CURRICULUM VITAE

Name: **Sabah H. Akrawi**

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Associate Professor of Clinical Pharmacokinetics, Biopharmaceutics
Teaching under- graduate and post-graduate courses in Biopharmaceutics, Pharmacokinetics, Clinical Pharmacokinetics, and Physical Pharmacy over 20 years.
Supervised more than 17 Post-Graduate students
Head of the Bioequivalence Studies Unit, Principal Investigator for the Bioequivalence Studies, and Head of the Analytical Laboratory, College of Pharmacy, Applied Science University, Amman-Jordan and College of Pharmacy Baghdad University.
Conducted more than 18 bioequivalence studies

Expert in:

- **HPLC, GC & other laboratories technique.**
  Conducting Chronic Intrahepatic & IV drug infusion in unrestrained animals.
  Conducting intranasal administration of drugs.
  Development and Validation of analytical methods for drugs using Micro Samples of blood.
  Design and Supervision of clinical studies.
  Design and Supervision of Disposition studies of drugs using Micro Samples.
  Drug Metabolism & its Stereo selective Disposition.
  Design and Supervision of Drug-Drug and Drug-Food interaction studies.

Microsoft Word
- **Microsoft Excel**
- **PowerPoint**

WinNonMix
SPSS

EDUCATION	
1968– 1973	BSc, College of Pharmacy University of Baghdad, Iraq
1982-1988	Ph.D. College of Pharmacy, University of Kentucky/ USA **Dissertation Title:** "Use of chronic portal vein infusion in rats to examine mephenytoin stereoselective disposition"

Teaching interests:
Teaching under- and post- graduate School of Pharmacy students courses of Clinical Pharmacokinetic, Pharmacokinetic, Physical Pharmacy, Biopharmaceuticals, Metabolism, Applied Therapeutic, OTC and Clinical Pharmacy.

Summary of research interests:

Research activities included the determination and evaluation of drug concentration to detect its relationship of the pharmacokinetic parameters to the therapeutic effects and pharmaceutical dosage form. Moreover, performed and validated drug analytical method. For instance; the evaluation and interpretation of the pharmacokinetic parameters of drugs (AUC, Clearance, $T_{1/2}$, K_e, K_m, C_{max}, T_{max}, V_d ...etc.); Pharmacokinetic/ Pharmacodynamics relationship. In addition, drugs under investigations required studies to determine their disposition, stereoslective disposition, through renal or metabolic route of elimination, additionally, its absorption and distribution in various body tissues. Effect of Drug–Drug and Drug–Food interaction on the disposition and its effect on pharmacokinetic parameters; bioavailability and bioequivalence studies include three parts the clinical, analytical and data statistical analysis; using micro sampling technique and the chronic intra hepatic infusion of drugs in unrestrained animals to predict the drug disposition and concentration profile.

PROFESSIONAL EXPERIENCE

2012- Now	College of Clinical Pharmacy-King Faisal University Job Title: Associate Professor Responsibilities: 1-Teaching School of Pharmacy students Clinical Pharmacokinetics & Pharmaceutical Care. 2- Scientific research regarding Biopharmaceutics and Pharmacokinetics. 3- Member of the scientific council -King Faisal University 4- Member of the Translation, Authority, and Publication Center-KFU 5- Recruitment Committee - coordinator 6- Accreditation Committee - member
2010-2012	Al Ain University of Science and Technology Job Title: Associate Professor

	Responsibilities: 1-Teaching School of Pharmacy students Biopharmaceutic, Pharmacy Practice, Social & Behavioral Aspects of Pharmacy Practice, Medication Dispensing and Distribution System & Physical Pharmacy. 2- Head of the Curriculum Committee 3- Head of the Training Committee 3- Scientific research regarding Biopharmaceutics and Pharmacokinetics.
2009-2010	Al Zytoonah University – Jordan Job Title: Associate Professor Responsibilities: 1-Teaching School of Pharmacy students Biopharmaceutic, Pharmaceutics, Pharmacokinetic, Clinical Pharmacokinetic & Physical Pharmacy. 2- Head of the Scientific Committee, Curriculum organization 3- Scientific research regarding Biopharmaceutics and Pharmacokinetics.
2000-2008	Applied Science University/College of Pharmacy, Amman-Jordan Job Title: Associate Professor Responsibilities: 1-Teaching School of Pharmacy students Biopharmaceutic, Pharmacokinetic, Clinical Pharmacokinetic & Physical Pharmacy. 2-Head of the Scientific and Curriculum committee at the School of Pharmacy. 3-Principal investigator for Bioavailability studies. - Established Bioequivalence studies unit. - Designed and supervised four Bioequivalence studies (Clindamycin capsule, Ibuprofen suspension, Rifampicin 150 mg capsule and Rifampicin 300 mg capsule) - Provided and modified the analytical methods 4-Head of the analytical laboratories for the Bioequivalence Unit, responsible for drugs analysis. 5-Supervised three postgraduate students with different projects of my interest. - “Two–Way, Crossover Randomized Bioequivalence Study of Two Formulations Containing rifampicin” - “Effect of hepatic blood flow on diurnal variation of CBZ steady state level during chronic portal vein infusion in rats. - “Lisinopril versus Captopril in hypertensive patients with and without renal impairment”.
1996-2000	University of Baghdad/ College of Pharmacy, Baghdad, Iraq Job Title: Associate Professor, Department of Clinical Pharmacy and Assistant to the Dean for Scientific Affair Responsibilities: 1- Teaching School of Pharmacy students (under- and post- graduate) Pharmacokinetic, Clinical Pharmacokinetic, Biopharmaceutic &

	Physical Pharmacy. 2- Member of the Post Graduate Studies Committee, Supervised post graduate students. 3- Head of the Scientific and Curriculum committee at the School of Pharmacy. 4- Principal investigator for Bioavailability studies. - Designed and supervised fourteen Bioequivalence studies (Cephalexin caps, Glibenclamide tablet, Naproxen tablet, Indomethacin capsule, Indomethacin suppositories, Clomipramine tablet, Amoxicillin Suspension, Ampicillin capsule, Carbidopa/Livodopa tablet, Gliclazide tablet, Methyldopa tablet and Clindamycin capsule). - Provided and modified the analytical methods 5- Head of the analytical laboratories for the Bioequivalence Unit, responsible for drugs analysis. 6- Supervised ten post-graduate students with different projects of my interest. - "The effect of prednisolone and antibiotic treatment on sperm function test and sperm agglutination in infertile men" - "Determination of nifedipine concentration in human serum" - "Two–Way, Crossover Randomized Bioequivalence Study of Two Formulations Containing 5mg Glibenclamide and Treatment Monitoring" - "The bioavailability-bioequivalence study of two dosage forms of test indomethacin product (25 mg capsules & 100 mg suppositories) and the treatment monitoring on patients using it" - "A two-way crossover bioavailability - bioequivalence study for formulations containing cephalexin" - "Drug registration system" - "Therapeutic drug monitoring for a test product containing 100mg atenolol and its bioavailability" - "Comparative study of three different manufacturers of atenolol tablets in hypertensive patients" - "Possible drug interaction between carbamazepine and tea components in human" - "Prescribing errors in selected Hospital and Private Clinics in Baghdad"
1988-1996	University of Baghdad/ College of Pharmacy, Baghdad, Iraq Job Title: Assistant Professor, Department of Clinical Pharmacy Responsibilities: 1- Teaching School of Pharmacy students (under- and post- graduate) Pharmacokinetic, Clinical Pharmacokinetic, Biopharmaceutics & Physical Pharmacy. 2- Member of the Post Graduate Studies Committee, Supervised post graduate students.

	3- Principal investigator for Bioavailability studies. - Established Bioequivalence studies unit. - Design and supervised one Bioequivalence study (Atenolol tablet) - Provide and modify its analytical method 4- Head of the analytical laboratories for the Bioequivalence Unit, responsible for drugs analysis. 5- Supervised four postgraduate students with different projects of my interest: - "Characterization of diurnal variation during chronic intravenous infusion of carbamazepine in rats" - "Prescribing errors in hospitals and private clinics in Kurkuk city" - "Determination of renal stone's type affected by Prosopis Farcta leaves extract" - "Nosocomial infections in three of Erbl's Hospitals"
1978-1982	University of Baghdad/ College of Pharmacy, Baghdad, Iraq Job Title: Assistant to the Dean for Student Affair Responsibilities: 1- Administration & Registration for the School of Pharmacy students 2- Supervise and Control the application of the curriculum. 3- Supervise the Pharmacy students training
1975-1978	University of Baghdad/ College of Pharmacy, Baghdad, Iraq Job Title: Instructor Responsibilities: Dept. of Pharmacology
PUBLICATIONS	
	1. "A problem with quantitation of mephenytoin enantiomers due to chiral interference from N-demethylated metabolite": Sabah H. Akrawi and Peter J. Wedlund; J. chromatography, 381, 198-200, 1986. 2. "Method for chronic portal vein infusion in unrestrained rats": Sabah H. Akrawi and Peter J. Wedlund; J. Pharmacological Methods; 17, 67-74 1987. 3. "Use of chronic portal vein infusion in rats to examine mephenytoin stereoselective disposition" Sabah H. Akrawi, a PhD dissertation, College of Pharmacy, University of Kentucky, Lexington, KY, USA, 1988. 4. "Mephenytoin stereoselective elimination in the rats: I- Enantiomeric disposition following intravenous administration". Sabah H. Akrawi and Peter J. Wedlund, European J. of drug metabolism and pharmacokinetics; Vol. 14, No. 3 pp. 195-200; 1989. 5. "Mephenytoin stereoselective elimination in the rats: II- Comparison of mephenytoin stereoselective clearance during chronic intravenous and hepatic portal vein administration". Sabah H. Akrawi and Peter J. Wedlund, European J. of drug metabolism and pharmacokinetics; Vol. 14, No. 4, pp. 269-278; 1989.

	6. "Mephenytoin stereoselective elimination in the rats: III. Stereoselective time course of induction during chronic hepatic portal vein administration". Sabah H. Akrawi and Peter J. Wedlund, European J. of drug metabolism and pharmacokinetics; European J. of drug metabolism and pharmacokinetics; 1989. 7. "Tissue distribution of INDIUM-III labeled poly (Glycolic Acid) matrices following jugular and hepatic portal vein administration". A.M. Hazrati, S. Akrawi, A.J. Hicky, P. Wedlund, J. Macdonald and P.P. Deluca, J. of Controlled Release, 9, pp. 205-214,1989. 8. "The effect of alphatoccopherol on experimentally induced gentamicin nephrotoxicity in rats". Abdulla T.M. Al-Ani, Marwan S.M. Al-Nimer and Sabah H. Akrawi, Iraqi J. Pharm. Sci. Vol 5(1) 1994. 9. "Nosocomial infections in three of Erbl's Hospitals". Kawa F. Dizayee and Sabah H. Akrawi. Iraqi J. Pharm. Sci. Vol. 6(1) 1995. 10. "Effect of molsidomine on trace metals in gentamicin induced nephrotoxicity in rats". Sabah H. Akrawi, Faris S. Allah-Werdi and Marwan S.M.Al-Nimer, Iraqi J. Pharm. Sci. Vol. 6(1) 1995. 11. "Prescribing errors in selected Hospital and Private Clinics in Baghdad". Sabah H. Akrawi. Iraqi J. Pharm. Sci. Vol. 7 1996. 12. "The evaluation of renoprotective effect of L-carnitine against gentamicin nephrotoxicity". Sabah H. Akrawi. Iraqi J. Pharm. Sci. Vol. 7 1996. 13. "Changes in brain glucose and glycogen in epileptic mice", S.P. Jazrawi and S.H. Akrawi, Al-Buhooth Al Tachaniya, Vol 9 ,N0 33, 1996. 14. "Effect of L-carnitine on lipid peroxidation in gentamicin induced nephrotoxicity in rats". Marwan S.M. Al-Nimer, Sabah H. Akrawi, Suhad Kh, Al-Jubory. Iraqi J. Pharm. Sci. Vol. 8(1) 1997. 15. "Potentaition of Gentamicin Induced Nephrotoxicity by Molsidomine in Rats". Sabah H. Akrawi and Marwan S.M. Al-Nimer, Iraqi J. Pharm. Sci. Vol, (9) 1998. 16. "Bioavailability – Bioequivalency study of a formulation containing Cephalexin", Sabah H. Akrawi, The Iraqi Journal of Community Medicine, 2000. 17. "Bioequivalence Assessment of Doloraz® 100 mg Suspensions in Healthy Human Volunteers". Sabah H. Akrawi, Ziad Al-Talla', Sabah D. Salim and Loay Rashan. Iraqi Journal of Pharmacy, Vol 3. No. 1, 2003. 18. "Bioequivalence study of indomethacin test product (25 mg capsule)" Haidar F. Hadi. Sabah H. Akrawi and Salim A. Hamadi, Iraqi J. Pharm Sci, vol 13. 2002. 19. "Bioequivalence Assessment of Clindox® 150 mg Capsules in Healthy Human Volunteers". Sabah H. Akrawi, Ziad Al-Talla', Sabah D. Salim and Loay Rashan. Iraqi Journal of Pharmacy, Vol 3.

	No. 1, 2003. 20. 'Bioequivalence Assessment of Hypoten® 100 mg Tablets in Healthy Human Volunteers and Treatment Monitoring'. Sabah H. Akrawi, Iraqi Journal of Pharmacy, Vol 3. No. 1, 2003. 21. "A two way cross over bioequivalence study for two formulations (100 mg suppository) containing indomethacin and treatment monitoring" Sabah H. Akrawi* and Haidar F. Hadi. J. Appl. Sci., Vol. 7, No. 1, 38-47, 2005 22. "Solid State NMR and Bioequivalence Comparison of the Pharmacokinetic Parameters of Two Formulations of Clindamycin" Zeyad A. Al-Talla1, Sabah H. Akrawi and Abdul-Hamid Emwas , J. Clinical Therapeutics, Vol. 49-No. 7/2011. 23. Bioequivalence assessment of two formulations of ibuprofen, Zeyad A. Al-Talla1, Sabah H. Akrawi, Luke T. Tolley, Salim H. Sioud, and and Abdul-Hamid Emwas, J. Drug Design, Development and Therapy, 2011:5 427-433. 24. "Pharmacokinetic Interaction between Dietary Black Tea and Carbamazepine in Epileptic Patients" Sabah H. Akrawi, Muna J. Hadi, Yasir Ibrahim, and Sabah Al-Dabbagh; Latin American Journal of Pharmacy; 34 (4), pp 754-9, 2015.
Professional Studies: (As a principal investigator and head of the analytical laboratory)	
	1. Bioavailability – Bioequivalency study of formulations containing 100 mg Atenolol , 1994. 2. A two - way crossover bioavailability - bioequivalence study for formulations containing cephalexin (capsules). 1997. 3. A two - way crossover bioavailability - bioequivalence study for formulations containing cephalexin (capsule). 1998. 4. Two – Way, Crossover Randomized Bioequivalence Study of Two Formulations Containing 5mg Glibenclamide (Tablet), 1998. 5. Bioavailability – Bioequivalency study of formulations containing 250 mg naproxen (Tablet), 1998. 6. Bioavailability – Bioequivalency study of formulations containing 500 mg naproxen (Tablet), 1998. 7. Bioavailability – Bioequivalency study of formulations containing 100 mg Indomethacin as suppository , 1999. 8. Bioavailability – Bioequivalency study of formulations containing 25 indomethacin as capsule, 1999. 9. Bioavailability – Bioequivalency study of formulations containing 25 mg Clomipramine as tablet, 1999. 10. Bioavailability – Bioequivalency study of formulations containing 250 mg Amoxicillin as suspension, 1999.

	11. Bioavailability – Bioequivalency study of formulations containing 250 mg methyldopa as tablet, 1999. 12. Bioavailability – Bioequivalency study of formulations containing 500 mg ampicillin,capsules 1999. 13. Bioavailability – Bioequivalency study of formulations containing 150 mg clindamycin, capsules 1999. 14. A bioequivalence study for two formulations containing carbidopa/levodopa tablets ; 2000. 15. A bioequivalence study for two formulations containing gliclazide 80 mg tablets ; 2000. 16. A bioequivalence study for two formulations containing clindamycin 150 mg capsules; [Clindox® vs. Dalacin C®]; 2001. 17. A bioequivalence study for two formulations containing rifampicin 150 mg capsules; 2001. 18. A bioequivalence study for two formulations containing rifampicin 300 mg capsules ; 2001. 19. A bioequivalence study for two formulations containing ibuprofen 100 mg suspension ; 2001.
POST GRADUATE STUDIES AND SUPERVISION (Supervised the following research)	
	1. "Two–Way, Crossover Randomized Bioequivalence Study of Two Formulations Containing rifampicin", Alaa Abbas & Sabah Akrawi, Thesis, 2001. 2. "Effect of hepatic blood flow on diurnal variation of CBZ steady state level during chronic portal vein infusion in rats". Abdula Al Dhaw, Sabah Akarwi and P.J. Wedlund, 2000. 3. "Lisinopril versus Captopril in hypertensive patients with and without renal impairment". Delshad Nori, Ali Farag Al-Saleh and Sabah Akrawi , 2000. 4. "The effect of prednisolone and antibiotic treatment on sperm function test and sperm agglutination in infertile men", Hiwa K. Saeed, M.T. Albarzanchi and Sabah Akrawi, Thesis, 1999. 5. "Determination of nifedipine concentration in human serum", Sahar M. Ali and Sabah Akrawi, Thesis, 1999. 6. "Two–Way, Crossover Randomized Bioequivalence Study of Two Formulations Containing 5mg Glibenclamide and Treatment Monitoring", Niazy B. Al-Deen and Sabah Akrawi, Thesis, 1999.

	7. "The bioavailability-bioequivalency study of two dosage forms of test indomethacin product (25 mg capsules & 100 mg suppositories) and the treatment monitoring on patients using it", Haidar F. Hadi and Sabah Akrawi, 1999. 8. "A two-way crossover bioavailability - bioequivalence study for formulations containing cephalexin". Qais N. Khammas and Sabah Akrawi, Thesis, 1998. 9. "Drug registration system". Hana Y. Kinno and Sabah Akrawi, Thesis 1998. 10. "Therapeutic drug monitoring for a test product containing 100mg atenolol and its bioavailability", Fadia Yaqub and Sabah Akrawi, Thesis, 1998. 11. "Comparative study of three different manufacturers of atenolol tablets in hypertensive patients", Saleh A. Al-Rawi and Sabah Akrawi, Thesis 1997. 12. "Possible drug interaction between carbamazepine and tea components in human". Muna J. Hadi and Sabah Akrawi, Thesis 1996. 13. "Prescribing errors in selected Hospital and Private Clinics in Baghdad". Niazy Burhanaddin and Sabah H. Akrawi. 1996. 14. "Characterization of diurnal variation during chronic intravenous infusion of carbamazepine in rats". Sufyan A. Abdullah and Sabah Akrawi, Thesis 1995. 15. "Prescribing errors in hospitals and private clinics in Kurkuk city", Neyazy Burhanaddin and Sabah Akrawi, Thesis 1994. 16. "Determination of renal stone's type affected by Prosopis Farcta leaves extract", Asma O. Al-Naje and Sabah Akrawi, Thesis 1994. 17. "Nosocomial infections in three of Erbl's Hospitals". Kawa F. Dizayee and Sabah Akrawi, Thesis 1993.
SCIENTIFIC RESEARCH AND ACTIVITIES	

	1. Establish Bioequivalence Studies Unit (principal investigator and head of the analytical laboratory) at the College of Pharmacy, University of Baghdad (1992). 2. Establish Bioequivalence Studies Unit and the (principal investigator and head of the analytical laboratory) at the College of Pharmacy – Applies Science University (2000). 3. A principal investigator and head of the analytical laboratory for many (19) Bioequivalence Studies. 4. -Teaching Clinical Pharmacy, Applied Therapeutic, Clinical Pharmacokinetic, Metabolism and OTC Drugs courses to pharmacy students (under graduate and post graduate) at Universities of Baghdad, and Applied Science University. 5. Teaching Pharmacokinetic, Biopharmaceutic and Physical Pharmacy courses to pharmacy students (under graduate and post graduate) at Universities of Baghdad and Applied Science University. 6. Supervising (17) post graduate students for M.Sc. and Diploma degree in area of Biopharmaceutics and clinical pharmacy at the College of Pharmacy, University of Baghdad. 7. Participating in teaching short courses of many Continuing Education programs at the Ministry of Health. 8. Editorial secretary of the "Iraqi Journal of Pharmaceutical Sciences" published by College of Pharmacy University of Baghdad (1994-2000). 9. Publishing (22) Scientific Papers in Local and International Journals. 10. Using Computer Programs (WinNonMix, Window, Excel Microsoft and SPSS). 11. I Performed and have Good experience in doing Chronic Intrahepatic Drug Infusion in Unrestraine animals (published in the journal of pharmacological methods (1987). 12. Performed the following: Determination of Drugs Concentration in human and animal blood Micro Samples using HPLC & GC technique. Design and Supervise the clinical part of the Bioequivalence studies. Perform and Validate the Analytical Methods of the Bioequivalence studies. Design and Supervise drug Disposition studies for drugs in order to evaluate its pharmacokinetics parameters (Clearances, Volume of Distribution, Rate of elimination, Half-life …etc.) Study the metabolism of drugs and its Stereoselective disposition. Design and Supervise study for the Drug –Food interaction.
PROFESSIONAL ASSOCIATIONS and MEMEBRSHIP	
1999-2000	A Member of the Drug Registration Committee (responsible for the bioequivalence studies evaluation), Ministry of health (1999-2000).

	A member of the Iraqi Scientific Pharmaceutical Association.
	Rho Chi, Pharmaceutical Honor Society
1989-2000	A member of several Consultant Scientific Committees of the Ministry of Health, Baghdad.
1997-2000	A Member of the scientific committee for Drug Industry (responsible for the GMP evaluation), Ministry of health.
LANGUAGES	
English	Read, write and speak fluently.
Arabic	Read, write and speak fluently.