

Fatin M. Ali Elmagbari



Personal Information:

Marital status: Married

Date of Birth: 06/ 09/ 1981

Address:

Chemistry Department Science Faculty University of Benghazi.

Mobile No: 00218913934549

Email: Fatin.ELMagbari@uct.ac.za Fatin.ELMagbari@uob.edu.ly

General Information

My research focuses on develop better copper(II)-based anti-inflammatory drugs which can be administered orally, intravenously or transdermally. However, the preferred route of administration is through the skin, because percutaneous absorption offers one obvious advantage of being less painful and hence tolerable to the patient. Therefore, the rate of dermal absorption and bioavailability of the copper is important.

Recently, I have completed the experimental work on a joint project with *Department of Biological Sciences, University of Cape Town*. This involved measuring the migration of Li and Sr in plants and soil. In all >1000 samples were prepared and measured using Microwave Plasma-Atomic Emission Spectrometer (MP-AES). As well as, study the urinary risk factors for calcium oxalate urolithiasis by using Uv/vis spectroscopy.

Education:

Postdoctoral fellowship in Chemistry- University of Cape Town, 2016.

“Design of Copper Ligand Solution Complexes as Potential Anti-inflammatory Drugs for Rheumatoid Arthritis”

Doctor of Philosophy (PhD), 2015.

Thesis: *“Synthesis and Design of Ligand Copper Complexes as Anti-Inflammatory Drugs”*
University of Cape Town, Cape Town-South Africa.

Master of Science (M.Sc.), 2008.

Thesis: *"Salting in and Characterization of Chromium, Manganese and Nickel Picolinate"*
Benghazi University, Benghazi-Libya.

Bachelor of Science (B.Sc.), 2003.

Benghazi University, Benghazi- Libya.

Work Experience:

Assistant Professor

Chemistry Department Science Faculty University of Benghazi.

Lecturer 2019.

Department of Chemistry, Benghazi University, Libya.

Demonstrator 2004- 2008.

Chemistry Department, Benghazi University, Faculty of Science, Benghazi Libya.

Undergraduate level courses taught:

General Chemistry (Inorganic part).

Transition metal chemistry and Coordination chemistry (Electronic spectra).

Bioinorganic Chemistry.

Graduate Research Assistant (Co-supervisor)

Laa-iqa Rylands Hons 2014-2015

Supervisor: Professor Graham Jackson

Formation Constants for Glycinate-Nickel(II) Complexes.

Hana Bawa MS.C 2016-2019

Supervisor: Professor Graham Jackson

In vitro Studies of Dermal Absorbed Cu(II) based anti-inflammatory Drugs.

Amouna Ahmed MS.C 2016-2020

Supervisor: Professor Graham Jackson

The potential thermodynamic and kinetic roles of Hydroxycitric Acid as an inhibitor of urinary calcium oxalate kidney stone formation: theoretical modelling and *in vitro* crystallisation experiments.

Instrument

Potentiometric Titration.

Uv-Visible and Infrared Spectroscopy.

Microwave Plasma-Atomic Emission Spectrometer (MP-AES).

Biological Activity

Dermal absorption. 2013-2018

Chemistry Department, University of Cape Town

Supervisor: Professor Graham Jackson

Memberships in Professional Societies

Member of Libyan Chemical Society.

Member of South African Chemical Institute.

Award Jun 2014:

The best poster in International Conference on Pure and Applied Chemistry in Mauritius ICPAC 2014. http://sites.uom.ac.mu/icpac/images/best_posters.

Publications:

1- "**Salting in and Thermal Decomposition Kinetics of Chromium Picolinate Complex**", *Journal Science and its application* 2007. Garyounis University.

2- "**Synthesis, Salting in and Thermal Analysis of Mn(II) Picolinate Complex**" Chapter 17(196-206), **10th** International Chemistry Conference in Africa (10ICCA) 18-21/11/2007. Benghazi-Libya.

- 3- "**Thermal analysis study and Thermodynamical parameters of some picolinate Complexes**", *Mukhtar Journal for Science*.24 (70-81), 2009.
- 4- "**Physicochemical properties of Nickel Picolinate Complexes**", *Mukhtar Journal for Science*. 25 (177-189), 2010.
- 5- "**Preparation, Characterization and Thermodynamical Parameters of Some Picolinate Complexes**", *International Journal of Scientific Research*, 4(10),396–399, 2015.
- 6- "**Formation and Spectral Properties of Metal Ion Complexes of Tripeptides**" *Inorganica Chimica Acta* 453 (2016) 29–38. doi/10.1016/j.ica.2016.07.043
- 7- "**Solution equilibria and the X-ray structure of Cu(II) complexation with 3-amino-N-(pyridin-2-ylmethyl)propanamide, a pseudo-mimic of human serum albumin**" *Dalton Trans.*,45(2016), 17010-17019. DOI: 10.1039/c6dt02974d.
- 8- "**In vitro Studies of Dermally Absorbed Cu(II) Tripeptide Complexes as Potentia Anti-inflammatory Drugs**" *Polyhedron* 123 (2017) 23–32. doi/10.1016/j.poly.2016.10.048
- 9- "**Stability, Solution Structure and X-ray Crystallography of a Cu(II) Diamide Complex**" *Inorganica Chimica Acta* 498 (2019) 119132. doi.org/10.1016/j.ica.2019.119132
- 10- "**NHC-phosphane rhodium complexes and their reaction with oxygen**" *Polyhedron* 181 (2020) 114472. doi.org/10.1016/j.poly.2020.114472
- 11- "**Immobilised of 4-(Dimethylamino)benzaldehyde (DABD) as an optical reflectance sensor for copper(II)**" *Journal of Applied Chemistry (IOSR-JAC)* 12(10) (2019) 49-53. doi.org/10.9790/5736-1210014953
- 12- "**Preparation and Antibacterial Activity of Mixed-Ligand Complexes of Some Divalent Transition Metal Ions**" *The Libyan Conference on Chemistry and Its Applications, LCCA* 1:1(2019)41- 47.
- 13- "**Synthesis and Characterization of Cr(III) & Fe(II) Bis(2-Methoxybenzylidene)Biphenyl-4,4'-Diamine Complexes**" *Open Journal of Inorganic Chemistry*, 10 (2020) 06-14. doi.org/10.4236/ojic.2020.101002
- 14- "**Preparation and Spectral Studies of Cr(III), Fe(II) Chelates of Schiff bases Derived from Benzidine and 2-Nitrobenzaldehyde**" *Journal of Applied Chemistry (IOSR-JAC)* 13(3) (2020) 29-35. doi.org/10.9790/5736-1303022935

Conferences:

- 4th Symposium of Science (12/6/2007), Garyounis University, Benghazi-Libya.
- 10th International Chemistry Conference in Africa (10ICCA) 18-21/11/2007. Benghazi-Libya.
- 14th Arab Chemistry Conference and Exhibition (ACC-14) (2008), Tripoli -Libya

- 1st** International Conference in Pharmaceutical Sciences (22-24/12/2009), Omar Al-mukhtar University, Al-Baida-Libya.
- 41st** National Convention of the South African Chemical institute (SACI2013)(1-6th Dec 2013) in the East London.
- 41st** International Conference on Coordination Chemistry (ICCC-41) (21st -25th July 2014) in Singapore.
- International Conference on Pure and Applied Chemistry (ICPAC 2014) (23rd to 27th June 2014) in Mauritius.
- 13th** International Symposium on Applied Bioinorganic Chemistry (ISABC13) (12 - 15 June 2015) NUI Galway, Galway, Ireland.
- South African Chemical Institute (SACI-24th/10/2016) Young Chemists Symposium at Stellenbosch University.
- 2nd** Libyan Conference on Chemistry and Its Applications (LCCA 09-11 May 2017) Benghazi, Libya.
- Inorganic Conference 2017 and Carman Physical Chemistry Symposium of the South African Chemical Institute, Western Cape from 25th – 29th June 2017.
- World Congress on Plasma Science & Technology (WCPST 2018) hosted in Stockholm, Sweden during 04 – 07 November 2018.
- 24th** Egyptian Conference in Chemistry 11-14 December 2018, Marsa Alam, Egypt
- 3rd** Libyan Conference on Chemistry and Its Applications (LCCA 07-09 Sep2019) Benghazi, Libya.
- 3rd** Libyan Conference on Medical and Pharmaceutical Sciences (3rd LCMPS 2019) Tripoli, Libya.