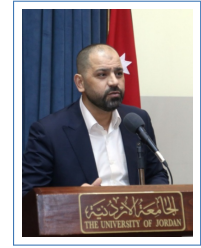


# Mahmoud Alkawareek

Associate Professor

School of Pharmacy  
The University of Jordan  
Amman 11942, Jordan  
☎ +962 790454590  
☎ +962 6 5355000  
✉ m.alkawareek@ju.edu.jo



## Education

- 2010 - 2013 **PhD in Pharmacy**, *School of Pharmacy*, Queen's University Belfast, Belfast, UK
- 2004 - 2009 **BSc in Pharmacy**, *School of Pharmacy*, The University of Jordan, Amman, Jordan

## Professional Experience

### Academic Experience

- 2019 - Present **Associate Professor**, *School of Pharmacy*, The University of Jordan, Amman, Jordan
- 2014 - 2019 **Assistant Professor**, *School of Pharmacy*, The University of Jordan, Amman, Jordan
- 2013 - 2014 **Lecturer**, *School of Pharmacy*, The University of Jordan, Amman, Jordan
- 2010 - 2013 **PhD Candidate**, *School of Pharmacy*, Queen's University Belfast, Belfast, UK
- 2009 - 2010 **Teaching Assistant**, *School of Pharmacy*, The University of Jordan, Amman, Jordan

### Administrative Experience

- 2021 - 2022 **Director of Accreditation and Quality Assurance Center**, *The University of Jordan*, Amman, Jordan
- 2021 - 2022 **Vice Dean for Development and Quality Assurance**, *School of Pharmacy*, The University of Jordan, Amman, Jordan
- 2019 - 2020 **Manager of Quality Assurance Unit**, *Accreditation and Quality Assurance Center*, The University of Jordan, Amman, Jordan
- 2018 - 2019 **Assistant Dean for Accreditation and Development**, *School of Pharmacy*, The University of Jordan, Amman, Jordan
- 2016 - 2017 **Assistant Dean for Student Affairs**, *School of Pharmacy*, The University of Jordan, Amman, Jordan

## Civic Engagement

### Internal Committee Membership

- 2022 - Present **Global University Rankings Committee**, *The University of Jordan*, Amman, Jordan
- 2021 - Present **Programs Learning Outcomes Committee**, *The University of Jordan*, Amman, Jordan

- 2021 - 2022 **University's Strategic Plan Committee**, *The University of Jordan*, Amman, Jordan
- 2021 - 2022 **International Accreditation Committee**, *The University of Jordan*, Amman, Jordan
- 2021 - 2022 **University's Curricula Committee**, *The University of Jordan*, Amman, Jordan
- 2021 - 2022 **E-Learning Committee**, *The University of Jordan*, Amman, Jordan
- 2021 - 2022 **Scientific Journals Accreditation Committee**, *The University of Jordan*, Amman, Jordan
- 2019 - 2019 **Grading System Development Committee**, *The University of Jordan*, Amman, Jordan

#### External Committee Membership

- 2021 - 2022 **Academic Committee**, *Institute of Banking Studies*, Amman, Jordan
- 2017 - 2017 **Generic Drug Registration Committee**, *Jordan Food and Drug Administration*, Amman, Jordan
- 2015 - 2017 **Post-Approval Changes Committee**, *Jordan Food and Drug Administration*, Amman, Jordan
- 2015 - 2017 **Quality Control Committee**, *Jordan Food and Drug Administration*, Amman, Jordan
- 2015 - 2015 **Bioequivalence Studies Committee**, *Jordan Food and Drug Administration*, Amman, Jordan

---

### Teaching Experience

- **Pharmaceutical Microbiology I**, BSc in Pharmacy and PharmD Programs, The University of Jordan
- **Pharmaceutical Microbiology II**, BSc in Pharmacy and PharmD Programs, The University of Jordan
- **Pharmaceutical Microbiology - Practical**, BSc in Pharmacy and PharmD Programs, The University of Jordan
- **Advanced Pharmaceutical Microbiology**, BSc in Pharmacy and PharmD Programs, The University of Jordan
- **Seminar in Pharmaceutical Technology**, BSc in Pharmacy and PharmD Programs, The University of Jordan
- **Introduction to Microbiology**, Doctor of Medicine Program, The University of Jordan
- **Microbiology Section of the MSS System**, Doctor of Medicine Program, The University of Jordan
- **Microbiology Section of the GI System**, Doctor of Medicine Program, The University of Jordan
- **Microbiology I**, Doctor of Dental Surgery Program, The University of Jordan
- **Microbiology II**, Doctor of Dental Surgery Program, The University of Jordan
- **Immunology**, BSc in Pharmacy Program, Applied Science University
- **Advanced Pharmaceutical Biotechnology**, MSc in Pharmaceutical Sciences Program, Applied Science University

---

## Postgraduate Supervision Experience

- 2022 - 2023 **Asma Dwiri, MSc**, The University of Jordan  
Skin penetration of silver nanoparticles: effect of size, charge and capping agent
- 2021 - 2022 **Iyman Saad, MSc**, The University of Jordan  
Stability and antibacterial efficacy of silver nanoparticles when used in combination with other antimicrobial agents
- 2020 - 2021 **Hiba Awni, MSc**, The University of Jordan  
Implementation of Machine Learning Techniques in Designing a Predictive Model for Characterizing PLGA Nanoparticles
- 2020 - 2021 **Taqwa Shaban, MSc**, The University of Jordan  
Application of Supervised Machine Learning Techniques for the Prediction of Antibiofilm Activity of Antibiotics
- 2018 - 2019 **Bayan Alanati, MSc**, The University of Jordan  
Synthesis and Characterization of Polymeric Microcapsules Containing Anticancer Agents by Internal Phase Separation Method
- 2018 - 2019 **Fareda Hamad, MSc**, The University of Jordan  
Antibacterial Activity of Silver Nanoparticles in Combination with Other Antimicrobial Agents

---

## Research Interests

- Pharmaceutical and Medical Microbiology
- Nanotechnology for Biomedical Applications
- Machine Learning for Biomedical Applications
- Novel Drug Delivery Systems

---

## Publications

- [1] A.M. Alkilany, O. Rachid, M.Y. Alkawareek, N. Billa, A. Daou, and C.J. Murphy. Plga-gold nanocomposite: Preparation and biomedical applications. *Pharmaceutics*, 14(3), 2022.
- [2] T.F. Shaban and M.Y. Alkawareek. Prediction of qualitative antibiofilm activity of antibiotics using supervised machine learning techniques. *Computers in Biology and Medicine*, 140, 2022.
- [3] N.E. Abdel-Hakem, R.M. Talaat, R.M. Samaka, I.H. Bassyouniy, M. EL-Shahat, M.Y. Alkawareek, and A.M. Alkilany. Therapeutic outcomes and biodistribution of gold nanoparticles in collagen-induced arthritis animal model. *Journal of Drug Delivery Science and Technology*, 67, 2022.
- [4] R.M. Darwish, M.Y. AlKawareek, N.R. Bulatova, and A.M. Alkilany. Silver nanoparticles, a promising treatment against clinically important fluconazole-resistant candida glabrata. *Letters in Applied Microbiology*, 73(6):718–724, 2021.
- [5] R.M. Abuhamdan, B.H. Al-Anati, Y. Al Thaher, Z.A. Shraideh, M.Y. Alkawareek, and S.R. Abulateefeh. Aqueous core microcapsules as potential long-acting release systems for hydrophilic drugs. *International Journal of Pharmaceutics*, 606, 2021.
- [6] Diala Walid Abu-Hassan, Mahmoud Yousef Alkawareek, Rania “Ahmad Azzam” Hamed, Fahmy Banat, and Saja Al-Muhtaseb. Host-parasite interaction model using bead-grown biofilms. *The FASEB Journal*, 34(S1):1–1, 2020.

- [7] M.Y. Alkawareek, A. Bahloul, S.R. Abulateefeh, and A.M. Alkilany. Synergistic antibacterial activity of silver nanoparticles and hydrogen peroxide. *PLoS ONE*, 14(8), 2019.
- [8] A.M. Alkilany, S. Alsotari, M.Y. Alkawareek, and S.R. Abulateefeh. Facile hydrophobication of glutathione-protected gold nanoclusters and encapsulation into poly(lactide-co-glycolide) nanocarriers. *Scientific reports*, 9(1):11098, 2019.
- [9] S.R. Abulateefeh, G.K. Al-Adhami, M.Y. Alkawareek, and 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(6):671–679, 2019.
- [10] E.A. Khalil, M.Y. Alkawareek, G. Othman, B. Tbakhi, and A.G. Al-Bakri. Evaluation of paromomycin sulphate permeation using ex vivo human skin model. *Pharmaceutical Development and Technology*, 24(3):390–393, 2019.
- [11] S.R. Abulateefeh, M.Y. Alkawareek, and A.M. Alkilany. Tunable sustained release drug delivery system based on mononuclear aqueous core-polymer shell microcapsules. *International Journal of Pharmaceutics*, 558:291–298, 2019.
- [12] O.A. Alfuhaha, M.Y. Alkawareek, and H.S. Alsharah. Self-evaluation and professional status as predictors of burnout among nurses in Jordan. *PLoS ONE*, 14(3), 2019.
- [13] M.Y. Alkawareek, B.M. Akkelah, S.M. Mansour, H.M. Amro, S.R. Abulateefeh, and A.M. Alkilany. Simple experiment to determine surfactant critical micelle concentrations using contact-angle measurements. *Journal of Chemical Education*, 95(12):2227–2232, 2018.
- [14] S. Behzadi, V. Serpooshan, W. Tao, M.A. Hamaly, M.Y. Alkawareek, E.C. Dreaden, D. Brown, A.M. Alkilany, O.C. Farokhzad, and M. Mahmoudi. Cellular uptake of nanoparticles: Journey inside the cell. *Chemical Society Reviews*, 46(14):4218–4244, 2017.
- [15] S.R. Abulateefeh, M.Y. Alkawareek, F.R. Abdullah, and 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*, 106(4):1136–1142, 2017.
- [16] N.H. Alshraiedeh, S. Higginbotham, P.B. Flynn, M.Y. Alkawareek, M.M. Tunney, S.P. Gorman, W.G. Graham, and B.F. Gilmore. Eradication and phenotypic tolerance of burkholderia cenocepacia biofilms exposed to atmospheric pressure non-thermal plasma. *International Journal of Antimicrobial Agents*, 47(6):446–450, 2016.
- [17] M.Y. Alkawareek, S.P. Gorman, W.G. Graham, and B.F. Gilmore. Potential cellular targets and antibacterial efficacy of atmospheric pressure non-thermal plasma. *International Journal of Antimicrobial Agents*, 43(2):154–160, 2014.
- [18] M.Y. Alkawareek, N.H. Alshraiedeh, S. Higginbotham, P.B. Flynn, Q.T. Algwari, S.P. Gorman, W.G. Graham, and B.F. Gilmore. Plasmid dna damage following exposure to atmospheric pressure nonthermal plasma: Kinetics and influence of oxygen admixture. *Plasma Medicine*, 4(1-4):211–219, 2014.

- [19] M.Y. Alkawareek, S.P. Gorman, W.G. Graham, and B.F. Gilmore. Eradication of marine biofilms by atmospheric pressure non-thermal plasma: A potential approach to control biofouling? *International Biodeterioration and Biodegradation*, 86:14–18, 2014.
- [20] N.H. Alshraiedeh, M.Y. Alkawareek, S.P. Gorman, W.G. Graham, and B.F. Gilmore. Atmospheric pressure, nonthermal plasma inactivation of ms2 bacteriophage: Effect of oxygen concentration on virucidal activity. *Journal of Applied Microbiology*, 115(6):1420–1426, 2013.
- [21] M.Y. Alkawareek, Q.T. Algwari, G. Laverty, S.P. Gorman, W.G. Graham, D. O’Connell, and B.F. Gilmore. Eradication of pseudomonas aeruginosa biofilms by atmospheric pressure non-thermal plasma. *PLoS ONE*, 7(8), 2012.
- [22] A. Bani-Jaber, I. Hamdan, and M. Alkawareek. The synthesis and characterization of fatty acid salts of chitosan as novel matrices for prolonged intragastric drug delivery. *Archives of Pharmacal Research*, 35(7):1159–1168, 2012.
- [23] E.M. Ryan, M.Y. Alkawareek, R.F. Donnelly, and B.F. Gilmore. Synergistic phage-antibiotic combinations for the control of escherichia coli biofilms in vitro. *FEMS Immunology and Medical Microbiology*, 65(2):395–398, 2012.
- [24] M.Y. Alkawareek, Q.T. Algwari, S.P. Gorman, W.G. Graham, D. O’Connell, and B.F. Gilmore. Application of atmospheric pressure nonthermal plasma for the in vitro eradication of bacterial biofilms. *FEMS Immunology and Medical Microbiology*, 65(2):381–384, 2012.
- [25] A.K. Bani-Jaber, M.Y. Alkawareek, J.J. Al-Gousous, and A.Y. Abu Helwa. Floating and sustained-release characteristics of effervescent tablets prepared with a mixed matrix of eudragit l-100-55 and eudragit e po. *Chemical and Pharmaceutical Bulletin*, 59(2):155–160, 2011.

---

## Conferences

- Sep 12-14, 2022 **THE Digital Universities MENA 2022**, Khalifa University, Abu Dhabi, UAE
- June 19, 2022 **QS World University Rankings 2023 - Arab Forum**, Riyadh, KSA
- March 1-3, 2022 **QS Higher Ed Summit - ME & Africa 2022 (MAPLE)**, Dubai, UAE
- Nov 27, 2020 **COVID-19 Diagnostic Tests: How Accurate are They? (Webinar)**, School of Pharmacy, The University of Jordan, Amman, Jordan, Presenter
- Nov. 20-21, 2017 **International Conference on Advances in Pharmaceutical and Medical Sciences**, Kuala Lumpur, Malaysia  
Alaaldin M. Alkilany and Mahmoud Y. Alkawareek; Azathioprine-Loaded Gold Nanoparticles for the Treatment of Rheumatoid Arthritis. (Poster presentation)
- Sep 27-29, 2017 **The 21st International Symposium on Microencapsulation**, University of Algarve, Faro, Portugal  
Abulateefeh S.R., Alkawareek M.Y., Alkilany A.M.; Tuning the Internal Core Architecture of PLGA Microcapsules for Drug Delivery Applications. (Poster presentation)
- March 5-6, 2017 **Best Practices for Planning Educational Assessment and Curriculum Mapping**, Al Ain University of Science and Technology, Abu Dhabi, UAE

- Oct 25-27, 2016 **Excellence in Pharmacy Education & Research: a Quality Approach**, *School of Pharmacy, The University of Jordan, Amman, Jordan*  
Alkawareek M.Y., Bahloul A., Alkilany A.M.; Silver Nanoparticles and Hydrogen Peroxide Based System for The Eradication of Stubborn Bacterial Infections. (Oral Presentation)
- Sep 9-12, 2013 **EUROBIOFILMS 2013, Third European Congress on Microbial Biofilms**, *Ghent, Belgium*  
Alkawareek M.Y., Gorman S.P., Graham W.G., Gilmore B.F.; Anti-biofilm Activity of Atmospheric Pressure Cold Plasmas: Efficacy and Mechanism. (Oral presentation)
- Sep 9-12, 2013 **EUROBIOFILMS 2013, Third European Congress on Microbial Biofilms**, *Ghent, Belgium*  
Alkawareek M.Y., Gorman S.P., Graham W.G., Gilmore B.F.; Microscopic Examination of Biofilm Destruction by Atmospheric Pressure Plasma. (Poster presentation)
- Feb 21, 2013 **Plasma Sources in Plasma Medicine**, *Greifswald, Germany*  
Alkawareek M.Y., Gorman S.P., Graham W.G., Gilmore B.F.; Elucidating the Mechanisms of Antimicrobial and Anti-biofilm Activities of Non Thermal Plasma. (Oral presentation)
- Sep 10-11, 2012 **IBBS ‘Antimicrobial Strategies for Biofilm Control’**, *Winchester, UK*  
Alkawareek M.Y., Gorman S.P., Graham W.G., Gilmore B.F.; A Novel Atmospheric Pressure Non-thermal Plasma for the Efficient Eradication and Control of Biofilms. (Oral presentation)
- July 12-13, 2012 **Plasma Medicine**, *Edinburgh International Conference Center, Edinburgh, UK*
- June 17-21, 2012 **The 4th International Conference on Plasma Medicine (ICPM-4)**, *Orléans, France*  
Alkawareek M.Y., Gorman S.P., Graham W.G., O’Connell D., Gilmore B.F.; Effects of Atmospheric Pressure Plasma on Cellular Components: An Insight into Bacterial Destruction Mechanisms. (Poster presentation)
- April 2-3, 2012 **The 34th All Ireland Schools of Pharmacy Research Seminar**, *UCC, Cork, Ireland*  
Alkawareek M.Y., Gorman S.P., Graham W.G., O’Connell D., Gilmore B.F.; Antibacterial Activity of Atmospheric Pressure Non-Thermal Plasma. (Oral presentation)
- Nov 14-18, 2011 **64th Annual Gaseous Electronics Conference (GEC)**, *Salt Lake City, Utah, USA*  
Alkawareek M.Y., Gilmore B.F., Gorman S.P., Algwari Q.T., Graham W.G., O’Connell D.; Eradication of Bacterial Biofilms Using Atmospheric Pressure Non-Thermal Plasmas. (Oral presentation)
- Aug 28 – Sep 2, 2011 **The 30th International Conference on Phenomena in Ionized Gases (ICPIG)**, *QUB, Belfast, NI, UK*  
Alkawareek M.Y., Gorman S.P., Algwari Q.T., O’Connell D., Gilmore B.F.; Kilohertz-Driven Atmospheric Pressure Plasma Jet for the Decontamination of Bacterial Biofilms. (Poster presentation)
- July 6-8, 2011 **EUROBIOFILMS 2011, Second European Congress on Microbial Biofilms**, *Copenhagen, Denmark*  
Alkawareek M.Y., Gorman S.P., Algwari Q.T., O’Connell D., Gilmore B.F.; Bacterial Biofilms Eradication Using Atmospheric Pressure Plasma Jet. (Poster presentation)
- April 18-19, 2011 **The 33rd All Ireland Schools of Pharmacy Research Seminar**, *RCSI, Dublin, Ireland*  
Alkawareek M.Y., Gorman S.P., Algwari Q.T., O’Connell D., Gilmore B.F.; Atmospheric Pressure Plasma for the Elimination of Bacterial Biofilms. (Poster presentation)

---

## Workshops and Training Courses

- Sep. 21-22, 2021 **Microsoft Excel: Basic to Intermediate Level (Training Course)**, *School of Pharmacy, The University of Jordan, Amman, Jordan*, Trainer
- Feb. 6, 2020 **Microsoft Excel: Basic to Intermediate Level (Training Course)**, *Accreditation and Quality Assurance Center, The University of Jordan, Amman, Jordan*, Trainer
- Nov. 6th, 2019 **Creating Effective Surveys Using Google Forms (Training Course)**, *Accreditation and Quality Assurance Center, The University of Jordan, Amman, Jordan*, Trainer
- Nov. 16th, 2017 **E-Learning (Training Course)**, *School of Pharmacy, The University of Jordan, Amman, Jordan*, Trainer
- Nov. 9th, 2017 **Matching Course ILOs to Program ILOs in Course Syllabus (Workshop)**, *School of Pharmacy, The University of Jordan, Amman, Jordan*
- May 24th, 2017 **New Trends in University Education: Project-Based Learning and Flipped Learning**, *Accreditation and Quality Assurance Center, The University of Jordan, Amman, Jordan*
- Aug. 28-31, 2016 **The 4th Pharmacy Students Research Training Program**, *School of Pharmacy, The University of Jordan, Amman, Jordan*, Speaker
- Jan. 18-25, 2015 **Academic Development Training Program**, *Accreditation and Quality Assurance Center, The University of Jordan, Amman, Jordan*, Including courses about course design, intended learning outcomes, new trends in university teaching, student learning evaluation, university laws and regulations, and code of practice for quality assurance
- 2010-2013 **QUB Postgraduate Training Programme**, *Queen's University Belfast, Belfast, UK*, Including courses about: academic writing, project management, communication and presentation skills, reference management systems, research originality and plagiarism, SPSS, and basics of graphic design

---

## Languages

Arabic Native  
 English Fluent