

Dr. Lekmine Sabrina

Date et lieu de Naissance :

12-11-1994 à Oum El Bouaghi
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UNIVERSITÉ:

Université Abbas Laghrour-Khenchela-

GRADE

Maître de conférence B

FACULTÉ

Sciences de la nature et de la vie

DÉPARTEMENT

Biologie Moléculaire et Cellulaire

LANGUAGE

Arabe- Anglais- Français

EDUCATION

Baccalauréat 2013

Sciences de la nature et de la vie

Licence 2016

Sciences Biologiques

Spécialité : Biochimie Appliquée

Université : Larbi ben m'hidi.oum el bouaghi

Master 2018

Sciences Biologiques

Spécialité : Biochimie Appliquée

Thème : L'effet des saponines extraites d'une plante fourragère *Astragalus gombiformis* sur les protozoaires ruminal

Directeur de mémoire: Pr Arhab Rabah

Université: Larbi ben m'hidi.Oum El Bouaghi

Doctorat 2021

Sciences Biologiques

Spécialité: Biochimie Appliquée

Thème: Phytochemical characterization and biological activities of plant extracts.

Directeur de Thèse: Pr. Boussekine Samira

Université: Echahid Cheikh Larbi Tebessi- Tebessa

EXPERTISE

- Bio-informatique
- Génie génétique
- Biologie moléculaire,
- Biotechnologie
- Biochimie structurale et appliquée.
- L'enzymologie
- Les molécules bioactives d'origine eucaryotique.

PROJETS DE RECHERCHE

Projet PRFU:

Evaluation de l'effet antidiabétique cardioprotecteur et anticancéreux des plantes médicinales.

Directeur de projet : Pr. Boussekine Samira

Code projet : D01N01UN120120200001

AFFILIATION AU LABORATOIRE

Laboratoire: Biotechnologie, Eau, Environnement et Santé.

Faculté: Natural and Life Sciences

Université: Abbes Laghrour-Khenchela

Directeur de Laboratoire: Pr. Kenza Kadi

COMPÉTENCES

- Polymerase Chain Reaction
- DNA Gel Electrophoresis
- Polyacrylamide Gel Electrophoresis
- SDS page
- Chimie Médicinale et Pharmaceutique
- Chimie Organique
- Chimie des Produits Naturels
- Phytochimie
- Extraction
- Activités Antioxydantes
- Essai de piégeage des radicaux libres DPPH
- Essai de piégeage des radicaux cationiques ABTS
- Test de capacité antioxydante de réduction du cuivre (CUPRAC)
- Essai de piégeage des radicaux GOR
- Activité de blanchiment de la β -carotène
- Activités Antidiabétiques
- Essai d'inhibition de l' α -amylase
- Essai d'inhibition de l' α -glucosidase
- Activités Anti-Alzheimer
- Activité Anti-tyrosinase
- Essai d'inhibition de la tyrosinase
- Activité Inhibitrice de l'Uréase
- Activité Anti-inflammatoire
- Activité Photoprotectrice
- Effet Cytotoxique
- Test de Létalité sur les Artémies (BST)
- Essai d'Inhibition de l'Hémolyse Oxidative (OxHLIA)
- Évaluation in vitro de l'Activité Antibactérienne
- Études in silico
- Docking Moléculaire
- network pharmacology
- ADMET
- Simulation
- molecular dynamics
- Drug Design....

Publications et activités scientifiques

Les articles scientifiques

- **Lekmine, S.;** Benslama, O.; Bensalah, B.; Touzout, N.; Moussa, H.; Tahraoui, H.; Ola, M.S.; Hafsa, H.; Zhang, J.; Amrane, A. Bioactive Phenolics of *Hyoscyamus Muticus* L. Subsp. *Falezlez*: A Molecular and Biochemical Approach to Antioxidant and Urease Inhibitory Activities. *Int J Mol Sci* 2025, 26, 370.
- **Lekmine, S.;** Benslama, O.; Ola, M.S.; Touzout, N.; Moussa, H.; Tahraoui, H.; Hafsa, H.; Zhang, J.; Amrane, A. Preliminary Data on *Silybum Marianum* Metabolites: Comprehensive Characterization, Antioxidant, Antidiabetic, Antimicrobial Activities, LC-MS/MS Profiling, and Predicted ADMET Analysis. *Metabolites* 2025, 15, 13.
- Djilali, K.; Maachi, R.; Danish, M.; **Lekmine, S.;** Hadjadj, M.; Ait Mesbah, Z.; Benslama, O.; Tahraoui, H.; Ola, M.S.; Ali, A. A Novel Mobile Phase for Green Chromatographic Determination of Haloperidol: Application to Commercial Pharmaceutical Products and Forced Degradation Studies. *Processes* 2025, 13, 260.
- **Lekmine, S.;** Benslama, O.; Kadi, K.; Brik, A.; Djefali, O.; Ounissi, M.; Slimani, M.; Ola, M.S.; Eldahshan, O.A.; Martín-García, A.I. Preliminary Investigation of *Astragalus Arpilobus* Subsp. *Hauarensis*: LC-MS/MS Chemical Profiling, In Vitro Evaluation of Antioxidant, Anti-Inflammatory Properties, Cytotoxicity, and In Silico Analysis against COX-2. *Antioxidants* 2024, 13, 654.
- Benslama, O.; **Lekmine, S.;** Moussa, H.; Tahraoui, H.; Ola, M.S.; Zhang, J.; Amrane, A. Silymarin as a Therapeutic Agent for Hepatocellular Carcinoma: A Multi-Approach Computational Study. *Metabolites* 2025, 15, 53.
- Moussa, H.; Hamid, S.; Mameri, A.; **Lekmine, S.;** Tahraoui, H.; Kebir, M.; Touzout, N.; Dahmoune, F.; Ola, M.S.; Zhang, J. From Green Chemistry to Healthy Environments: Silver Nanoparticles as a Dual Antioxidant and Antibacterial Agents for Advancing Biomedicine and Sustainable Wastewater Treatment. *Bioengineering* 2024, 11, 1205.
- **Lekmine, S.;** Benslama, O.; Tahraoui, H.; Ola, M.S.; Laouani, A.; Kadi, K.; Martín-García, A.I.; Ali, A. Anti-Cholinergic Effects of the Phenolic Extract from the *Astragalus Crenatus* Plant: A Computational and Network Pharmacology Study. *Pharmaceuticals* 2024, 17, doi:10.3390/ph17030348.

- Toumi, S.; **Lekmine, S.**; Touzout, N.; Moussa, H.; Elboughdiri, N.; Boudraa, R.; Benslama, O.; Kebir, M.; Danish, S.; Zhang, J. Harnessing Deep Learning for Real-Time Water Quality Assessment: A Sustainable Solution. *Water (Basel)* 2024, 16, 3380.
- Moussa, H.; Dahmoune, F.; Lekmine, S.; Mameri, A.; Tahraoui, H.; Hamid, S.; Benzitoune, N.; Moula, N.; Zhang, J.; Amrane, A. Optimization of Ultrasound-Assisted Extraction of Bioactive Compounds from *Carthamus Caeruleus* L. Rhizome: Integrating Central Composite Design, Gaussian Process Regression, and Multi-Objective Grey Wolf Optimization Approaches. *Process Biochemistry* 2024, 147, 476–488.
- **Lekmine, S.**; Benslama, O.; Kadi, K.; Ignacio Martín-García, A.; Shamsul Ola, M.; Abdullah Yilmaz, M.; Ali, A. Therapeutic Potential of Hyoscyamus Niger-Derived Compounds: Targeting Ovarian Cancer through Antioxidant Activity and EGFR Tyrosine Kinase Inhibition. *J King Saud Univ Sci* 2024, 36, 103103, doi:<https://doi.org/10.1016/j.jksus.2024.103103>.
- Harrat, N.; Kadi, K.; Gueboudji, Z.; Addad, D.; Hamli, S.; Dib, D.; Boukeria, S.; **Lekmine, S.**; Mekersi, N. Effect of Infiltration-Percolation Treatment of Olive Mill Wastewater on Cereal Seed Germination. *Water Air Soil Pollut* 2024, 235, 693.
- Gherdaoui, D.; Yahoum, M.M.; Toumi, S.; **Lekmine, S.**; Lefnaoui, S.; Benslama, O.; Bouallouche, R.; Tahraoui, H.; Ola, M.S.; Ali, A. Elucidating Chiral Resolution of Aromatic Amino Acids Using Glycopeptide Selectors: A Combined Molecular Docking and Chromatographic Study. *Int J Mol Sci* 2024, 25, 9120.
- **Lekmine, S.**; Bendjedid, S.; Benslama, O.; Martín-García, A.I.; Boussekine, S.; Kadi, K.; Akkal, S.; Nieto, G.; Sami, R.; Al-Mushhin, A.A.M. Ultrasound-Assisted Extraction, LC–MS/MS Analysis, Anticholinesterase, and Antioxidant Activities of Valuable Natural Metabolites from *Astragalus Armatus* Willd.: In Silico Molecular Docking and In Vitro Enzymatic Studies. *Antioxidants* 2022, 11, 2000.
- Djeghim, H.; Bellil, I.; Benslama, O.; **Lekmine, S.**; Temim, E.; Boufendi, H.; Postigo, I.; Sánchez, P.; Khelifi, D. Effects of Genetic Diversity on the Allergenicity of Peanut (*Arachis Hypogaea*) Proteins: Identification of the Hypoallergenic Accessions Using BALB/c Mice Model and in Silico Analysis of Ara h 3 Allergen Cross-Reactivity. *J Proteomics* 2024, 306, 105264.
- Smara, M.; Khalladi, R.; Moulai-Mostefa, N.; Madi, K.; Mansour, D.; **Lekmine, S.**; Benslama, O.; Tahraoui, H.; Zhang, J.; Amrane, A. Efficiency of Hydrogen Peroxide and Fenton Reagent for Polycyclic Aromatic Hydrocarbon Degradation in Contaminated Soil: Insights from Experimental and Predictive Modeling. *Processes* 2024, 12, 621.

- **Lekmine, S.**; Benslama, O.; Kadi, K.; Martín-García, A.I.; Yilmaz, M.A.; Akkal, S.; Boumegoura, A.; Alhomida, A.S.; Ola, M.S.; Ali, A. LC/MS-MS Analysis of Phenolic Compounds in Hyoscyamus Albus L. Extract: In Vitro Antidiabetic Activity, in Silico Molecular Docking, and in Vivo Investigation against STZ-Induced Diabetic Mice. *Pharmaceuticals* 2023, 16, 1015.
- Fahmy, N.M.; Fayez, S.; Zengin, G.; Selvi, S.; Uba, A.I.; Mollica, A.; Bouyahya, A.; Ponniya, S.K.M.; Nilofar; **Lekmine, S.** Chemical Exploration of Different Extracts from Phytolacca Americana Leaves and Their Potential Utilization for Global Health Problems: In Silico and Network Pharmacology Validation. *J Biomol Struct Dyn* 2024, 1–21.
- Triki, Z.; Fergani, Z.; **Lekmine, S.**; Tahraoui, H.; Amrane, A.; Zamouche, M.; Kebir, M.; Assadi, A.A.; Khezami, L.; Zhang, J. Numerical Modelling and Performance Evaluation of Vacuum Membrane Distillation for Energy-Efficient Seawater Desalination: Towards Energy-Efficient Solutions. *Water (Basel)* 2023, 15, 3612.
- Benslama, O.; **Lekmine, S.**; Mansouri, N. Phytochemical Constituents of Astragalus Monspensulanus and Integrative Analysis for Its Antioxidant, Photoprotective, and Antityrosinase Activities: Experimental and Computational Investigation. *Eur J Integr Med* 2023, 60, 102247.
- **Lekmine, S.**; Boussekine, S.; Akkal, S.; Martín-García, A.I.; Boumegoura, A.; Kadi, K.; Djeghim, H.; Mekersi, N.; Bendjedid, S.; Bensouici, C.; et al. Investigation of Photoprotective, Anti-Inflammatory, Antioxidant Capacities and LC–ESI–MS Phenolic Profile of Astragalus Gombiformis Pomel. *Foods* 2021, 10, doi:10.3390/foods10081937.
- Mekersi, N.; Addad, D.; Kadi, K.; Casini, S.; Hackenberger, D.K.; Boumaza, A.; **Lekmine, S.** Effects of Olive Mill Wastewater and Olive Mill Pomace on Soil Physicochemical Properties and Soil Polyphenols. *J Mater Cycles Waste Manag* 2023, 25, 1404–1416.
- Boussekine, S.; **Lekmine, S.**; Gasmi, S.; Benkhedir, A.; Saker, H.; Lidoughi, A. The PROTECTIVE EFFECT OF SELENIUM ON DIABETIC NEPHROPATHY IN WISTAR RATS. *Journal of microbiology, biotechnology and food sciences* 2022, 12, e5960–e5960.
- Mekersi, N.; Kadi, K.; Casini, S.; Addad, D.; Amari, A.; **Lekmine, S.** Evaluation of the Effects of Short-Term Amendment with Olive Mill Pomace on Some Soil Properties. *Soil Science Annual* 2022, 73, 1–6.
- **Lekmine, S.**; Boussekine, S.; Kadi, K.; Martín-García, A.I.; Kheddouma, A.; Nagaz, K.; Bensouici, C. A Comparative Study on Chemical Profile and Biological Activities of Aerial Parts (Stems, Flowers, Leaves, Pods and Seeds) of Astragalus Gombiformis. *Biocatal Agric Biotechnol* 2020, 27, doi:10.1016/j.bcab.2020.101668.

- Mekersi, N.; Kadi, K.; Casini, S.; Addad, D.; Bazri, K.E.; Marref, S.E.; **Lekmine, S.**; Amari, A. Effects of Single and Combined Olive Mill Wastewater and Olive Mill Pomace on the Growth, Reproduction, and Survival of Two Earthworm Species (Aporrectodea Trapezoides, Eisenia Fetida). Applied Soil Ecology 2021, 168, 104123.
- Kadi, K.; Mrah, R.; Hamli, S.; **Lekmine, S.**; Dib, D.; Addad, D.; Boukeria, S.; Gueboudji, Z.; Hafsaoui, I. Evaluation of the Anticoagulant Activity of Margins from Olives Extraction in the Khenchela Region. Journal of Fundamental and Applied Sciences 2020, 12, 634–649.

LISTE DES LIVRES

Lekmine Sabrina. Natural Desert Sources of Bioactive Compounds Broché – 26 octobre 2022. ISBN 9994983407