

Curriculum Vitae

Personal information Razvan Cioc

Work experience

Nov 2023 - ongoing Pharmaceutical Quality Assessor

Medicines Evaluation Board CBG-MEB (College ter Beoordeling van Geneesmiddelen) Utrecht, NL

- assess Module 3 of the registration dossier for national and European authorization of human medicines

Nov 2022 - Nov 2023 Collaborating Expert Nitrosamines 0.2 FTE

Pharmaceutical Quality Office, European Medicines Agency (EMA), Amsterdam, NL

- provide scientific support on the topic of nitrosamine contaminations of pharmaceuticals
- literature survey, scientific writing, review of quality defect reports, etc.
- published manuscript: R.C. Cioc, et al., Formation of N-Nitrosamine Drug Substance Related Impurities in Medicines: A Regulatory Perspective on Risk Factors and Mitigation Strategies, OPRD, 2023

Oct 2022 - Sept 2023 Researcher Peptide Lab (0.8 FTE)

Interdivisional GMP Facility (IGFL), Leids Universitair Medisch Centrum, NL

- design, development and GMP production of fluorescent and radioactive tracers for molecular imaging
- peptide synthesis and purification, bioconjugation, protein labelling
- development and use of various analytical and purification tools (e.g. UPLC-MS, UV-VIS)
- scientific writing (synthesis and purification protocols, project updates, SoPs, IMPD, etc)

June 2019 – Aug 2022 Postdoctoral Researcher (with Prof. Pieter C. A. Bruijninx)

Utrecht Universiteit, NL

- development of innovative strategies to process sugar-derived furanics into drop-in chemicals or functional replacements for chemical commodities (e.g. polymers and additives)
- experimental and theoretical research, teaching, lab and people management, scientific dissemination
- development and use of various analytical tools, from GC to NMR (incl. for macromolecules)
- multiple collaborations with various industrial (TNO, Green Chemistry Campus) and academic partners

Oct. 2016 - Nov. 2018 Process Chemist PR&D

Alcami Corporation, Weert (now Symeres), NL

- R&D for the development of API (Active Pharmaceutical Ingredients) GMP manufacturing processes suitable for scale-up in the production facilities
- route selection, process optimization, screening, marker synthesis, range finding
- focus on quality, safety, sustainability, robustness and cost-effectiveness
- part of a multinational, interdisciplinary team (PR&D, QC, QA, Production, EHS, NBD)

Nov. 2012 - Sept. 2016 PhD student (promotor: Prof. dr. ir. Romano V. A. Orru; copromotor: Dr. Eelco Ruijter)

Vrije Universiteit Amsterdam, NL

- development of novel synthetic methodologies for the green synthesis of pharmaceutical intermediates and drug-like molecules
- multistep synthesis of interesting targets (natural products, bioactive compounds, drugs)
- intense collaborations with European academic and industrial partners in the CHEM21 consortium (e.g. GSK, Sanofi, Pfizer, Bayer; universities in UK, BE, DE, FR, AT, FI)

Education and training

2010 – 2012 Master of Science: Molecular Design, Synthesis and Catalysis

Faculty of Sciences, Vrije Universiteit Amsterdam and Universiteit van Amsterdam (The Netherlands)

2006 – 2010 Bachelor of Science: Chemical Engineering in Organic Chemistry

Faculty of Engineering in Foreign Languages, Politehnica University of Bucharest (Romania)

Additional information

Publications

Multicomponent Synthesis: Cohesive Integration of Green Chemistry Principles

R. C. Cioc, E. Ruijter, R. V. A. Orru, Green Chemistry in Drug Discovery 2022, 237-267

Targeting Valuable Chemical Commodities: Hydrazine - mediated Diels - Alder Aromatization of Biobased Furfurals

R. C. Cioc, M. Crockatt, J. C. van der Waal, P. C. A. Bruijninx, ChemSusChem 2022 15, e202201139

The Interplay between Kinetics and Thermodynamics in Furan Diels-Alder Chemistry for Sustainable Chemicals Production

R. C. Cioc, M. Crockatt, J. C. van der Waal, P. C. A. Bruijninx, Angew. Chem. Int. Ed. 2021 61, e202114720

Furoic Acid and Derivatives as Atypical Dienes in Diels-Alder Reactions

R. C. Cioc, T. J. Smak, M. Crockatt, J. C. van der Waal, P. C. A. Bruijninx, Green Chem. 2021, 23, 5503-5510.

Direct Diels-Alder reactions of furfural derivatives with maleimides

R. C. Cioc, M. Lutz, E. A. Pidko, M. Crockatt, J. C. van der Waal, P. C. A. Bruijninx, Green Chem. 2021, 23, 367-373.

Vanillic Acid and Methoxyhydroquinone Production from Guaiacyl Units and Related Aromatic Compounds Using Aspergillus Niger Cell Factories

R. J. M. Lubbers, A. Dilokpimol, P. A. Nousiainen, R. C. Cioc, J. Visser, P. C. A. Bruijninx, R. P. de Vries, *Microb. Cell Fact.* 2021, 20, 151.

Synthesis of Carbazoles by a Diverted Bischler-Napieralski Cascade Reaction
M. Faltracco, S. Ortega-Rosales, E. Janssen, R. C. Cioc, C. M. L. Vande Velde, E. Ruijter, *Org. Lett.* 2021, 23, 3100-3104.

Dynamic Trapping as a Selective Route to Renewable Phthalide from Biomass-Derived Furfuryl Alcohol
C. S. Lancefield, B. Fölker, R. C. Cioc, K. Stanciakova, R. E. Bulo, M. Lutz, M. Crockatt, P. C. A. Bruijninx, *Angew. Chem. Int. Ed.* 2020, 59, 23480-23484.

Stereoselective Synthesis of Functionalized Bicyclic Scaffolds by Passerini 3-Center-2-Component Reactions of Cyclic Ketoacids
R. C. Cioc, V. Estevez, D. J. van der Niet, C. M. L. Vande Velde, N. G. Turrini, M. Hall, K. Faber, E. Ruijter, R. V. A. Orru, *Eur. J. Org. Chem.* 2017, 9, 1262-1271.

Ugi 4-Center-3-Component Reaction as a Direct Approach to Racetams
R. C. Cioc, L. Schaepkens van Riepst, P. Schuckman, E. Ruijter, R. V. A. Orru, *Synthesis* 2017, 49, 1664-1674.

Biocatalytic Access to Nonracemic γ -Oxo Esters via Stereoselective Reduction Using Ene-Reductases
N. G. Turrini,* R. C. Cioc,* D. J. H. van der Niet, E. Ruijter, R. V. A. Orru, M. Hall, K. Faber, *Green Chem.* 2017, 19, 511-518.

Brønsted Acid-Catalyzed Cyanotritylation of Aldehydes by Trityl Isocyanide
R. C. Cioc, P. Schuckman, H. D. Preschel, T. Vlaar, E. Ruijter, R. V. A. Orru, *Org. Lett.* 2016, 18(15), 3562-3565.

Trityl Isocyanide as a Mechanistic Probe in Multicomponent Chemistry: Walking the Line between Ugi- and Strecker-type Reactions
R. C. Cioc, H. D. Preschel, G. van der Heijden, E. Ruijter, R. V. A. Orru, *Chem. Eur. J.* 2016, 22(23), 7837-7842.

Synthesis of Polycyclic Spiroindolines by Highly Diastereoselective Interrupted Ugi Cascade Reactions of 3-(2-isocyanoethyl)indoles
J. M. Saya, B. Oppelaar, R. C. Cioc, G. van der Heijden, C. M. L. Vande Velde, R. V. A. Orru, E. Ruijter, *Chem. Commun.* 2016, 52, 12482-12485.

One-pot Synthesis of N-substituted β -Amino Alcohols from Aldehydes and Isocyanides
R. C. Cioc, D. J. H. van der Niet, E. Janssen, E. Ruijter, R. V. A. Orru, *Chem. Eur. J.* 2015, 21(21), 7808-7813.

Asymmetric Synthesis of Tetracyclic Pyrroloindolines and Constrained Tryptamines by a Switchable Cascade Reaction
C. de Graaff, L. Bensch, S. J. Boersma, R. C. Cioc, M. J. van Lint, E. Janssen, N. J. Turner, R. V. A. Orru, E. Ruijter, *Angew. Chem. Int. Ed.* 2015, 54(47), 14133-14136.

Multicomponent Reactions: Advanced Tools for Sustainable Organic Synthesis
R. C. Cioc, E. Ruijter, R. V. A. Orru, *Green Chem.* 2014, 16, 2958-2975.

Sustainable Synthesis of Diverse Privileged Heterocycles by Palladium-Catalyzed Aerobic Oxidative Isocyanide Insertion
T. Vlaar, R. C. Cioc, P. Mampuy, B. U. W. Maes, R. V. A. Orru, E. Ruijter, *Angew. Chem. Int. Ed.* 2012, 51(52), 13058-13061.

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