

**DAVID LACHKAR, PHD.**  
**LEAD SCIENTIST**

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**EDUCATION**

- 2011-2014**      **PhD** in Chemistry (CNRS, Paris-Saclay, France).
- 2009-2011**      **MSc** in Pharmaceutical Science (Paris Sud University, France).
- 2006-2009**      **BSc** in Organic synthesis and Medicinal Chemistry (Paris Sud University, France).
- 2005-2006**      **Academic Degree** of Science (Paris XII University, France).

**PROFESSIONAL EXPERIENCE**

**Since Jan 2019 : Process Development Scientist (Adama Agricultural solution, Israel)**

Optimization, process improvement and scale-up synthesis of new molecules for crops protection.  
Troubleshooting and manufacturing of herbicides and fungicides.  
Agrochemical industry, Pilot & Production.

**May 2017 - Dec 2018 : R&D Chemist (Salzman Group, Israel)**

Upscaling and production of Active Pharmaceutical Ingredients (API).  
Hands-on experience with chemical reactors (1L to 50L)  
Pharmaceutical industry, Drug discovery, R&D.

**Nov 2014 - Dec 2016 : Researcher Assistant (CNRS, BioCIS Lab, France).**

First biomimetic synthesis of indole alkaloids Voacalgine A and Bipleophylline.  
Synthesis of new organic compounds from a marine natural molecule, Ilimaquinone.  
Extraction of natural products, Medicinal Chemistry and Pharmacognosy.

**Sep 2011 - Nov 2014 : PhD Student (CNRS, ICSN Lab, France).**

Synthesis of hybrid materials for news applications in Catalysis.  
Functionalization of inorganic surfaces with various organic ligand to tune their catalytic properties.  
Organometallic Catalysis, Polypeptide Synthesis, Polyoxometalates Chemistry.

**COMPETENCES**

- **Management** : Leading R&D projects, managing and supervision of PhD Chemists or students, analytical and technical support to Pilot & Production, GMP works, 5 Batch Analysis, working with CROs and outsourcing companies, SOP writing, timelines and project schedule development, training and presentation skills.

- **Organic Synthesis** : Scale-up of active pharmaceutical ingredients and agrochemical product, drug development and optimization of various methodology, multi-step synthesis, medicinal chemistry and extraction of natural products, organometallic catalysis, peptide synthesis, supramolecular and polyoxometalates chemistry.

- **Analytic technique** : GMP/GLP environment, NMR, GC / LC-MS, semi preparative HPLC, IR, XRD.

- **Languages** : French (native speaker), English, Hebrew.

- **Computer skills** : SciFinder Chemical Abstract, Reaxys, Pack office, ChemDraw, NMRnotebook.

- **Other skills** : Design of experiments approach (DOE), use of chemical reactors, MW assisted reactions.

• **Publications :**

- Eur. JOC, 2018, 20-21, 2486. A ring-distortion strategy from marine natural product Ilimaquinone leads to quorum sensing modulators.
- Synthesis, 2018, 50 (21), 4229. Divergent oxidative coupling between indoles and 2,3-dihydroxybenzoic acid derivatives for the biomimetic synthesis of Voacalgine A and Bipleiophylline.
- Nat. Chem. 2017, 9, 793-798. Unified Biomimetic Assembly of Voacalgine A and Bipleiophylline via Divergent Oxidative Coupling.
- Chem. Eur. J. 2017, 23, 14454-1461. An unprecedented blue chromophore found in nature using a « Chemistry First » and molecular networking approach. Discovery of Dactylocyanines A-H.
- Chem. Eur. J. 2017, 23, 13323-13327. Elucidation of the conformation of Polyglycine Organo-Polyoxotungstates : Evidence for Zipper folding.
- Aust. J. Chem. 2017, 70 (6), 743. Ilimaquinone and 5-*epi*-Ilimaquinone : Beyond a Simple Diastereomeric Ratio, Biosynthetic Considerations from NMR-Based Analysis
- Angew. Chem. Int. Ed. 2016, 55, 5961-5965. Grafting of secondary diolamides onto  $[P_2W_{15}V_3O_{62}]^{9-}$  generates hybrid heteropoly acids.
- C. R. Chimie. 2016, 19, 113-116. Bifunctional Organocatalysis with Squaramide-Containing Dawson Organo-Polyoxotungstates.
- Chemistry of Organo-Hybrids, 2015. Chapitre II, Functionalized Graphenes, Wiley, New Jersey.
- Org. Lett. 2014, 16, 3860. Pd-containing Organopolyoxometalates derived from Dawson Polyoxometalate  $[P_2W_{15}V_3O_{62}]^{9-}$  : Lewis acidity and dual site catalysis.
- Chem. Eur. J. 2013, 19, 6753. Properties of a Tunable Multinuclear Nickel Polyoxotungstate Platform.
- Can. J. Chem. 2012, 90, 944. 2-(Selenocyanatomethyl)-2-propenol - A convenient synthon for ligation via the deselenative allylic rearrangement of allyl selenosulfides : preparation, functional group compatibility, and application.

• **Oral Communications :**

*Marine Natural Products as scaffold for generation of chemically diverse libraries for drug discovery.*

XV International Symposium on Marine Natural Products

(Cumbuco Beach, Brasil, 29 August - 2 September 2016).

*Ring-distortion strategy from natural products.*

VI International Symposium on Advances in Synthetic and Medicinal Chemistry

(Rehovot, 15-18 November 2015).