Ahmed Alzainy, Ph.D.

Lecturer in Pharmaceutics and Industrial Pharmacy

SUMMARY

Highly accomplished Pharmaceutical Scientist with 5+ years of experience in drug delivery systems. Proven expertise in formulation development and preclinical research.

EDUCATION

Doctor of Philosophy (Ph.D.) in Pharmaceutical Sciences, University of Greenwich, UK (2024)
Thesis: "Formulation Design and Functional Characterisation of a Novel Vaginal Mucosal Drug Delivery System"

Bachelor of Science (B.Sc.) in Pharmaceutical Sciences, MSA University, Egypt (2018) (October University for Modern Sciences and Arts), Graduation Project Grade: Very Good

Bachelor of Science (B.Sc.) in Pharmaceutical Sciences, University of Greenwich, UK (2018)
Second Class Upper Division.

Certificate in Advanced Drug Delivery, University of Greenwich, UK (2017)

WORK EXPERIENCE

Postdoctoral Researcher as KTP associate, University of Strathclyde, UK (2024)

- Conducted research on novel drug delivery systems on oral and buccal thin film technology with increasing their permeation viability through the membranes.
- Assisted in various laboratory projects, proficiency in a range of techniques using solvent casting method, Franz diffusion cells.

Development associate, Fitabeo therapeutic company, UK (2023-2024)

- Pre-formulation studies including solubility, compatibility, solid state analysis, dissolution, in-vitro studies and stability studies (iterative as well as ICH conditions).
- Designing formulation/process development and analytical testing (based on QbD from project initiation to the target goal or commercialization.
- Dissolution and In-Vitro permeation studies (using Franz cells)
- Writing product development reports, and technical reports/summaries independently, including but not limited to generating accurate, reliable data by following established procedures and practices for product development; recording, tabulating, summarising and reporting results and interpreting and displaying data in a clear and concise manner, thoroughly and accurately documenting all formulation and development work
- Support in expanding formulation R&D, and analytical capabilities and developing SOPs.

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Research assistant, University of Greenwich, UK (2022-2023)

- Conducted research on novel vaginal drug delivery system to act locally and systemically to achieve the therapeutic action.
- Using advanced physico-chemical characterization using NMR to investigate further information on polymer-drug interactions and crosslinking, GPC (Gel permeation chromatography) to determine the molecular weights and polydispersity of polymers. Rheology to investigate the thermogelling and viscoelastic properties of formulations after hydration in the SVF. In addition, physical stability (e.g., conversion from amorphous back to crystalline) studies was conducted for longer periods up to 6 months using XRD with DSC.

Postgraduate Researcher Teaching Assistant, University of Greenwich, UK (2019-2023)

- Delivered laboratory and tutorial sessions to undergraduate students and MSc students.
- Completed the Postgraduate Researcher Development Programme: Teaching, Learning & Assessment (2019).

PUBLICATIONS

- *Alzainy, A., & Boateng, J. (2022). Novel Mucoadhesive Wafers for Treating Local Vaginal Infections. Biomedicines, 10, 3036.*
- *Alzainy, A., & Boateng, J. (2022). Formulation Design and Functional Characterisation of a Novel Vaginal Mucosal Drug Delivery System. British Journal of Pharmacy, 7(2).*

AWARDS

Participated in the UK Abroad Programme, by MSA University & University of Greenwich, UK. Recognized for achieving genuine employability attributes in 2017

TECHNICAL SKILLS

SOFTWARE

- GraphPad Prism
- Proficient in Microsoft Office Suite

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ANALYTICAL TECHNIQUES

- Formulation development
- Freeze-drying
- Biological techniques (MTT assay, bacterial and fungal antimicrobial assays)
- Rheometer
- Solvent casting method for film technology
- Franz diffusion method

LAB EQUIPMENT

- Scanning electron microscopy (SEM)
- High-performance liquid chromatography (HPLC) and UV spectroscopy
- Malvern Zetasizer
- Ultrapyc for semi-solid and solid density.
- Fourier Transform Infrared Spectroscopy (FTIR), Differential Scanning Calorimetry (DSC), and Thermogravimetric Analysis (TGA)

LANGUAGES

- Arabic: Native
- English: Fluent