50 del 30/06/2020) Codice concorso 4388.

[Fabio Morana] CURRICULUM VITAE

COGNOME	MORANA
NOME	FABIO
DATA DI NASCITA	[11/05/1986]

Work experience

Dates	09/2018 - to date
Occupation or position held	R&D Group Leader - Generics & Custom Synthesis
Dates	02/2017 - 08/2018
Occupation or position held	R&D Scientist (Project Leader) - Generics & Custom Synthesis Procos S.p.A. Cameri (NO), Italy
	Design of novel synthetic routes (patentable or non-patent infringing) of APIs, new chemical entities (NCEs) and advanced intermediates, laboratory feasibility and scale-up optimization for R&D and industrial plants
Dates	06/2015 - 02/2017
Occupation or position held	API R&D Scientist - Asymmetric Organic Synthesis Chemessentia srl - Chemo Group Novara, Italy
	Design of novel synthetic routes (patentable or non-patent infringing) of APIs, laboratory feasibility
Dates	09/2014 - 06/2015
Occupation or position held	Post-doctoral Research Assistant "Activation Modes in Asymmetric Catalysis" Department of Organic Chemistry - Faculty of Chemistry and Pharmacy, University of Regensburg, Germany Supervisor: Prof. Dr. Ruth M. Gschwind
	Synthetic and mechanistic investigation of the most common activation modes in asymmetric organocatalysis by NMR spectroscopy
Dates	03/2013 - 09/2014
Occupation or position held	Post-doctoral Research Assistant "Novel Syntheses of Molecules with Pharmaceutical Activity"

	Department of Chemistry and Industrial Chemistry, University of Genova, Italy Supervisor: Prof. Dr. Renata Riva
	Novel asymmetric patentable synthesis of an API
Education	
Dates	01/2010 - 01/2013
Occupation or position held	Ph.D. in "Chemical Sciences and Technologies" Department of Chemistry and Industrial Chemistry, University of Genova, Italy Supervisor: Prof. Luca Banfi Thesis title: "Preparation of Optically Active Building Blocks <i>via</i> Asymmetric Organocatalysis and Their Application in Innovative Synthetic Strategies"
	The commission evaluated the thesis and the overall activity as EXCELLENT
	Asymmetric organocatalysis, isocyanide-based multicomponent reactions, one-pot cascade reactions, phase-transfer catalysis
Dates	06/2011 - 03/2012
Occupation or position held	Visiting Ph.D. student Department of Chemistry, Aarhus University, Denmark Supervisor: Prof. Karl Anker Jørgensen
	Asymmetric synthesis, organocatalysis, formal total synthesis, domino reactions
Dates	10/2007 - 10/2009
Title of qualification awarded	Master degree (2-years degree) in Chemistry (Organic and Biomolecular) Supervisors: Dr. Patrizia Gentili - Dr. Roberta Bernini Thesis title: "Chemoselective oxidation of catechins and epicatechins by the Laccase/mediator system: synthetic and mechanistic aspects"
	05/2009 1 month in the Department of Agro-Biology and Agro-Chemistry, "University of Tuscia", Viterbo, Italy
Principal subjects/occupational skills covered	<ul style="list-style-type: none"> • Organic synthesis • Bioorganic chemistry • Organic stereochemistry • Pharmaceutical chemistry • Spectroscopic techniques
Name and type of organisation providing education and training	"Sapienza" University of Rome
Level in national or international classification	110/110 cum laude
Dates	10/2004 - 07/2007
Title of qualification awarded	Bachelor degree (3-years degree) in Chemistry (Organic and Biomolecular) Supervisor: Prof. Armandodoriano Bianco Thesis title: "New polar chains for the synthesis of new water-soluble coronene and perilene derivatives as telomerase inhibitors"

Principal subjects/occupational skills covered

- General chemistry
- Organic chemistry
- Biochemistry
- Physics

Name and type of organisation providing education and training

“Sapienza” University of Rome

Level in national or international classification

110/110 cum laude

Dates

09/1999 - 07/2004

Title of qualification awarded

General Certificate of Education (Diploma di maturità)

Name and type of organisation providing education and training

Scientific High School “L.B. Alberti” (Naples)

Level in national or international classification

100/100

Personal skills and competences

Mother tongue(s)

Italian

Other language(s)

Self-assessment

European level (*)

English

French

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
Excellent	Excellent	Excellent	Excellent	Excellent
Basic	Good	Basic	Basic	Basic

Skills and competences

- Thinking outside the box
- Tenacity, clear motivation and focus on achieving results (problem solving)
- Ability of working with high workload and tight timelines
- Marked propensity to coordinate project teams
- Collaborative spirit and excellent relationship and communication skills
- High reliability, attention to details and timelines on assignments
- Capacity of autonomously planning work projects and delivery times (reports, proposals)
- Strong tendency to the interdisciplinary collaboration
- Public speaking
- Interacting with individuals from diverse backgrounds
- Team building
- Group management

Technical skills and competences

- NMR
- IR
- GC-MS
- GC (both achiral and chiral stationary phase for the separation of enantiomers)
- HPLC (both achiral and chiral stationary phase for the separation of enantiomers)
- UV spectroscopy
- Glove-box facilities
- Ionic exchange resins
- Polarimetry
- Flash chromatography

Computer skills and competences

- Microsoft Office Package (Word, Excel, Powerpoint, Publisher)
- Molecular drawing programs (ChemDraw)
- Reaxys (Beilstein)
- SciFinder
- Espacenet

Driving licence

European B driving licence

Additional informations

In addition to the list below 1 Patent Application as first inventor not yet publicly available

Scientific Publications

Original Publications on ISI Journals & Patent Applications

- 1) "Organocatalytic Asymmetric Synthesis of β -Aryl- β -isocyanoesters" F. Morana, A. Basso, M. Bella, R. Riva, L. Banfi, *Adv. Synth. Catal.*, 2012, 354 (11-12), 2199.
- 2) "The *Homo*-PADAM Protocol: Stereoselective and Operationally Simple Synthesis of α -Oxo- or α -Hydroxy- γ -acylaminoamides and Chromanes" F. Morana, A. Basso, R. Riva, V. Rocca, L. Banfi, *Chem. Eur. J.*, 2013, 19 (14), 4563.
- 3) "Organophosphorus Reagents in Organocatalysis: Synthesis of Optically Active α -Methylene- δ -lactones and δ -Lactams" A. Albrecht, F. Morana, A. Fraile, K. A. Jørgensen, *Chem. Eur. J.*, 2012, 18 (33), 10348.
- 4) "Asymmetric Synthesis of γ -Nitroesters by an Organocatalytic One-Pot Strategy" K. L. Jensen, P. H. Poulsen, B. S. Donslund, F. Morana, K. A. Jørgensen, *Org. Lett.*, 2012, 14 (6), 1516.
Highlighted by Synfacts, 2012, 8 (5), 561.
- 5) "Selective Access to Both Diastereoisomers in an Enantioselective Intramolecular Michael Reaction by Using a Single Chiral Organocatalyst and Application in the Formal Total Synthesis of (-)-Epibatidine" K. L. Jensen, C. F. Weise, G. Dickmeiss, F. Morana, R. L. Davis, K. A. Jørgensen, *Chem. Eur. J.* 2012, 18 (38), 11913.

- 6) "Chemoselective C-4 Aerobic Oxidation of Catechin Derivatives Catalyzed By the *Trametes villosa* Laccase/1-Hydroxybenzotriazole System: Synthetic and Mechanistic Aspects" R. Bernini, F. Crisante, P. Gentili, F. Morana, M. Pierini, M. Piras, *J. Org. Chem.*, 2011, 76 (3), 820.
- 7) "Unexpected Different Chemoselectivity in the Aerobic Oxidation of Methylated Planar Catechin and Bent Epicatechin Derivatives Catalyzed by the *Trametes villosa* Laccase/1-Hydroxybenzotriazole System" P. Gentili, R. Bernini, F. Crisante, S. Menta, F. Morana, M. Pierini, *RSC Adv.*, 2014, 4 (16), 8183.
- 8) "Remote-Stereocontrol in Dienamine Catalysis: Z-Dienamine Preferences and Electrophile-Catalyst Interaction Revealed by NMR and Computational Studies" A. Seegerer, J. Hioe, M. M. Hammer, F. Morana, P. J. W. Fuchs, R. M. Gschwind, *J. Am. Chem. Soc.*, 2016, 138 (31), 9864.
- 9) "Brønsted Acid Catalysis - Structural Preferences and Mobility in Imine/Phosphoric Acid Complexes" J. Greindl, J. Hioe, N. Sorgenfrei, F. Morana, R. M. Gschwind, *J. Am. Chem. Soc.*, 2016, 138 (49), 15965.
- 10) "NMR Spectroscopic Characterization of Charge Assisted Strong Hydrogen Bonds in Brønsted Acid Catalysis" N. Sorgenfrei, J. Hioe, J. Greindl, K. Rothermel, F. Morana, N. Lokesh, R. M. Gschwind, *J. Am. Chem. Soc.*, 2016, 138 (50), 16345.
- 11) "Enzymatically Promoted Release of Organic Compounds Linked to Magnetic Nanoparticles" C. Lambruschini, S. Villa, L. Banfi, F. Canepa, F. Morana, A. Relini, P. Riani, R. Riva, F. Silvetti, *Beilstein J. Nanotechnol.*, 2018, 986.
- 12) "Unprecedented Mechanism of an Organocatalytic Route to Conjugated Enynes with a Junction to Cyclic Nitronates" V. Streitferdt, M. H. Haindl, J. Hioe, F. Morana, P. Renzi, F. von Rekowski, A. Zimmermann, M. Nardi, K. Zeitler, R. M. Gschwind, *Eur. J. Org. Chem.*, 2019, 328.
Highlighted as Very Important Paper.
- 13) "Internal acidity scale and reactivity evaluation of chiral phosphoric acid with different 3,3'-substituents in Brønsted acid catalysis" K. Rothermel, M. Melikian, J. Hioe, J. Greindl, J. Gramüller, M. Žabka, N. Sorgenfrei, T. Hausler, F. Morana, R. M. Gschwind, *Chem. Sci.*, 2019, 10, 10025.
- 14) "Processes for the Preparation of Diastereomerically and Enantiomerically Enriched Oxazolines" G. Barreca, M. Rasparini, L. Carcone, F. Morana, WO2017081206A1.
- 15) "Racemic Beta-Aminosulfone Compounds" G. Barreca, G. Marras, F. Morana, WO2018184933A1.
- 16) "Process for the Preparation of the Crystalline Form III of Tipiracil Hydrochloride" F. Morana, S. Gobbato, L. Cozzi, J. Roletto, P. Paissoni, WO2019086292A1.
- 17) "Process for the Synthesis of 6-Chloromethyluracil" F. Morana, S. Gobbato, J. Roletto, P. Paissoni, WO2019166901A1.
- 18) "Process for the Asymmetric Synthesis of (R)-4-propyldihydrofuran-2-(3H)-one" F. Morana, J. Roletto, P. Paissoni, WO2019239341A1.
- 19) "Process for the Synthesis of Carglumic Acid" F. Morana, V. Grande, S. Gobbato, J. Roletto, P. Paissoni, WO2020075082A1.

All the papers are published in leading and high-quality peer-reviewed scientific journals (impact factors between 14.357 and 2.882 in 2017).

Communications at Conferences

Oral communications

“Organocatalytic asymmetric synthesis of β -aryl- β -isocyanoesters”, Giornate Italo Francesi della Chimica 2012, Marseille (France), 16-17/4/2012

Posters

“Organophosphorus Reagents in Organocatalysis: Synthesis of Optically Active α -Methylene- δ -lactones and δ -Lactams”, IASOC 2012, Ischia (Italy), 22-26/9/2012

Congresses attended

- CATAFLU.OR, Bologna, 24-25/3/2011

- Giornate Italo-Francesi della Chimica 2012, Marseille (France), 16-17/4/2012

- 27th European Colloquium on Heterocyclic Chemistry, Amsterdam (The Netherlands), 03-06/07/2016

- Scientific Update: Catalysis in the Fine Chemicals Industry, Lucerne (Switzerland), 14-15/05/2019

National and International Schools or Workshops

- XXV Scuola Estiva di Sintesi Organica “A.Corbella”, Gargnano (BS), 14-18/6/2010

- X Laboratorio di Metodologie Sintetiche in Chimica Farmaceutica, Siena, 13-17/2/2011

- Ischia Advanced School of Organic Synthesis (IASOC) 2012, Ischia (NA), 22-26/9/2012

- Ischia Advanced School of Organic Synthesis (IASOC) 2018, Naples (NA), 22-25/9/2018

Teaching Assistance

- “Organic Chemistry 2 with Laboratory” (Bachelor Degree in Chemistry and Chemical Technologies, 2010/2011)

- “Organic Chemistry with Laboratory” (Bachelor Degree in Biotechnologies, 2011/2012)

- “Organic Chemistry 2 with Laboratory” (Bachelor Degree in Chemistry and Chemical Technologies, 2012/2013)

I have several interests outside the working field: I played the lead electric guitar in a rock band and I studied piano for four years. I like to run, to travel and to spend my spare time with the people I love.

I agree to the processing of personal data according to the D. lgsl 196/2003

Data

13/07/2020

Luogo

Novara