

CURRICULUM VITAE

Enam Khalil, Prof.

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Qualifications:

December 1988: PhD,
Manchester University, England.

Doctoral Thesis Title: **A Thermodynamic Study of Binary and Ternary Mixtures of Some Alkanes and Alkanols.**

May 1982 : BSc,
Cairo University, Cairo, Egypt.

Languages:

English and Arabic : Fluent

Employment / Positions Held:

Staff member in the Faculty of Pharmacy, the University of Jordan since January 1989.

1993-1994: Dean Assistant, Faculty of Pharmacy, The University of Jordan.

1995-1998: Vice Dean, Faculty of Pharmacy, The University of Jordan.

Main Teaching experience:

For Ph.D Students:

- Physicochemical Properties As a Tool in Drug Research.

For Master Students:

- Advanced Physical Pharmacy.
- Drug Delivery Systems.

For Undergraduate Students:

- Physical Pharmacy in two theoretical courses and one practical course.
- Selected Topics in Physical Pharmacy, final year , elective course .
- Pharmaceutical Technology, final year , elective course .
- Radiopharmacy, final year, elective course.
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In Addition to the Supervision/ Cosupervision of the Following graduate Projects:

1. Dakin's Solution Use for infected Diabetic Foot Ulcers: A Randomized Controlled Trial.....
2. Penetration And Distribution Of GNPs Into Excised Human And Animal Skin: Optimization Of Particles Size, Shape, And Surface Chemistry Toward Hair Follicles Targeting. **2016.**
3. The effect of Iberin against *Pseudomonas aeruginosa* biofilms in cystic fibrosis artificial sputum medium and on ex vivo skin explant model. **2016.**
4. Quantification and mechanism elucidation of emu oil as a penetration enhancer in transdermal drug delivery systems. **2016.**
5. A prodrug approach to enhance azelaic acid percutaneous absorption. **2015.**
6. Antiproliferative activity of the combination of Doxorubicin/ Qurecetin on breast cancer cell lines: possible role of changes in oxidative stress level, **2015.**
7. Preparation and characterization of microemulsion based formula of phenothiazinium salt photosensitizer for PACT treatment of acne. **2012**
8. Physicochemical Characterization of Emulgels contain Simulgel 600, Montanov 68 and Cosolvent for Topical Application, **2011**
9. Studying the effect of visible light-activation of photosensitizer – Pluronic gel based topical formula against *staphylococcus aureus* culture, **2010.**
10. Intranasal drug delivery system for Insulin, **2003.**
11. Development of controlled drug delivery system of antimicrobials for the local treatment of periodontal disease, **2003.**
12. Studies on the microbiology of oil-in-water microemulsions, **2003.**
13. Ionic surfactants microemulsions: Prediction of their formation and stability using in vacu molecular modeling and data mining, **2002.**

14. Glyceryl monooleate based liquid crystalline phases for the transdermal Delivery of diclofenac salts : Formulation design and Evaluation, **2001**.
15. Prediction of microemulsion existence area in the ternary diagram: Application of molecular modeling and data mining, **2001**.
16. Development of novel oral dosage forms using cubic liquid crystal delivery system, **2000**.
17. The effect of mixing time and other variables on tablets and capsules properties some products containing magnesium stearate, **1999**.

Main Academic and Scientific Activities

Awards/ Sponsored Research:

FTIR- Beam user times November 2016. ALBA Synchrotron, Barcelona, Spain.

FTIR- Beam user times May 2016. Elettra Synchrotron, Trieste, Italy.

FTIR- Beam user times July & August 2015. BESSY II Synchrotron, Berlin, Germany.

FTIR- Beam user time August 2014. MAX Lab Synchrotron, Lund, Sweden.

Sabbatical leave, **2008-2009**. The European Synchrotron Radiation Facility, (ESRF), Grenoble, France.

Sabbatical leave, **2004-2005**. The University of Cincinnati, Ohio, USA.

Tempus sponsored research visit to Saarland University-Germany, January **2005**.

DAAD sponsored research visit to Saarland University-Germany, July **2000**.

Self-sponsored research visit to Saarland University-Germany, August **1999**.

Committee/ Societies:

- Member in the Biophysical Society, U.S.A.
- Member in the Jordan Pharmaceutical Association.
- Member in the Jordanian National Committees of SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East).
- Regular reviewer for "International Journal of Pharmaceutics"
- Regular reviewer for "Pharmaceutical Research" Journal.
- Regular reviewer for " Pharmaceutical Development and Technology" Journal.
- Occasional reviewer for Pharmaceutical Journals published in Jordan and Syria.

- Evaluation for articles submitted for promotion or financial support from Jordan, Palestine and Saudi Arabia.

Main Conferences/ Workshops:

Biophysical Society 60th Annual Meeting, Los Angeles, California, USA, February 27-March 2, 2016. Platform lecture (**Application of FT-IR Microspectroscopy In The Investigation of The Stratum Corneum Barrier Function**)

Twelfth Arab Conference on the Peaceful Uses of Atomic Energy, Sharm El-Sheikh, Arab Republic of Egypt, 16-20 May 2015. Lecture (**Application of Synchrotron Radiation for the Analysis of Biological Samples**)

First Swedish Jordanian Workshop on Science and Research. Hashemite University, Zarka, Jordan, 25-29 Jan 2015. Lecturer (**Application of FTIR-Imaging In Skin Research**)

"Skin and Formulation 4th Symposium", Lyon – France, 4-5 June, 2012.
Poster Presentation (The Tendency of Ibuprofen (IB) Toward Crystal Growth In Eudragit RL/IB and Eudragit RS/IB Films).

The 3rd Kuwait International Pharmacy Conference, **Kuwait**, 14-16 February **2011**. Poster presentation (**Development of controlled drug delivery system of antimicrobials for the local treatment of periodontal disease**).

The 11th Eurasia Conference on Chemical Sciences, the Dead Sea, **Jordan**, 6-10 October **2010**. Poster Presentation (**Effect of the ionic surfactants at the maximum solubilization capacity and conductivity of microemulsions containing nonionic surfactants**).

Controlled Release Society (CRS) 37th Annual Meeting, July 10-14, **2010**, Oregon, U.S.A. Poster Presentation (**Intranasal Drug Delivery Systems : Nasal Absorption of Insulin in Rabbits using Pluronic F127 as a carrier**).

The 6th Jordanian Synchrotron Users Scientific Workshop. Amman- **Jordan**. 6th of May **2010**. Oral Presentation.

The 2nd KHIBC MENA Cancer Research Conference, 2-3 October **2009**. Amman, **Jordan**. Oral Presentation (**Synchrotron microbeam radiation therapy combined with the chemo-agent JAI-51 improve brain tumor treatment**).

HSC10: Synchrotron Radiation techniques contribution to nanoscience, 18-22 May **2009**. Grenoble, **France**.

The 19th ESRF Users' Meeting & Associated Workshops, 2-5 February **2009**. Grenoble, **France**.

6th SESAME Users' Meeting, 17-19 November **2007**. Amman, **Jordan**.

The 9th International Conference on Biology and Synchrotron Radiation, 13-17 August **2007**. Manchester, **UK**.

5th SESAME Users Meeting, 27-29 November **2006**, Alexandria & Workshop on "Synchrotron Applications in Molecular Crystallography", 30 November - 2 December 2006, Cairo, **Egypt**.

5th World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology, 27 -30 March **2006** Geneva , **Switzerland**. Poster Presentation, (Transport Properties of Glucose in the Epidermis and Dermis)

Al-Azhar 4th International Conference for Pharmaceutical and Biological Sciences, 13-15 February **2006**. Cairo, **Egypt**. Oral Presentation.

The Third International Conference of the Royal Medicinal Services. Held in collaboration with the Royal College of Physicians of London, 5-8 April **2006**. Amman , **Jordan**. Oral presentation.

Al-Azhar 3rd International Conference for Pharmaceutical and Biological Sciences, 16-18 December **2003**. Cairo, **Egypt**. Oral Presentation.

"Clinical Research Skills Workshop for Investigators". Supervised by Pfizer and the Jordanian Ministry of Health, 15-16 May **2002**. Amman , **Jordan**.

Third Symposium on Modern Detergents and Soap Techniques, 3rd SMDST, 7-10 July **2001**. Amman , **Jordan**. Oral Presentation.

Workshop organized by "The Arab Atomic Energy Agency" and concerned about the development of methods for teaching nuclear sciences and related technology during the first University degree. Cairo-Egypt, 24-28 January **1999**.

The Second Annual Meeting of The Association of Colleges of Pharmacy in The Arab World, 16-18 October **1998**. Beirut, **Lebanon**. Oral Presentation.

" Preparation and Application of Radio-labeled Chemicals and Pharmaceuticals". Workshop organized by the Arab Atomic Energy Agency, 13-25 December **1997**. Cairo, **Egypt**.

"Regional Consultation on Revising the Under-Graduate Pharmacy Curricula" Workshop organized by the WHO, EMRO, 24-27 June **1997**. Beirut, **Lebanon**.

The 15th Pharmaceutical Technology Conference, 19-21 March **1996**. Oxford, **U.K**. Poster Presentation.

In addition to the participation and the professional attendance to most of the locally held related meetings and workshops.

Publications

1. A prodrug approach to enhance azelaic acid percutaneous availability. Sara Al-Marabeh, **Enam Khalil**, Mohammad Khanfar, Amal G. Al-Bakri & Muhammed Alzweiri. *Pharmaceutical Development and Technology*. DOI:10.1080/10837450.2016.1200614. <http://dx.doi.org/10.1080/10837450.2016.1200614>
2. Colloidal stability of gold nanorod solution upon exposure to excised human skin: Effect of surface chemistry and protein adsorption. Nouf N. Mahmoud, Khaled M. Al-Qaoud, Amal G. Al-Bakri, Alaaldin M. Alkilany, **Enam A. Khalil**. *International Journal of Biochemistry & Cell Biology*, DOI: 10.1016/j.biocel.2016.02.020, Accepted February 2016.
3. Physicochemical Characterization of Emulgel Formulated With Sepineo P 600, Sepineo SE 68 and Cosolvent Mixtures. **Enam A. Khalil**, Samia A. Majid, Ghadeer A. R.Y. Suaifan, Faisal T. Al-Akayleh, Al-Sayed A. Sallam. *Pharmaceutical Development and Technology*. Early online, March 2015.
4. Antiproliferative Activity of Selected Non-Steroidal Anti-Inflammatory Agents: Role of Iron Complexes. Rana Abu-Dahab, **Enam Khalil**, Ayman Khair, Dina El-Sabawi, Imad Hamdan. *Jordan Journal of Pharmaceutical Sciences*, 7, 49-66, 2014.
5. Characterization of the 9L gliosarcoma implanted in the Fischer rat: an orthotopic model for a grade IV brain tumor. Bouchet Audrey, Bidart Marie, Miladi Imen, Le Clec'h Céline, Serduc Raphaël, Coutton Charles, Regnard Pierrick, **Khalil Enam**, Dufort Sandrine, Lemasson Benjamin, Laissue Jean, Pelletier Laurent, Le Duc Géraldine. *Tumor Biology*, 16 March 2014. [DOI 10.1007/s13277-014-1783-6].
6. Effect of Ethylcellulose and Propylene Glycol on the controlled- release performance of Glyceryl monooleate – Mertronidazole periodontal gel. Al-Sayed Sallam, Firas Faleh Hamudi, **Enam Ayoub Khalil**. *Pharmaceutical Development and Technology*, 1-10, 2013. [DOI: 10.3109/10837450.2015.1022789]
7. Studies on the kinetics of killing and the proposed mechanism of action of microemulsions against fungi. Ibrahim S.I. Al-Adham, Hana Ashour, Elham Al-Kaissi, **Enam Khalil**, Martin Kierans, Phillip J. Collier. *International Journal of Pharmaceutics*. 454, 226– 232, 2013.
8. Chalcone JAI-51 improves efficacy of synchrotron microbeam radiation therapy of brain tumors. Audrey Bouchet, Ahcene Boumendjel, **Enam Khalil**, Raphael Serduc, Elke Brauer, Erik Albert Siegbahn, Jean Albert Laissue and Jean Boutonnat.

J. Synchrotron Rad. **19**, 478-482, **2012**

9. Formulation and Characterization of IPM/Water/Nonionic-Ionic Surfactant Microemulsions. **Enam Khalil**, Shorouq T. Al-Sotari and Mutasem Taha. *Journal of Chemistry and Chemical Engineering*, 6, 187-198, **2012**

10. The Antimicrobial Activity of Oil-Water Microemulsions is Predicted by their position the Microemulsion Stability Zone. Al-Adham, I.S.I., Al-Nawajeh, A.S.M, **Khalil, E.** Collier, P.J. *The international Arabic Journal of Antimicrobial Agents*, 2(2), 1-8, **2012**.

11. Towards an Image-Guided Microbeam Radiation Therapy Using Gadolinium-Based Nanoparticles. Ge´raldine Le Duc, Imen Miladi, Christophe Alric, Pierre Mowat, Elke Bra¨uer-Krisch, Audrey Bouchet, **Enam Khalil**, Claire Billotey, Marc Janier, Franc-ois Lux, Thierry Epicier, Pascal Perriat, Ste´phane Roux, and Olivier Tillement. *ACS Nano*, 5 (12) 9566–9574, **2011**.

12. Preferential effect of synchrotron microbeam radiation therapy on intracerebral 9L gliosarcoma vascular networks. A. Bouchet, B. Lemasson, G. Le Duc, C. Maisin, E. Bräuer-Krisch, E. A. Siegbahn, Luc Renaud, **E. Khalil**, C. Rémy, C. Poillot, A. Bravin, J. A. Laissue, E. L. Barbier, R. Serduc. *International Journal of Radiation Oncology Biology. Physics.* 78,1503-1512, **2010**.

13. Evaluation of the wound healing effect of some Jordanian traditional medicinal plants formulated in Pluronic F127 using mice (*Mus musculus*). **Enam Khalil**, Fatma U. Afifi and Maysa Al-Hussaini. *Journal of Ethnopharmacology*. 109, 104-112, **2007**.

14. Release characteristics of diclofenac diethylamine from emulgels containing Pluronic F127. **Enam Khalil**, U.F. Schaefer and A. Sallam. *Journal of Drug Delivery Science and Technology*. 16(5)381-387, **2006**.

15. Glucose partition coefficient and diffusivity in the lower skin layers. **Enam Khalil**, Kosmas Kretsos and Gerald Kasting. *Pharmaceutical Research*. 23, 1227-1234, **2006**.

16. Studies on the in vivo hypoglycemic activities of two medicinal plants used in the treatment of diabetes in Jordanian traditional medicine following intranasal administration. F.U. Afifi, B. Al-Khalidi and **E. Khalil**. *Journal of Ethnopharmacology*. 100, 314-318, **2005**.

17. QSPR modeling of pseudoternary microemulsions formulated employing lecithin surfactants: Application of data mining, molecular and statistical modeling. Mutasem O. Taha, Hiba Abdel-Halim, Mutasim Al-Ghazawi and **Enam Khalil**. *International Journal of Pharmaceutics*. 295, 135-155, **2003**.

18. Characterization of two diclofenac diethylamine emulgels by their in vitro release and their interaction with human skin. A.Sallam, **Enam Khalil**, and Ulrich F. Schaefer. *STP Pharma Sciences*. 13, 405-413, **2003**.
19. Microemulsions are highly effective anti-biofilm agents. I.S.I.Al Adham, N.D. Al-hmoud, **E.Khalil**, M. Kierans and P.J. Collier. *Letters in Applied Microbiology*. 36, 1-4, **2003**.
20. Formulation of an oral dosage form utilizing the properties of cubic liquid crystalline phases of glyceryl monooleate. Sayed Sallam, **Enam Khalil**, Hussain Ibrahim , Ibtisam Freij. *European Journal of Pharmaceutics and Biopharmaceutics*. 53, 343-352, **2002**.
21. Development of quantitative structure-property relationship model for pseudoternary microemulsion formulated with nonionic surfactants and cosurfactants: application of data mining and molecular modeling. Mutasem O. Taha, Mutasim Al-Ghasawi, Hend Abu-Amara, **Enam Khalil**. *European Journal of Pharmaceutical Sciences*. 15, 461-478, **2002**.
22. Aqueous solubility of diclofenac diethylamine in the presence of pharmaceutical additives: A comparative study with diclofenac sodium. **Enam Khalil**, S. Najjar and A. Sallam. *Drug Development and Industrial Pharmacy*. 26, 375-381, **2000**.
23. Content uniformity and dissolution characteristics of prednisolone Avicel PH200 interactive powder mixture: A comparative study with Emcompress and lactose granules. **Enam Khalil** and A. Sallam. *STP Pharma Sciences*. 10, 149-155, **2000**.
24. Microemulsions are membrane-active antimicrobial, self preserved systems. Ibrahim S.I Al-Adham, **Enam Khalil**, Nisreen D. Al-Hmoud, Martin Kierans, and Phillip J. Collier. *Journal of Applied Microbiology*. 89,32-39, **2000**.
25. Interaction of two diclofenac acid salts with copolymers of ammoniomethacrylate: Effect of additives and release profiles. **Enam Khalil** and A.Sallam. *Drug Development and Industrial Pharmacy*. 25, 419-427, **1999**.
26. A model drug release from different solubilized systems. **Enam Khalil**. *Alexandria Journal of Pharmaceutics*. 13, 5-9, **1999**.
27. Effect of isoorientin isolated from Arum palaestinum on uterine smooth muscle rats and guinea pigs. F.U. Afifi, **Enam Khalil**, S. Abdalla. *Journal of Ethnopharmacology*. 65, 173-177, **1999**.
28. Evaluation of fast disintegrants in Terfenadine tablets containing a gas-evolving disintegrants. E.Sallam; H.Ibrahim; R. Abu-Dahab; M. Shubair; **E. Khalil**. *Drug Development and Industrial Pharmacy*. 24, 501-507, **1998**.

29. Effect of the aqueous extract of *Laurus nobilis* seeds on ethanol-induced gastric ulcer in rats. F.U.Afifi, S.O.Tamimi, **Enam Khalil** and A.Disi. Alexandria *Journal of Pharmaceutics*. 11, 127-129, **1997**.

30. Evaluation of the gastroprotective effect of *Laurus nobilis* seeds on ethanol induced gastric ulcer in rats. U. Afifi, **Enam Khalil**, S.O.Tamimi, and A. Disi. *Journal of Ethnopharmacology*. 58, 9-14, **1997**.

Last updated: Nov., 2016