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### **Academic Qualifications**

M.Sc. in Quality Management, The Arab Academy for Science, Technology and Maritime Transport, Egypt, 2023

Ph.D. in Pharmaceutical Analytical Chemistry, Faculty of Pharmacy, Zagazig University, Egypt, 2018

M.Sc. in Pharmaceutical Chemistry, Faculty of Pharmacy, Zagazig University, Egypt., 2012

B.S. Pharmacy, Faculty of Pharmacy, Alexandria University, Egypt, 2004

### **Research Activities**

#### **- Publications**

## Article:

1. 2024 Leveraging Strengths of Green Chromatography in Developing Eco-friendly HPLC and HPTLC Methods for the Simultaneous Analysis of Lamivudine, Dolutegravir and Tenofovir alafenamide, *Microchemical Journal*, 207 (2024) 111645
2. 2024 Independent concentration extraction as a novel green approach resolving overlapped UV-Vis binary spectra and HPTLC-densitometric methods for concurrent determination of levocloperastine and chlorpheniramine, *BMC Chemistry* 18, (2024) 160.
3. 2024 Copper and Nitrogen-doped Carbon Quantum Dots as Green Nano-Probes for Fluorimetric Determination of Delafloxacin; Characterization and Applications, *Analytica Chimica Acta* (2024): 343175
4. 2024 Investigating Trace and Macro-element Composition of Herbal and Nutraceutical Dietary Supplements Marketed in Oman: Insights into Safety and Labeling, *Biological Trace Element Research*, (2024); DOI: 10.1007/s12011-024-04343-w
5. 2024 Design, Characterization and Biopharmaceutical Applications of Novel Green Boron-Carbon Quantum Dots for Quantification of Apalutamide; Greenness Evaluations, *Journal of Fluorescence*, (2024) <https://doi.org/10.1007/s10895-024-03802-w>.
6. 2024 The Promising Effect of Ascorbic Acid and Paracetamol as Anti-Biofilm and Anti-Virulence Agents against Resistant *Escherichia coli*, *Current Issues in Molecular Biology*, 46 (2024) 6805-6819.
7. 2024 Synthesis of organic solvent-free nitrogen-doped carbon quantum dots as unique green fluorimetric probes for analysis of abrocitinib in human plasma, *Luminescence*, 39 (2024) e4801.
8. 2024 *Polypogon monspeliensis* Hepatoprotective Attributes: UHPLC/ QTOF-MS/MS Metabolite Profiling and In Vitro and In Silico Studies, *Revista Brasileira de Farmacognosia*, (2024). <https://doi.org/10.1007/s43450-024-00554-3>
9. 2024 Verapamil-Loaded Cubosomes for Enhancing Intranasal Drug Delivery: Development, Characterization, Ex Vivo Permeation, and Brain Biodistribution Studies, *AAPS PharmSciTech*, 25 (2024) 95.
10. 2024 Tracking the Variations in Trace and Heavy Elements in Smoking Products Marketed in Oman and Egypt: Risk Assessment After Implementation of Constraining Protocols, *Biological Trace Element Research*, (2024). <https://doi.org/10.1007/s12011-024-04182-9>
11. 2024 A new green fluorimetric micelle complexation approach for reduction of the consumed solvent and quantification of avapritinib in biological fluids, *RSC advances*, 14

(2024) 10445-10451

12. 2024 Optimization and characterization of quercetin-loaded solid lipid nanoparticles for biomedical application in colorectal cancer, *Cancer Nanotechnology*, 15 (2024) 16
13. 2024 Design, Characterization, and Bioanalytical Applications of Green Terbium-and Nitrogen-Doped Carbon Quantum Dots as a Fluorescent Nanoprobe for Omadacycline Analysis, *Applied Spectroscopy*, 78 (2024) 329-339.
14. 2023 Novel green HPTLC and organic solvent-free micellar LC methods for the simultaneous determination of Ozenoxacin and benzoic acid; greenness assessment and applications, *Sustainable Chemistry and Pharmacy*, 36 (2023) 101277
15. 2023 Integrating micellar HPLC and green analytical chemistry tools in greenness assessment of five commonly Co-formulated antidiabetic drugs, *Sustainable Chemistry and Pharmacy*, 35 (2023) 101199.
16. 2023 Fast and Sensitive Bioanalytical Method for the Determination of Deucravacitinib in Human Plasma Using HPLC-MS/MS: Application and Greenness Evaluation, *Molecules*, 28 (2023) 5471.
17. 2023 Recent Advances in Chiral Selectors Immobilization and Chiral Mobile Phase Additives in Liquid Chromatographic Enantio-separations; A Review, *Journal of Chromatography A*, 1706 (2023) 464214.
18. 2023 Development of cysteine-doped MnO<sub>2</sub> quantum dots for spectrofluorimetric estimation of copper: applications in different matrices, *Analytical and Bioanalytical Chemistry*, 415 (2023) 5529-5538.
19. 2023 Preparation, Characterization and Application of a Novel Selective Mercury Electrode Using Natural Epoxide as a Green Anion Carrier, *Microchemical Journal*, 192 (2023) 108905
20. 2023 Studying molecular interactions via capillary electrophoresis and microscale thermophoresis: A review, *Electrophoresis*, 44 (2023) 1114-1142
21. 2023 Evaluation of Biofloc-Based Probiotic Isolates on Growth Performance and Physiological Responses in *Litopenaeus vannamei*, *Water* 2023, 15(16), 3010
22. 2023 Zinc(II) complexation strategy for ultra-sensitive fluorimetric estimation of molnupiravir: Applications and greenness evaluation, *Archiv der Pharmazie*, 356 (2023) 2300005
23. 2023 Toxic Elemental Impurities in Herbal Weight Loss Supplements; A Study Using ICP-OES Microwave-Assisted Digestion, *Toxics*, 11 (2023) 272
24. 2023 An Innovative Polymer-Based Electrochemical Sensor Encrusted with Tb

Nanoparticles for the Detection of Favipiravir: A Potential Antiviral Drug for the Treatment of COVID-19, *Biosensors*, 13 (2023) 243

25. 2023 Comparative Evaluation of Reversed Stationary Phase Geometries and Greener Systems on HPLC and UHPLC Using Five Recent Hepatitis-C Antivirals, *Journal of AOAC International*, 106 (2023) 580-587.

26. 2023 Green Chemometric Determination of Cefotaxime Sodium in the Presence of Its Degradation Impurities Using Different Multivariate Data Processing Tools; GAPI and AGREE Greenness Evaluation, *Molecules*, 28 (2023) 2187

27. 2023 Phytochemical Characterization of *Pterocephalus frutescens* with In-Silico Evaluation as Chemotherapeutic Medicine and Oral Pharmacokinetics Prediction Study, *Scientia Pharmaceutica*, 91 (2023) 7.

28. 2023 Determination of Sodium, Potassium, and Magnesium as Sulfate Salts in Oral Preparations Using Ion Chromatography and Conductivity Detection, *Separations*, 10 (2023) 99

29. 2023 Micellar Organic-solvent Free HPLC Design of Experiment for the Determination of Ertapenem and Meropenem; Assessment using GAPI, AGREE and Analytical Eco-scale models, *Microchemical Journal*, 185 (2023) 108262

30. 2022 Antitrypanosomal, Antitopoisomerase-I, and Cytotoxic Biological Evaluation of Some African Plants Belonging to Crassulaceae; Chemical Profiling of Extract Using UHPLC/QTOF-MS/MS, *Molecules*, 27 (2022) 8809

31. 2022 *Dinebra retroflexa* Herbal Phytotherapy: A Simulation Study Based on Bleomycin-Induced Pulmonary Fibrosis Retraction Potential in Swiss Albino Rats, *Medicina* 58 (2022) 1719

32. 2022 Design of an Experimental Study for the Simultaneous Determination of Cefepime, Piperacillin and Tazobactam Using Micellar Organic Solvent-Free HPLC, *Separations*, 9 (2022) 215

33. 2022 Microscale thermophoresis as a powerful growing analytical technique for the investigation of biomolecular interaction and the determination of binding parameters, *Methods and Applications in Fluorescence*, 10 (2022) 042001.

34. 2022 Bimodal Release Two-In-One Clonazepam Matrix Lozenge Tablets for Managing Anxiety-Related Disorders: Formulation, Optimization and In-Vivo Evaluation, *Scientia Pharmaceutica*, 90 (2022) 43.

35. 2022 Microscale Thermophoresis and Molecular Modelling to Explore the Chelating Drug Transportation in the Milk to Infant, *Molecules*, 27 (2022) 4604

36. 2022 Highly sensitive high-performance thin-layer chromatography method for the simultaneous determination of Molnupiravir, Favipiravir, and Ritonavir in pure forms and pharmaceutical formulations, *Journal of Separation Science*, 45 (2022) 2582-2590
37. 2022 Analytical Performance and Greenness Evaluation of Five Multi-Level Design Models Utilized for Impurity Profiling of Favipiravir, a Promising COVID-19 Antiviral Drug, *Molecules*, 27 (2022) 3658.
38. 2022 Fabrication of novel quantum dots for the estimation of COVID-19 antiviral drug using green chemistry: application to real human plasma, *RSC Advances*, 12 (2022) 16624-16631
39. 2022 Cost-effective, Green HPLC Determination of Losartan, Valsartan and their Nitrosodiethylamine Impurity; Application to Pharmaceutical Dosage-forms, *Royal Society Open Science*, 9 (2022) 220250.
40. 2022 Two Green Micellar HPLC and Mathematically Assisted UV Spectroscopic Methods for the Simultaneous Determination of Molnupiravir and Favipiravir as a Novel Combined COVID-19 Antiviral Regimen, *Molecules*, 27 (2022) 2330
41. 2022 Eco-Friendly and Sensitive HPLC and TLC Methods Validated for the Determination of Betahistine in the Presence of Its Process-Related Impurity, *Separations*, 9 (2022) 49
42. 2022 Validated Capillary Zone Electrophoresis Method for Impurity Profiling and Determination of Nill (3-OMe-Salophene), *Separations*, 9 (2022) 25
43. 2021 Green Stability Indicating Organic Solvent-Free HPLC Determination of Remdesivir in Substances and Pharmaceutical Dosage Forms, *Separations*, 8 (2021) 243
44. 2021 Determination of six drugs used for treatment of common cold by micellar liquid chromatography, *Analytical and Bioanalytical Chemistry*, 413 (2021) 5051-5056.
45. 2021 Erectile Dysfunction and Premature Ejaculation Drugs: Mode of Action and Analytical Methods Literature Review, *Journal of Drug Research and Development*, 7 (2021) 1-7
46. 2021 Overview on liquid chromatography and its greener chemistry application, *Annals of Advances in Chemistry*, 5 (2021) 04-12
47. 2021 Green Sensitive Spectrofluorimetric determination of Remdesvir, an FDA approved SARS-COV-2 Candidate Antiviral; Application in Pharmaceutical Dosage Forms and Spiked Human Plasma, *Analytical methods*, 13 (2021) 2596-2602
48. 2021 Overview on Hepatitis C, Treatment Strategy, Instrumental Analysis of Anti-HCV drugs, *Journal of Pharmacy and Drug Innovations*, 2 (2021), DOI: <http://doi.org/03.2020/1.1014>.

49. 2021 Mini review on Chromatography of Proteomics, *Global Journal of Chemical Sciences*, 1 (2021) 1-4.
50. 2021 Green micellar solvent-free HPLC and Spectrofluorimetric determination of Favipiravir as one of COVID-19 antiviral regimens, *Microchemical Journal*, 165 (2021) 106189.
51. 2021 Chemometry-assisted UV-spectrophotometric methods for the simultaneous determination of paritaprevir, ritonavir, and ombitasvir in their combined tablet dosage forms: A comparative study, *Journal of Chemometrics*, 35 (2021) e3339
52. 2021 Validation of HPLC-UV Multi-Residue Method for the Simultaneous Determination of Tetracycline, Oxytetracycline, Spiramycin and Neospiramycin in Raw Milk, *Food Analytical Methods*, 14 (2021) 36-43.
53. 2021 An eco-friendly micellar HPLC method for the simultaneous determination of triamtrene and xipamide in active pharmaceutical ingredients and marketed tablet dosage form, *Acta Chromatographica*, 33 (2021) 51-56.
54. 2020 Solvent-free mixed micellar mobile phases; an advanced green chemistry approach for reversed phase HPLC determination of some antihypertensive drugs, *Journal of Separation Science*, 43 (2020) 3224-3232.
55. 2020 Development and validation of eco-friendly micellar HPLC method for the simultaneous determination of hydrochlorothiazide and valsartan in bulk powder and pharmaceutical dosage forms, *Journal of Iranian Chemical Society*, 17 (2020) 1725-1730
56. 2020 Monolithic and core-shell particles stationary phase morphologies in protein analysis; Peptide mapping of erythropoietin hormone and determination of carbetocin, *Annales Pharmaceutique Francaises*, 78 (2020) 206-216.
57. 2020 Core-shell particles and monolithic columns; tools for simultaneous LC analysis of avanafil, sildenafil, apomorphine, trazodone, yohimbine, tramadol and dapoxetine in pharmaceutical dosage forms, counterfeit products and human plasma, *RSC advances* 10 (2020) 1379-1387.
58. 2019 Assessment and validation of green stability indicating RP-HPLC method for simultaneous determination of timolol and latanoprost in pharmaceutical dosage forms using eco-friendly chiral mobile phase, *Microchemical Journal*, 148 (2019) 21-26.
59. 2019 Development and validation of eco-friendly micellar-HPLC and HPTLC-densitometry methods for the simultaneous determination of paritaprevir, ritonavir and ombitasvir in pharmaceutical dosage forms, *Heliyon*, 5 (2019) e01518
60. 2018 Performance Comparison Between Monolithic, Core-Shell, and Totally Porous

Particulate Columns for Application in Greener and Faster Chromatography, Journal of AOAC International, 101 (2018) 1985-1992.

61. 2017 A rapid stability indicating LC-method for determination of Praziquantel in presence of its pharmacopoeial impurities, Arabian Journal of chemistry, 10 (2017) S35-S41

62. 2016 Simultaneous determination of the antihypertensives hydrochlorothiazide, losartan potassium, irbesartan and valsartan in bulk powders and pharmaceutical preparations by HPLC, Main Group Chemistry, 15 (2016) 335-346.

63. 2015 A novel stability indicating HPLC-method for simultaneous determination of atenolol and nifedipine in presence of atenolol pharmacopoeial impurities, Journal of Applied Pharmaceutical Science, 5 (2015) 017-025.

64. 2014 Chromatographic analysis of some drugs employed in erectile dysfunction therapy: Qualitative and quantitative studies using calixarene stationary phase, Journal of Separation Science 37 (2014) 2814-2824.

65. 2014 Comparison between Calixarene and conventional HPLC-phases concerning with separation of antihypertensive drugs, Journal of Liquid Chromatography & Related Technologies, 37 (2014) 1-25.

### **Consultancy Activities**

Pharmaceutical Quality Consultant, OTC Pharma, Sabaa Pharm, Egypt, 2019- 2021

Pharmaceutical Quality Control Manager, GYPTO Pharma, Egypt, 2020- 2021

### **Membership in Professional Bodies**

2023-Present: Society for Applied Spectroscopy, USA

2004-Present: Egyptian Pharmacy Syndicate

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