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Professional Experience

- September 2024 – Present **Assistant Professor of Pharmaceutics**, Faculty of Pharmacy and Drug Technology, Egyptian Chinese University, Cairo, Egypt.
- May 2021 – August 2024 **Assistant Professor of Pharmaceutics**, Faculty of Pharmacy, Cairo University, Cairo, Egypt.
- January 2013 – May 2021 **Teaching and Research Assistant of Pharmaceutics**, Faculty of Pharmacy, Cairo University, Cairo, Egypt.

Education

- July 2018 – March 2021 **Doctor of Philosophy in Pharmaceutical Sciences**, Faculty of Pharmacy, Cairo University, March 2021.
Thesis title “**A Pharmaceutical Study on Certain Nanocarrier Systems for Enhancing the Transdermal Drug Delivery**”
- July 2013 – April 2018 **Master of Pharmaceutical Sciences**, Faculty of Pharmacy, Cairo University, April 2018.
Thesis title “**A Pharmaceutical study on certain controlled release oral formulations of a phosphodiesterase-5 inhibitor**”
- Sep. 2007 – May 2012 **Bachelor of Pharmaceutical Sciences**, Faculty of Pharmacy, Cairo University, May 2012. Grade: Excellent with Honours – Fifth of Class.

Research Experience

- Formulation and evaluation of nanosuspension.
- Formulation and evaluation of different liposomal, invasomal, novasomal, terpesomal, and elastosomal dispersion systems.
- Formulation, characterization, and optimization of polymeric nanoparticles (lipomers and dendrimers).
- Formulation, characterization and optimization of solid lipid nanoparticles and nanostructured lipid carriers.
- In vitro and in vivo evaluation of the formulated systems via various routes of administration (oral, transdermal, and intranasal).

Publications

- 1- Ahmed S, Aziz DE, Sadek MA, **Tawfik MA**. Capped flexosomes for prominent anti-inflammatory activity: development, optimization, and ex vivo and in vivo assessments. Drug Deliv Transl Res. 2024 Sep;14(9):2474-2487. doi: 10.1007/s13346-024-01522-z.
- 2- Abdallah M, Mohamed AS, Tadros MI, El-Nabarawi M, **Tawfik MA**. Solusomes (novel Soluplus® enriched nano-vesicular carriers) for improving the oral bioavailability of

Candesartan Cilexetil. *Pharmaceutical Development and Technology*. **2023**. doi: 10.1080/10837450.2023.2289166

- 3- El Taweel MM, **Tawfik MA**, Soliman K, Khattab MS, Farag MM. Tailoring of topically applied curcumin loaded pro-novasomes for skin cancer treatment: In-vitro characterization, statistical optimization and histopathological assessment of subcutaneous Ehrlich carcinoma mice model. *Journal of Drug Delivery Science and Technology*. **2023**; 88: 104957. doi: 10.1016/j.jddst.2023.104957.
- 4- **Tawfik MA**, El Taweel MM, Farag MM, Shamsel-Din HA, Ibrahim AB. Sonophoresis-assisted transdermal delivery of antimigraine-loaded nanolipomers: Radio-tracking, histopathological assessment and in-vivo biodistribution study. *Int J Pharm*. **2023** Aug 20; 644:123338. doi: 10.1016/j.ijpharm.2023.123338. Epub ahead of print. PMID: 37607646.
- 5- Abd-Elal RMA, Essawy AM, Salem MA, Elsayed M, Khalil MG, Abdelhakeem E, Ali NA, **Tawfik MA**. Formulation, optimization, in-vivo biodistribution studies and histopathological safety assessment of duloxetine HCl-loaded ultra-elastic nanovesicles for antidepressant effect after intranasal and transdermal delivery. *Int J Pharm X*. **2023** Jun 24;6: 100194. doi: 10.1016/j.ijpx.2023.100194. PMID: 37434966; PMCID: PMC10331411.
- 6- **Tawfik MA**, Eltaweel MM, Fatouh AM, Shamsel-Din HA, Ibrahim AB. Brain targeting of zolmitriptan via transdermal terpesomes: statistical optimization and in vivo biodistribution study by ^{99m}Tc radiolabeling technique. *Drug Deliv. and Transl. Res*. **2023**. doi: 10.1007/s13346-023-01373-0
- 7- **Tawfik MA**, Mohamed MI, Tadros MI, El-Helaly SN. Low-Frequency Sonophoresis as an Active Approach to Potentiate the Transdermal Delivery of Agomelatine-Loaded Novasomes: Design, Optimization, and Pharmacokinetic Profiling in Rabbits. *AAPS PharmSciTech*. **2021**; 22(8):261. doi: 10.1208/s12249-021-02147-y.
- 8- **Tawfik MA**, Tadros MI, Mohamed MI, Nageeb El-Helaly S. Low-Frequency versus High-Frequency Ultrasound-Mediated Transdermal Delivery of Agomelatine-Loaded Invasomes: Development, Optimization and in-vivo Pharmacokinetic Assessment. *Int J Nanomedicine*. **2020**; 15:8893-8910. doi: 10.2147/IJN.S283911.
- 9- **Tawfik MA**, Tadros MI, Mohamed MI. Polyamidoamine (PAMAM) dendrimers as potential release modulators and oral bioavailability enhancers of vardenafil hydrochloride. *Pharmaceutical Development and Technology*. **2019**; 24(3):293-302. doi: 10.1080/10837450.2018.1472611.
- 10- **Tawfik MA**, Tadros MI, Mohamed MI. Lipomers (Lipid-polymer Hybrid Particles) of Vardenafil Hydrochloride: a Promising Dual Platform for Modifying the Drug Release Rate and Enhancing Its Oral Bioavailability. *AAPS PharmSciTech*. **2018**; 19:3650–3660. doi: 10.1208/s12249-018-1191-0.

Poster Presentations

Tawfik MA*, Tadros MI, Mohamed MI. Nanostructured lipid carrier for the enhancement of Vardenafil HCl oral bioavailability. 8th International scientific conference of Faculty of Pharmacy - Cairo University (Pharmacy in Egypt: Ensuring Access to Health), Cairo, Egypt. (April 2017)

*Poster presenter

Professional Society Affiliations

- General Syndicate of Pharmacists.
- Egyptian Society of Pharmaceutical Sciences.

Awards

1. Cairo University Awards for the International Publications. (2018, 2019 and 2020)

Teaching Activities

Undergraduate Courses (General Program)

- Industrial Pharmacy II – Two Term (General) Program, Faculty of Pharmacy, Cairo University.
- Supervising Practical labs of Industrial Pharmacy II – Two Term (General) Program, Faculty of Pharmacy, Cairo University.
- Pharmaceutical technology – Pharm D Program, Faculty of Pharmacy, Cairo University.
- Supervising Practical labs of pharmaceutical technology – Pharm D Program, Faculty of Pharmacy, Cairo University.
- Pharmacy Ethics and Legislation – Two Term Program, Faculty of Pharmacy, Ahrum Canadian University.
- Pharmaceutical Legislation and Regulatory Affairs – Two Term (General) Program, Faculty of Pharmacy, Ahrum Canadian University.
- Drug Design – Two Term Program, Faculty of Pharmacy, Ahrum Canadian University.
- Pharmaceutics III – Faculty of Pharmacy, Ahrum Canadian University.
- Industrial Pharmacy II– Faculty of Pharmacy, Ahrum Canadian University.
- Orientation to Pharmacy– Faculty of Pharmacy, Ahrum Canadian University.
- Supervising Practical labs of Pharmaceutics I – Two Term Program, Faculty of Pharmacy, Ahrum Canadian University.
- Supervising Practical labs of Pharmaceutics II – Two Term Program, Faculty of Pharmacy, Ahrum Canadian University.
- Industrial Pharmacy – Two Term Program, Faculty of Pharmacy, Misr International University.
- Orientation to Pharmacy - Faculty of Pharmacy, Misr International University.
- Supervising Practical labs of Pharmacokinetics – Two Term Program, Faculty of Pharmacy, Misr International University.
- Supervising Practical labs of Pharmaceutics II – Two Term Program, Faculty of Pharmacy, Misr International University.
- Pharmaceutics IV – Faculty of Pharmacy, Egyptian Chinese University.
- Pharmaceutical technology I – Faculty of Pharmacy, Egyptian Chinese University.
- Pharmaceutical Legislation and Regulatory Affairs – Faculty of Pharmacy, Egyptian Chinese University.
- Pharmaceutical technology II – Faculty of Pharmacy, Egyptian Chinese University.
- Orientation – Faculty of Pharmacy, Egyptian Chinese University.

Undergraduate Courses (Clinical Program)

- Controlled drug delivery systems –Faculty of Pharmacy, Cairo University.
- Pharmacy Ethics and Legislation – Faculty of Pharmacy, Ahrum Canadian University.

Postgraduate Courses

- Hospital Pharmacy Administration Course for Industrial Pharmacy Diploma students, Faculty of Pharmacy, Cairo University.
- Mechanical Utilities and Services Course for Industrial Pharmacy Diploma students, Faculty of Pharmacy, Cairo University.

Training and Workshops Attended

1. Positive Thinking. (2024)
2. Quality of career. (2024)
3. Essential Tips for Biomedical Research Methodology. (2023)
4. Sustainable Development in University Education. (2023)
5. Overview of regulatory submissions and approvals in the US. (2023)
6. Specialized course in quality work. (2024, 2023, 2022)
7. Telepharmacy: An opportunity to improve the clinical role of pharmacists. (2022)
8. The impact of international emergencies on access to medicines: Lessons learnt from the COVID-19 pandemic. (2022)
9. Peptides: Bio-inspired molecular constructs from the innovation of biomedical nanomaterials. (2022)
10. Item Bank. (2022)
11. Legal Financial Aspects in University Environment. (2022)
12. Essentials of Integrated Education. (2020)
13. Critical Thinking. (2020)
14. Interactive Electronic Courses. (2020)
15. Statistical Analysis of Bio-Experiments. (2019)
16. Evidence Based Strategy in Medical Practice. (2019)
17. Staff Entrepreneurship. (2019)
18. The Credit Hour Systems. (2018)
19. Exams and Students Evaluation Systems. (2017)
20. International Publishing of Scientific Research. (2017)
21. University Code of Ethics. (2015)
22. Research Ethics. (2014)
23. Use of Technology in Teaching. (2014)
24. Conference Organization. (2014)
25. Communication Skills. (2013)

Language and Computer Skills

1. Fundamentals of Digital Transformation Certificate (FDTC).
2. Local TOEFL, Center of language and professional translation, Cairo University – Score 650. (2013)
3. International Computer Driving License (ICDL). (2013)
4. Statistical Analysis using SPSS.
5. Design of experiments using Design Expert Software.