

# Muhammad Irfan Siddique

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## **Objective:**

To pursue a challenging career in an esteemed and vibrant organization, that would utilize my potential and experience to a maximum extent while providing me opportunities of growth and professional excellence.

## **Academic Qualification:**

- **PhD Pharmaceutics**  
University of Kebangsaan Malaysia (Malaysia) 2014-2017  
**PhD Research Project**  
*PRE-CLINICAL SAFETY EVALUATION, SCALING UP AND HUMAN CLINICAL SAFETY AND EFFICACY OF CO-LOADED HYDROCORTISONE-HYDROXYTYROSOL CHITOSAN NANOPARTICLES FOR THE TREATMENT OF ATOPIC DERMATITIS*
- **M.Sc. Pharmaceutical Sciences**  
University of Greenwich (UK) 2010-2011  
**Modules Studied:**  
Pharmaceutical Analysis & Testing                      Pharmaceutical Product Development  
Microbiology and Introduction to Biotechnology      Manufacture & Control  
Medicinal Chemistry & Therapeutics                      Ethical, Professional and Legal Issues  
**M.Sc. Research Project**  
*EXPERIMENTAL AND THEORETICAL STUDIES OF  $\delta$ -VALEROLACTAM USING RAMAN and FTIR SPECTROSCOPY*  
**Co-Curricular Workshops and Practice**  
Attended special GC, LCMS, NIR, RAMAN, UV, X-RAY DEFFRACTION & NMR workshops & Labs at University of Greenwich  
**Training course**  
Attended HPLC two day training course from JHON STUART ACADEMY UK and got certificate upon its successful completion.
- **Pharm-D (Doctor of Pharmacy)**  
Baqai Medical University, Pakistan (Karachi) 2004-2009  
CGPA – 3.23

## **Professional Experience:**

Organization: Faculty of Pharmacy, Northern Border University  
Designation: Assistant professor  
Location: Rafha, Saudi Arabia  
Tenure: (March-2023 till now)

Organization: Institute of Pharmaceutical sciences, UVAS Lahore  
Designation: Assistant professor  
Location: Lahore, Pakistan  
Tenure: (August-2017 to February-2023)

Organization: **Akhtar Saeed College of Pharmaceutical Sciences**  
Designation: **Assistant professor**  
Location: **Lahore, Pakistan**  
Tenure: **(Oct-2016 to August 2017)**

Organization: **Lahore College of Pharmaceutical Sciences**  
Designation: **Senior Lecturer**  
Location: **Lahore, Pakistan**  
Tenure: **(Jan-2012 to Feb-2014)**

Organization: **Kolak Snack foods ltd.**  
Designation: **Laboratory Analyst**  
Location: **London, UK**  
Tenure: **6-months (April-2011 to Oct-2011)**

Organization: **Kasmani Pharmacy, Hayes**  
Designation: **Pharmacy Technician**  
Location: **London**  
Tenure: **1-Year (Nov-2009 to Nov-2010)**

### **Post-Graduate Students Supervisor**

- M. Phil Produced (12)
- M. Phil in progress (08)
- PhD. as co-supervisor (2)

### **Research Group Patent:**

- A Pharmaceutical Composition of a Polymeric biodegradable film for Diabetic Wound Healing. **(Granted)**
- Chitosan-based Skin Targeted Nanoparticles Drug Delivery System and Method, PCT No. PCT/MY/2014/000262. Malaysian Patent No. PI 2013004157.

### **Research Publications:**

1. Sarfraz M, Arafat M, Zaidi SHH, Eltaib L, Siddique MI, Kamal M, Ali A, Asdaq SMB, Khan A, Aaghaz S, et al. Resveratrol-Laden Nano-Systems in the Cancer Environment: Views and Reviews. **Cancers. I. F. 5.2**
2. Muhammad Sarfraz, Abida Khan, Gaber El-Saber Batiha, Muhammad Furqan Akhtar, Ammara Saleem, Basiru Olaitan Ajiboye, Mehnaz Kamal, Abuzer Ali, Nawaf M. Alotaibi, Shams Aaghaz, Muhammad Irfan Siddique, Mohd Imran. Nanotechnology-Based Drug Delivery Approaches of Mangiferin: Promises, Reality and Challenges in Cancer Chemotherapy. **Cancers. I. F. 5.2.**
3. Salizatul Ilyana IBRAHIM \*, Nadeem Irfan BUKHARI, Ummarah KANWAL, Abu Bakar Abdul MAJEED & **Muhammad Irfan SIDDIQUE**. Transmembrane Diffusion of  $\alpha$ -Tocopherol as a Model Drug Across Synthetic Membrane in Automated Vertical Diffusion Cells – Validation of Device and Drug Related Factors. **Latin American Journal of Pharmacy. I. F. 0.229.**
4. Muhammad Khurram Waqas, Haleema Sadia, Muhammad Imran Khan, Muhammad Ovais Omer, **Muhammad Irfan Siddique**, Shaista Qamar, Muhammad Zaman, Muhammad Hammad Butt, Mian Waqar Mustafa, Naeem Rasool. Development and characterization of niosomal gel of fusidic acid: in-vitro and ex-vivo approaches. **Designed Monomers and Polymers. I.F. 3.718.**
5. Qurrat-al-ain Khan<sup>1</sup>, **Muhammad Irfan Siddique**<sup>1\*</sup>, Muhammad Sarfaraz<sup>2</sup>, Khurram Rehman<sup>3</sup>, Muhammad Farhan Sohail<sup>4,5</sup>, and Haliza Katas<sup>6</sup>. Oral Dispersible Films from Product

Development to End-User Acceptability: A Review. **Critical Reviews in Therapeutics Drug Carrier System. I.F. 3.09.**

6. Misbah Hameed, Akhtar rasul, Sumera latif, Maria rasool, Ghulam abbas, **Muhammad Irfan siddique**, Muhammad khurram waqas, Ikram Ullah Khan, Abid Mehmood Yousaf, Pervaiz Akhtar shah. Fabrication of Moxifloxacin HCl loaded biodegradable chitosan nanoparticles for potential antibacterial and accelerated cutaneous wound healing efficacy. **Journal of Microencapsulation. I.F. 4.034.**
7. Murtada A. Oshi, Adnan Haider, **Muhammad Irfan Siddique**, Alam Zeb, Syed Babar Jamal, Atif Ali Khan Khalil, Muhammad Naeem Nanomaterials for chronic inflammatory diseases: the current status and future prospects. **Applied Nanoscience. I.F. 3.869.**
8. Saima Tufail, **Muhammad Irfan Siddique\***, Muhammad Sarfraz, Muhammad Farhan Sohail\*, Nabeel Shahid, Muhammad Ovais Omer, Haliza Katas, and Fatima Rasool. Simvastatin nanoparticles loaded polymeric film as a potential strategy for diabetic wound healing: in vitro and in vivo evaluation. **Current Drug Delivery. I.F. 3.758.**
9. **Siddique MI**, Katas H, Muhammad Sarfraz, Tahir Ali Chohan, Jamil A, Amin IM, Cairul M. Clinical insight into topically applied Multipronged Nanoparticles in Subject with Atopic Dermatitis. **Journal of Drug Delivery Science and Technology. I.F. 5.062.**
10. Qurat-ul-ain Shoaib Sumera Latif, Qazi Amir Ijaz, Hafsa Afza. Muhammad Irfan Siddique, Amjad Hussain, Muhammad Sohail Arshad, Nadeem Irfan Bukhari and Nasir Abbas. Solubility and dissolution rate enhancement of ibuprofen by cyclodextrin based carbonate nanosponges. **PJPS 10.36721/PJPS.2021.34.3.SUP.1045-1055.1. I.F. 0.863.**
11. Qurrat-ul-ain Khan, **Muhammad Irfan Siddique\***, Fatima Rasool, Muhammad Naeem, Muhammad Usman & Muhammad Zaman Development, and characterization of orodispersible film containing cefixime trihydrate. **Drug Development and Industrial Pharmacy, I.F. 3.4**
12. Ahmad Z, Khan MI, **Siddique MI**, Sarwar HS, Shahnaz G, Hussain SZ, Bukhari NI, Hussain I, Sohail MF. Fabrication and Characterization of Thiolated Chitosan Microneedle Patch for Transdermal Delivery of Tacrolimus. AAPS PharmSciTech. 2020 Feb;21(2):1-2. **AAPS PharmSci Tech. I.F 3.3.**
13. Wardah Ashfaq, Khurram Rehman, **Muhammad Irfan Siddique** & Qurrat-Al-Ain Khan. Eicosapentaenoic Acid and Docosahexaenoic Acid from Fish Oil and Their Role in Cancer Research. **Food reviews international. I.F. 5.8.**
14. **Siddique MI**, Saima Tufail, Ze Heng Ker, Tahir Mehmood Khan, Fatima Rasool, Muhammad Farhan Sohail and Nabeel Shahid. Towards fast and cost-effective up-scaling of Nano-encapsulations by Ionic-gelation method using model drug for the treatment of atopic dermatitis. **PJPS I.F. 0.863.**
15. Muhammad Ijaz Riaz, Hafiz Shoaib Sarwar, Mubashir Rehman, Umar Farooq Gohar, Syed Atif Raza, **Muhammad Irfan Siddique**, Gul Shahnaz, Muhammad Farhan Sohail. Study of erythrocytes as a novel drug carrier for the delivery of artemether. **BJPS I.F. 1.3.**
16. **Siddique MI**, Katas H, Amin MC, Ng SF, Zulfakar MH, Buang F, Jamil A, Syed Maaz Nadeem. Potential treatment of atopic dermatitis: tolerability and safety of cream containing nano-particles loaded with hydrocortisone and hydroxytyrosol in human subjects. **Drug Delivery and Translational Research, I.F. 5.4.**
17. **Siddique MI**, Nabeel shahida, Zunera Razzaqa, Haliza Katasb, Muhammad khurram waqasa, Kashif-ur-Rahmana. Fabrication and characterization of Matrix Type Transdermal Patches Loaded with Tizanidine Hydrochloride: Potential Sustained Release Delivery System. **Drug Development and Industrial Pharmacy, I.F. 3.4**
18. **Siddique MI**, Haliza Katas, Chai Yi Wen, Zahid Hussain, and Fatin Hanini Mohd Fadhil. Thermoresponsive curcumin/DsiRNA nano-particle gels for the treatment of diabetic wounds: synthesis and drug release **Therapeutic Delivery**, March 2017, Vol. 8, No. 3, Pages 137-150 (doi: 10.4155/tde-2016-0075).

19. **Siddique MI**, Katas H, Amin MC, Ng SF, Zulfakar MH, Buang F, Jamil A. Preclinical Safety Evaluation of Hydrocortisone-hydroxytyrosol Co-loaded Chitosan Nanoparticles Cream in Albino Wistar Rats. *Proceedings of pharmaceutical sciences research day* 2015. 2015:102.
20. **Siddique MI**, Katas H, Amin IM, Cairul M, Ng SF, Zulfakar MH, Buang F, Jamil A. Minimization of Local and Systemic Adverse Effects of Topical Glucocorticoids by Nanoencapsulation: In Vivo Safety of Hydrocortisone–Hydroxytyrosol Loaded Chitosan Nanoparticles. *Journal of Pharmaceutical sciences*. 2015 Dec 1; 104(12):4276-86. **I.F. 3.8**
21. **Siddique MI**, Katas H, Amin MC, Ng SF, Zulfakar MH, Jamil A. In-vivo dermal pharmacokinetics, efficacy, and safety of skin targeting nano-particles for corticosteroid treatment of atopic dermatitis. *International journal of pharmaceuticals*. 2016 Jun 30; 507(1):72-82. **I.F: 5.8**.

### **Chief organize of Seminars:**

1. Two-day first aid training session in collaboration with Pakistan Red Crescent Society 17-18 jan-22.
2. **First Aid Training seminar** in collaboration with ERC and Rescue 1122. 11-08-22
3. Organize **Breast Cancer Awareness Seminar** on 20-10-2021.
4. Organize **Awareness Seminar on Diabetes and COPD** on 18-11-2021.
5. First Aid Training seminar in collaboration with Red Crescent Society. 10-09-21.
6. Organize **Breast Cancer Awareness Seminar** on 28-10-2020.
7. **First Aid Training seminar** in collaboration with Rescue 1122. 03-03-21.

### **Conferences:**

1. **Muhammad Irfan Siddique**, “Preparation and in-vivo Biocompatibility of Tizanidine Hydrochloride loaded patch: Potential Sustained Release Delivery System” Two-day STEM international conference **24-25<sup>th</sup> March 2022. Islamia University Bahawalpur, IUB.**
2. **Muhammad Irfan Siddique**, “Nanotechnology and New Challenges” invited speaker at Lahore College of Pharmaceutical Sciences, 7<sup>th</sup> September 2021.
3. **Muhammad Irfan Siddique**, “Formulation and characterization of rapid dissolving oral film of piroxicam and clove oil” Two-day STEM international conference **30-31<sup>st</sup> March 2021. Islamia University Bahawalpur, IUB.**
4. **Muhammad Irfan Siddique**, Preparation and Physicochemical characterization of Orodispersible Film Containing Insoluble Drug Molecule, Two-day One health international conference **25-26<sup>th</sup> November 2020. College of Veterinary & Animal Sciences, Jhang.**
5. **Muhammad Irfan Siddique**, Development and Characterization of Simvastatin Loaded Chitosan Nanoparticles for its Potential Effect on Diabetic Wound Healing’’. Webinar Recent Advancement in Miniaturized Drug Delivery System 28<sup>th</sup> October 2020. **International Medical University, Malaysia.**
6. **Muhammad Irfan Siddique**, Molecular characterization of drug-loaded chitosan nanoparticles’’. Recent Advances in pharmaceutical research, 3rd September 2020. **COMSAT University Islamabad, Pakistan.**
7. **Muhammad Irfan Siddique**, Development and Characterization of Tizanidine Hydrochloride Loaded Transdermal Patch. International Pharmacy Conference & **Exhibition IPCE-2020 (Islamia University Bahawalpur, Pakistan.**
8. **Muhammad Irfan Siddique**, Preparation and Characterization of Curcumin Loaded Chitosan Nanoparticles in Sodium Alginate Based Gel. **International Pharmacy Conference (Lahore College for Women University-2019).**
9. **Muhammad Irfan Siddique**, Preparation and Characterization of Glucocorticoids Loaded Nanoparticles and its Antibacterial Activity. **International Pharmacy Scientific Symposium, University of Central Punjab-2019).**
10. **Muhammad Irfan Siddique**, Nanotechnology in Dermatology. “*Nanotechnology, The Future of Medicine*” Lahore College of Pharmaceutical Sciences-2019).

11. **Muhammad Irfan Siddique**<sup>\*1,2</sup>, Haliza Katas<sup>2</sup>, Mohd Cairul Iqbal Mohd Amin<sup>2</sup>. Scaling-up the nano-fabrication and stability study of hydrocortisone and hydroxytyrosol co-loaded chitosan nano-particles. **Advances in Phytochemical Analysis (Trends in Natural Products Research, Liverpool, United Kingdom)-2018.**
12. **Muhammad Irfan Siddique**<sup>\*1,2</sup>, Haliza Katas<sup>2</sup>, Mohd Cairul Iqbal Mohd Amin<sup>2</sup>. Preparation of drug loaded nano-particle on large scale and its characterization for the treatment of atopic dermatitis. **Pharmaceutical and Biochemical Sciences (PBS) 7<sup>th</sup> Pak Pharma. & Healthcare EXPO 2018.**
13. **Muhammad Irfan Siddique**<sup>\*1,2</sup>, Haliza Katas<sup>2</sup>, Mohd Cairul Iqbal Mohd Amin<sup>2</sup>. Preparation of drug loaded nano-particle on large scale and its characterization for the treatment of atopic dermatitis. **Pharma Asia, PPMA 2018.**
14. **Muhammad Irfan Siddique**<sup>\*1,2</sup>, Haliza Katas<sup>2</sup>, Mohd Cairul Iqbal Mohd Amin<sup>2</sup>. Fabrication of chitosan nano-particles for boosting transdermal delivery of topical glucocorticoids: *in-vivo* permeation and pharmacokinetic assessment. **3<sup>rd</sup> International Health Trigon Summit 2018.**
15. **Muhammad Irfan Siddique**<sup>\*1,2</sup>, Haliza Katas<sup>2</sup>, Mohd Cairul Iqbal Mohd Amin<sup>2</sup>. Safe and non-irritant cream containing hydrocortisone and hydroxytyrosol co-loaded chitosan nano-particles: Acute dermal toxicity and irritation studies. **National Conference on Recent Advancement in Pharmaceutical Sciences 2018.**
16. **Muhammad Irfan Siddique**<sup>\*1</sup>, Haliza Katas<sup>1</sup>, Mohd Cairul Iqbal Mohd Amin<sup>1</sup>. Clinical Investigation and Biocompatibility of Encapsulated Topical Glucocorticoids. **International conference on recent advances in clinical research-2017.** UVAS, Lahore
17. **Muhammad Irfan Siddique**<sup>\*1</sup>, Haliza Katas<sup>1</sup>, Mohd Cairul Iqbal Mohd Amin<sup>1</sup>, Ali Naim<sup>2</sup>. Development of chitosan nano-particles of hydrocortisone-hydroxytyrosol for targeted delivery and safety in albino Wistar rats. **International pharmacy conference and exhibition, 2016.**
18. **Muhammad Irfan Siddique**<sup>\*1</sup>, Haliza Katas<sup>1</sup>, Mohd Cairul Iqbal Mohd Amin<sup>1</sup>, Shioh-Fern Ng<sup>1</sup>, Mohd Hanif Zulfakar<sup>1</sup>, Fhataheya Buang<sup>1</sup>, Adawiyah Jamil<sup>2</sup>. In-Vivo Dermal Pharmacokinetics, Efficacy, and Safety of Skin Targeting Nanoparticles for Corticosteroid Treatment of Atopic Dermatitis. **Pharmaceutical science Research day 2016.**
19. **Muhammad Irfan Siddique**<sup>1</sup>, Haliza Katas<sup>1</sup>, Mohd Cairul Iqbal Mohd Amin<sup>1</sup>, Shioh-Fern Ng<sup>1</sup>, Mohd Hanif Zulfakar<sup>1</sup>, Fhataheya Buang<sup>1</sup>, Adawiyah Jamil<sup>2</sup>. Nano-particles Enhance Targeted Topical Corticosteroids Delivery into the Skin with Improved Safety for the Treatment of Atopic Dermatitis: In-Vivo Safety of Hydrocortisone-Hydroxytyrosol Loaded Chitosan Nanoparticles. **Control release and drug delivery symposium, 2015.**
20. **Muhammad Irfan Siddique**<sup>1</sup>, Haliza Katas<sup>1\*</sup>, Mohd Cairul Iqbal Mohd Amin<sup>1</sup>, Shioh-Fern Ng<sup>1</sup>, Mohd Hanif Zulfakar<sup>1</sup>, Fhataheya Buang<sup>1</sup>, Adawiyah Jamil<sup>2</sup>. Preclinical safety evaluation of hydrocortisone-hydroxytyrosol co-loaded chitosan nano-particles cream in albino Wistar rats. **Pharmaceutical science Research day 2015.**
21. **Muhammad Irfan Siddique**<sup>\*</sup>, Haliza Katas, Mohd Cairul Iqbal Mohd Amin. Acute dermal toxicity and acute dermal irritation of hydrocortison-hydroxytyrosol chitosan nano-particles in albino wistar rat skin. **Control release and drug delivery symposium, 2014.**

### **Research Grant:**

- Punjab Agriculture Research Board, worth of 16.671 million, 2021.
- Pakistan Science Foundation, worth of 7.12286 million, 2021.
- National Research Program for Universities, HEC, worth 6.1502 million, 2021.
- Approved SRGP research grant from HEC. Worth 0.5 million, 2018

## **Computer Skills:**

**Operating Systems:** Windows 7/ Windows XP  
**Office Tools:** MS Excel, MS Power Point and MS Word.  
Skilled in data compilation and documentation

## **Language Proficiency:**

Proficient in spoken and written English, Malay, Urdu and Punjabi

## **References:**

Will be furnished upon request.