

Amal Ghaleb Al-Bakri

Professor of Pharmaceutical Microbiology

Department of Pharmaceutics and Pharmaceutical Technology

Faculty of Pharmacy/ The University of Jordan

Queen Rania St.

Amman, 11942 Jordan

Personal Information

Name: Amal Ghaleb Al-Bakri

Date of Birth: 23, September, 1971

Nationality: Jordanian

Current Address: Department of Pharmaceutics and Pharmaceutical Technology

Faculty of Pharmacy, The University of Jordan

Amman, 11942 Jordan

Tel: +962 6 5355000 ext-23330

Fax: +962 5 339649

Email: agbakri@ju.edu.jo

www.ju.edu.jo/sites/academic/agbakri

Education

1989	Secondary School Certificate, Tawjihi (Excellent, 93.8) Rosary College, Amman-Jordan
1993-1994	B.Sc. in Pharmacy (Excellent, 2/120) Faculty of Pharmacy, The University of Jordan, Amman, 11942 Jordan
1999-2001	Ph.D. in Pharmaceutical Sciences / Microbiology, <i>Thesis title:</i> " Co-Culture of <i>Pseudomonas aeruginosa</i> and <i>Burkholderia cepacia</i> : Implications to Cystic Fibrotic Lung Infection" Faculty of Medicine, Dentistry, Nursing and Pharmacy School of Pharmacy and Pharmaceutical Sciences The University of Manchester, Oxford Road, Manchester UK M13 9PL

Training and Working Experience

1994-1997	Teaching Assistant. Faculty of Pharmacy, The University of Jordan, Amman-Jordan.
1997-2001	Ph.D. student. Faculty of Medicine, Dentistry, Nursing and Pharmacy. School of Pharmacy and Pharmaceutical Sciences. Manchester, U.K.
2002-2007	Assistant Professor. Department of Pharmaceutics and Pharmaceutical Technology, Faculty of Pharmacy, The University of Jordan, Amman-Jordan.
2007-2012	Associate Professor. Department of Pharmaceutics and Pharmaceutical Technology, Faculty of Pharmacy, The University of Jordan, Amman-Jordan.
2004-2007	Dean Assistant for Academic Development. Faculty of Pharmacy, The University of Jordan, Amman-Jordan.
2004-2005	Preparation of Program Specification and Self Assessment Documents for the Faculty of Pharmacy, The University of Jordan, Amman, Jordan.
2007- Sep 2011	Vice Dean. Faculty of Pharmacy, The University of Jordan, Amman, Jordan.
2007- Sep 2011	Head of Committee for Postgraduate Studies
2012-current	Professor. Department of Pharmaceutics and Pharmaceutical Technology, Faculty of Pharmacy, The University of Jordan, Amman-Jordan.
2013-2014	Dean. Faculty of Pharmacy, The Royal University for Medical Sciences, Amman-Jordan

Research Interests

1. Microorganisms as Planktonic and Biofilm cultures: Their growth characteristics and control.
2. Drug Discovery: Identification and testing of new compounds including natural products as potential antibacterial and antipathogenic agents (Quorum sensing inhibitors and anti adhesion agents). In collaboration with researchers from the Faculty of Pharmacy and Faculty of Science-University of Jordan.
3. Molecular characterisation of resistant strains of *Staphylococcus aureus* and *Acinetobacter baumannii* and their prevalence within the Jordanian population. In collaboration with researchers from the Faculty of Pharmacy and the Faculty of Medicine-University of Jordan.
4. Community drug use and abuse and rationale drug use in Jordan's health care system.
5. Photodynamic antimicrobial chemotherapy PACT and its use in pharmaceutical dosage forms to control microbial infections.

Research Funding/Grants

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|------------------|---|
| Sep, 2003 | 1. Antibiotic resistance surveillance in Jordan. (Deanship of Academic Research, University of Jordan, 7, 350 \$). Publication no.4. |
| Dec, 2003 | 2. Testing of Protein Tyrosine phosphatase (PTPase) inhibitors captured by <i>in-silico</i> screening as potential new hypoglycemic agents. (Deanship of Academic Research, University of Jordan, 14, 400 \$).Publication no. 5. |
| Nov, 2004 | 3. Testing of non-nucleoside compounds predicted by computer pharmacophore modeling of HIV type-1 reverse transcriptase inhibitors as novel anti-Human Immunodeficiency Virus (AIDS). (Deanship of Academic Research, University of Jordan, 24, 500 \$). Publication no.13. |
| Sep, 2006 | 4. Search for new potent antibacterial agents via ligand-based and structure-based modeling techniques followed by microbiological validation. (Deanship of Academic Research, University of Jordan, 26, 700 \$). Publication no. 10. |
| 2007 | 5. Biofilm formation and eradication of methicillin and vancomycin resistant staphylococci isolated from Jordanian community. (Deanship of Academic Research, University of Jordan, 21, 780 \$). Manuscript is under preparation. |

- 2009** 6. Molecular categorization, epidemiological surveillance and virulence determinants of methicillin resistant *Staphylococcus aureus* (MRSA) and coagulase-negative staphylococcus (CoNS) in Jordanian community. (Scientific Research Fund, Ministry of Higher Education, **44, 975 \$**). Manuscript is under preparation.
- 2010** 7. Pilot study for the *in vitro* evaluation of antimicrobial activity of *Varthemia iphionoids* Boiss (family Compositae) crude extracts in the treatment of topical skin bacterial and fungal infections.
(The National Center for Biotechnology, **5, 421 \$**).
- 2010** 8. Formulation and Evaluation of Pharmaceuticals containing photosensitizers as novel antimicrobial agents.(The National Center for Biotechnology, **22, 480 \$**).
- 2010** 9. Staff Exchange Scheme FP7 2010 (**32, 000 EUR**).
- 2011** 10. Daniel Turnber Fellowship for Medical Sciences Award (**3, 500 £**).
- 2012** 11. Study of prevalence and risk factors associated with diabetic foot infections caused by MRSA among Jordanian patients. (Deanship of Academic Research, University of Jordan, **20600 JD**)
- 2014** 12. Screening of antimicrobial and antiquorum sensing activity in macro algae from Gulf of Aqaba, Red Sea. (Deanship of Academic Research, University of Jordan)
- 2014** 13. Co-culture of *Pseudomonas aeruginosa* biofilm on cultured cystic fibrosis airway cells. (Deanship of Academic Research, University of Jordan)

Awards

1. Ministry of Higher Education B.Sc Scholarship- 1989-1994.
2. Dar Al Dawa- Pharmaceutical Company Ph.D Scholarship, 1997-2001.
3. The University of Jordan Award of Best researcher, Academic Year 2009-2010.
4. The University of Jordan Award of Best Researcher, Academic Year 2010-2011.
4. Marie Marie Curie Actions—International Research Staff Exchange Scheme- IRSES)-FP7, 2010.
5. Daniel Turnberg Fellowship for Medical Sciences, 2011.

Publications

1. **Amal G. Al- Bakri**, Peter Gilbert and David G. Allison (1999). Mixed species biofilms of *Burkholderia cepacia* and *Pseudomonas aeruginosa*. *Biofilms, The Good, The Bad and the Ugly* pp327-337. Edited by Wimpeny, J, Gilbert, P, Walker, J, Brading, M and Bayston R. Bioline: Cardiff.
2. **A.G. Al-Bakri**, P. Gilbert and D.G. Allison (2004). Immigration and emigration of *Burkholderia cepacia* and *Pseudomonas aeruginosa* between and within mixed biofilm communities. *Journal of Applied Microbiology* **96**, pp 455-463.
3. **Amal G. Al-Bakri**, Peter Gilbert, David G Allison (2005). Influence of gentamicin and tobramycin on binary biofilm formation by co-cultures of *Burkholderia cepacia* and *Pseudomonas aeruginosa*. *Journal of Basic Microbiology*. **45 (5)**, pp 392-396.
4. **Amal G. Al- Bakri**, Yasser Bustanji, Al-Motassem Yousef (2005). Common consumption of antibacterial drugs within the Jordanian population: sources, patterns and appropriateness. *International Journal of Antimicrobial Agents*. **26**, pp 389-395.
5. Yasser Bustanji, Mutasem O. Taha, Al-Motassem Yousef **Amal G. Al- Bakri** (2006). Berberine potently inhibits protein tyrosine phosphatase 1B: Investigation by docking simulation and experimental validation. *Journal of Enzyme Inhibition and Medicinal Chemistry*. **21 (2)**, pp 163-171.
6. Mutasem O. Taha, **Amal G Al-Bakri** Waleed Zaloum (2006). Discovery of potent inhibitors of Pseudomonas quorum sensing via pharmacophore modeling and *in-silico* screening. *Journal of Bioorganic and Medicinal Chemistry Letters*. **16(22)**, pp 5902-5906.
7. **Amal G Al-Bakri** and Fatima Afifi (2007). Evaluation of antimicrobial activity of selected plant extracts by rapid XTT colorimetry and bacterial enumeration. *Journal of Microbiological Methods*. **68(1)**, pp 19-25.
8. Mutasem O. Taha, Yasser Bustanji, **Amal G. Al-Bakri**. Al-Mottassem Yousef, Waleed A. Zalloum, Ihab Al-Masri, and Naji Atallah (2007). Discovery of new potent human protein tyrosine phosphatase inhibitors via pharmacophore and QSAR analysis followed by *in-silico* screening. *Journal of Molecular Graphics and Modeling*. **25(6)**, pp 870-884.
9. Yousef A.M. **Al-Bakri A.G.**, Yasser Bustanji, Al-Wazaify M. Self Medication Patterns in Amman, Jordan (2008). *Pharmacy World and Science*. **30(1)**, pp 24-30.

10. Taha MO, Atallah N, **Al-Bakri A.G.**, Paradis-Bleau C, Zalloum H, Younis KS, Levesque RC (2008). Discovery of new MurF inhibitors via pharmacophore modelling and QSAR analysis followed by in-silico screening. *Bioorganic and Medicinal Chemistry*. **16(3)**, pp 1218-1235.
11. **Al-Bakri A.G.**, Othman, G and Bustanji Y (2009). The assessment of the antibacterial and antifungal activities of aspirin, EDTA and aspirin-EDTA combination and their effectiveness as antibiofilm agents. *Journal of Applied Microbiology* **107(1)**, pp 280-286.
12. Al-Momany NH, **Al-Bakri AG**, Makahleh ZM, Wazaify MMB (2009). Adherence to international antimicrobial prophylaxis guidelines in cardiac surgery: a Jordanian study demonstrates need for quality improvement *Journal of Managed Care Pharmacy*. **15 (3)**, pp 262-271.
13. Bustanji Y, Al-Masri IM, Qasem A, **Al-Bakri AG** and Taha MO (2009). *In silico* screening for non-nucleoside HIV-1 reverse transcriptase inhibitors using physicochemical filters and high-throughput docking followed by in vitro evaluation. *Chemical Biology and Drug Design*, **74 (3)**, pp 258-265.
14. Saadeh, HA, Mosleh IM, **Al-Bakri AG** and Mubarak MS (2010). Synthesis and antimicrobial activity of new 1,2,4-triazole-3-thiol metronidazole derivatives. *Monatshefte für Chemie*, **141**, pp 471-478.
15. **Al-Bakri AG**, Othman G and Afifi FU (2010). Determination of the antibiofilm, antiadhesive and anti-MRSA activities of seven *Salvia* species. *Pharmacognosy Magazine*, **6**, pp 264-270.
16. Taha MO, Qandil AM, Al-Haraznah T, Khalaf RA, Zalloum H, **Al-Bakri AG** (2011). Discovery of new antifungal leads via pharmacophore modeling and QSAR analysis of fungal N-myristoyl transferase inhibitors followed by in silico screening. *Chemical Biology and Drug Design*, **78(3)**, pp 391-407.
17. Taha MO, Habash M, Al-Hadidi Z, **Al-Bakri A**, Younis K, Sisan S (2011). Docking-based Docking-based comparative intermolecular contacts analysis as new 3-D QSAR concept for validating docking studies and in silico screening: NMT and GP inhibitors as case studies. *Journal of Chemical Information and Modeling*, **51(3):647-669**.
18. Haythem A. Saadeh, Eman A. Abu Shaireh, Ibrahim M. Mosleh, **Amal G. Al-Bakri** and Mohammad S. Mubarak (2011). Synthesis, characterization and biological activity of Schiff bases derived from metronidazole. *Medicinal Chemistry Research*. DOI: 10.1007/s00044-011-9830-y. Online

19. Mohammed H. Kailani, **Amal G. Al-Bakri**, Haitham Saadeh and Yusuf M. Al-Hiari. Preparation and antimicrobial screening of novel 2,2-dichloropropane-cis-dicarbamates and comparison to their alkane and cis alkene analogs. (2012). Jordan Journal of Chemistry, **7(3)**:
20. **A.G. Al-Bakri**, H Al-Hadithi, V. Kasabri, G. Othman, A. Kriegeskorte and K. Becker. The epidemiology and molecular characterization of methicillin-resistant staphylococci sampled from healthy Jordanian population (2013). Epidemiology and infection, **23**: .1-8.
21. Asem A Shehabi Rozan Abu-Yousef, Eman Badran, **Amal G. Al-Bakri**, Luay Abu-Qatouseh and Karsten Becker. Major Characteristics of *Staphylococcus aureus* colonizing Jordanian infants (2013). Pediatrics International. 55(3):300-4. doi: 10.1111/ped.12060.

22. Obeidat N, Jawdat F, **Al-Bakri AG**, Shehabi AA. Major biologic characteristics of *Acinetobacter baumannii* isolates from hospital environmental and patients' respiratory tract sources (2014). American Journal of Infect Control. 42(4):401-4. doi: 10.1016/j.ajic.2013.10.010.
23. Adwan S1, Abu-Dahab R, **Al-Bakri AG**, Sallam A. Glyceryl monooleate-based otic delivery system of ofloxacin: release profile and bactericidal activity (2014). Pharmaceutical Development and Technology. Jan 6 (doi:10.3109/10837450.2013.871030).
24. Amjad M. Qandil, Lorca O. Al-Zoubi, **Amal G. Al-Bakri**, Haneen A. Amawi , Qosay A. Al-Balas ,Abdulmalik M. Alkatheri and Abdulkareem M. Albekairy. Synthesis, Antibacterial Evaluation and QSAR of α -Substituted-N4-Acetamides of Ciprofloxacin and Norfloxacin (2014). Antibiotics. 3(3), 244-269; doi:10.3390/antibiotics3030244
25. Safa Daoud, Fatma U Afifi, Amal G Al-Bakri, Violet Kasabri, and Imad I Hamdan. Preparation Physicochemical Characterization and Biological Evaluation of some Hesperidin Metal Complexes (2014) Iran J Pharm Res. 13(3): 909–918.
26. Malath A. Al-Qtaitat, Haythem A. Saadeh, Amal G. Al-Bakri, Hargobinder Kaur, Kapil Goyal, Rakesh Sehgal, Mohammad S. Mubarak. Synthesis, characterization, and biological activity of novel metronidazole-piperazine amides (2014). Monatsh Chem. DOI 10.1007/s00706-014-1352-0
- 27.

Supervision: M.Sc. and Ph.D Projects

1. Generation of an optimal pharmacophoric model for quorum sensing agonists and antagonists in *Pseudomonas aeruginosa* employing ligand based technique and subsequent experimental validation. (Defended on January 2006). Publication no.6.
2. Composition of Jordanian rosemary and fennel essential oils and their antimicrobial effects against four major foodborne bacterial pathogens. (Defended on December, 2006)
3. Docking, CoMFA and pharmacophore modeling of the MurB enzyme inhibitors for the discovery of new selective anti-bacterial agents and subsequent experimental validation (Defended on May, 2007). Publication no. 10.
4. Comprehensive study of the use of prophylactic antibiotics in clinical practice in cardiac surgery in Jordan: microbiological study of normal flora and surgical site infecting organism, adherence to international guidelines, and obstacles against adherence (Defended on July, 2007). Publication no. 12.
5. The assessment of the anti-adhesive and anti-biofilm activities of selected agents towards the establishment of pseudo steady-state microbial biofilms on abiotic surfaces and their potential use as catheter lock therapy (Defended on April, 2008). Manuscript is under preparation.
6. Pharmacophore modelling of *Enterococcus faecalis* Fab H enzyme inhibitors for the discovery of new selective anti-bacterial agents and subsequent experimental validation (Defended on August, 2008).
7. Discovery of new *Candida albicans* protein *N*-myristol transferase (NMT) inhibitors via novel structure based molecular modeling approach followed by experimental validation (Defended on July, 2010). Publication no.17.
8. Preparation and antimicrobial evaluation of 7-substituted aniline-8-nitrofluoroquinolones (Defended on August, 2010).
9. A Prospective randomized controlled trial to investigate the impact of a Clinical pharmacist on treatment-related problems in patients who receive anti-infective therapy in the general intensive care unit (ICU) ward of a major medical centre in Jordan (Defended on November, 2010).

10. The assessment of biofilm formation of *Acinetobacter baumannii* isolates from human and environment sources in association with antimicrobial resistance (Defended on December, 2010). Publication no 22.
11. Studying the effect of specific wave length light-activation of photosensitizer-Pluronic gel based topical formula against *Staphylococcus aureus* culture (Defended on May, 2012).
12. Preparation and characterization of microemulsion based formula of 5-aminolaevulinic acid (ALA) photosensitizer for PACT treatment of acne. (Defended on May, 2014)
13. Cross sectional evaluation of the usage of the broad spectrum intravenous antibiotics in the JUH intensive care units. (Defended on May, 2014).
14. The Effect of Iberin against *Pseudomonas aeruginosa* biofilms on cultured cystic fibrosis airway cells. (Ph.D project, 2014)

A member in the examination committee of Postgraduates

1. The prevalence of adhesion (*ica D* and *fib*) and toxin (*tst*, *eta* and *etb*) genes in Jordanian *Staphylococcus aureus* isolates (July, 2004).
2. Antibiotic self-medication among health professional students at Jordan University (January. 2007).
3. The immunomodulatory effect of Gemifloxacin on human peripheral mononuclear blood cells (August, 2009).
4. Immunogenicity evaluation of an erythropoietin product in patients with chronic renal failure (August 2010).
5. Preparation, Physicochemical characterization and biological evaluation of some hesperidin metal complexes (August, 2010).
6. Assessment of the antirheumatic activity of *Salvia fruticosa* Mill (Syn: *Salvia triloba* L. Fil) (Lamiaceae); by performing enzymatic, cellular and *in vivo* studies (June, 2011).
7. Evaluation of prolonged intermittent fasting effect on immune system and some blood inflammatory cytokines in healthy volunteers (April, 2011).

And others

Conferences and Talks Attended

1. Biofilms: Community Interactions and Control (1997). Cardiff, U.K.
2. Biofilms: The Good, the Bad and the Ugly (1999). Cardiff, U.K.
3. Society for General Microbiology Symposium on Microbial Signalling and Communication (1999). Edinburgh, U.K.
4. American Society for Microbiology Conference on "Biofilms 2000" (2000). Big Sky, Montana, USA.
5. Society for General Microbiology Symposium on Community Structure and Co-operation in Biofilms (2000). Exeter, U.K.
6. Biofilm Community Interactions: Chance or Necessity? (2001). Cardiff, U.K.
7. The 2nd Arabian Symposium of Antibiotics (2002). Damascus, Syria.
8. The 2nd International Conference of the Royal Jordanian Medical Services (2003). Amman, Jordan.
9. Faculty of Pharmacy Symposium "Advanced Computer Aided Drug Discovery Techniques Adopted at the Faculty of Pharmacy-The University of Jordan" (2003). Amman, Jordan.
10. The 3rd Arab Symposium for Antimicrobial Agents "Towards Rational use of Antimicrobials (2004). Dar El Defaa El Gawi, Cairo, Egypt.
11. The 3rd International Conference of the Royal Medical Services in Collaboration with the Royal college of Physicians of London (2006). Amman, Jordan.
12. The 4th Arab Symposium for Antimicrobial Agents (2006). Tunis, Tunisia.
13. USP 2nd Regional Scientific Workshop (9-10, September, 2006). Amman, Jordan.
14. The 2nd Jordanian Workshop "Synchrotron Light for Experimental Science and Applications in the Middle East [SESAME] in Research, Training and Technological Applications" (September, 2006). Amman, Jordan.
15. Sterilizing Filters Validation Issues: Today and the Future. Pall Italia & Pall Middle East. (15 November, 2006). Amman, Jordan.
16. USP 2nd Regional Scientific Workshop (9-10, September, 2006). Amman, Jordan.

17. The 9th International Conference on Biology and Synchrotron Radiation (**13-17, August, 2007**). Manchester, UK.
18. The 6th Arab Conference of Antimicrobial agents (**16-18, October, 2008**). Rabat, Morocco
19. The 7th Arab Conference of Antimicrobial agents (**2009**). Lebanon, Beirut.
20. The 8th Arab Conference of Antimicrobial agents (**2010**). Syria ,
21. The Third conference of the Federation of Arab Societies of Clinical Microbiology and Infectious diseases and the Tenth Conference of Arab Alliance for Prudent Use of Antimicrobial Agents. 2014. Amman-Jordan

Conferences: Podium Presentations

1. **Amal G. Al- Bakri**, Peter Gilbert and David G. Allison (1999). Mixed species biofilms of *Burkholderia cepacia* and *Pseudomonas aeruginosa*. Biofilms: The Good, the Bad and the Ugly. Cardiff, U.K.
2. **Amal G. Al- Bakri**, Peter Gilbert and David G. Allison (7-10 October, 2003). Immigration and emigration of *Burkholderia cepacia* and *Pseudomonas aeruginosa* between and within mixed biofilm communities. The 2nd international conference of the Royal Jordanian Medical Services. Amman, Jordan.
3. **Amal G. Al- Bakri**, Peter Gilbert and David G. Allison (March, 2004). The effects of chronic exposure to antibiotics upon dynamics in binary biofilms. The 3rd Arab symposium for antimicrobial agents "Towards Rational use of Antimicrobials. Cairo/Egypt.
4. **Amal G. Al- Bakri**, Yasser Bustanji, Al-Motassem Yousef (April/2006). Antibacterial Drug Consumption among the Jordanian Population: Current Status and Future Plans. The 3rd International Conference of the Royal Medical Services in Collaboration with the Royal college of Physicians of London. Amman, Jordan.
5. Yasser Bustanji, Mutasem Taha, Al-Motassem Yousef, **Amal Al- Bakri** (2006). Protein Tyrosine Phosphatase 1B Inhibitors as Potential New Hypoglycemic Agents. The 3rd International conference of the Royal Jordanian Medical Services. Amman, Jordan.
6. **Amal G. Al-Bakri**, Motassem Taha and Waleed Zalloum (2007). Bacterial Biofilm and Resistance: Towards the Discovery of Effective Antibiofilm Agents. The 5th Arab Symposium for Antimicrobial Agents. Amman, Jordan.
7. **Amal G. Al-Bakri**, Manal Ayyash and Asem Shehabi (2008). Biofilm associated infections: control versus resistance. The 6th Arab Conference for Antimicrobial Agents. Rabat-Morocco
8. **Amal G. Al-Bakri** Ghadeer Othman and Fatima Afifi (2010). *Salvia* species as potential antibiofilm, antiadhesive and anti-MRSA natural agents. The 8th Arab Conference of Antimicrobial agents. Syria.
9. **Amal G. Al-Bakri** (2011). Society's Failure to Protect the Miracle Drug. Faculty of Pharmacy-Petra University Scientific Day. Amman-Jordan.
10. **Amal G. Al-Bakri**, Eman Aqil, Ghadeer Othman and Enam Khalil (2014). Studying the antimicrobial effect of low energy light activation of photosensitizers on planktonic and biofilm cultures of Gram negative, Gram positive and *Candida albicans*.

Conferences: Poster Presentations

1. **Amal G. Al- Bakri**, Peter Gilbert and David G. Allison (2000). Formation of mixed species biofilms of *Pseudomonas aeruginosa* and *Burkholderia cepacia*, ASM 100th General Meeting/Los Angeles, California, USA.
2. **Amal G. Al- Bakri**, Peter Gilbert and David G. Allison (2000). Formation of mixed species biofilms of *Pseudomonas aeruginosa* and *Burkholderia cepacia*, ASM Conference on "Biofilms 2000". Big Sky, Montana, USA.
3. **Amal G. Al- Bakri**, Peter Gilbert and David G. Allison (September 2000). Establishment of *Pseudomonas aeruginosa* and *Burkholderia cepacia* binary culture biofilms. SGM main symposium; Community structure and co-operation in biofilms. University of Exeter, Exeter, UK.
4. Yasser Bustanji, Mutasem O. Taha, Al-Motassem Yousef **Amal G. Al- Bakri** (17-21 December, 2005). Berberine Potently Inhibits Protein Tyrosine Phosphatase 1B: Investigation by Docking Simulation and Experimental Validation. The 9th International Pharmaceutical Sciences Conference and Exposition.. Riyadh, Kingdom of Saudi Arabia. Saudi Pharmaceutical Journal 2005, 13(4 S):78.
5. **Amal G. Al- Bakri**, Yasser Bustanji, Al-Motassem Yousef (April 2006). Community antibacterial consumption in Jordan: Prudent use or Misuse and Abuse. The 4th Arab Symposium for Antimicrobial Agents. Tunis, Tunis.
6. Manal Ayyash, Asem Shehabi, **A.G. Al-Bakri** (May 2008). A novel catheter lock therapy. Faculty of Pharmacy/UJ Scientific Day. Amman-Jordan.
7. **Amal G. Al-Bakri**, Hussein Shalan, Atallah Abu-oliem, Nailya Bulatova (2011). A Prospective randomized controlled trial to investigate the impact of a Clinical pharmacist on treatment-related problems in patients who receive anti-infective therapy in the general intensive care unit (ICU) ward of a major medical centre in Jordan. Faculty of Pharmacy/UJ Scientific Day. Amman-Jordan.

Workshops and Training Courses Attended

1. Teaching and Assessment Methods. (**2-December-24 January, 2003**). Centre for Educational Development. Amman, Jordan.
2. Managing Multiple Choice Questions. (**3. June, 2003**). Centre for Educational Development. Amman, Jordan.
3. Regional workshop on "Research Approaches and Strategies" (**9-12 July, 2003**). Held in collaboration between Wageningen UR, Head of Academic Affairs UNESCO-IHE and Water and Environment Research and Study Center/University of Jordan. An activity of the collaborative project of: Capacity building of wastewater valorization for agriculture production in the Middle East area by using cost effective treatment technology. Amman, Jordan.
4. Regional workshop on "Training of Trainers" (**14-17 July, 2003**). Held in collaboration between Wageningen UR, Head of Academic Affairs UNESCO-IHE and Water and Environment Research and Study Centre/University of Jordan. An activity of the collaborative project of: Capacity building of wastewater valorization for agriculture production in the Middle East area by using cost effective treatment technology. Amman, Jordan.
5. The Role of Pharmacist (**15-16 September 2004**). Jordan Food and Drug Administration Amman, Jordan.
6. Training Human Resources for Quality Assurance Reviewal in the Academic Department (**2004**). Quality Assurance Agency (QAA). Amman, Jordan.
7. Training Trainers for Tempus and other Programmes (**July, 2005**). The consortium of Universita Cattolica del Sacro Cuore Milan, Ersamus Hogeschool Brussel, European cultural interactions Athens and the University of Jordan. Supported by the European Commission DG EAC, within the Tempus-Meda project *SCM M007A04*. Amman, Jordan.
8. Training course on using Blackboard (**2005**). King Abdulla II School for Information and Technology Amman, Jordan.
9. Training course on Recent Techniques for Identification of Bacteria (12-16 March, 2006). Cairo Mircen, Faculty of Agriculture, Ain Shams University and UNESCO Cairo office. Cairo, Egypt.

10. Eighth Plenary Meeting of ISO/TC 217- "Cosmetics" and Parallel WG Meetings (15-19/6/2008). Jordan Standards and Metrology Organisation-Amman, Jordan as a Jordanian Expert within the following groups

- a. ISO/WD 11930 Cosmetics-Microbiology-evaluation of the antimicrobial protection of a cosmetic product,
- b. ISO/CD 29621 "Cosmetics – Microbiology - Guidance factors to the risk assessment and identification of microbiologically low-risk products"

11. FP7 and the Health Theme (5 July, 2010). The Higher council for science and Technology. Amman-Jordan.

Memberships

1994-current	Jordan Pharmaceutical Association, Jordan.
1997-2003	Biofilm Club, UK.
1999-2001	Society of General Microbiology, U.K.
2000/2001	American Society for Microbiology, USA.
2002-current	Arab Alliance for the Prudent Use of Antimicrobial Agents, Egypt.
2004-2005	Faculty representative at the University of Jordan council.
2006-current	Jordanian Food and Drug Administration.
2010	Pharmacy Education Accreditation-Higher Education Accreditation Commission-
2007-Sep 2011	Member of the Faculty of Graduate Studies Council
2001-current	Member at number of University and Faculty committees e.g. (Postgraduate, Scientific Research, Library, Equipment and Laboratory, Tender, Quality Assurance, Study Plan and Curriculum-Ph.D program, and others) The Chair Person of the Faculty of Pharmacy Scientific Days, 2007 and 2010

Computer Skills and Others

1. The University of Jordan Computer Driving License (UJCDL), passing successfully all of its 9 modules. (Introduction, Windows, Word, Excel, PowerPoint, Access, Internet, Outlook, FrontPage).
2. Licensed Trainer for Applications to Tempus and other Programmes.

Member in the Editorial Board of

1. The International Arabic Journal of Antimicrobial Agents (IAJAA), 2011
2. TheScientificWorldJOURNAL, 2011

Referee for manuscript published within

1. Jordan Journal of Pharmaceutical Sciences
2. Journal of Pharmaceutical Biology
3. Jordan Journal for Biological Sciences
4. African Journal of Microbiology Research
5. Journal of Essential Oil Bearing Plants
6. Journal of Pharmaceutical Biology

Teaching Experience

1. Basic Microbiology
2. Pharmaceutical Microbiology
2. Selected Topics in Pharmaceutical Microbiology
3. Advanced Pharmaceutical Microbiology-MSc
3. Immunology and Genetics
4. Pharmacy Regulations and Ethics
5. Seminar in Pharmaceutics and Pharmaceutical Technology

Quality Control and Assurance experience

1. Pharmacy Education Accreditation:
 - a. Dean Assistant for Academic Development. Faculty of Pharmacy, University of Jordan for three years during which the Program Specification and Self Assessment Documents for the Faculty of Pharmacy had been prepared according to the specifications of Quality Assurance Agency, UK
 - b. Assessment of Pharmacy Education in Jordan as a committee member of Higher Education Accreditation Commission
2. Member of the JFDA committee for microbiological labs accreditation. The responsibilities included
 - a. Inspection of the premises
 - b. Evaluation of the SOPs
 - c. Evaluation of the QC and QA

All these require a comprehensive knowledge for all the QC tests that are used to evaluate the antimicrobial potency of biocides, the preservative efficacy of preservatives, the microbiological quality of sterile and non sterile drugs, food, water and biocides.

3. Consultant to the Jordan Standards and Metrology Organisation for the revision and the establishment of SOPs for the Microbiological assessment of Pharmaceuticals and Cosmetics According to ISO requirement.