

## **Muqdad Alhijaj**

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### **Personal profile:**

PhD student (Pharmacist) Specialised in the field of drug delivery and material characterisation. Highly qualified in the design, characterisation and evaluation of different pharmaceutical dosage forms and drug delivery systems.

### **Work history:**

1. Associate tutor (part time) ----School of Pharmacy / University of East Anglia/ Norwich/ UK ---- (February 2014 to July 2014) (September 2014 to July 2015) and (September 2015 to present). Main responsibilities:
  - ✓ Preparing the requirements of experimental work including laboratory supplies and equipments.
  - ✓ Following up individual steps of the work to make the students achieving their experimental aims.
  - ✓ Explaining the applications of experimental work to enhance students' motivation.
  - ✓ Developing students' experimental skills and training them to be successful scientists in the future.
  - ✓ Providing feedback to module organizer.
  - ✓ Ensuring the fulfilment of safety procedures.
2. Assistant lecturer (full time) ----College of Pharmacy / University of Basrah/ Basrah/Iraq ---- (November 2004 to present). Main responsibilities:
  - ✓ Teaching undergraduate students modules related to pharmaceutical technology, industrial pharmacy and pharmaceutical calculations (theory and practical).
  - ✓ Assessment of students.
  - ✓ Development of teaching modules.
  - ✓ Representative of the academic staff in the College of Pharmacy/ University of Basrah.
  - ✓ Head of the Department of Pharmaceutics and Clinical Pharmacy for 2 years (2008-2010).
3. Hospital pharmacist ---- Basrah Health Directorate / Basrah/ Iraq ----(November 2002-November 2004). Main responsibilities:
  - ✓ Dispensing medications patients after checking their prescriptions to minimise medical errors.
  - ✓ Advising medical team regarding the safe, effective and convenient use of medications.

- ✓ Patient education.
- ✓ Supervising pharmaceutical products purchase and storage.

### **Qualifications:**

1. PhD (in progress) (Drug delivery and material characterization) ----School of Pharmacy / University of East Anglia/ Norwich/ UK ---- (April 2013 to present).
2. M.Sc. (Pharmaceutics) ---- College of Pharmacy / University of Baghdad / Baghdad/ Iraq ---- (October 2005 to March 2008).
3. B.Sc. (Pharmacy) ---- College of Pharmacy / University of Baghdad / Baghdad/ Iraq ---- (October 1997 to March 2002).

### **Publications:**

1. Alhijjaj, M., Reading, M., Belton, P., Qi, S. (2015) Thermal Analysis by Structural Characterization (TASC) as a novel method for assessing heterogeneity in complex solid pharmaceutical dosage forms in Analytical Chemistry 87. pp. 10848–10855.
2. Alhijjaj, M., Yassin, S., Reading, M., Zeitler, J. A., Belton, P., Qi, S. (2016) Characterization of heterogeneity and spatial distribution of phases in complex solid dispersions by thermal analysis by structural characterization and X-ray micro computed tomography in Pharmaceutical Research.
3. Alhijjaj, M., Bouman, J., Wellner, N., Belton, P., Qi, S. (2015) Creating drug solubilisation compartments via phase separation in multi-component buccal patches prepared by direct hot melt extrusion-injection moulding in Molecular Pharmaceutics 12. pp. 4349-4362.
4. Alhijjaj, M., Belton, P., Qi, S. (submitted) An investigation into the use of polymer blends to improve the printability of and regulate drug release from pharmaceutical solid dispersions prepared via fused deposition modeling (FDM) 3D printing in European Journal of Pharmaceutics and Biopharmaceutics.

### **Laboratory Key Research skills:**

1. Thermal Analysis by Structural Characterization (TASC)
2. Hot Melt Extrusion (HME)
3. Injection Moulding (IM)
4. Fused Deposition Modelling (FDM) 3D printing
5. Electrospinning
6. Differential Scanning Colorimetry (DSC & MTDSC)
7. Attenuated Total Reflectance Fourier Transform Infrared (ATR-FTIR)
8. Powder X-Ray Diffraction (PXRD)
9. Scanning Electron Microscopy (SEM)
10. Thermal Gravimetric Analysis (TGA)
11. High Pressure Liquid Chromatography (HPLC)
12. Dynamic Vapour Sorption (DVS)

13. UV-Visible Spectrophotometry
14. Micro-CT Analysis
15. Dissolution Evaluation
16. Diffusion Evaluation
17. Polarized Light Microscopy
18. Freeze Drying
19. Spin coating

**Conferences, workshops, and development programs:**

1. School of Pharmacy / University of East Anglia/ Norwich/ UK: research days, 2013, 2014, 2015 and 2016. (poster presentations).
2. Advanced Materials and Pharmaceutical Technologies (AMPTEC) Conference / University of Greenwich/ UK, 2014 (oral and poster presentations).
3. TAC Thermal Analysis 50<sup>th</sup> Anniversary Conference of the RSC Thermal Methods Group, Churchill College, Cambridge, UK, 2015 (Poster presentation)
4. Controlled Release Society (CRS) 42<sup>nd</sup> meeting, Edinburgh, Scotland, 2015. (Poster presentation).
5. 5<sup>th</sup> APS International PharmSci Conference, Nottingham, UK, 2015. (Poster presentation).
6. Controlled Release Society (CRS) 43<sup>rd</sup> meeting, Seattle, USA, 2016. (Poster presentation).
7. Solid lipid nanoparticles workshop, Norwich Research Park, Norwich, UK, 2015.
8. DAN-TRAP workshop of Drug Development to Cross Biological Barriers, University of East Anglia, Norwich, UK, 2016.
9. University of East Anglia Personal and Professional Development Program (PPD) 33.5 units including wide variety of development programmes.

**Research Related Software experience:**

1. Microsoft Word
2. Microsoft Excel
3. Microsoft Power point
4. OPUS
5. Universal Analysis 2000
6. Image J
7. Table Curve
8. CTAn and CTVol
9. TASC Software

**Memberships:**

1. Iraqi Syndicate of Pharmacists
2. Controlled Release Society
3. The Academy of Pharmaceutical Sciences
4. Royal Society of Chemistry