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SUMMARY

- Professional pharmaceutical researcher, scientific paper reviewer and pharmaceutical inventor.
 - Membership in a governmental institution for drug registration in Jordan (Jordan FDA).
 - Received several awards and appreciation certificates
 - Ex-consultant of Pharmaceutical Industry Companies in Jordan, Saudi Arabia and Switzerland
 - Ex-Pharmaceutical Industry Technical Manager
 - Published more than 25 innovations and got more than 70 national and international (USA, Europe, Japan, etc.) patents in the field of nano-technology, material science, pharmaceutical industry and environment.
 - Developed innovative and creative solutions to problems in drug delivery, nanotechnology, pharmaceutical material science and environmental pollution.
 - Qualified to develop generic and innovative pharmaceutical products
 - Qualified to conduct a full research constructions and to initiate full nanotechnology and Pharmaceutical Industry Centers
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HONORS AND AWARDS

Awards

-Hisham Adeeb Hijjawi Award- 2007

Industrial Award, Jordan

Brief description: Superdisintegrant made of chitosan and silicone dioxide

Award Level: Country Level-Local Jordan

-Hisham Adeeb Hijjawi Award- 2009

Industrial Award , Jordan

Brief description: Production of magnesium silicate using natural resources

Award Level: Country Level-Local Jordan

- ALECSO 2011

Appreciation certificate for outstanding research contributions and innovation by Arab

League Educational, Cultural and Scientific Organization (ALECSO), Tunisia

Level: Arab World Level- Regional

- Taif 2012

Appreciation certificate for role in The external collaboration committee, College of Pharmacy, Taif University, KSA

Level: College Level- KSA

- Taif 2012

Appreciation certificate for role in Development of pharmaceuticals department, College of Pharmacy, Taif University, KSA

Level: College Level- KSA

- Taif 2012

Taif University awards for scientific research publications Taif University, KSA

Level: University Level- KSA

- Taif 2013

Appreciation certificate for efforts in the
Student Preparatory Scientific Forum carried out by
Ministry of Higher Education, College of Pharmacy
Taif University, KSA

Level: College Level- KSA

- Taif 2013

Taif University awards for scientific research publications
Taif University, KSA

Level: University Level- KSA

- Shoman Award 2013

32nd Abdul Hameed Shoman Award for Arab Researchers
for Basic Sciences (Nanotechnology), Jordan

Level: Arab World Level

-Philadelphia Award 2015

Philadelphia University Award for Best Invention

Level: Country Level-Local Jordan

- Distinguished Arab Researcher Award 2016

Level: Arab World level

-Best Paper Award-Phospholipid Division 2017

Level: American Oil's Chemist Society (AOCS)- USA. International Level

University of Petra Award for Excellence and Innovation 2017

Level: University Level, Jordan

- Best Lecturer Award at University of Petra 2017

Level: University Level, Jordan

- El Hassan Bin Talal Award for Scientific Excellence 2018

For a shared Project with University Colleagues
and Jordan Pharmaceutical Manufacturing Company (JPM)
project "Development of oral insulin delivery system"

- World Intellectual Property Rights WIPO medal for inventors, Switzerland, **2019**.
For contribution in the development of Local Pharmaceutical Industry
Level: International

Grants and research fund

-Ph.D. full Scholarship by the Jordanian Pharmaceutical Manufacturing Company. Jordan 1998-2003

-Research fund for development of protein delivery systems
Research Deanship, Taif University, KSA 2010

-Research fund for development of alginate derivatives
for topical and transdermal delivery systems
Research Deanship, Taif University, KSA 2012

-Research fund for the development of novel functional food
for the treatment of obesity
Research Deanship, Taif University, KSA 2013

-Research fund for conversion of date palm tree organic biomass waste and sea
water brine contaminants present in Saudi Arabia into a useful pharmaceutical additive.
King Abdulaziz City for Science and Technology, Riyadh, KSA 2014

-Research fund for the development of Wound Healing Systems . University of Petra, Jordan
2017

-Research fund for the development of Ibuprofen Soluplus nanoparticle System. University
of Petra, Jordan 2017

- Research fund for improvement of hens' eggs quality through the inclusion of healthy
materials to the hens' food, University of Petra, Jordan 2017

WORLD-WIDE INVENTIONS

1- Oral delivery of protein drug using microemulsion. Inventors: Badwan A., **Al-Remawi M. Patents (1-3)**

2- Pharmaceutical polymer composition for oral controlled-release delivery of terbutaline sulfate .Inventors: **Al-Remawi M.**, Badwan A. **Patents (4-15)**

3- Composition containing chitosan for sustained drug release . Inventors: Badwan A., **Al-Remawi M. Patents (16-26)**

4- Universal controlled-release composition comprising chitosan. Inventors: Badwan A., **Al-Remawi M. et al. Patents (27-30)**

5- Universal controlled-release composition comprising xanthan gum and sodium alginate .
Inventors: Badwan A., **Al-Remawi M. et al. Patents (31-34)**

- 6- Nanocapsules for oral delivery of proteins . Inventors: Badwan A., **Al-Remawi M. Patent (35)**
- 7-Chitosan silicon dioxide coprecipitate composition for use as a therapeutically active agent. Inventors: Badwan A., **Al-Remawi M. et al. Patent (36)**
- 8 - Solid pharmaceutical formulation. Inventors: Badwan A., **Al-Remawi M. et al. Patents (37-38)**
- 9- Mineral fiber solid dispersion, method for preparing the same and use thereof as pharmaceutical tableting aid. Inventors: Badwan A., **Al-Remawi M. et al. Patents (39-40)**
- 10- Chitosan-silicon dioxide coprecipitate and use as excipient in solid dosage forms. Inventors: Badwan A., **Al-Remawi M., et al. Patents (41-50)**
- 11-Composition comprising chitosan and an acidic drug for oral controlled release. Inventors: Badwan A., **Al-Remawi M. Patents (51-53)**
- 12- Composition comprising covalent conjugates of chitosan and an acidic drug for parenteral administration . Inventors: Badwan A., **Al-Remawi M. Patents (54-56)**
- 13- Aqueous composition comprising chitosan and acidic drug. Inventors: Badwan A., **Al-Remawi M., et al. Patents (57-59)**
- 14- Co-precipitate method for preparing the same and uses thereof. Inventors: Badwan A., **Al-Remawi M., et al. Patents (60-61)**
- 15- Co-precipitate method for preparing the same and use thereof. Inventors: Badwan A., **Al-Remawi M., et al. Patents (62-63)**
- 16- Microemulsified drug formulation. Inventors: Badwan A., **Al-Remawi M., et al. Patents (64-65)**
- 17- Process for collecting and separating of water-insoluble pollutant from aqueous or soil environments. Inventors: Badwan A., **Al-Remawi M., et al. Patents (66-67)**
- 18- Co-precipitate of chitin and silicon dioxide for the use as tablet excipient . Inventors: Badwan A., **Al-Remawi M., et al. Patens (68-69)**
- 19- Controlled release oral drug delivery system. Inventors: Badwan A., **Al-Remawi M., et al. Patents (70-71)**
- 20- Novel Pharmaceutical Chitosan for use in Solid Dosage Forms. Inventors: Badwan A., **Al-Remawi M. et al, Patent (72)**
- 21- Functional food composition and its use in diet food. Inventors: **Al-Remawi M., Maghrabi I. Patent (73)**
- 22- Pharmaceutical emulsion composition and use thereof. Inventors: **Al-Remawi M., Maghrabi I. Patent (74)**
- 23- Oral liquid Formulation. Inventors: **Al-Remawi M. Badwan A. et al. Patent (75)**
- 24- Controlled release pharmaceutical composition. Inventors: **Al-Remawi M., Maghrabi I. Patent (76)**

- 25- Solid lipid nanoparticles composition of 4,5-bis acetyloxy 9,10-dihydro-4, 5-dihydroxy-9, 10-dioxo-2 anthracene carboxylic acid as an oral liquid dosage form. Inventors: Al-Remawi M and Saleem M. **Patent (77).**
- 26- COMPOSITION FOR ACCELERATING WOUND HEALING. Mayyas Al-Remawi and Faisal Al-Akayleh. **Patent (78).**
- 27- ORALLY-DISPERSIBLE SOLID PHARMACEUTICAL FORMULATION. Mayyas Al-Remawi and Faisal Al-Akayleh. **Patent (79).**
- 28- PHARMACEUTICAL COMPOSITION FOR USE AS ANALGESIC, ANTI-INFLAMMATORY, OR ANTIPYRETIC AGENT, AND A METHOD OF PREPARATION THEREOF. Mayyas Al-Remawi and Faisal Al-Akayleh. **Patent (80, 81)**
- 29-A METHOD OF PREPARING ALGINATE MICRO-PARTICULATES Mayyas Al Remawi. **Patent (82).**

WORLD-WIDE PATENTS

- 1-Canadian Patent Application (CA2672707 -**2008-06-21**)
- 2-European Patent Application (EP 1797870 - **2007-06-20**)
- 3-International Application Published Under the Patent Cooperation Treaty
PCT(WO 2007068311-2007-06-21)
- 4-South Africa Patent Application (ZA20070005660 **2005-12-29**)
- 5-European Patent Application (EP 1685831 (A1) **2006-08-02**)
- 6-United States Patent Application (US 2008206334 (A1) **2008-08-28**)
- 7-Norway Patent Application (NO 20073850 (A) **2007-10-10**)
- 8-South Korean Patent Application (KR 20070100364 **2007-08-16**)
- 9-Spain Patent Application (ES 2284088 **2007-11-01**)

- 10- International Application Published Under the Patent Cooperation Treaty PCT (WO 2006076951 **2006-07-27**)
- 11-Eurasia Patent Office Application (EA 013969 **2010-08-30**)
- 12-German Patent Application (DE 602005000675 **2007-11-15**)
- 13-Chinese Patent Application (CN 101102756 **2007-07-18**)
- 14-Canadian Patent Application (CA 2592269 **2007-06-26**)
- 15-Brazilian Patent Application (BR PI0519622 **2009-02-25**)
- 16-South Africa Patent Application (ZA 200706807 **2008-10-29**)
- 17-European Patent Application (EP 1693051 **2006-08-23**)
- 18-United States Patent Application (US 2010130612 **2010-05-27**)
- 19-South Korean Patent Application (KR 20070104643 **2007-09-03**)
- 20- Japanese Patent Application (JP 2008530148 **2007-10-17**)
- 21-International Application Published Under the Patent Cooperation Treaty PCT (WO 2006087028 (A1) **2006-08-24**)
- 22-Eurasia Patent Office Application (EA 200701735 **2008-02-28**)
- 23-Chinese Patent Application (CN 101128183 **2007-08-17**)
- 24-Canadian Patent Application (CA 2598364 (A1) **2006-08-24**)
- 25-Brazilian Patent Application (BR PI0520078 (A2) **2009-04-14**)
- 26-Australian Patent Application AU 2005327852 **2006-08-24**)
- 27-German Patent Application (DE60319983 **2009-07-23**)

- 28-European Patent Application (EP 1512394 **2005-03-09**)
- 29-United States Patent Application (US 2005281873 **2005-12-22**)
- 30-Japanese Patent Application (JP 2005075831 **2005-03-24**)
- 31-German Patent Application (DE60319982 **2009-04-16**)
- 32-European Patent Application (EP 1510205 **2005-03-02**)
- 33-United States Patent Application (US 2005074491 **2005-04-07**)
- 34-Japanese Patent Application (JP 2005075830 **2005-03-24**)
- 35-European Patent Application (EP2042166 **2009-04-01**)
- 36-European Patent Application (EP2016946 **2009-01-21**)
- 37-International Application Published Under the Patent Cooperation Treaty PCT
(WO2008148503 **2008-12-11**)
- 38-European Patent Application (EP 2000132 **2008-12-10**)
- 39-International Application Published Under the Patent Cooperation Treaty PCT
(WO2008145361 2008-12-04)
- 40-European Patent Application (EP 1997480 **2008-12-03**)
- 41-Spain Patent Application (ES2307099 **2008-11-16**)
- 42-European Patent Application (EP 1759711 **2007-03-07**)
- 43- United States Patent Application (US 2008214677 **2008-09-04**)
- 44-South Korean Patent Application (KR 20080048465 **2008-06-02**)

45-International Application Published Under the Patent Cooperation Treaty PCT (WO 2007025715 2007-03-08)

46-Eurasia Patent Office Application (EA 200800733 **2008-06-30**)

47-Denmark Patent Application (DK 1759711 **2008-10-27**)

48-Chinese Patent Application (CN 101267839 **2008-09-17**)

49- Canadian Patent Application (CA 2616470 **2007-03-08**)

50-Brazilian Patent Application (BR PI0615612 **2011-05-24**)

51-International Application Published Under the Patent Cooperation Treaty PCT (WO2008095588 **2008-08-14**)

52-European Patent Application (EP 1955693 **2008-08-13**)

53-United States Patent Application (US 2010093661 **2010-04-15**)

54-International Application Published Under the Patent Cooperation Treaty PCT (WO2008095587 **2008-08-14**)

55-European Patent Application (EP 1955711 **2008-08-13**)

56-United States Patent Application (US 2010286079 **2010-11-11**)

57-International Application Published Under the Patent Cooperation Treaty PCT (WO2008095586 **2008-08-14**)

58-European Patent Application (EP 1955710 **2008-08-13**)

59-United States Patent Application (US 2010286080 **2010-11-11**)

- 60-International Application Published Under the Patent Cooperation Treaty PCT
(WO2008086844 **2008-07-24**)
- 61-European Patent Application (EP 1946750 **2008-07-23**)
- 62-International Application Published Under the Patent Cooperation Treaty PCT
(WO2008017335 **2008-02-14**)
- 63-European Patent Application (EP 1886671 **2008-02-13**)
- 64-International Application Published Under the Patent Cooperation Treaty PCT
(WO2008017334 **2008-02-14**)
- 65-European Patent Application (EP 1886667 **2008-02-13**)
- 66-European Patent Application (EP1862434 **2007-12-05**)
- 67-International Application Published Under the Patent Cooperation Treaty PCT (WO
2007128371 **2007-11-15**)
- 68-European Patent Application (EP1852110 **2007-11-07**)
- 69- International Application Published Under the Patent Cooperation Treaty PCT
(WO 2007121848 **2007-11-01**)
- 70-International Application Published Under the Patent Cooperation Treaty PCT
(WO2006119844 **2006-11-16**)
- 71-European Patent Application (EP 1721602 **2006-11-15**)
- 72-Jordanian Patent JO2568 (B) — **2010-09-05**
- 73-United States Patent Application (US20130034645 **2013-4-3**)

- 74-European patent Application (EP 2653156 **2013**-10-23)
- 75-European patent Application (EP 2656857, **2013**-10-30)
- 76-European Patent Application (EP2716282, **2014**-04-09)
- 77- Jordan Patent Application (JOP20170168 **2019**-02-22)
- 78- Jordan Patent Application (JOP20180129 — **2020**-06-24)
- 79- Jordan Patent Application (JOP20180128 (A1) — **2020**-06-24)
- 80-Jordan Patent Application (JOP20190004- **2020**-07-10)
- 81-International Patent Application (WO2020144724 - **2020**-07-16)
- 82-International Patent Application WO2021181437-**2021**-09-16)

PUBLICATIONS

Journal Publications

1-**Al-Remawi M.**, Badwan A. et al. Sample Handling in Solid-Solid Transformation, Proc. 3rd word Meeting APV/APGI, Berlin, 3/6 April, pp643-644, 2000

2-El-Barghouthi,M., Eftaiha, A., Rashid, I., **Al-Remawi, M.**, Badwan, A. A novel superdisintegrating agent made from physically modified chitosan with silicon dioxide. Drug Development and Industrial Pharmacy, vol. 34, no. 4, **2008**, pp. 373-83.

Publisher: Informa healthcare-UK, Journal Impact factor 1.618
ISI journal ISSN 0363-9045

3-Rashid, I., **Al Remawi, M.**, Eftaiha, A., Badwan, A. Chitin silicon dioxide coprecipitate as a novel superdisintegrant. Journal of Pharmaceutical Sciences, vol. 97, no. 11, **2008**, pp. 4955-69

Publisher: John Wiley and Sons Inc. USA, Journal Impact factor 3.055
ISI journal ISSN 0022-3549

4-Rashid, I., Daraghmeh,N., **Al-Remawi, M.**, Leharne ,S., Chowdhry ,B., Badwan,A. Characterization of chitin metal silicates as binding superdisintegrants. Journal of Pharmaceutical Sciences, vol. 98, no. 12, **2009**, pp. 4887-901

Publisher: John Wiley and Sons Inc -USA, Journal Impact factor 3.055
ISI journal ISSN 0022-3549

5-Elsayed,A., **Al Remawi,M.**, Qinna,N., Farouk,A., Badwan,A. Formulation and characterization of an oily-based system for oral delivery of insulin. *European Journal of Pharmaceutics and Biopharmaceutics*, vol.73, no. 2, **2009**, pp. 269-79.
Publisher: Elsevier-Netherland, Journal Impact factor 4.046
ISI journal ISSN 0939-6411

6-Eftaiha,A., El-Barghouthi,M., Rashid,I., **Al-Remawi,M.**, Saleh,A., Badwan,A. Compressibility and compactibility studies of chitosan, xanthan gum, and their mixtures. *Journal of Materials science*, vol. 73, no. 2, **2009**, pp. 269-79
Publisher: Springer Netherlands, Journal Impact factor 2.015
ISI journal ISSN 0022-2461

7- Badwan,A., **Remawi, M.**, Qinna,N., Elsayed,A., Arafat,T., Melhim,M., Hijleh,O., Idkaidek,N. Enhancement of oral bioavailability of insulin in humans. *Neuroendocrinology Letters*, vol. 30, no. 1, **2009**, pp. 4-8.
Publisher: Maghira and Maas Publications-Sweden, Journal Impact factor 1.621
ISI journal ISSN 0172-780X

8- Qandil,A., Obaidat,A., Ali,M., Al-Taani,B., Tashtoush,B., Al-Jbour,N., **Al Remawi, M.**, Al-Sou'od,K., Badwan,A. Investigation of the Interactions in Complexes of Low Molecular Weight Chitosan with Ibuprofen.
ISI journal ISSN 0095-9782

9- Al-Shaikh Hamid,R., Al-Akayleh,F., Shubair,M., Rashid,I., **Al Remawi, M.**, Badwan,A.Evaluation of Three Chitin Metal Silicate Co-Precipitates as a Potential Multifunctional Single Excipient in Tablet Formulations. *Marine Drugs*. vol. 8, no. 5, **2010**, pp. 1699–1715
Publisher: Molecular Diversity Preservation International-Switzerland, Journal Impact factor 3.854
Scopus ISSN 1660-3397

10- Eftaiha,A., Qinna,N., Rashid,I., **Al Remawi,M.**, Al Shami,M., Arafat,T., Badwan,A.Bioadhesive Controlled Release Matrix of Metronidazole Based on Chitosan and Xanthan gum. *Marine Drugs*, vol. 8, **2010**, pp.1716-1730.
Publisher: Molecular Diversity Preservation International-Switzerland, Journal Impact factor 3.854
Scopus ISSN 1660-3397

11- Obaidat, R., Al-Jbour,N., Al-Sou'd,K., Sweidan,K., **Al-Remawi, M.**, Badwan,A .Some Physico-chemical Properties of Low Molecular Weight Chitosans in Aqueous Solution.. *Journal of Solution Chemistry*, vol. 39, no. 4, **2010**, pp. 575-588.
Publisher: Springer New York, Journal Impact factor 1.415
ISI journal ISSN 0095-9782

12- Rashid, I., Daraghme, N., **Al-Remawi, M.**, Lehar, S.A., Chowdhry, B.Z., Badwan, A. Characterization of the impact of magnesium stearate lubrication on the tableting properties of chitin-Mg silicate as a superdisintegrating binder when compared to Avicel® 200. Powder Technology, vol. 203, no. 3, **2010**, pp. 609-619.

Publisher: Elsevier-Netherland, Journal Impact factor 2.221

ISI journal ISSN 0032-5910

13- Elsayed, A., **Al-Remawi, M.**, Farouk, A., Badwan, A. Insulin-Chitosan Polyelectrolyte nanocomplexes: Preparation, Characterization and Stabilization of Insulin. Sudan JMS, vol. 5, no. 2, **2010**

Publisher: Khartoum

14- Assaf, S., Al-Jbour, N., Eftaiha, A., Elsayed, A., **Al-Remawi, M.**, Qinna, N., Chowdhry, B., Leharne, S., Badwan, A. Factors Involved in Formulation of Oily Delivery System for Proteins Based on PEG-8 caprylic/capric glycerides and polyglyceryl-6 dioleate in a Mixture of Oleic acid with Chitosan. Journal of Dispersion Science and Technology, vol., no. 5, **2011**

Publisher: Taylor and Francis Inc.-UK, Journal Impact factor 0.697

ISI journal ISSN 0193-2691

15- Elsayed, A., **Al-Remawi, M.**, Qinna, N., Farouk, A., Al-Sou'od, K., Badwan, A. Chitosan-sodium lauryl sulfate nanoparticles as a carrier system for the in-vivo delivery of oral insulin. AAPS Pharm. SciTech. **2011**

Publisher: American Association of Pharmaceutical Scientists-USA, Journal Impact factor 1.432

ISI journal ISSN 1530-9932

16- Rashid, I., **Al-Remawi, M.**, Leharne, S., Chowdhry, B., Badwan, A. A novel multifunctional pharmaceutical excipient: Modification of the permeability of starch by processing with magnesium silicate. International Journal of Pharmaceutics, vol 15, no. 411, **2011**, pp. 18-26.

Publisher: Elsevier-Netherland, Journal Impact factor 3.867

ISI journal ISSN 0378-5173

17- Sweidan, K., Jaber, A., Al-Jbour, N., Obaidat, R., **Al-Remawi, M.**, Badwan, A. Further investigation on the degree of deacetylation of chitosan determined by potentiometric titration. Journal of Excipients and Food Chemistry, vol 2, no. 1, **2011**, pp.-16

Publisher: International Pharmaceutical Excipients Council-USA, Journal Impact factor 3.4

18- Al-alakayleh, F., **Al-Remawi, M.**, Rashid, I., Badwan, A. Formulation and in vitro assessment of sustained release terbitaline sulfate tablet made from binary hydrophilic polymer mixtures. Pharmaceutical Development and Technology, vol 6, **2011**

Publisher: Informa Healthcare-UK, Journal Impact factor 1.395

ISI journal ISSN 1083-7450

19- **Al-Remawi, M.** Sucrose as a Crosslinking Modifier for the Preparation of Calcium Alginate Films via External Gelation. *Journal of Applied Sciences*, **2012**.

Publisher: Asian Network for Scientific Information

20- **Al-Remawi, M.** Properties of Chitosan Nanoparticles Formed Using Sulfate Anions as Crosslinking Bridges. *American Journal of Applied Sciences*, vol. 9, no. 7, **2012**, pp. 1091-1100.

Publisher: Science Publications –USA, Journal Impact factor 1.4

Scopus ISSN Print: 1546-9239

21- Athamneh, N., Tashtoush B., Qandil A., Al-Tanni B., Obaidat A., Al-Jbour N., Qinna N., Al-Sou'od K., **Al-Remawi M.**, Badwan A. A new controlled release liquid delivery system based on diclofenac potassium and low molecular weight chitosan complex solubilized in polysorbates. *Drug Development and Industrial Pharmacy*, **2013**

Publisher: Informa healthcare-UK, Journal Impact factor 1.618

ISI journal ISSN 0363-9045

22-**Al-Remawi M.**, Al-Akayleh F., Salem M., Al Shami M., Badwan A. Application of Excipient Made from Chitosan - Xanthan as a Single Component for the Controlled Release of Ambroxol Tablet. *J. Excipients and Food Chem.* 4 (2) **2013** pp 47-57.

*Publisher: International Pharmaceutical Excipients Council-USA, Journal Impact factor 3.4**

ISSN 2150-2668

23- Al-Sou'od K, Abu-Falaha R, **Al-Remawi M.** Surface Activity of Some Low Molecular Weight Chitosan Derivatives. *Jordan Journal of Chemistry.* **2013**, 8(1), 1-17

Publisher: Yarmouk University

24- Qinna N, Akayleh F, **Al Remawi M.**, Kamona K, Taha H., Badwan A. Evaluation of a functional food preparation based on chitosan as a meal replacement diet. *Journal of Functional Food*, Volume 5, Issue 3, July **2013**, Pages 1125-1134

Publisher: Elsevier Limited-UK, Journal Impact factor 4.48

ISI journal ISSN 1756-4646

25- **Al-Remawi M**, Hamam F., Hamaidi M. Quality by design approach to prepare oleoyl alginate derivative and its use in transdermal delivery. *Pharmaceutical Development and Technology.* Nov 25, **2013**

Publisher: Informa Healthcare-UK, Journal Impact factor 1.395

ISI journal ISSN 1083-7450

26-Elsayed A., **Al-Remawi M.**, Maghrabi I., Hamaidi M., Jaber N. Development of insulin loaded mesoporous silica nano injectable particles layered by chitosan as a controlled release delivery system accepted in *International journal of Pharmaceutics* Volume 461, Issues 1–2, 30 January **2014**, Pages 448-458

Publisher: Elsevier-Netherland, Journal Impact factor 3.867

ISI journal ISSN 0378-5173

- 27- **Al-Remawi M.**, ElSayed A., Maghrabi I., Hamaidi M., Jaber N. Preparation of Nano Lipo amino acid for Oral delivery of insulin, *Die Pharmazie*, vol: 69, **2014** pp 1-7.
Publisher: Govi-Verlag Pharmazautischer Verlag Germany, impact factor 0.962
ISI Journal ISSN 0031-7144
- 28- Hamam F., **Al-Remawi M.** Novel delivery system of curcumin through transdermal route using sub-micronized particles composed of mesoporous silica and oleic acid. *Journal of Functional Foods*. Volume 8, May **2014**, Pages 87–99
Publisher: Elsevier Limited-UK, Journal Impact factor 4.48
ISI journal ISSN 1756-4646
- 29-Al-Akayleh, F., **Al Remawi, M.**, Salem, M. S., & Badwan, A. Using chitosan and xanthan gum mixtures as excipients in controlled release formulations of ambroxol HCl-in vitro drug release and swelling behavior. *Journal of Excipients & Food Chemicals*, **2014**, 5(2). *Publisher: International Pharmaceutical Excipients Council-USA, Journal Impact factor 3.4**
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- 30-Al-Akayleh, F., **Al Remawi, M.**, Salem, M. S., & Badwan, A. Chitosan and Xanthan Gum Mixtures as Excipient for Controlled Release of Ambroxol HCl: In-vitro drug Release and Swelling Behavior. *Journal of Excipients and Food Chemicals*, 5(2), **2014** Pages 140-148. *Publisher: International Pharmaceutical Excipients Council-USA, Journal Impact factor 3.4**
ISSN 2150-2668
- 31- **Al-Remawi M** and Maghrabi I. Characterization of a novel functional food of ALG emulgel used for obesity treatment: emulsifier effect and safety concerns accepted in *Journal of nutritional ecology and food research*. vol 2, 1-9, **2014**
- 32-Hamam F, **Al Remawi M**, Naser A. Evaluation of Specialty Lipids Based on Fish Oil and Capric Acid on Blood Lipid Chemistry using Animal Models. *Journal Food and Nutrition Sciences*, vol 5, 314, **2015**.
- 33-Alzahrani, S. O., Alwagdani, A. M., Alotaibi, A. M., Ghazi, M., **Al-Remawi M** & Mohamed, K. M. Study of the Antidiabetic Activity of *Huernia* Sp. Nov. aff. *Boleana* Growing in High Altitude Areas of Southwest Saudi Arabia. *Annals of Biological Science*. Vol 3, 15-20, **2015**
- 34- **Al-Remawi M.** Application of N-hexoyl chitosan derivatives with high degree of substitution in the preparation of super-disintegrating pharmaceutical matrices. *Journal of Drug Delivery Science and Technology*, 29, 31-41. **2015**
Publisher: Elsevier, impact factor 0.7, ISI Journal
ISSN 1773-2247
- 35- **Al-Remawi, M.** Quality by design of curcumin-loaded calcium alginate emulsion beads as an oral controlled release delivery system. *J. Excipients and Food Chem.* 6 (2) **2015**

*Publisher: International Pharmaceutical Excipients Council-USA, Journal Impact factor 3.4**
ISSN 2150-2668

36-Qinna, N. A., Karwi, Q. G., Al-Jbour, N., **Al-Remawi, M. A.**, Alhussainy, T. M., Al-So'ud, K. A., ... & Badwan, A. A. (2015). Influence of molecular weight and degree of deacetylation of low molecular weight chitosan on the bioactivity of oral insulin preparations. *Marine drugs*, 13(4), 1710-1725.

Publisher: Molecular Diversity Preservation International-Switzerland, Journal Impact factor 3.854
Scopus ISSN 1660-3397

37-Al-Sou'od, K. A., Saadelnour, M. M., & **Al-Remawi, M.** Preparation and characterization of surface active N-butyrate low molecular weight chitosan. *European Journal of Chemistry*, 7(1), 91-96, **2016**

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38-**Al-Remawi, M.**, Elsayed, A., Maghrabi, I., Hamaidi, M., & Jaber, N. Chitosan/lecithin liposomal nanovesicles as an oral insulin delivery system. *Pharmaceutical Development and Technology*, 1-9. **2016**

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39- Ali A. and **Al Remawi M.** Freeze dried quetiapine-nicotinamide binary solid dispersions: A new strategy for improving physicochemical properties and ex-vivo diffusion. *Journal of Pharmaceutics*, accepted in 31 October, **2016**.

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40- **Al-Remawi, M.**, Ali, A. M. A., Khames, A., & Hamaidi, M. (2017). Meloxicam-Paracetamol Binary Solid Dispersion Systems with Enhanced Solubility and Dissolution Rate: Preparation, Characterization, and In Vivo Evaluation. *Journal of Pharmaceutical Innovation*, 1-10.

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41- **Al-Remawi M**, Elsayed A, Maghrabi I, Hamaidi M, Jaber N. A novel pharmaceutical excipient: coprecipitation of calcium and magnesium silicate using brine-seawater in date palm cellulose as an absorbing host. *J. Excipients and Food Chem.* 8 (3) 2017 – 1

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42-Elsayed A, Khaled A, Al Remawi M, Qinna N, Farsakh H, Adnan Badwan A. Low Molecular Weight Chitosan-Insulin Complexes Solubilized in a Mixture of Self-Assembled Labrosol and Plurol Oleaque and Their Glucose Reduction Activity in Rats. *Marine Drugs* 2018, 16(1), 32

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43- Maghrabi, I., Elsayed, A., Al-Remawi, M., Hamaidi, M., & Jaber, N. (2018). Evaluation of calcium magnesium silicate-date palm cellulose as a potential tablet excipient. *Journal of Excipients and Food Chemicals*, 106-115.

44-Al-Akayleh, F., Ali, H. H. M., Ghareeb, M. M., & Al-Remawi, M. (2019). Therapeutic deep eutectic system of capric acid and menthol: Characterization and pharmaceutical application. *Journal of Drug Delivery Science and Technology*, 53, 101159.

45-Ali, H. H., Ghareeb, M. M., Al-Remawi, M., & Al-Akayleh, F. T. (2020). New insight into single phase formation of capric acid/menthol eutectic mixtures by Fourier-transform infrared spectroscopy and differential scanning calorimetry. *Tropical Journal of Pharmaceutical Research*, 19(2), 361-369.

46-Jaber, N., Al-Remawi, M., Qatouseh, L. A., Ahmad, M., & Aiedeh, K. (2020). Synthesis, characterization and evaluation of oleoyl-chitosan derivatives as enhancers for ferrous ions nano-delivery using Caco-2 cell model. *Journal of Drug Delivery Science and Technology*, 58, 101761.

47-Al-Akayleh, F., Jaber, N., & Al-Remawi, M. (2020). Designing, Preparation, and Evaluation of Orodispersible Chitosan Anionic Salt Tablets. *Journal of Pharmaceutical Innovation*, 1-13.

48-Al-Akayleh, F., Al-Naji, I., Adwan, S., Al-Remawi, M., & Shubair, M. (2020). Enhancement of curcumin solubility using a novel solubilizing polymer Soluplus®. *Journal of Pharmaceutical Innovation*, 1-13.

49Al-Akayleh, F., Adwan, S., Khanfer, M., Idkaidek, N., & Al-Remawi, M. (2021). A Novel Eutectic-Based Transdermal Delivery System for Risperidone. *AAPS PharmSciTech*, 22(1), 1-11.

50-Jaber, N., Al-Akayleh, F., Abdel-Rahem, R. A., & Al-Remawi, M. (2021). Characterization ex vivo skin permeation and pharmacological studies of ibuprofen lysinate-chitosan-gold nanoparticles. *Journal of Drug Delivery Science and Technology*, 62, 102399.

51-Khanfar, M., Al-Remawi, M., Al-Akayleh, F., & Hmouze, S. (2021). Preparation and Evaluation of Co-amorphous Formulations of Telmisartan—Amino Acids as a Potential Method for Solubility and Dissolution Enhancement. *AAPS PharmSciTech*, 22(3), 1-13.

52-Abdel-Rahem, R. A., Al-Remawi, M., Daraosheh, A. Q., & Hoffmann, H. (2021). Rheological behavior of wormlike micelles (WLMs) in alcohol/water mixed solvent: influence of alcohol chain length. *Colloid and Polymer Science*, 1-15.

53-Jaber, N., Al-Remawi, M., Al-Akayleh, F., Al-Muhtaseb, N., Al-Adham, I. S., & Collier, P. J. (2021). A review of the antiviral activity of Chitosan, including patented applications, and its potential use against COVID-19. *Journal of Applied Microbiology*.

54-Abdel-Rahem, R. A., Al-Remawi, M., Clinckspoor, K. J., & Hoffmann, H. (2021). Comparison of the influence of 1-propanol and of 2-propanol on the viscoelastic solutions of cetyltrimethylammonium bromide (CTAB) and sodium salicylate (NaSal). *Colloid and Polymer Science*, 299(12), 1967-1978.

55-Daadoue, S., Al-Remawi, M., Al-Mawla, L., Idkaidek, N., Khalid, R. M., & Al-Akayleh, F. (2022). Deep eutectic liquid as transdermal delivery vehicle of Risperidone. *Journal of Molecular Liquids*, 345, 117347.

THESIS SUPERVISION OR EXTERNAL ADVISOR

- Rasha Khaled Mohammed Abuflaha "Preparation and Characterization of New Lipooligosaccharide Chitosan Derivatives" Al al-Bayt University Faculty of Science Department of Chemistry
- Nusaiba K. Al-Nemrawi. Sodium hyaluronate oligosaccharide interaction with gabapentin. Jordan University of Science and Technology 2008
- Karwi Q. The Effect of Molecular Weight and Different Degrees of Deacetylation of Chitosan on the In vivo and in vitro Release of Oral Insulin Preparations. Faculty of Pharmacy, University of Petra 2010
- Dana Asad. Pharmacological evaluation of microemulsion containing butylated chitosan as protein delivery system in animals. Faculty of Pharmacy, University of Petra 2010
- Alaa Al Saadi. Preparation of low molecular weight oleoyl chitosan nanoparticles for modifying ibuprofen release. Faculty of Pharmacy, Petra University 2016
- Salah. Preparation of gold nanoparticles coated with N-oleoyl chitosan as antimicrobial agents
- Nour Awni. .The influence of chitin's crystallinity on its compression properties, 2018
- Heba Fayez. Extraction, Phytochemical Analysis and Standardization of Olive Leaves (*Olea europaea* L.) from Different Geographic Regions in Jordan, 2018
- Layali Shafee. Invitro Diffusion Study of Diclofenac Diethyl Amine From Deep Eutectic System, 2019
- Wasim Mahyoob. Novel bio-sorbent based on modified Olive leaves biomass for removal of lead from waste water. 2019
- Bader Albdoor. The use of deep eutectic system for Quetiapine fumarates release, 2019

- Ala Suleiman. A novel biomass adsorbent from olive tree leaves for removal of organic pollutants intoxication such as methylene blue. 2020
- Sara Fadel. The use of deep eutectic solvent for olive leaves extract. 2020
- Abdea Naqawa. THE USE OF CURCUMIN LOADED NOVEL LIQUISOLID NANOPARTICLE SYSTEM FOR COLON CANCER TREATMENT. 2020
- Eyman Al najjar. Adaptation of gram negative bacteria and gram positive bacteria to a newly formulated hand sanitizer. 2020
- Abdel ELMajeed. Preparation and characterization of a novel spray dried directly compressible made from Chitosan/Soluplus, under progress

EDUCATION

PhD	Jordan University of Science and Technology (JUST)/Jordan Thesis: "Formulation of a Universal Controlled Release Hydrophilic Polymer Mixture Ready for Direct Compression" PHD IN Pharmaceutical Technology from JUST	2003
MS	Jordan University of Science and Technology (JUST)/Jordan	1998

Thesis: "Studies on Solid Transformation of Terfenadine"

BS University of Jordan/Amman-Jordan

1994

PROFESSIONAL EXPERIENCE

Pharmacist 1995 to 2004

- Pharmacist in-charge and Pharmacy owner of Beit Rima Pharmacy, Jordan

Pharmaceutical Researcher 2003-2010

- Role in the development of novel delivery systems and excipients:
- Development of a novel superdisintegrant pharmaceutical excipient for solid dosage forms
- Development of a novel sustained release matrix systems for the oral delivery of drugs
- Development of a new natural, biodegradable pharmaceutical surface active agent
- Development of a cream-base for the delivery of active pharmaceutical ingredients and plant extracts
- Development of a novel delivery system for oral delivery of proteins such as insulin
- Development of a new system for the treatment of obesity.
- Preparation of a complete product master files (PMF) for sustained release solid dosage forms for different active ingredients
- Monitoring the clinical trials of JPM oral insulin preparation using Euglycemic Clamp technique

Instrument handling Experience

- Analytical techniques: FTIR, NMR, Raman Spectroscopy, circular dichroism spectroscopy, HPLC (all detectors), Ion chromatography (IC), LC MS/MS, AFM microscopy, thermal conductivity meters, DSC-TGA, TMA, UTM (universal testing machine), rheometers, zeta potential, polymer molecular weight determination and particle size analyzers
- Formulation techniques: high pressure homogenizers, nano-spray dryer, freeze drying, Extrusion Spheronization (pelletization) and sustained release formulation.

RESEARCH AND MANAGERIAL EXPERIENCE

**Suwagh Company for drug delivery system/
Jordanian Pharmaceutical Manufacturing
Company/Jordan**

2003 to 2010

Position, Technical Manager

- Working within pharmaceutical company, tasked with technical issues concerning development of novel drug delivery systems
- Writing up the inventions in form of patents for the preservation of the company rights, follow up the patents status and give responses for all examiners' reports for examples EESR (the Extended European Search Report) when applying to Europe

- Assessing initial requirements for the delivery systems and implementing solutions accordingly
- Training my team on the use of analytical methodologies, formulation aspects and follow up the progress
- Facilitating the Conduct of animal studies on rats, mice and rabbits for PK/PD profiles Skill/Accomplishment/Project

**Nanotechnology and Industrial Pharmacy Unit/
College of Pharmacy/Taif University, Taif, KSA** 2010 to 2015
Position: Unit manager

- Developing novel and patentable technologies in the field of insulin oral delivery, curcumin transdermal delivery and functional food products for obesity using animal studies on rats, mice and rabbits

**External Scientific Collaboration Unit
College of Pharmacy/Taif University, Taif, KSA** 2010-2015
Position: Unit head

- Facilitating the scientific collaboration between pharmaceutical industry and college of pharmacy at Taif University

SCIENCE FORUM FOR RESEARCH AND CONSULTANCY (SIPS), Jordan.
Position: Pharmaceutical Research Consultant 2015-present

Jordanian Pharmaceutical Manufacturing Company, Jordan. 2015-2017
Position: Formulation Consultant

**University of Petra
Position: President's Assistant for Scientific Affairs
and Technology Transfer
University of Petra, Amman Jordan** 2017-2018

**University of Petra
Position: Dean of Scientific Research and Graduate Studies
UOP, Amman, Jordan** 2018-2022

**University of Petra
Position: Vice President for Academic Affairs
UOP, Amman, Jordan** 2022-present

TEACHING EXPERIENCE

Israa University, Jordan 2003 to 2004
Assistant Professor, Department of Pharmaceutics

- Taught Biopharmaceutics/ Pharmacokinetics and Physical Pharmacy courses, undergraduate courses

Taif University, KSA 2010 to 2012
Assistant Professor, Head of Department of Pharmaceutics

- Taught Physical Pharmacy, Pharmaceutical Industry, Pharmacokinetic & biopharmaceutics and Drug Dispensing courses
- Revised the curriculum to meet accreditation standards
- Coordinated grading and labs with teaching assistants

Taif University, KSA 2012- 2015
Associate Professor, Head of Department of Pharmaceutics

- Taught Clinical Pharmaceutics, Quality Control and Pharmaceutical Calculations courses

University of Petra, Jordan 2015-2017
Associate Professor, Department of Pharmaceutics

- Taught Physical Pharmacy (1) course

University of Petra
Professor

Taught Industrial Pharmacy Courses 2017-present

PRESENTATIONS, POSTER AND INVITED LECTURES

- Mayyas Al-Remawi (speaker). Chitosan and its use in controlled release matrix systems. The Eleventh Pharmaceutical Conference by Jordanian Pharmaceutical Association/ **Jordan**, Sept, **2005**

- Mayyas Al-Remawi (speaker). Novel controlled release drug delivery systems developed by Suwagh Company CPhI, Madrid, **Spain**. 11, **2005**

- Mayyas Al-Remawi (speaker). Nanotechnology Applications of Suwagh Company. CAN nanotechnology Center-Hamburg, **Germany**, **2007**

- Mayyas Al-Remawi (speaker). An Overview about Suwagh Company Drug Delivery Technology. Sanofi-Aventis international, **France**, Jan **2008**

- Mayyas Al-Remawi (speaker). Overview of Some Research Projects at Suwagh Company. Scientific Day of faculty of Pharmacy- University of Jordan, **Jordan 2009**

- Mayyas Al-Remawi (speaker). Generic medicines and clinical evaluation. Clinical investigators Training Program- Jordan Food and Drug Administration, **Jordan**, May **2010**
- Mayyas Al-Remawi (Poster). Novel gel food preparation useful in the treatment of obesity. Professional Poster Presentation Category for DUPHAT (Dubai International and Technologies Conference & Exhibition) 10-12 March 2013 Dubai, **UAE**, **2013**
- Al-Remawi M. and Maghrabi I (Poster). A new functional food used as diet. Innovation and Entrepreneurship Forum 2013, at King Abdulaziz Historical Hall, Umm Al-Qura University Makkah Al-Mukarama, **Kingdom of Saudi Arabia** from the 14th till the 16th of May **2013**
- Mayyas Al-Remawi (professional speaker). Novel oral insulin lipoamino acid nanoparticle delivery system. DUPHAT (Dubai International and Technologies Conference & Exhibition) 1 - 10 March, 2014, Dubai, **UAE**, **2014**
- Mayyas Al-Remawi (Poster), An Injectable Chitosan coated submicronized particles for insulin sustained release delivery. 9th World Meeting of Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology, Lisbon, **Portugal**, 31 March-03 April, **2014**
- Mayyas Al-Remawi (Professional speaker). Innovative Technology in Pharmaceutical Industry. Oman is an Attractive Environment for Pharmaceutical investment, Hotel Muscat Holiday, Muscat, **Sultanate of Oman**, November 12-13, **2014**
- Ahmed Mahmoud Abdelhaleem Ali and Mayyas Mohammad Ahmad Al-Remawi (Poster). Quetiapine-nicotinamide co-amorphous dispersion: A new strategy for improving physicochemical properties and ex-vivo performance of a model antipsychotic drug. 8th International Conference and Exhibition on Pharmaceutics & Novel Drug Delivery Systems. Madrid, **Spain**. March 07-09, **2016**
- Mayyas Al-Remawi (Professional speaker), TRB Chemidica Int. SA meeting. Geneva, **Switzerland 2016**.
- Mayyas Al-Remawi (speaker). Inventions in Jordanian Pharmaceutical Industry Sector. 3rd Scientific Day of Faculty of Pharmacy, Philadelphia University, **Jordan** May 18th, **2017**.
- Mayyas Al-Remawi (speaker). Oral insulin drug delivery system. BIT's 7th Annual International Symposium of Drug Delivery Systems-2017, July 12-14, **2017**, Prague, **Czech Republic**

PROFESSIONAL TRAINING

International Training

-Licensed to conduct animal studies in Europe Certified to pass Laboratory Animal Science (LAS) course (80 Credit hrs) from Faculty of Veterinary medicine (2008), Utrecht University, Netherlands

-ERWEKA Workshop on In-vitro dissolution systems and a visit to QC facility of Bayer Company at Berlin. Frankfurt, **Germany**, 20– 26 March **2013**

Attending Seminars

- Continuing Education Seminar on Contraceptive Technology by MOH, Jordan 1995
- Advances in Contraceptive Technology by CMS, Jordan Nov. 11, 2001
- Training course in Doing Business with the EU: Licensing and IPR Issues Seminar, Jordan, March 11-12, 2006
- Public Speaking Training Course by int@j, Jordan March 14-18, 2004-Training course in Knowledge Management for Executives, Jordan. April 25 and 27, 2005
- Doing Business with the EU: Licensing and IPR Issues Seminar By Jordan Intellectual Property Association and Euro Jordanian Export Program, Jordan, March 11-12, 2006
- Proactive Leadership training program held by The Australian College of Behavioral Technology. Jordan, July 2006
- Health Research Ethics and IRB Review experience for Public and Private Health Sectors. Jordan, May 20-21, 2009
- Facilitating Clinical Trials in Mena Region Conference, Jordan October 23-24, 2009
- Training Program-Developing Research Abilities: Idea formulation and research management, King Abdulaziz City for Science and General Directorate of Research Grants, Taif , KSA 21 Nov., 2012
- Atomic Force Microscopy-Tribology and Mechanical Testing-Surface Profilometry, Jeddah, 4th Dec. 2012
- Thermal Analysis, Jeddah, 18th Nov. 2012
- MD Consult/First Training Session, Elsevier Taif 3rd Oct. 2012
- Seminar on Dissolution and Hardness testing, ERWEKA Germany 26-3-2013
- Bioscience smart tools for enhancing your research, Jeddah KSA, Nov. 14. 2013
- Nexera X2 UPLC chromatographic management system, Jeddah KSA Sep 24, 2013
- Recent advances in CNS acting drugs. Taif University, KSA May 8, 2014
- Last advancement in nanotechnology solutions using FEI SEM and DualBeam TM microscopy, Organized in collaboration with Naizak Global Engineering Systems- Lab Systems Divisions and FEI, the Netherlands, April 14, 2015
- Science direct and Scopus training held on by Elsevier BV, Taif University, KSA 8-3-2015
- Application of citation manager software Endnote, Taif University KSA 6-3-2015
- SPSS training program, Petra University, Amman Jordan. April 9-30, 2016

PROFESSIONAL AFFILIATIONS

- Member of the Clinical Studies Committee, Jordan FDA, 2008-2010
Assessment of the protocols for clinical and bioequivalence studies as a member in Clinical Studies Committee in The Jordanian Food and Drug Administration (JFDA)-a governmental Institution
- King Abdullah Nanotechnology Center, Riyadh-KSA, 2012-2015

Consultant for nanotechnology development and cancer drug delivery systems
- Scientific Consultant for many regional pharmaceutical Industry companies such as Jordanian Pharmaceutical Manufacturing Co. (Jordan), Alrai Pharmaceutical Industries, Jeddah (KSA) and SPIMACO (KSA) and TRB Chemedica,(Switzerland) 2010-2015
-King Faisal Hospital, Hospital pharmaceutical preparation Taif KSA, 2012-2015.
-Member of the Registration Committee of Generic Drugs, Jordan FDA 2017-2021
-Member of Medical and Pharmaceutical Committee for Research Funding-Ministry of Higher Education, Jordan 2020-present.

PROFESSIONAL SERVICE

Peer-Reviewed Articles:

-Reviewer of Articles published in several journals including: Journal of Nanotechnology Research (NANO) SPRINGER-LINK Publisher, Journal of Microencapsulation (Informa Healthcare-UK), Saudi Journal of Health Sciences (KSA), Carbohydrate Polymers, Drug Development and Industrial Pharmacy (USA), etc.

Special service

- Serving students, colleagues and other university researchers in finishing their studies on DSC, AFM and FTIR Taif, Saudi Arabia, 2010-2015

COMMUNITY SERVICE

-*Local Industry:* Communicated with the local producers of medicines and pharmaceutical factories

-*Hospitals:* Communicating to apply nanotechnology in the development of curcumin loaded nanoparticles to be applied on skin cancer treatment, Hada Military Hospital, Taif, Saudi Arabia 2010-2015.

- *Training:* Conduct different specialized practical training for workers in the field of nanotechnology and skin delivery systems 2010-2015.

REFERENCES

Available on request