

Dalila Chouikhi
Ph.D. University of Strasbourg, France
Lecturer in Organic Chemistry

Lecturer in chemistry with 3 years' experience as a teaching assistant in General and Organic Chemistry

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Address: Al Kindi Street, Bin Mahmoud South, Doha, Qatar

Date of birth: 17/08/1987 (28 years old)

Education

2009 –2013 **Ph.D. degree in Organic/ Bioorganic Chemistry**, *Institute of Supramolecular Science and Engineering*, University of Strasbourg, France

- **University of Strasbourg:** ranking according to *Shanghai Academic Ranking of World Universities in Chemistry in 2014*: 1st in France, 3rd in Europe & 17th in the world.
- ***Institute of Supramolecular Science and Engineering (Institut de Science et d'Ingénierie Supramoléculaires)***: hosts very talented and internationally renowned scientists, among them two Nobel Prize laureates in Chemistry:
 - Professor **Jean-Marie Lehn** (Nobel prize in 1987)
 - Professor **Martin Karplus** (Nobel Prize in 2013).
- My Ph.D. Advisor, **Pr. Nicolas Winssinger** did a Ph.D. under the guidance of Professor **K. C. Nicolaou** and a NIH post-doctoral fellow with Professor **P.G. Schultz** at *The Scripps Research Institute*, La Jolla, California, USA.

2007-2009 **Master's degree in Bioorganic and Medicinal Chemistry**, Abou bekr Belkaid University, Tlemcen, Algeria. Received the **valedictorian prize**.

2004-2007 **Bachelor's degree in Chemistry**, Abou bekr Belkaid University, Tlemcen, Algeria. Received the **valedictorian prize**.

Teaching Experience

September 2013 to present

1- Experience as a teaching assistant (undergraduate courses taught in French and English)

- a. **General Organic Chemistry** (2nd year General Chemistry Bachelor's students): electronic structure and bonding, chemical drawing and nomenclature of organic compounds, stereochemistry, organic acids and bases, reactivity of different functional groups: alkanes, alkenes, alkynes, dienes, aromatic compounds, halogenoalkane, organometallic compounds, alcohols and phenols, amines.
- b. **General Chemistry** (1st year Science and Technology Bachelor's students)
- c. **Thermodynamics** (1st year Science and Technology Bachelor's students)
- d. **Crystallography- Solid State Chemistry** (3rd year General Chemistry Bachelor's students)

Theoretical courses: Recitation sections (50 students/section)

-Use of modern teaching methods that allows smooth communication with students through internet technology (emails & Facebook group). For more details, please check my two **Facebook Group** pages for the 1st year Bachelor's students (General Chemistry / Thermodynamics) on these links:

1/ <https://www.facebook.com/groups/Dalila.Chemistry/>

2/ <https://www.facebook.com/groups/1051613688196733/>

-Attend lectures; -prepare practice problems for the recitation sections; -evaluate student performance including grading exams, quizzes, assignments, and papers; -proctor quizzes and exams; -track and record course grades and class attendance; -tutoring and group tutoring by maintaining weekly hours to communicate with students as needed; -promote and support students through additional courses on voluntary basis; -cooperate and meet with the course instructor to discuss assignments and classroom issues.

Practical courses: Laboratory classes both in undergraduate and graduate levels (8 to 16 students/section)

-Help students develop the thinking skills and habits of a scientist; -promote safety in the laboratory; -give short overviews to help students making links between the class concepts and the necessary lab skills; -demonstrate key techniques or equipment operation and describe the location and handling of special materials; -handle laboratory instruments (NMR, LC/MS, IR, UV/Vis...) and data interpretation; -teach students to pay attention to details and be careful to record their observations and results; -help students to look for connections and to learn how to interpret and discuss their results; -prepare the reaction procedures and grade lab reports; -communicate with the laboratory technician to provide information about chemicals and material needed.

2- Experience as a lecturer: (graduate courses taught in English)

a. **Advanced Organic Chemistry** (1st year Organic Chemistry Master's students)

Introduction to reactions, reagents and mechanisms (solvents, thermodynamics, reaction diagrams, the Hammond postulate, electrophiles, nucleophiles, curly arrows, etc), radicals and photochemical reactions, nucleophilic substitution reactions (SN1, SN2, SNi), electrophilic substitution reactions, elimination reactions, addition reactions, chromatographic methods.

b. **Organometallic Chemistry** (1st year Organic Chemistry Master's students)

Study of the different organometallic compounds families: organolithium, Organocopper, Organozinc, organocadmium, organoaluminum, organotin, organopalladium, organonickel, organomercury, organorhodium, organoiron, organocobalt

c. **Combinatorial Chemistry** (2nd year Organic Chemistry Master's students)

Introduction and historical review, peptide chemistry, solid phase and liquid phase combinatorial synthesis, combinatorial synthesis techniques (oligonucleotides, oligopeptides, oligosaccharides, heterocycles library synthesis...), analytical methods in combinatorial chemistry, chemical encoding, deconvolution methods, bioactivity detection / high throughput screening.

✚ Mainly courses for graduate students(25 students/section), but I also replaced the principal instructor in some courses for undergraduate students (200 students/section)

-courses planning and preparation; - review on a regular basis program content and materials, updating when required; -extend, transform and apply knowledge acquired from research to teaching; -challenge thinking, foster debate and develop the ability of students to engage in critical discourse and rational thinking; -apply innovative and appropriate teaching techniques and material which create interest, understanding and enthusiasm amongst students; - Ensure that program design and delivery comply with the quality standards and regulations of the University; - participate in the program design of the Organic Chemistry Master of Tlemcen University.

Research Experience

September 2013 to present

Research Associate in Organic Chemistry, *Laboratoty of Catalysis and Organic Chemistry Synthesis* (LCSCO), Abou bekr Belkaid University, Tlemcen, Algeria

Research Topics:

- Peptide and polymer chemistry
- Removal of heavy metals from industrial wastewater using polymers

+ Supervision of Master's student and co-supervision of Ph.D. students

07-2014/09-2014 and 07-2015/09-2015

Visiting Professor, *Charles Sadron Institute*, French National Center for Scientific Research (CNRS), Strasbourg, France (2014 and 2015 summers)

03-2013/01-2014

Post-Doctoral Researcher, *Charles Sadron Institute*, French National Center for Scientific Research (CNRS), Strasbourg, France

- Project: "Effect of Macromolecular Crowding on Single Chain Polymer Chemistry"; Advisor: Pr. Jean-François Lutz

09-2009/01-2013

Ph.D. Researcher, *University of Strasbourg*, France

- Thesis: "Synthesis of Modified Peptide Nucleic Acids"; advisor: Pr. Nicolas Winsinger.

02-2009/06-2009

Master's Internship, *Abou bekr Belkaid University*, Tlemcen, Algeria.

- Thesis: "Phytochemical and biological study of a medicinal plant"; advisor: Pr. B. Tabti

Administrative Experience

- Regular participation to pedagogical departmental committees
- Member of the Chemistry Department Quality Assurance Cell: continuous improvement of the administrative and HA quality process. Training by Jean-Jacques BOUCHOT and Fabrice HENARD, two European experts.

Fellowships, Awards and Honors

- July 2009** Master's Degree **valedictorian prize**, Abou bekr Belkaid University, Tlemcen, Algeria
- March 2009** **1st prize** in the National Competition organized by the Algerian Ministry of Higher Education for the best students in chemistry and physics.
- July 2007** Bachelor's Degree **valedictorian prize**, Abou bekr Belkaid University, Tlemcen, Algeria
- March 2007** **1st prize** in the National Competition organized by the Algerian Ministry of Higher Education for the best students in chemistry and physics.
- 2009 - 2013** **PNE Fellowship**, Algerian Ministry of Higher Education & Scientific Research.

Publications, Posters and Conferences

- ✓ Gadiri, A.; Choukchou-Braham, E.; Bensmain, A.; Heddi, D.; **Chouikhi, D.** “Polyvinylpyrrolidone Modification of Bentonite and its Application to Copper Retention” communication presented at the 5th National Polymer Symposium (SNP-5), Université de Bejaia, Algeria, **December 2015**
- ✓ Gadiri, A.; Choukchou-Braham, E.; Bensmain, A.; Heddi, D.; **Chouikhi, D.** “Physico-Chemical Study of Copper Retention by Polyvinylpyrrolidone Modified Clay” Communication presented at the 5th international Congress edition: Water, Waste and Environment «The Millennium Challenge» (EDE5), Université Hassan I, Settat, Morocco, **November 2015**
- ✓ Conference presented at the Laboratory of Bioactive and Natural Substances- Université Abou Bekr Belkaid, Tlemcen, Algeria. Title “**Peptide synthesis**”, **February 2015.**
- ✓ Conference presented at the Science Faculty/Chemistry Department of Université Abou Bekr Belkaid, Tlemcen, Algeria. Title “**Preparation of Peptides and Peptide-like Structures Using Solid Phase Synthesis and Polymer Soluble Supports**”, **November 2014.**
- ✓ Amrane, M. I.; **Chouikhi, D.**; Badi, N.; Lutz, J-F. “Synthesis of Well-Defined Polystyrene Rink Amide Soluble Supports and Their Use in Peptide Synthesis” *Macromolecular Chemistry and Physics*. **2014**, 215, 1984–1990
- ✓ **Chouikhi, D.**; Ciobanu, M.; Zambaldo, C.; Duplan, V.; Barluenga, S.; Winssinger, N. “Expanding the scope of PNA-encoded synthesis (PES): Mtt-protected PNA fully orthogonal to Fmoc chemistry and a broad array of robust diversity generating reactions” *Chem. Eur. J.* **2012**, 18, 12698 – 12704
- ✓ **Chouikhi, D.**; Ciobanu, M.; Zambaldo, C.; Duplan, V.; Barluenga, S.; Winssinger, N. “Expanding the scope of PNA-encoded synthesis (PES): Mtt-protected PNA fully orthogonal to Fmoc chemistry and a broad array of robust diversity generating reactions” poster presented at the 13th Belgian Organic Synthesis Symposium (BOSS), Leuven, Belgium, **July 2012**
- ✓ **Chouikhi, D.**; Barluenga, S.; Winssinger, N. “Clickable Peptide Nucleic Acids (cPNA) with Tunable Affinity”, poster presented at the 12th Belgian Organic Synthesis Symposium (BOSS), Namur, Belgium, **July 2010**
- ✓ Participation to the Twelfth Tetrahedron Symposium. Challenges in Organic and Bioorganic Chemistry. 21-24th June **2011**, Sitges, Spain
- ✓ **Chouikhi, D.**; Barluenga, S.; Winssinger, N. “Clickable Peptide Nucleic Acids (cPNA) with Tunable Affinity” *Chem. Commun.* **2010**, 46, 5476-5478

Languages and IT skills

Languages

I can communicate and teach in any of the following languages:

- English: Fluent
- French: Fluent
- Arabic: Native speaker

IT Skills:

- Fully conversant with PC and Mac platforms
- Good Knowledge of the Office Pack (Microsoft Word, Excel, Outlook, Power Point)
- Expertise of all social media platforms (Facebook, Tweeter, etc)
- Other Professional tools: Adobe Photoshop, **ChemDraw**, **SciFinder**

Referees

Pr. Jean-François LUTZ

- CNRS Research Director/ Deputy Director of Charles Sadron Institute/ Head of the Precision Macromolecular Chemistry Group
- *Charles Sadron Institute*, French National Center for Scientific Research (CNRS), Strasbourg, France
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Pr. Chewki ZIANI-CHERIF

- Professor of Neurochemistry
- Laboratoty of Catalysis and Organic Chemistry Synthesis (LCSCO), Abou bekr Belkaid University, Tlemcen, Algeria
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Dr. Eng. Pascal G. PICHON

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Dr. Eng. Pierre MORIEUX

- Chemistry Field Application Scientist.
- *PerkinElmer Informatics.*
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