

## Prof. Samer Abulateefeh

<http://academic.ju.edu.jo/S.AbuLateefeh/default.aspx>

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### Education:

- Ph.D. in Pharmacy, School of Pharmacy, University of Nottingham, Nottingham-UK. 2007-2011 (Thesis Title: Novel Thermo-Responsive Polymeric Nanoparticles for Cancer Therapy).
- B.Sc. of Pharmacy, School of Pharmacy, University of Jordan, Amman-Jordan. 2000-2005

### Professional Experience:

#### Academic Positions:

- **December 2019 – Present:** Professor, Department of Pharmaceutics and Pharmaceutical Technology, School of Pharmacy, University of Jordan.
- **December 2015 – December 2019:** Associate Professor, Department of Pharmaceutics and Pharmaceutical Technology, School of Pharmacy, University of Jordan.
- **June 2011 - December 2015:** Assistant Professor, Department of Pharmaceutics and Pharmaceutical Technology, School of Pharmacy, University of Jordan.

#### Administrative Positions:

- **September 2016 – September 2017:** Member of the Faculty Board, School of Pharmacy, University of Jordan.
- **September 2014 – September 2016:** Assistant Dean for Student Affairs, School of Pharmacy, University of Jordan.

**Industrial Positions:**

- **July 2005 – July 2007:** Pharmacist Formulator, Department of Research and Development (R&D), Hikma Pharmaceuticals, Amman, Jordan.

**Committees:**

**At the University of Jordan** (Below are selected committees among 40 committees I have been involved in):

- **2017-Current:** Member of the Nanotechnology Center Board, University of Jordan.
- **2020-2021:** Head of the Alumni Committee, School of Pharmacy, University of Jordan.
- **2019-2020:** Member of the Graduation Committee, School of Pharmacy, University of Jordan.
- **2018-2019:** Member of the Examination Committee, School of Pharmacy, University of Jordan.
- **2017-2018:** Head of the Safety Committee, School of Pharmacy, University of Jordan.
- **2016-2017:** Member of the Curriculum Committee, School of Pharmacy, University of Jordan.
- **2015-2016:** Head of the Graduation Committee, School of Pharmacy, University of Jordan.
- **2015-2016:** Head of the Examination Committee, School of Pharmacy, University of Jordan.
- **2014-2016:** Member of the ACPE Accreditation Steering Committee, School of Pharmacy, University of Jordan.
- **2014-2016:** Head of the Student Services and Academic Policies Subcommittee-ACPE Accreditation Committee, School of Pharmacy, University of Jordan.

**Community Committees:**

- **2016-2018:** Member of the Licensing Committee of Pharmaceutical industries, Jordanian Food and Drug Administration.

- **December 2013-June 2014:** Member of the Renewal of Drug Registration Committee, Jordanian Food and Drug Administration.

### **Membership in Pharmaceutical Societies:**

- Jordan Association of Pharmacists (2005- Present).

### **Teaching Experience:**

I am teaching the following courses:

- Physicochemical Principles of Pharmacy.
- Physical Pharmacy (Theory and Practical).
- Pharmaceutical Calculations and Compounding of Dosage Forms (Theory and Practical).
- Pharmaceutical Technology 1 (Theory and Practical).
- Cosmetic Science.
- Seminar in Pharmaceutics and Pharmaceutical Technology.
- Advanced Physical Pharmacy for Master Degree.

### **Supervision of Postgraduate Students:**

- Raghad Abuhamdan (MSc; Principal Supervisor), "*The effect of varying polymer type, molecular weight, and functionalities on the formation, drug loading, and release kinetics of microcapsules*". School of Pharmacy, University of Jordan, 2019-2020.
- Bayan Al-Anati (MSc; Principal Supervisor), "*Synthesis and characterization of polyester microparticles as controlled drug delivery systems for hydrophilic drugs*". School of Medicine, University of Jordan, 2018- 2019.
- Muna Hassan (MSc; Co-Supervisor), "*Formulation and characterization of combretastatin A4 loaded PLGA nanoparticles*". School of Pharmacy, An Najah University- Palestine, 2017- 2018.

## Research and Technical Skills:

- Synthesis of polymeric nanoparticles and microparticles and tuning their internal morphologies for drug delivery and biomedical applications.
- Characterization of drug-loaded nanoparticles using:
  - Dynamic light scattering (DLS).
  - Zeta potential analysis.
  - Transmission Electron Microscope (TEM).
  - Scanning Electron Microscope (SEM).
  - HPLC.
  - Fluorescence Spectroscopy.
- Synthesis of novel thermo-responsive polymers using a number of techniques such as:
  - Atom Transfer Radical Polymerization (ATRP).
  - Ring Opening Polymerization (ROP).
- Characterization of polymers using:
  - Gel Permeation Chromatography (GPC).
  - NMR
  - FT-IR
  - Temperature-controlled UV-Visible spectroscopy.
- Cell culture techniques, cellular uptake and toxicity studies:
  - Confocal microscope.
  - Fluorescence Activated Cell Sorting (FACS).
  - MTT assays.

## Workshops and Training Courses:

- “MCQs” Workshop organized by the Accreditation and Quality Assurance Center, 25 July 2019, University of Jordan, Amman, Jordan.
- “Patents” Workshop organized by the Accreditation and Quality Assurance Center, 15 April 2019, University of Jordan, Amman, Jordan.
- “Writing Scientific Papers by Using Latex” Workshop organized by the Accreditation and Quality Assurance Center, 20 March 2019, University of Jordan, Amman, Jordan.

- “Blended Learning” Workshop organized by the Accreditation and Quality Assurance Center, 13 March 2019, University of Jordan, Amman, Jordan.
- “E-Learning” Workshop organized by the School of Pharmacy, 16 November 2017, University of Jordan, Amman, Jordan.
- “Matching course ILOs to program ILOs in course syllabus” Workshop organized by the School of Pharmacy, 9 November 2017, University of Jordan, Amman, Jordan.
- Bioavailability and Bioequivalence Studies Workshop (BA/BE Studies), 17 and 18 June 2007, Prescription Pharma Support, in accordance with Hikma Pharmaceuticals, Amman, Jordan.
- E-Learning Workshop at the University of Jordan: Vision and Ideas for Development, 2 September 2012, University of Jordan, Amman, Jordan.
- Staff Development Workshops (50 hours), 15 January - 6 February 2012, Center for Educational Development, University of Jordan, Amman, Jordan.  
Subjects of Staff Development Workshops:
  - Designing Study Plans (6 hours).
  - Teaching Design and its Strategies (12 hours).
  - Effective University Teaching Skills (12 hours).
  - Exams Preparation and Learner’s Assessment (12 hours).
  - Laws, Bylaws and Regulations of the University of Jordan (6 hours).
  - Academic Ethics (2 hours).

### Peer-Reviewed Publications:

- A.N. Zaid, M. Hassan, N. Jaradat, M. Assali, R. Al-Abbassi, A. Alkilany, **S.R. Abulateefeh**, Formulation and characterization of combretastatin A4 loaded PLGA nanoparticles. *Materials Research Express* 6 (2019) 1250d7.
- M.Y. Alkawareek, A. Bahlool, **S.R. Abulateefeh**, A.M. Alkilany, Synergistic antibacterial activity of silver nanoparticles and hydrogen peroxide. *PLOS ONE* 14 (2019) e0220575.

- A.M. Alkilany, S. Alsotari, M.Y. Alkawareek, **S.R. Abulateefeh**, Facile hydrophobication of glutathione-protected gold nanoclusters and encapsulation into poly(lactide-co-glycolide) nanocarriers. *Scientific Reports* 9 (2019) 11098.
- N. Abu-Khalaf, A.N. Zaid, N. Jaradat, A.M. Alkilany, **S.R. Abulateefeh**, R. Al Ramahi, M. Ghanem, Identification of substandard drug products using electronic tongue: Cefdinir suspension as a pilot example. *Drug Design, Development and Therapy* 13 (2019) 3249–3258.
- A.M. Alkilany, **S.R. Abulateefeh**, C.J. Murphy, Facile functionalization of gold nanoparticles with PLGA polymer brushes and efficient encapsulation into PLGA nanoparticles: Toward spatially precise bioimaging of polymeric nanoparticles. *Particle & Particle Systems Characterization* 36 (2019) 1800414.
- **S.R. Abulateefeh**, M.Y. Alkawareek, A.M. Alkilany, Tunable sustained release drug delivery system based on mononuclear aqueous core-polymer shell microcapsules. *International Journal of Pharmaceutics* 558 (2019) 291-298.
- **S.R. Abulateefeh**, G.K. Al-Adhami, M.Y. Alkawareek, A.M. Alkilany, Controlling the internal morphology of aqueous core-PLGA shell microcapsules: Promoting the internal phase separation via alcohol addition. *Pharmaceutical Development and Technology* 24 (2019): 671-679.
- M.Y. Alkawareek, B.M. Akkelah, S.M. Mansour, H.M. Amro, **S.R. Abulateefeh**, A.M. Alkilany, Simple experiment to determine surfactant critical micelle concentrations using contact-angle measurements. *Journal of Chemical Education* 95 (2018) 2227–2232.
- M.A. Hamaly, **S.R. Abulateefeh**, K.M. Al-Qaoud, A.M. Alkilany, Freeze-drying of monoclonal antibody-conjugated gold nanorods: Colloidal stability and biological activity. *International Journal of Pharmaceutics* 550 (2018) 269-277.
- **S.R. Abulateefeh**, M.Y. Alkawareek, F.R. Abdullah, A.M. Alkilany, Preparation of aqueous core-poly(d,l-lactide-co-glycolide) shell microcapsules with mononuclear cores by internal phase separation: Optimization of formulation parameters. *Journal of Pharmaceutical Sciences* 116 (2017) 1136-1142.
- **S.R. Abulateefeh**, A.M. Alkilany, Synthesis and characterization of PLGA shell microcapsules containing aqueous cores prepared by internal phase separation. *AAPS PharmSciTech* 17 (2016) 891-897.

- R.Z. Al Bakain, **S.R. Abulateefeh**, M.O. Taha, Synthesis and characterization of chitosan-lactate-phthalate and evaluation of the corresponding zinc- and aluminium-crosslinked beads as potential controlled release matrices. *European Polymer Journal* 73 (2015) 402-412.
- **S.R. Abulateefeh**, M.O. Taha, Enhanced drug encapsulation and extended release profiles of calcium-alginate nanoparticles by using tannic acid as a bridging cross-linking agent. *Journal of microencapsulation* 32 (2015) 96-105.
- A.M. Alkilany, **S.R. Abulateefeh**, K.K. Mills, A.I. Bani Yaseen, M.A. Hamaly, H.S. Alkhatib, K.M Aiedeh, J.W. Stone, Colloidal Stability of Citrate and Mercaptoacetic Acid Capped Gold Nanoparticles upon Lyophilization: Effect of Capping Ligand Attachment and Type of Cryoprotectants. *Langmuir* 30 (2014) 13799-13808.
- **S.R. Abulateefeh**, M.A. Khanfar, R.Z. Al Bakain, M.O. Taha, Synthesis and characterization of new derivatives of alginic acid and evaluation of their iron(III)-crosslinked beads as potential controlled release matrices. *Pharmaceutical Development and Technology* 19 (2014) 856-867.
- R. Al-Otoum, **S.R. Abulateefeh**, M.O. Taha, Preparation of novel ionotropically crosslinked beads based on alginate-terephthalic acid composites as potential controlled release matrices. *Pharmazie* 69 (2014) 10-18.
- **S.R. Abulateefeh**, S.G. Spain, K.J. Thurecht, J.W. Aylott, W.C. Chan, M.C. Garnett, C. Alexander, Enhanced uptake of nanoparticle drug carriers *via* a thermoresponsive shell enhances cytotoxicity in a cancer cell line. *Biomaterials Science* 1 (2013) 434-442
- M. Soliman, R. Nasanit, **S.R. Abulateefeh**, S. Allen, M.C. Davies, S.S. Briggs, L.W. Seymour, J. A. Preece, A.M. Grabowska, S.A. Watson, C. Alexander, Multi-component synthetic polymers with viral-mimetic chemistry for nucleic acid delivery. *Molecular Pharmaceutics* 9 (2012) 1-13
- **S.R. Abulateefeh**, S.G. Spain, J.W. Aylott, W.C. Chan, M.C. Garnett, C. Alexander, Thermoresponsive polymer colloids for drug delivery and cancer therapy. *Macromolecular Bioscience* 11 (2011) 1722-1734
- **S.R. Abulateefeh**, A.O. Saeed, J.W. Aylott, W.C. Chan, M.C. Garnett, B.R. Saunders, C. Alexander, Facile synthesis of responsive nanoparticles with reversible, tunable and rapid thermal transitions from biocompatible constituents. *Chemical Communications* 40 (2009) 6068-6070

**Conference Contributions:**

- R.Z. Al Bakain, M.O. Taha, **S.R. Abulateefeh**, Synthesis of chitosan-lactate-phthalate and evaluation of the corresponding zinc-and aluminium-crosslinked beads as potential controlled release matrices. Poster presentation, *The 15th Congress of the European Society of Contraception and Reproductive Health*, Budapest, Hungary (2018).
- **S.R. Abulateefeh**, M.Y. Alkawareek, A.M. Alkilany, Tuning the internal core architecture of PLGA microcapsules for drug delivery applications. Poster presentation, *21<sup>st</sup> International Symposium on Microencapsulation*, Faro, Portugal (2017).
- B. Akkelah, S. Mansour, H. Amro, M.Y. Alkawareek, **S.R. Abulateefeh**, A.M. Alkilany. Determination of critical micelle concentration using contact angle measurements: A didactic lab. Poster presentation, *Al-Zaytoonah University of Jordan and The University of Toledo International Pharmaceutical Conference (ZTIPC 2017)*, Amman, Jordan (2017).
- D. Shalabi, B. Akkelah, A.K. Alhiary, S. Aburkayah, **S.R. Abulateefeh**, M.Y. Alkawareek, R. Abu-Zurayq, A.M. Alkilany. Adsorption of methylene blue onto activated charcoal prepared from Jordanian olive oil processing solid waste. Poster presentation, *Al-Zaytoonah University of Jordan and The University of Toledo International Pharmaceutical Conference (ZTIPC 2017)*, Amman, Jordan (2017).
- **S.R. Abulateefeh**, A.M. Alkilany, H.S. AlKhatib, K.M. Aiedeh, S.M. Abdelghany, Bisphosphonates-loaded nanoparticles: Comparison between different nano-formulations. Oral presentation, *World Drug Delivery Summit*, Houston, TX, USA (2015).
- **S.R. Abulateefeh**, Nanomedicines for cancer therapy. Oral presentation, *The 15<sup>th</sup> Scientific Congress of the Association of Pharmacy Colleges in the Arab World & The 3<sup>rd</sup> International Conference of the Faculty of Pharmacy at the University of Jordan*, Amman, Jordan (2012).
- **S.R. Abulateefeh**, J.W. Aylott, W.C. Chan, M.C. Garnett, B.R. Saunders, C. Alexander, Synthesis & characterization of novel thermo-responsive nanoparticles from biocompatible constituents. Oral presentation, *Polymeric Biomaterials Conference*, Reading, UK (2010).



- **S.R. Abulateefeh**, J.W. Aylott, W.C. Chan, M.C. Garnett, B.R. Saunders , C. Alexander, Responsive PLGA-b-(PPGMA-co-PEGMEMA) nanoparticles with reversible and tunable thermal transitions. Poster presentation, *RSC/SCI Macro Group Young Researchers Meeting*, Nottingham, UK (2010).
- **S.R. Abulateefeh**, J.W. Aylott, W.C. Chan, M.C. Garnett, B.R. Saunders , C. Alexander, Novel thermo-responsive nanoparticles: Synthesis and drug loading aspects. Poster presentation, *8<sup>th</sup> International Symposium on Polymer Therapeutics: From Laboratory to Clinical Practice*, Valencia, Spain (2010).
- **S.R. Abulateefeh**, J.W. Aylott, W.C. Chan, M.C. Garnett, B.R. Saunders , C. Alexander, Smart colloids with thermal transitions. Poster presentation, *UK-PharmSci- The Science of Medicines*, Nottingham, UK (2010).

## Funded Research Projects

- Deanship of Academic Research, The University of Jordan, Co-Investigator, “*Development of sustained release micro/nanoparticles loaded with levothyroxine*”. **2019-2021**; JD 21,000.
- Deanship of Academic Research, The University of Jordan, Co-Investigator, “*Synergistic activity of silver nanoparticles and hydrogen peroxide against bacteria in planktonic and biofilm modes of growth*”. **2018-2020**; JD 15,000.
- Deanship of Academic Research, The University of Jordan, Co-Investigator, “*Toxicity and cellular uptake of gold nanoparticles in renal tissues of rat kidney: The effect of nanoparticle’s physiochemical properties*”. **2018-2020**; JD 18,000.
- Scientific Research Support Fund, Ministry of Higher Education and Scientific Research, Jordan, Principal Investigator, “*Enhanced oral bioavailability of insulin using PLGA NPs: in vivo evaluation of toxicity and therapeutic effect*”. **2015-2018**; JD 38,370.
- Scientific Research Support Fund, Ministry of Higher Education and Scientific Research, Jordan, Co-Investigator, “*Polymeric nanoparticles with encapsulated gold nanoparticles: Towards sensitive quantification and visualization of pharmaceutical polymeric nanocarriers*”. **2015-2018**; JD 85,000.

- Deanship of Academic Research, The University of Jordan, Principal Investigator, “*Preparation of new thermo-responsive PLGA-polyether amine nanoparticles for drug delivery applications*”. **2015-2017**; JD 27,000.
- Deanship of Academic Research, The University of Jordan, Principal Investigator, “*Pharmaceutical nanotechnology for enhancing the oral bioavailability of bisphosphonates (BPs)-Osteoporosis agents*”. **2013-2015**; JD 10,000.
- Deanship of Academic Research, The University of Jordan, Co-Investigator, “*Targeting and ablation of metastatic esophageal cancer using gold nanotechnology*”. **2013-2015**; JD 17,000.

*Last updated in April 2021*