

**ASSEL AMINE**

## RESEARCH AREA

Chemistry: synthesis, Boron chemistry, Chemosensor, Fluorescent Probe, NMR, Catalysis, Chromatography, Spectroscopy, bioimaging, in vitro testing, Drug Design, Molecular docking, *In silico* analysis

## EDUCATION and INTERNSHIP

December 2023

**Phd organic chemistry (Thesis defense: 23 December 2023)**

Laboratory of Heterocyclic Chemistry, Natural Products and Reactivity (LR11ES39), Team: Medicinal Chemistry and Natural Products- Faculty of Science of Monastir /University of Monastir, Monastir, Tunisia,  
Thesis title: *Design, synthesis of 4-hydroxycoumarin derivatives for therapeutic and photophysical application*. Supervisor: Prof Hichem Ben Jannet.

January – June 2019

**Research Agent**

The Environmental Analysis and Processes Research Unit, Higher Institute of Applied Sciences and Technology Mahdia, Tunisia

December 2018

**Research Master degree in Organic chemistry**

Master research internship: Electrochemistry and Environment Laboratory (LEE), ENIS-SFAX

Sfax National Engineering School, Tunisia

Thesis title: *Comparative study, characterization and quality control of quality of Tunisian and European olive oils: Analytical and chemometric approach*. Supervisor:

Prof Bouaziz Mohamed

September 2013– June 2016

**Licence in chemistry (Bsc)**

Faculty of Science of Sfax, University of Sfax, Tunisia

Chemistry

## Research Internship

November 2022-March 2023

**Doctoral Erasmus Research Internship**

Photochemistry Group: Department of Chemical, Biological, Pharmaceutical and Environmental Sciences University of Messina, Messina, Italy

• **Design and synthesis of Boron-Coumarin complexes**

<b>September – December 2021</b>	<ul style="list-style-type: none"> <li>▪ <b>Photophysical testing and application</b> Supervision : Pr Sebastiano Campagna, Pr Fausto Punteriero</li> </ul> <p><b>Doctoral Research Internship (PHD)</b></p> <p>URCOM: ORGANIC AND MACROMOLECULAR CHEMISTRY RESEARCH UNIT, le Havre University, France</p> <ul style="list-style-type: none"> <li>▪ <b>Assessment of Ruthenium Catalysis in the Chemistry of N-Acyliminium's: Application to the Synthesis of Substances for Pharmaceutical Interest.</b> Supervision : Pr Othman Mohamed</li> </ul>
<b>June 2014 – to July 2014</b>	<p><b>Summer Internship</b></p> <p>Toxicology and Environment Laboratory , CAMUR Tunis, Tunisia</p> <ul style="list-style-type: none"> <li>▪ Optimization of an HPLC chromatographic method for detecting patulin in apple juice.</li> <li>▪ Determination of cholinesterases in organophosphate poisoning in biomarkers (snails); by visible UV spectrophotometer</li> </ul>

### Research Experience

<b>September 2020</b>	<p><b>Poster communication</b></p> <p>EFMC-YMCS Virtual Event 2020: Virtual 7th EFMC Young Medicinal Chemists' Symposium, Belgium</p> <ul style="list-style-type: none"> <li>▪ <b>IN SILICO ANALYSIS OF NEWLY SYNTHESIZED 4-HYDROXYCOUMARIN-CARBONITRILE DERIVATIVES AS POTENTIALS INHIBITORS OF ACETYLCHOLINESTERASE"</b></li> </ul>
<b>April 2023</b>	<p><b>Poster communication</b></p> <p>The 15<sup>o</sup> Encontro Nacional de Química Física - in Online, from 4<sup>th</sup> to 5<sup>th</sup> April 2023, Portugal</p> <ul style="list-style-type: none"> <li>▪ <b>Coumarin derived Schiff's base as a colorimetric probe for selective detection of Cu<sup>2+</sup> ions"</b></li> </ul>
<b>May 2023</b>	<p><b>Oral communication</b></p> <p>8th Organic Chemistry Conference and 4th Science &amp; Engineering of Polymeric materials, Tunisia</p> <ul style="list-style-type: none"> <li>▪ <b>Design and synthesis of novel sulfamate linked 4-hydroxycoumarin hybrids Biological and computational insights into the anti-<math>\alpha</math>-amylase potential</b></li> </ul>
<b>May 2023</b>	<p><b>Poster presentation</b></p> <p>Journée des doctorants, Monastir-Tunisia</p> <ul style="list-style-type: none"> <li>▪ <b>Development of Schiff base linked 4-hydroxycoumarin: chemosensor for colorimetric detection of metal ions</b></li> </ul> <p><b>Publications</b></p> <ul style="list-style-type: none"> <li>▪ A molecular chemodosimeter to probe "closed shell" ions in kidney cells (DOI: <a href="https://doi.org/10.1039/d3ob01408h">10.1039/d3ob01408h</a>) <b>Amine Assel</b>, Meagan M Stanley, Rashid Mia, Besma Boulila, Peter J Cragg, Iyanuoluwani Owolabie, Meredith Hetrick, Alex Flynt, Karl J Wallace, Hichem Ben Jannet</li> <li>▪ Design, Synthesis and biological evaluation of novel benzopyran derivatives as potential <math>\alpha</math>-amylase inhibitors: An Investigation by Experimental and</li> </ul>

Computational Studies ([10.1016/j.molstruc.2022.134227](https://doi.org/10.1016/j.molstruc.2022.134227)). Amel Hajlaoui, **Amine Assel**, Houda Lazrag, Jalloul Bouajila, Abdel Halim Harrath, Lamjed Mansour, Hichem Ben Jannet, Anis Romdhane.

- Synthesis of new sulfamate conjugates as potent anti alpha amylase agents: in vitro approach coupled with molecular docking, DFT calculation and cheminformatics prediction ([10.1016/j.molstruc.2022.134020](https://doi.org/10.1016/j.molstruc.2022.134020)) **Amine Assel**, Amel Hajlaoui; Houda Lazrag; Marwa Manachou; Anis Romdhane; Jamil Kraiem; Hichem Ben Jannet
- Glioblastoma-specific anticancer activity of newly synthesized 3,5-disubstituted isoxazole and 1,4-disubstituted triazole-linked tyrosol conjugates. Aissa I, Abdelkafi-Koubaa Z, Chouaïb K, Jalouli M, **Assel A**, Romdhane A, Harrath AH, Marrakchi N, Ben Jannet H. Bioorg Chem. 2021 Sep;114:105071. ([10.1016/j.bioorg.2021.105071](https://doi.org/10.1016/j.bioorg.2021.105071))

### Scientific Training

June 2014 – July 2014

Faculty of Medicine of Sfax, University of Sfax, Tunisia

- **Biostatistics with R language (chimométric)** – Pr Ahmed Rebai

6-7-8 september 2018

Higher Biotechnology Institute of Sfax, University of Sfax, Tunisia

- **Protein Modeling, Molecular Docking and Drug Design**-Pr Nabil Miled

November 2019

Palais des sciences de Monastir, université de Monastir, Tunisie

- **Molecular docking and drug design** –Pr Houcemedine OTHMAN

July 2020

Ramaiah Institute of Technology and Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Ramaiah University of Applied Sciences, Bengaluru, Karnataka, India (Online)

- **Docking, QSAR and Molecular Dynamics**
- **Docking of organometallic compound**

April 2023

Higher Biotechnology Institute of Monastir, University of Monastir, Tunisia

- **Molecular Docking and Drug Design**- Dr. Mabrouk Horchani

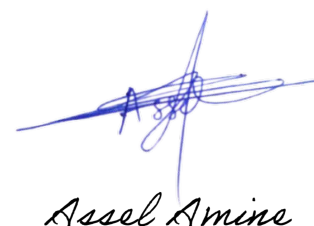
### PERSONAL Skills

#### Communication Skills

Good communication skills gained through my experience as a Tunisian scout and civil association, Leadership (scout leader)

#### Technical skills

- Good command of analytical instruments:
- **NMR**: Bruker, **HPLC**, **GC-FID** : Agilent, Waters, spectrophotometry UV-Vis
- **Absorption atomic spectrum** (Spectrum SAA4000)
- **XLSTAT**, **R software** Ms office, CHEMDRAW, Mestrenova
- BIOVIA DSV, AUTODOCK, MOE, GROMACS, NAMD, VMD



Assel Amine