

# Curriculum vitae

## Personal Information

**Name:** Aya Moneer Mostafa Mohamed

**Date of birth:** 15<sup>th</sup> of June 1991

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## Work experience

-**Associate lecturer** at Pharmaceutical Analytical Chemistry Department, Faculty of Pharmacy, Assiut University, Egypt from 22<sup>nd</sup> of January 2019 till present (on a study leave).

-**Lab and class demonstrator** at Pharmaceutical Analytical Chemistry Department, Faculty of Pharmacy, Assiut University, Egypt from 16<sup>th</sup> of December 2013 till 22<sup>nd</sup> of January 2019.

## Education

-**PhD** of Pharmaceutical analytical chemistry, under supervision of Professor James Barker, Dr. Stephen Wren, and Dr. Stephen Barton from the school of Life Sciences, Pharmacy, and Chemistry, faculty of Health, Science, Social Care, and Education, Kingston University, London, UK (ongoing since October 2020).

-**MSc** of Pharmaceutical Sciences: Pharmaceutical Analytical Chemistry, under supervision of Professor Fardous A. Mohamed, Dr. Marwa B. Ali, and Dr. Azza H. Rageh from Pharmaceutical Analytical Chemistry Department, Faculty of Pharmacy, Assiut University, from September 2014 to December 2018.

-**BSc** of Pharmacy and Pharmaceutical Sciences (Hons.) from Faculty of Pharmacy, Assiut University, from September 2008 to June 2013.

-Primary, preparatory, and high school graduate from Badr language school, Assiut city, Egypt.

## Credentials

**Mother tongue:** Arabic

**Foreign languages:** English fluently spoken and written, with ibtTOEFL score of 106 and IELTS (academic) score of 7.5.

**Communication skills:** Excellent communication skills gained through my work as demonstrator and assistant lecturer for 7 years at faculty of pharmacy, Assiut university and 2 years in Kingston university through work with peers and students.

**Organizational / managerial skills:** Very good organizing and managerial skills gained throughout the course of my career as I am responsible for many tasks including students reports and exams, students' lab management, and preparation of different chemical solutions and reports required for lab sessions.

**Job acquired skills:**

-Excellent handling and operation of different analytical equipment including High-performance liquid chromatography (HPLC), liquid chromatography-mass spectrometry (LC-MS), high-performance thin-layer chromatography (HPTLC), spectrophotometer, spectrofluorometer, differential scanning calorimetry (DSC), thermogravimetric analysis (TGA), dynamic light scattering (DLS), inductively coupled plasma atomic emission spectroscopy (ICP-OES), Fourier-transform infrared spectroscopy (FT-IR), porosimeter, conductometer and potentiometer.

-Excellent team management and teamwork among peers and students to achieve excellence in Analytical Chemistry projects and research.

-Excellent command of preparing different chemical solutions (buffers, standard solutions, and samples) in any concentration.

-Excellent ability of critical thinking and problem solving.

-Excellent ability to write scientific papers with 9 publications produced so far.

-Excellent ability to manage students' lab.

-Excellent ability to conduct information and explain difficult scientific information in simplified methods.

**Digital skills:**

-Excellent command of Microsoft word, Excel and PowerPoint.

-Excellent command of Origin pro software, Chemdraw, and Biorender.

-Very good ability to learn and develop new digital skills on any software.

**Additional information**

## Publications:

- 1- A.M. Mostafa, S.J. Barton, S.P. Wren, J. Barker, Development of Highly Sensitive Fluorescent Sensors for Separation-Free Detection and Quantitation Systems of Pepsin Enzyme Applying a Structure-Guided Approach, *Biosensors*, 14 (2024), 151. <https://doi.org/10.3390/bios14030151> .
- 2- K. Alhazzani, A. Z. Alanazi, A. M. Mostafa, J. Barker, M. M. El-Wakil A. H. Ali, Enhanced dual fluorescence quenching of red and blue emission carbon dots by copper dimethyldithiocarbamate for selective ratiometric detection of ziram in foodstuff and water samples, *Microchemical Journal*, 204 (2024), 11092.
- 3- K. Alhazzani, A. Z. Alanazi, A. M. Mostafa, J. Barker, M. M. El-Wakil A. H. Ali, Exploiting the pH-responsive behavior of zinc-dithizone complex for fluorometric urea sensing utilizing red-emission carbon dots, *Microchemical Journal*, 204 (2024), 111129.
- 4- K. Alhazzani, A. Z. Alanazi, A. M. Mostafa, J. Barker, M. M. El-Wakil A. H. Ali, Cobalt-modulated dual emission carbon dots for ratiometric fluorescent vancomycin detection, *RSC Adv.*, 2024, 14, 5609-5616.
- 5- A. Z. Alanazi, K. Alhazzani, A. M. Mostafa, J. Barker, M. M. El-Wakil A. H. Ali, Selective and reliable fluorometric quantitation of anti-cancer drug in real plasma samples using nitrogen-doped carbon dots after MMIPs solid phase microextraction: Monitoring methotrexate plasma level, *Journal of Pharm. & Biomed. Analysis*, 238 (2024), 115862.
- 6- K. Alhazzani, A. Z. Alanazi, A. M. Mostafa, J. Barker, M. M. El-Wakil A. H. Ali, Selective fluorescence turn-on detection of combination cisplatin–etoposide chemotherapy based on N-CDs/GSH-CuNCs nanoprobe, *RSC adv*, 14 (2024) 2380-2390.
- 7- K. Alhazzani, A. Z. Alanazi, A. M. Mostafa, J. Barker, M. M. El-Wakil A. H. Ali, A dual emissive silver-riboflavin complex and nitrogen-doped carbon dot nanoprobe for ratiometric detection of glutathione, *Microchemical J.* 199 (2024) 109996.
- 8- A. Z. Alanazi, K. Alhazzani, A. M. Mostafa, J. Barker, M. M. El-Wakil A. H. Ali, Highly selective fluorometric detection of streptokinase via fibrinolytic release of photoluminescent carbon dots integrated into fibrin clot network, *Microchemical J.* 197 (2024) 109800.
- 9- A. Z. Alanazi, K. Alhazzani, A. M. Mostafa, J. Barker, M. M. El-Wakil A. H. Ali, Monitoring antiviral active metabolite (N-hydroxycytidine) levels in plasma in presence of carboxylesterase-2 inhibitor verapamil

- using copper tetracyanoquinodimethane enhanced sensor, *Microchemical J.* 194 (2023) 109330.
- 10- K. Alhazzani, A. Z. Alanazi, A. M. Mostafa, J. Barker, M. M. El-Wakil A. H. Ali, A novel microextraction technique aided by air agitation using a natural hydrophobic deep eutectic solvent for the extraction of fluvastatin and empagliflozin from plasma samples: application to pharmacokinetic and drug–drug interaction study, *RSC adv*, 13 (2023) 31201-31212. DOI: 10.1039/D3RA05929D.
  - 11- K. Alhazzani, A. Z. Alanazi, A. M. Mostafa, J. Barker, M. M. El-Wakil A. H. Ali, A selective dual quenching sensor (EY/BG@CDs) for simultaneous monitoring of gentamicin and ketorolac levels in plasma: a highly efficient platform that caters to the needs of therapeutic drug monitoring, *RSC adv*, 13 (2023), 28940-28950. DOI: 10.1039/D3RA04894B.
  - 12- Poster: A.M. Mostafa, S.J. Barton, S.P. Wren, J. Barker, Comparing the performance of two different fluorescent dyes in the development of fluorescent molecularly imprinted polymers for pepsin enzyme, 3rd Global Conference on Polymers, Plastics and Composites (PPC), Barcelona, Spain, 11-12 September 2023 (Best poster award).
  - 13- A.M. Mostafa, S.J. Barton, S.P. Wren, J. Barker, Development of magnetic molecularly imprinted polymers for the extraction of salivary pepsin prior to analysis by a novel HPLC-SEC method, *Polymer (Guildf)*. 261 (2022). doi.org/10.1016/j.polymer.2022.125417.
  - 14- A.M. Mostafa, S.J. Barton, S.P. Wren, J. Barker, Review on molecularly imprinted polymers with a focus on their application to the analysis of protein biomarkers, *TrAC - Trends in Analytical Chemistry*. 144 (2021). doi.org/10.1016/j.trac.2021.116431.
  - 15- F.A. Mohamed, M.F.B. Ali, A.H. Rageh, A.M. Mostafa, Highly sensitive UHPLC – DAD method for simultaneous determination of two synergistically acting antiepileptic drugs; levetiracetam and lacosamide: Application to pharmaceutical tablets and human urine, *Biomed. Chromatogr.* (2019) 1–11. doi:10.1002/bmc.4554.
  - 16- F.A. Mohamed, M.F.B. Ali, A.H. Rageh, A.M. Mostafa, A highly sensitive HPTLC method for estimation of oxcarbazepine in two binary mixtures with two metabolically related antiepileptic drugs: Application to pharmaceutical and biological samples, *Microchem. J.* 146 (2019) 414–422. doi:10.1016/j.microc.2019.01.031.
  - 17- A.M. Mostafa, A.H. Rageh, M.F.B. Ali, F.A. Mohamed, Micelle and inclusion complex enhanced spectrofluorimetric methods for

- determination of Retigabine: Application in pharmaceutical and biological analysis, *Spectrochim. Acta - Part A Mol. Biomol. Spectrosc.* 207 (2019) 251–261. doi:10.1016/j.saa.2018.09.030.
- 18- Poster: F. A. Mohamed, M. F. B. Ali, A. H. Rageh and A. M. Mostafa, A Validated RP-UPLC Method for Determination of Levetiracetam and Lacosamide in Bulk and Spiked Human Urine, Assiut University 11<sup>th</sup> International Pharmaceutical Science Conference, Faculty of Pharmacy, Assiut, Egypt, April 11<sup>th</sup>& 12<sup>th</sup>, 2018.
- 19- F.A. Mohamed, M.F. Bakr, A.H. Rageh, A.M. Mostafa, The use of separation techniques in the analysis of some antiepileptic drugs: A critical review, *J. Liq. Chromatogr. Relat. Technol.* 39 (2017) 783–798. doi:10.1080/10826076.2016.1266654.

### **Certifications:**

- 1- Certificate of participation with a talk in the 10<sup>th</sup> Annual conference of AnalytiX-2024, held in Nagoya, Japan from 22<sup>nd</sup> to 24<sup>th</sup> of April, 2024.
- 2- Certificate of compliance with Kingston University data protection regulations (GDPR) from MetaCompliance on the 22<sup>nd</sup> of January 2024, online.
- 3- Certificate of attendance of The JPAG Pharmaceutical Analysis Research Awards and Careers Symposium held by the royal society of chemistry (RSC) and the joint pharmaceutical analysis group (JPAG) on the 21<sup>st</sup> of November 2023 in London, UK.
- 4- Certificate of attendance of The Chromatographic (Analytical) method life cycle 2023: From cradle to grave II, held by the royal society of chemistry (RSC) and the joint pharmaceutical analysis group (JPAG) on the 5<sup>th</sup> of October 2023 in London, UK.
- 5- Certificate of achievement of the best poster award for the poster entitled ‘Comparing the performance of two different fluorescent dyes in the development of fluorescent molecularly imprinted polymers for pepsin enzyme’ from the committee of the 3<sup>rd</sup> Global Conference on Polymers, Plastics and Composites (PPC-2023) held on Sep 11-12, 2023, Barcelona, Spain.
- 6- Certificate of attendance of the Live Seminar: An Introduction to LC-MS sponsored by Phenomenex on 8<sup>th</sup> of March 2023.
- 7- Certificate of achievement of the status of associate fellow of the higher education academy (AFHEA), awarded on 13<sup>th</sup> of July 2023.
- 8- Certificate of attendance of the Eleventh Assiut university International Pharmaceutical Sciences conference held in faculty of Pharmacy Assiut University on 11<sup>th</sup> and 12<sup>th</sup> of April 2018.

- 9- Certificate of attendance and participation in a workshop entitled " How to cope with the scientific literature" held on 15<sup>th</sup> and 16<sup>th</sup> of October 2014.
- 10- Certificate of attendance of the Ninth Assiut university International Pharmaceutical Sciences conference held in faculty of Pharmacy Assiut University on 12<sup>th</sup> and 13<sup>th</sup> of March 2014.
- 11- Certificate of attendance of Employability Skills Track held from 16<sup>th</sup> of January to 3<sup>rd</sup> of February 2013.
- 12- International Computer Driving License (ICDL) certificate on 5<sup>th</sup> of October 2009.

### **Courses:**

- 1- Cyber security course offered by Kingston University; certificate earned on December 5, 2023.
- 2- Research ethics in practice, certificate earned on January 15, 2021, as part of the Epigeum Online Course System.
- 3- Ethical research, certificate earned on January 15, 2021, as part of the Epigeum Online Course System.
- 4- Grammar and Punctuation by University of California Irvine, department of continuing education on Coursera. Certificate earned on Tuesday, December 3, 2019, 8:00 GMT.
- 5- Introduction to Psychology by University of Toronto on Coursera. Certificate earned on Monday, April 22, 2019, 1:19 PM GMT.

### **Workshops**

- 1- Writing concepts workshop for PhD Students offered by Kingston University online on 20<sup>th</sup> of January 2021.
- 2- Computer aided drug design using MOE software, from 7<sup>th</sup> to 11<sup>th</sup> of July 2012.

### **Memberships**

- Member of Royal Society of Chemistry, London since November 2020.

### **Awards**

Associate fellow of the academy of higher education (AFHEA) status earned on 13<sup>th</sup> of July 2023.

Newton Moshrafa full PhD scholarship offered by The Egyptian Ministry of Higher Education & Scientific Research and The British Council in September 2020.

### **Websites & links**

<https://scholar.google.com/citations?user=yy6OL5oAAAAJ&hl=en&oi=ao>

<https://www.linkedin.com/in/aya-m-m-mohamed-2a1b74151/>

## **Referees**

Names and contact details can be supplied upon request.