

Dr Christelle JABLONSKI- LORIN

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PROFESSIONAL EXPERIENCE

September 2002 to 2025

Senior scientist and Lecturer at the University of Applied Sciences, FHNW, Institute of Chemistry and Bioanalytics, Muttenz.

-Research Scientist for Applied Research Projects in Synthesis, Nanotechnology and Chemical Engineering:

Collaborations in **Nanosciences** with BASF: synthesis of polymers of high refractive index (lenses), new colored nanoparticles for e-readers, development of inks of defined properties; with Print Color: development of novel safety tags against product piracy, VAN BAERLE: DoE and optimization of the synthesis of hydrophilic and hydrophobic silica nanoparticles, development of additives to improve chemical resistance and UV resistance in paints HEIQ: synthesis and evaluation of properties of manganese oxide and palladium silica nanoparticles, synthesis and analysis of polymers for textile coating, surface modifications and hydrophobic coating of graphene.

Synthesis of pharma intermediates for ROCHE (heterocycles, aromatic chemistry), MERCK (Cholesterol), MERZ (Metabolites characterization, enzymatic reactions) and chiral building blocks (FLUKA) obtained by biotransformations with yeasts.

Different **microreactor / flow chemistry systems** developed in collaborations with Ciba, Novartis, SynphaBase.

-Practical education in synthesis: multistep traditional synthesis (mg to g quantity), optimization and scale-up reactions, microwave chemistry, photochemistry.

- Practical education in chemical engineering techniques (unit operations: rectification, extractions, membrane filtration, crystallization and flow chemistry including in-line measurements)

-Lecturer: Biocatalysis, Enzymatic reactions, Drug metabolism / Basic Organic Chemistry and NMR interpretation for structures elucidation (1D, 2D experiments)-1st to 5th semesters Bachelor studies.

-Supervision of Bachelor and Masterthesis in collaboration with industrial partners.

10. 1999 – 09. 2002

Chemist in High Throughput Screening and Parallel Synthesis at Chemspeed Ltd (Augst)

- Custom synthesis, preparation and analysis of libraries in solution phase and solid support.
- Synthesis of building blocks libraries
- Automation and development of the Chemspeed synthesizers.
- Preparation of the tests for customers (including application notes, posters)
- Training and support to the customers in Europe on the Chemspeed automated systems.

04. 1998 – 09.1999

Post-doctorat funded by Rhône-Poulenc Rorer :

- Preparation of a library of substituted diketopiperazines on polymer support (100 compounds)
- Automated synthesis on the Nautilus 2400 robot synthesizer (Argonaut) and IRORI system.

**Imperial College of Science, Technology and Medicine in London
Supervision : Prof D. Craig and Prof A. Barrett**

EDUCATION

- 1997 :** Graduate student in the PhD thesis, obtained with the grade
« très honorable avec les félicitations du jury », University of Orléans
“Elaboration and evaluation in stereocontrolled synthesis of vinyl sulfides and vinyl sulfones derived from sugars. Novel approaches to oxa- and azacycles of biological interest.”
Supervision : Prof. Dr. P. Rollin
- 1994 :** D.E.A. Chimie et Physicochimie des Composés d'Intérêt Biologique,
University of Orléans - France
- 1993 :** Master of Science in Chemistry (Organic chemistry),
University of Orléans - France

LANGUAGES

Fluent in French and English, German (read, basic spoken language).

SOFTWARES and TECHNICAL SKILLS

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- Microsoft office, Accelrys, Chemdraw, ACD Labs, Stavex
 - Use of the Scifinder, ACD Chemoffice ultra, CyBy databases
 - Practice in standard analytical techniques : NMR, FTIR, gel permeation chromatography, LCMS, GC, IR on beads and nanoparticles, UV.
 - Familiar with various automated workstations

INTERESTS

Fitness, reading, motorbikes

PUBLICATIONS

C. LORIN, C. MAROT, V. GARDON & P. ROLLIN : Novel approach to the synthesis of sugar sulfones via trans-sulfonylation of a unique heteroaryl precursor, *Tetrahedron Lett.*, **1995**, 36, 4437-4438.

M.T. LAKIN, N. MOUHOUS-RIOU, C. LORIN, P. ROLLIN, J. KROON & S. PEREZ : Structural analysis of 6-S-(benzoxazol-2-yl)-6-deoxy-1,2:3,4-di-O-isopropylidene-6-thio- α -D-galactopyranose by means of X-ray diffraction, high resolution NMR spectroscopy and molecular modelling, *Carbohydr. Res.*, **1996**, 290, 125-136

S. CASSEL, P. CHAIMBAULT, M. LAFOSSE, C. LORIN & P. ROLLIN : Sugar-derived sulfoxides and their reactivity towards Pummerer rearrangement conditions, *Sulfur Lett.*, **1996**, 20, 63-70

M. MAVRATZOTIS, V. DOURTOGLOU, C. LORIN & P. ROLLIN : Glucosinolate chemistry. First synthesis of glucosinolates bearing an external thio-function, *Tetrahedron Lett.*, **1996**, 37, 5699-5700

J. MORAVCOVA, P. ROLLIN, C. LORIN, V. GARDON, J. CAPKOVA & J. MAZAC : Mechanism of regioselective thiofunctionalization of pentofuranoses, *J. Carbohydr. Chem.*, **1997**, 16, 113-127

P. H. BUIST, B. BEHROUZIAN, S. CASSEL, C. LORIN, P. ROLLIN, A. IMBERTY & S. PEREZ : Stereochemical analysis of D-galacto-sulfoxides using (S)- α -methoxyphenyl acetic acid, *Tetrahedron : Asymm.*, **1997**, 8, 1959-1961

J.-L. GRAS, X. FOURNIOUX, T. SOTO, C. LORIN & P. ROLLIN : Synthesis of carbohydrate formacetal dimers under non-acidic conditions, *J. Carbohydr. Chem.*, **1997**, 16, 1509-1514

L. BROCHARD, C. LORIN, N. SPIESS & P. ROLLIN, A novel reductive fragmentation reaction in thio-sugar chemistry, *Tetrahedron Lett.*, **1998**, 39, 4267-4270

A. IMBERTY, N. MOUHOUS-RIOU, P. ROLLIN, S. CASSEL, C. LORIN & S. PEREZ : Crystal and molecular structures of two aza-heterocyclic hybrids derived from 6-thio-D-galactopyranose, *J. Carbohydr. Chem.*, **1998**, 17, 923-936

C. LORIN & P. ROLLIN, Synthesis of sugar-derived alkyl sulfones using a versatile transsulfonylation process, *Synthesis*, **1998**, 1506-1510

D. GUEYRARD, C. LORIN, J. MORAVCOVA & P. ROLLIN, A new intramolecular migration in thiosugar chemistry : S - O transfer of a benzothiazol-2-yl group in saccharidic sulfones, *J. Carbohydr. Chem.*, **1999**, 18, 3, 317-331

C. JABLONSKI-LORIN, V. MELLILO, E. HUNGERBUEHLER, Stereoselective Bio-reduction to a Chiral Building Block on a Kilogram Scale, *Chimia*, **2003**, 57, 9, 574-576

C. LORIN, V. AUCAGNE, A. TATIBOUET & P. ROLLIN, Regioselective Michael-induced cyclisation of γ - and δ -hydroxy vinyl sulfides and vinyl dithiocarbamates, *Tetrahedron Letters*, **2005**, 46, 25, 4349-4352.

C. JABLONSKI-LORIN, M. NOLD, A. BODENMÜLLER, E. HUNGERBÜHLER, Versatile approaches to sugar amino acids building blocks, *Chimia*, **2007**, 5, 286-288.

ALLES, R.; PUCHKOV, M.; JABLONSKI, C.; SPEICH, B.; KEISER, J.; HUWYLER, J., Development of oxantel tablets for pediatric clinical studies, *Journal of Drug Delivery Science and Technology*, **2013**, 23(6), 623-625.

C. JABLONSKI, G. GRUNDLER, U. PIELES, S. STEBLER, R. OEHRLEIN AND Z. SZAMEL, Synthesis and electrophoretic properties of novel nanoparticles for colored electronic Ink and e-paper applications, *Chimia*, **2016**, 70, 5, 366-368.

A. DAS, K. CHOI, C. JABLONSKI, M. WASER, T. BÜHLER, J. KWON, M. HEIGHT, R. A. RASO, Functional Porous Graphene Membranes: from Superhydrophobic to Slippery, *Adv. Mater Interfaces*, **2025**, 12, 2400957, 1-10.

A. DAS, M. WASER, K. CHOI, C. JABLONSKI, A.H. OECHSLE, J. KWON, M. HEIGHT, T.A. JUNG, R.A. RASO, Observations on Spatial Specificity in the Modification of Porous Graphene Layers, *ChemSusChem*, **2025**, 000, e202501031.

PATENT

R. GÜLLER, J. SCHRÖER, C. LORIN, New method for carrying out a chemical reaction, WO 02/13969 A1

ORAL COMMUNICATIONS* AND POSTERS

C. LORIN, C. MAROT & P. ROLLIN : Stereocontrolled synthesis of oxa- and azacycles from sugar-derived vinyl sulfones, *7th Meeting on Stereochemistry*, 24-26 / 04 / 1995, Trest (République Tchèque)*.

J. MORAVCOVA, P. ROLLIN, C. LORIN, V. GARDON, J. MAZAC & J. CAPKOVA : Regioselective Mitsunobu thiofunctionalization of 1,2-isopropylidene- α -D-ribo- and xylofuranoses, *ibid*.

S. CASSEL, G. CATELANI, F. DE RENSIS, C. LORIN & P. ROLLIN : Valorisation non alimentaire du lactosérum. Synthèse régiosélective de dérivés du 6-thio-D-galactose : *XVIèmes Journées Méditerranéennes des Glucides*, 20-24 / 05 / 1996, L'Isle sur la Sorgue.

S. CASSEL, C. LORIN & P. ROLLIN : Réarrangement de Pummerer de sulfoxydes osidiques, *ibid*.

C. LORIN & P. ROLLIN : Acétogénines d'Annonacées. Approches synthétiques d'oxacycles chiraux à partir de vinyl sulfures osidiques, *ibid**.

C. LORIN & P. ROLLIN : Vinyl sulfures dérivés de sucres. Nouvelles approches régio- et stéréocontrôlées pour la synthèse de systèmes oxacycliques chiraux, *IXèmes Journées Franco-Espagnoles de Chimie Organique*, 02-07 / 06 / 1996, Aspet*.

S. CASSEL, G. CATELANI, F. DE RENSIS, C. LORIN & P. ROLLIN : Sintesi regioselettiva di derivati del 6-tio-D-galattosio e del 6'-tiolattosio, *TUMA 96*, 06-07 / 06 / 1996, L'Aquila (Italie).

C. LORIN & P. ROLLIN : Sugar-derived vinyl sulfides. Novel regio- and stereocontrolled synthetic approaches to plurichiral oxacyclic systems, *International Conference on Organic Synthesis (ICOS-11)*, 30 / 06-04 / 07 / 1996, Amsterdam (NL).

C. LORIN, P. ROLLIN, X. POISSON, S. MEUDAL, S. PILARD & W. LUIJTEN, Analyse structurale par spectrométrie de masse de sulfones osidiques, *XVI èmes Journées de Spectrométrie de Masse*, 17-19 / 09 / 1996, Orléans

C. LORIN & P. ROLLIN, Synthesis of chiral pyrrolidines. New approaches based on sugar-derived vinyl sulfides and vinyl sulfones, *ESOC-10*, 22-27 / 06 / 1997, Basel (Switzerland)

C. LORIN, Heterocyclic thioglyco-hybrids : versatile precursors for the synthesis of chiral oxa- and azacycles, *conference for the firm Hoffmann-La Roche*, 27 / 06 / 1997, Basel (Switzerland)*

C. LORIN & P. ROLLIN, Synthesis from thiosugars of chiral THF-THF or THF-THP bicyclic building blocks, *8th Bratislava Symposium on Saccharides*, 1-5 / 09 / 1997, Smolenice, (Slovaquie)*.

D. GUEYRARD, C. LORIN, J. MORAVCOVA & P. ROLLIN, A novel intramolecular migration in saccharidic sulfones : benzothiazol-2-yl group transfer through an ipso-substitution, *ibid.*

J. MORAVCOVA, R. BLAHOVA, P. STOIOVA, C. LORIN & P. ROLLIN, Synthetic studies of a pentofuranose with a fused pyrazolidine ring, *ibid.*

S. CASSEL, C. LORIN, M. RENARD, P. ROLLIN & H. VESCHAMBRE, Compared stereoselectivities in the chemical and biological oxidation of sugar-derived sulfides, *Biotrans' 97*, 22-26 / 09 / 1997, La Grande Motte, France.

C. LORIN, Aza-heterocycles / thiosugar hybrids: prospects in stereocontrolled synthesis, *conference for the firm Hoffmann-La Roche*, 05 / 12 / 1997, Basel (Switzerland)*

D. GUEYRARD, C. LORIN, J. MORAVCOVA, P. ROLLIN : Une nouvelle migration intramoléculaire chez les hétéroaryl sulfones osidiques, *5^{ème} Journée Jeunes Chercheurs*, 16 / 01 / 1998, Paris

J. MORAVCOVA, R. BLAHOVA, P. STOIOVA, C. LORIN, P. ROLLIN, E. VANGREVELINGHE, L. MORIN-ALLORY : Stereostructural investigation of sugar-derived pyrazolidines by NMR and molecular modelling calculations, *8th Meeting on Stereochemistry*, 19-22 / 04 / 1998, Teplà (République Tchèque).

C. LORIN, O. INTES, P. ROLLIN : Chiral vinyl « thiocarbonates » as unexpected Michael acceptors in a ring closure process, *18th International Symposium on the Organic Chemistry of Sulfur (ISOCS-18)*, 13-18 / 07 / 1998

V. AUCAGNE, C. LORIN, A. TATIBOUET, P. ROLLIN : Thiochimie des sucres – cyclisations de vinylsulfures osidiques, *XIIIe journées de la Chimie et de la Biochimie des Glucides*, 28-05 / 01-06-2000, Ambleteuse, France

C. LORIN, R. GULLER, C. MUNSCH, J. SCHROER, Parallel three step solution synthesis of pharmaceutical active compounds, *Combinatorial Chemistry 2000*, 11-14/07/2000, London

C. LORIN, Parallel synthesis and traditional chemistry in lead optimization, *Combinatorial Chemistry 2000*, 11-14/07/2000, Imperial College of London, UK*

C. LORIN, Validity of experiments on down-scaled equipment combining high throughput experiments (HTE) and design of experiment (DoE) to accelerate process development, *Optimising organic reactions and processes*, 17-19/06/02, Hotel Royal Christiana, Oslo, Norway*

C. JABLONSKI-LORIN, Validity of Experimental Results from Catalyst Screening and Yeast-Catalysed Biotransformation on Down-Scaled Equipment for Parallel Synthesis, *The 3rd conference for Parallel Solution and Solid Phase Chemistry*, 16-17/01/03, Hilton Basel, Basel, Switzerland*

C. JABLONSKI-LORIN, A Few Examples of Applications in Bioorganic and Organic Chemistry Performed on the Syncore Workstation, *Büchi's Synthese- und Chromatographie-Seminar*, 08/06/04, Kongresszentrum Basel, Switzerland*

C. JABLONSKI-LORIN, Biosynthesis and Characterisation of N-hydroxy compounds phase II metabolites using UDP-glucuronyltransferases, Olten Meeting organised by Swiss Biotechnet, 15/11/06, Hotel Arte Olten*

C. JABLONSKI, C. SIEBENHAAR, M. WASER, M. LIEBETANZ, S. GRABER, E. CONSTABLE, U. PIELES, G. GRUNDLER, M. HEIGHT, Flame Spray Pyrolysis for the Preparation of Manganese Oxide Nanocomposites, SCG, PolyColl 2011, 29.04.11, Geneva

C. JABLONSKI, C. SIEBENHAAR, M. WASER, M. LIEBETANZ, S. GRABER, E. CONSTABLE, U. PIELES, G. GRUNDLER, M. HEIGHT, Manganese Oxide Hybrid Nanocomposites Used as Mild Oxidant and Recyclable Catalyst, SCG Fall Meeting, 13.09.12, ETH-Zürich

C. JABLONSKI, S. STEBLER, G. GRUNDLER, U. PIELES, R. OEHRLEIN AND Z. SZAMEL, Synthesis and mobility properties of new nanoparticles for colored e-readers, SNI Annual Meeting, 11-12/09/14, Lenzerheide, Switzerland

C. JABLONSKI, S. STEBLER, G. GRUNDLER, U. PIELES, R. OEHRLEIN AND Z. SZAMEL, Synthesis and electrophoretic properties of nanoparticles linked to dendrimer-dyes branched structures, SCG, Polycoll 2015, 03/07/15, Uni Fribourg, Adolphe Merkle Institute.

C. JABLONSKI, S. STEBLER, G. GRUNDLER, U. PIELES, R. OEHRLEIN AND Z. SZAMEL, Synthesis and electrophoretic properties of nanoparticles linked to dendrimer-dyes branched structures, SCG Fall Meeting 2015, 04/09/15, EPFL Lausanne.

C. JABLONSKI, R. OEHRLEIN, Z. SZAMEL, Core Shell Nano-Particles for Colored e-Paper Applications, Innovation Landscape Nano, 09.09.15, FHNW Muttensz*

P. CIOMPI, C. JABLONSKI, W. RIEDL, Density Analysis for Novel In-line Control Systems, ECCE/ECAB 2025, engineering for a sustainable world: summit for clean technologies & brighter legacy 8-10.09.25, Lisbon, Portugal.

REVIEWER

Article: Novel adenosine A2AR ligands: A synthetic, functional and computational investigation of selected literature adenosine A2AR antagonists for extending into extracellular space.
Bioorganic and Medicinal Chemistry Letters, published in 2013