Jean-Baptiste Langlois, PhD
Novartis Pharma AG
Postfach
CH-4002. Basel
Switzerland
Office: (+41) 61 32 49 349
Email: jean-baptiste.langlois@novartis.com

PROFESSIONAL EXPERIENCE

Novartis Institutes for Biomedical Research, Basel, Switzerland (07/2014-*present*)
Principal Scientist and Project Team Leader in Medicinal Chemistry - Global Discovery Chemistry Group
Research focused on the discovery of small molecules modulating disease-related biological pathways
Keywords: Medicinal chemistry - Lead optimization & characterization - Pharmacokinetic & pharmacodynamic studies - Organic synthesis - Biomaterial-drug conjugates - Project team leadership - Patent & literature analyses.

University of Basel and **PIQUR Therapeutics AG**, Basel, Switzerland (09/2013-06/2014)
Research scientist working on CTI-supported projects
Research focused on the pre-clinical development of new dual PI3K/mTOR inhibitors
Keywords: Medicinal chemistry - Kinase inhibitors - Lead optimization - Drug discovery - Preclinical studies - Molecular modeling (Maestro software) - Patent & literature survey - Patent & publication writing.

Massachusetts Institute of Technology, Cambridge, U.S.A. (01/2012-07/2013)
SNSF Postdoctoral Fellow, Group of Professor Stephen L. Buchwald
Research focused on the discovery of small molecules with antifungal properties
Keywords: Medicinal chemistry - Multidisciplinary & team-oriented projects - Hit to lead programs - Antifungal agents - Structure-activity relationship studies - Cross-coupling chemistry - Heterocyclic compounds.

EDUCATION

University of Geneva, Geneva, Switzerland (09/2007-10/2011)
Ph.D. in Organic Chemistry, Group of Professor Alexandre Alexakis
Research focused on the development of new methodologies to access valuable chiral building blocks
Keywords: Organometallic chemistry - Asymmetric catalysis - Allylic substitution - Copper-based catalysts - Reaction optimization - Mechanistic investigation - Computational study (DFT calculations) - Scientific communication (written and oral).

University of Rouen, Rouen, France (09/2005-07/2007)
Master Degree in Organic and Bioorganic Chemistry
Six-month internship at **MerckSerono S.A.**, Geneva, Switzerland
Research focused on the preparation of deuterated analogs of a clinical candidate for DMPK studies
Keywords: Multistep syntheses - Advanced purification methods (preparative HPLC) - Isotope labeling - Preclinical studies.

University of Rouen, Rouen, France (09/2004-07/2005)
Bachelor Degree in Chemistry
Five-month internship at the I.R.C.O.F., Group of Professor Pierre-Yves Renard
Research focused on the synthesis of new luminescent probes
Keywords: Multigram scale syntheses - Development of a library of potential probes.

PUBLICATIONS

1. N. Hughes, P. Erbel, F. Bornancin, C. Wiesmann, N. Schiering, F. Villard, A. Decock, B. Rubi, S. Melkko, C. Spanka, N. Buschmann, C. Pissot-Soldermann, O. Simic, R. Beerli, M. Sorge, M. Tintelnot-Blomley, K. Beltz, C. Régnier, J. Quancard, A. Schlapbach, J-B. Langlois*, M. Renatus*, "Stabilizing Inactive Conformations of MALT1 as an Effective Approach to Inhibit its Protease Activity", *Adv. Therap.* **2020**, *3*, 200078.

2. C. Borsari, D. Rageot, A. Dall'Asen, T. Bohnacker, A. Melone, A. M. Sele, E. Jackson, J-B. Langlois, F. Beaufils, P. Hebeisen, D. Fabbro, P. Hillmann, M. P. Wymann*, "A Conformational Restriction Strategy for the Identification of a Highly Selective Pyrimido-pyrrolo-oxazine mTOR Inhibitor", *J. Med. Chem.* **2019**, *62*, 8609-8630.

3. D. Rageot, T. Bohnacker, A. Melone, J-B. Langlois, C. Borsari, P. Hillmann, A. M. Sele, F. Beaufils, M. Zvelebil, P. Hebeisen, W. Loescher, J. Burke, D. Fabbro, M. P. Wymann*, "Discovery and preclinical characterization of 5-[4,6-Bis({3-oxa-8-azabicyclo[3.2.1]octan-8-yl})-1,3,5-triazin-2-yl]-4-(difluoromethyl)pyridin-2-amine (PQR620), a highly potent and selective mTORC1/2 inhibitor for cancer and neurological disorders", *J. Med. Chem.* **2018**, *61*, 10084-10105.

4. B. Vincent, J-B. Langlois, R. Srinivas, A. K. Lancaster, R. Scherz-Shouval, L. Whitesell, B. Tidor, S. L. Buchwald, S. Lindquist*, "A Fungal-Selective Cytochrome bc1 Inhibitor Impairs Virulence and Prevents the Evolution of Drug Resistance", *Cell. Chem. Bio.* **2016**, *23*, 978-991.

5. J-B. Langlois, D. Emery, J. Mareda*, A. Alexakis*, "Mechanistic identification and improvement of a direct enantioconvergent transformation in copper-catalyzed asymmetric allylic alkylation", *Chem. Sci.* **2012**, *3*, 1062-1069 (*This article has been highlighted in Synfacts*, **2012**, *8*, 630).

6. J-B. Langlois, A. Alexakis*, "Copper-catalyzed enantioselective allylic substitution" in "Transition Metal Catalyzed Enantioselective Allylic Substitution in Organic Synthesis", U. Kazmaier, Ed.; *Topics in Organometallic Chemistry*, *Vol. 38*, Springer: Berlin / Heidelberg, **2012**, p235-268.

7. A. Quintard, J-B. Langlois, D. Emery, J. Mareda, L. Guénée, A. Alexakis*, "Conformationally stabilized catalysts by fluorine insertion: tool for enantioselectivity improvement", *Chem. Eur. J.* **2011**, *17*, 13433-13437.

8. J-B. Langlois, A. Alexakis*, "Identification of a new valuable kinetic process in copper-catalyzed asymmetric allylic alkylation" *Angew. Chem. Int. Ed.* **2011**, *123*, 1917-1921 (*This article has been highlighted in Synfacts*, **2011**, *5*, 512).

9. N. Maindron, S. Poupart, M. Hamon, J-B. Langlois, N. Plé, L. Jean, A. Romieu*, P-Y. Renard*, "Synthesis and luminescence properties of new red-shifted absorption lanthanide(III) chelates suitable for peptide and protein labelling" *Org. Biomol. Chem.* **2011**, *9*, 2357-2370.

10. J-B. Langlois, A. Alexakis*, "Copper-catalyzed asymmetric allylic alkylation of racemic cyclic substrates: application of dynamic kinetic asymmetric transformation (DYKAT)" *Adv. Synth. Catal.* **2010**, *352*, 447-457.

11. J-B. Langlois, A. Alexakis*, "Dynamic kinetic asymmetric transformation in copper-catalyzed allylic alkylation" *Chem. Commun.* **2009**, 3868-3870 (*This article has been selected as a "hot paper"*).

12. D. Polet, X. Rathgeb, C. A. Falciola, J-B. Langlois, S. E. Hajjaji, A. Alexakis*, "Enantioselective iridium-catalyzed allylic arylation" *Chem. Eur. J.* **2009**, *15*, 1205-1216.

PATENTS

1. V. Cmiljanovic, P. Hebeisen, F. Beaufils, D. Rageot, A. Sele, M. Wymann, J-B. Langlois, *PCT Int. Appl.*, WO 2016075130 A1 20160519, 2016.

2. P. Hebeisen, F. Beaufils, J-B. Langlois, *PCT Int. Appl.*, WO 2015162084 A1 20151029, 2015.

3. J-B. Langlois, S. L. Buchwald, B. Vincent, L. Whitesell, S. Lindquist, W. Youngsaye, J. Pu, B. Munoz, S. Dandapani, "Thiohydantoin derivatives for treating a fungal or protozoan infection", *PCT Int. Appl.*, WO 2014062852 A2 20140424, 2014.

4. B. Vincent, L. Whitesell, S. L. Lindquist, W. Youngsaye, S. L. Buchwald, J-B. Langlois, P. P. Nag, A. Ting, B. J. Morgan, B. Munoz, S. Dandapani, J. Pu, B. Tidor, R. R. Srinivas, "Preparation of indazole derivatives as antifungal agents and uses thereof", *PCT Int. Appl.*, WO 2014047662 A2 20140327, 2014.

SELECTED ORAL PRESENTATIONS

1. Virtual workshop entitled "From Lab Scientist to Scientific Project Team Leader: Soft Skills Required to be Successful in Industry", organized by the Society for Women in Natural Sciences from ETH Zürich, July 22nd, **2020**.

2. Invited lecture entitled "Stabilizing Inactive Conformations of MALT1 as an Effective Strategy to Inhibit its Protease Activity", Swiss Snow Symposium, Saas-Fee (Switzerland), January 24th, **2020**.

3. Short communication entitled "Stabilizing Inactive Conformations of MALT1 as an Effective Strategy to Inhibit its Protease Activity", EFMC International Symposium on Advances in Synthetic and Medicinal Chemistry, Athens (Greece), September 3rd, **2019**.

LANGUAGES

French: mother language
English: fluent

REFERENCES

Professor Alexandre Alexakis
Department of Organic Chemistry
University of Geneva
Quai Ernest Ansermet, 30
CH-1211, Geneva 4
Switzerland
+41 22 379 6522
alexander.alexakis@unige.ch

Professor Stephen L. Buchwald
Department of Chemistry
Massachusetts Institute of Technology
77 Massachusetts Avenue
MA-02139, Cambridge
United States of America
+1 617 253 1885
sbuchwal@mit.edu