



# PROF. DR. FATIMA RASOOL

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Research interests: To develop modified release dosage forms and targeted drug delivery systems using multidisciplinary approaches including computer modelling and simulation with a focus on molecular simulations, computer aided drug design as well as pharmacokinetic and pharmacodynamic principles for pre-formulation and pre-clinical evaluations of novel drug combinations and drug delivery systems.

## PROFESSIONAL CAREER

### Professor

Jul 2023 – Present

### Associate Professor

Jan 2020 – Jun 2023

### Assistant Professor

Jan 2012 - Dec 2019

### Honorary Faculty

Oct 2014 - Sep 2015

### Lecturer

May 2009- Dec 2011

### Visiting Lecturer

2007 - 2009

2003 - 2004

### Lecturer

2006 – 2007

### Hospital Pharmacist

2004 – 2006

### Pharmacist

2002 - 2003

### Punjab University College of Pharmacy, University of the Punjab, Lahore

Allama Iqbal Campus (Old Campus), Lahore, Punjab, Pakistan

### Lancaster University, Lancaster, United Kingdom

### Punjab University College of Pharmacy, University of the Punjab, Lahore

### Faculty of Pharmacy and Alternative Medicine, the Islamia University of Bahawalpur, Bahawalpur, Pakistan

### Hamdard Institute of Pharmaceutical Sciences, Islamabad, Pakistan

### Bahawal Victoria Hospital, Bahawalpur, Pakistan

### National Organization UDL Distribution (Pvt.) Limited, Bahawalpur, Pakistan

## EDUCATION

### Post – Doc.

Oct 2014 – Sep 2015

### Lancaster University, Lancaster, England

Advisor: Prof. Dr. Jamshed Anwar

Research Project: Molecular Dynamic Simulation Studies of Protein Aggregation

### Ph.D. in

### Pharmaceutics

2007 - 2012

### The Islamia University of Bahawalpur, Bahawalpur, Pakistan

Advisor: Prof. Dr. Mahmood Ahmad

Dissertation: Metoprolol Microcapsules: Formulation and *in-vitro* & *in-vivo* Characterization

### M.Phil in

### Pharmaceutics

2002 – 2004

### The Islamia University of Bahawalpur, Bahawalpur, Pakistan

Advisor: Prof. Dr. Mahmood Ahmad

Thesis: The Effect of Binders on the Bioavailability of ofloxacin tablets using animal model.

### B. Pharmacy

1995 - 1999

### The Islamia University of Bahawalpur, Bahawalpur, Pakistan

## TRAINING

Certified course on “Pharmaceutical Formulations, Molecular Modeling for Materials Science Applications” conducted by Schrodinger USA, completed on 31-07-2023.

## Countries Visited

March 2010	Research paper presentation in a conference at Rio de Janeiro, Brazil
June 2010	Research paper presentation in a conference at Istanbul, Turkey
October 2012	Research paper presentation in a conference at Chicago, USA
September 2013	Research paper presentation in a conference at Buenos Aires, Argentina
Oct 2014 - Sep 2015	Post Doctoral Research at Lancaster university, Lancaster, UK
February 2016	Research paper presentation in a conference at United Arab Emirates
January 2017	Poster presentation in a conference at Houston, USA
February 2017	To Perform Umrah at Saudia Arabia
November 2017	Research paper presentation in a conference at United Kingdom
February 2023	To Perform Umrah at Saudia Arabia
Apr - May 2023	Visit to New York, United States of America and London, United Kingdom.

## PROFESSIONAL AFFILIATION/ MEMBERSHIP/COMMUNITY SERVICES

- Member Pakistan Pharmacist Association
- Registered Pharmacist in Punjab Pharmacy Council, Pakistan
- Member Academic Staff Association, University of the Punjab, Lahore, Pakistan
- Member Doctoral Program Committee (DPC) of Punjab University College of Pharmacy
- Member of Faculty and Academic Board of Study, Gulab Devi Institute of Pharmacy, Gulab Devi Educational Complex, Lahore
- Ph.D., M.Phil. Thesis Examiner of various Universities
- Assistant Superintendent in Girls Hostel No. 7, University of the Punjab, Lahore from 27-04-2010 to 26-04-2012
- External Examiner for Practical and Theory Papers of Pharm D, M. Phil. & Ph. D. of Other National Universities
- HEC approved Supervisor since 2012
- Member Quality Enhancement Cell (QEC), University of the Punjab
- Member, Board of Studies in University College of Pharmacy under University of the Punjab Act, 1973
- Elected as Executive Member, Academic Staff Association by Teachers of University of the Punjab in Feb, 2020 Elections and re-elected in Feb, 2021 Elections
- Member, Senate, University of the Punjab, Lahore
- Member Academic Council, University of the Punjab, Lahore
- Member, Post-graduate Admission Committee, College of Pharmacy, University of the Punjab
- Member, Under-graduate Admission Committee, College of Pharmacy, University of the Punjab

## EDITORIAL APPOINTMENTS

- Member Editorial board, Pakistan Journal of Pharmacy, Pakistan
- Reviewer "Scientific Research and Essays".
- Incharge Pharmabulletin, University College of Pharmacy, for 2013-2014 and again 2018 to onward.
- Incharge Pharma Mag for 2013- 2014.
- Senior Editor of Pakistan Journal of Pharmacy since 2012

## ADMINISTRATIVE/MANAGERIAL RESPONSIBILITIES IN PUNJAB UNIVERSITY COLLEGE OF PHARMACY

- Coordinator Post Graduate Program, Punjab University College of Pharmacy.
- Deputy Student Advisor from 2013 - 2015.

- Coordinator Midsession Examination of Pharm. D. Classes
- Member Poster Presentation Committee
- Member Seminar Committee
- Member College Security Committee
- Member Management Committee for UCP Canteen.
- Member Sports Committee.
- Nomination to attest the documents of pharmacy graduates for registration with Punjab Pharmacy Council on behalf of the principal.
- Member Class Room Facility Monitoring Committee.
- Member College Admission Committee.
- Member Lecture Allocation Committee.
- Committee to implement the SOPs of COVID-19 in the College.
- Class tutor of second and final Pharm D classes.

## **DISTINCTIONS AND AWARDS**

- Stood 3<sup>rd</sup> in 5<sup>th</sup> class district examination and got merit scholarship.
- Talent scholarship throughout from class six to the intermediate class.
- Distinctions in B-pharmacy, M.Phil. and Ph.D. examinations.
- Indigenous Ph.D. Fellowship from Higher Education Commission of Pakistan.
- Nomination by Higher Education Commission of Pakistan for award of UNESCO- L'OREAL scholarship for young women in Life Sciences for the year 2009.
- Travel grant from University of the Punjab, Lahore, (Pakistan) for presentation of research paper in an International Conference held in Brazil in 2010.
- Incentive Award of Rs. 51,250/- on Research Publications for the year 2010 by the University of the Punjab.
- Incentive Award of Rs. 66,249/- on Research Publications for the year 2011 by the University of the Punjab.
- Incentive Award of Rs. 43,119/- on Research Publications for the year 2012 by the University of the Punjab.
- Travel grant from University of the Punjab, Lahore, (Pakistan) for presentation of poster in 2012 AAPS Annual Meeting and Exposition held in America.
- Travel grant from University of the Punjab, Lahore, (Pakistan) for presentation of poster in 4<sup>th</sup> Latin America Conference organized by International Society for Pharmacoeconomics and Outcomes Research (ISPOR) held on 12-14 September 2013 in Buenos Aires, Argentina.
- A research project approved and financed by University of the Punjab in 2013 was completed successfully entitled "Formulation and Evaluation of Gastroretentive Drug Delivery System of Amoxicillin" amounting Rs. 150,000/-.

## **CONFERENCES ATTENDED AND PARTICIPATED**

- Pharmacy in New Era, 1<sup>st</sup> National Pharmacy Conference, 2-4 March 2007, Faculty of Pharmacy and Alternative Medicine, IUB, Bahawalpur, Pakistan.
- 14<sup>th</sup> National Pediatric Conference, 20-22 February 2009, Multan, Pakistan.
- 15<sup>th</sup> International Pharmacy Conference & Exhibition, 5-8 April 2009, Lahore, Pakistan.
- 1<sup>st</sup> International Conference Jinnah Hospital Pharmacy Practices, 12-14 February 2010, Lahore, Pakistan.
- International Conference on Computer, Electrical and System science & Engineering, 29-31 March 2010, Rio De Janeiro, Brazil.
- International Postgraduate Student Meeting on Pharmaceutical Sciences, 24-27 June 2010, Izmir, Turkey.
- 1<sup>st</sup> National Seminar on Use of Animals in Science – Ethical & Practical Considerations, held on 3-4 January, 2011 at University College of Pharmacy, University of the Punjab, Lahore, Pakistan.

- One day training workshop on “Managing Plagiarism in Academic Research – Hands on Training using Turnitin software” in the university of the Lahore, Pakistan, dated 4<sup>th</sup> March 2011.
- Seminar and Workshop on Environmental Toxicology and Health, 8-9 March 2011, held at Department of Pharmacology and Toxicology, University of Veterinary and Animal Sciences, Lahore in collaboration with Department of Clinical Neuroscience, University of Cambridge, UK.
- A Seminar on “Improving Pharmacy Practice Research” held on April 27, 2011 at Ghotvi Hall, Abbasia Campus, IUB, Bahawalpur.
- 10<sup>th</sup> international Pharmacy Conference and Exhibition 2011 (IPCE2011) from 28<sup>th</sup> April to 1<sup>st</sup> May 2011 in Lahore.
- One day Seminar on “Opportunities for Pharmacists in Developed Countries” held on November 24, 2011 at Khawaja Farid Campus, IUB, Bahawalpur.
- Two days national conference on “Scope and Development of Eastern Medicine in Pakistan” held on 12-13 April 2012 at Ghotvi Hall Abbasia Campus, The Islamia University of Bahawalpur, Pakistan.
- 17<sup>th</sup> International Pharmacy Conference & Exhibition (IPCE), “Pharmacy Profession and 21<sup>st</sup> Century” organized by Pakistan Pharmacist Association held on April 19-21 2012 at Marriot Hotel Islamabad, Pakistan.
- Two-Day Training Workshop on “Improving Clinical Pharmacy Practices in Pakistan” held on 09-10 June, 2012 at Abbasia Campus, IUB, Bahawalpur.
- International Conference on Research Methodology: New Trends and Integrative Approach from Bench to Bedside held on 6-8 September 2012 at University College of Pharmacy.
- Poster presentation at 2012 AAPS Annual Meeting and Exposition held in Chicago, America on October 14-18, 2012.
- 23<sup>rd</sup> Annual International Conference on Family Medicine, organized by FAMILYCON, held at Lahore, Pakistan on 5<sup>th</sup> Jan 2013.
- 2<sup>nd</sup> National Pharmacy Conference & Exhibition “Pharmacy Profession for Prosperous Health” held in Bahawalpur-Pakistan on February 8-9 2013.
- International Conference on Pharmaceutics and Neuropharmacology held at Hajvery University in collaboration with Cambridge University UK on April 24<sup>th</sup> 2013.
- 3<sup>rd</sup> Annual International Pharmacy Scientific Symposium & Pharmaceutical Exhibition on “Bridging Pharmacy Practice & Research” held on March 28-30, 2014 at University of Central Punjab, Lahore.
- 4<sup>th</sup> Latin America Conference organized by International Society for Pharmacoeconomics and Outcomes Research (ISPOR) held on 12-14 September 2013 in Buenos Aires, Argentina.
- One Day International Seminar on “Patient Safety and Pharmacovigilance” held on June 07, 2014 at University of Central Punjab.
- 1<sup>st</sup> Symposium on Bioequivalence and Bioavailability Studies organized by Center for Bioequivalence Studies and Bioassay Research, University of Karachi, Pakistan during 15<sup>th</sup>, 16<sup>th</sup> April 2014 in Lahore.
- 7<sup>th</sup> International Conference on Drug Discovery and Therapy held at University of Sharjah, Sharjah, United Arab Emirates on February 15-18, 2016 organized by Eureka Science and University of Sharjah, Sharjah.
- One day Symposium on “Strategic Management of Epidemics” held on March 26, 2016 organised by University of Central Punjab, Lahore.
- International Conference on Pharmacy Practice (ICPP-2017) “Emerging Role of Pharmacist in Patient Centered Care” held on 12-14 January 2017 in Bahawalpur, Pakistan.
- 19<sup>th</sup> international conference on Pharmaceutical manufacturing and drug development held on 30-31 January 2017 in Jeddah organized by World academy of science, engineering and technology.
- One Day Seminar on “Awareness on Thalassemia” held on 16<sup>th</sup> February, 2017 at Lecture Theater No.1, Punjab University College of Pharmacy, University of the Punjab, Lahore.
- One Day Seminar on “Empowering Youth” held on 17<sup>th</sup> March, 2017 at Lecture Theater No.1, Punjab University College of Pharmacy, University of the Punjab, Lahore.
- One Day Seminar on “Introduction to Community Pharmacy Management Software” held on 8<sup>th</sup> May, 2017 at Lecture Theater No.1, Punjab University College of Pharmacy, University of the Punjab, Lahore.

- One Day Seminar on “Marketing Management” held on 29<sup>th</sup> March, 2017 at Lecture Theater No.1, Punjab University College of Pharmacy, University of the Punjab, Lahore.
- ISPOR 20<sup>th</sup> Annual European congress held on 4-8 November 2017 in Glasgow, Scotland organized by the International society for pharmacogenomics and outcome research.
- One Day Seminar on “Promotion of Peace” held on 8<sup>th</sup> December 2017 at Lecture Room No.1, Punjab University College of Pharmacy, University of the Punjab, Lahore.
- 1<sup>st</sup> National Conference on Recent Advancements in Pharmaceutical Sciences held on 7-8 March 2018 organized by College of Pharmacy, University of Sargodha.
- 4<sup>th</sup> Annual International Pharmacy Scientific Symposium & Poster Exhibition, “Research Trends in Nanotechnology & Health Practices” held on 11-12 May 2018 at University of Central Punjab, Lahore, Pakistan.
- “Countering Violent Extremism Orientation Session” Organized by Centre for Health and Gender Equality (CHANGE) from 22-25 April 2019 at the Islamia University of Bahawalpur.
- Training Session entitled “Career Counselling using MBTI Personality Analysis and Emotional Intelligence Test” held on January 24, 2020 Organized by Department of Pharmacy, IUB in Collaboration with PharmEvo (Pvt.) Ltd.
- 2<sup>nd</sup> International Pharmacy Conference & Exhibition “New Paradigms of Pharmacy Education & Practice in Pakistan” held on February 20-21, 2020 organized by Department of Pharmacy, The Islamia University Bahawalpur.
- STEMS International Conference organised by Directorate of International Linkages held on March 30-31, 2021.
- 3-Day National Seminar, “The Changing Landscape in Pharmacy Profession” on August 15 - 17, 2022 Organised by, Department of Pharmacy, University of Peshawar.

#### **CONFERENCES, TRAININGS AND SEMINARS ATTENDED DURING POST-DOC. IN UK**

- Post Grad Safety Induction session on 22nd January 2015
- Gromacs training session by Dr Jamshed Anwer on 28th January 2015
- Nanoscale Engineering of Plasmonic Materials for Biosensing and Light Harvesting Applications by Dr Fang Xie Imperial College London on 18th February 2015
- Exercising Control in Ring-opening and Controlled Radical Polymerisations by Dr Michael Shaver on 11th March 2015
- A hands-on session on CP2K (atomistic and molecular simulations of various systems using DFT, QM/MM, MD and Quantum Monte Carlo) by Iain Bethune project manager at EPCC 24th March 2015
- LU Postgraduate Research Conference on 25th April 2015
- Polymer therapeutics and site-specific bioconjugation strategies in Nanomedicine by Dr Gabriel Cavalli-Petraglia from the Department of Chemistry, University of Surrey, Surrey, GU2 7XH on 20th May 2015
- Polypyridyl ruthenium (II) complexes as cytotoxic lipophilic cations: new paradigms for old molecules? By Professor Richard Keene from the Department of Chemistry, University of Adelaide, South Australia on 29th May 2015
- Rational Design of Low Enthalpy Materials for On-Board Hydrogen Storage Applications by Prof David Antonelli from the Sustainable Environment Research Center, University of Glamorgan, Pontypridd on 10<sup>th</sup> June 2015

#### **EVENTS/SEMINARS/SYMPOSIA/WORKSHOPS ORGANIZED RECENTLY**

- Debates, Songs, Paintings, Sketching, Calligraphy competitions held to celebrate Kashmir solidarity day on Feb 18, 2022 at PUCP, PU.
- TECHNOSPARK – NEW THINKING & NEW POSSIBILITIES, A workshop held on May 27, 2022 at PUCP, PU.

- “Only in Darkness can you see the stars” An event organized on Feb 2, 2023 at PUCP, PU.
- “1<sup>st</sup> National Symposium for the Revision of Pharmacy Curriculum” held on 21-23 August 2023 at University of the Punjab, Khanaspur Campus, Khanaspur.
- Orientation session organized for M. Phil/Ph. D classes 2023.
- “Pharmacy Education & Exhibition 2023” held on Nov 19, 2023 at PUCP, Lahore.

## **RESEARCH PUBLICATIONS**

- Ghulam Murtaza, Mahmood Ahmad, Naveed Akhtar, **Fatima Rasool**. A comparative study of various microencapsulation techniques: Effect of polymer viscosity on microcapsule characteristics. Pakistan Journal of Pharmaceutical Sciences 2009, 22 (3): 291-300.
- **Fatima Rasool**, Mahmood Ahmad, Ghulam Murtaza, Haji M. S. Khan & Shujaat A. Khan. Metoprolol tartrate-ethylcellulose tableted microparticles: formulation and *in vitro* evaluation. Latin American Journal of Pharmacy 2010, 29 (6): 984-90.
- Shujaat Ali Khan, Mahmood Ahmad, Ghulam Murtaza, Muhammad Naeem Aamir, Nisar-ur-Rehman, Rozina Kousar, **Fatima Rasool** and Mohammad Akhtar. Formulation of nimesulide floating microparticles using low-viscosity hydroxypropyl methylcellulose. Tropical Journal of Pharmaceutical Research 2010, 9 (3): 293-299.
- Shujaat Ali Khan, Mahmood Ahmad, Ghulam Murtaza, Muhammad Naeem Aamir, Rozina Kousar, **Fatima Rasool**, Shahiq-u-Zaman. In vitro - in vivo correlation study on nimesulide loaded hydroxypropyl methyl cellulose microparticles. Acta Pharmaceutica Sinica 2010, 45 (6): 772-777.
- **Fatima Rasool**, Mahmood Ahmad, Haji Muhammad Shoaib Khan, Naveed Akhtar, Ghulam Murtaza. The effect of binders on the bioavailability of ofloxacin tablets in animal model. Acta Poloniae Pharmaceutica - Drug Research 2010, 67 (2): 185-189.
- Shujaat Ali Khan, Mahmood Ahmad, Ghulam Murtaza, Harris M. Shoaib, Muhammad N. Aamir, Rozina Kousar, **Fatima Rasool**, Asadullah Madni. Development of in-vitro in-vivo correlation for nimesulide loaded ethylcellulose microparticles. Latin American Journal of Pharmacy 2010, 29 (6): 1029-1034.
- Shujaat A. Khan, Mahmood Ahmad, Muhammad N. Aamir, Ghulam Murtaza, **Fatima Rasool** & Muhammad Akhtar. Study of nimesulide release from ethylcellulose microparticles and drug-polymer compatibility analysis. Latin American Journal of Pharmacy. 2010, 29 (4): 554-61.
- Naveed Akhtar, Haji Muhammad Shoaib Khan, Gulfishan, **Fatima Rasool**, Mehmood Ahmad and Tariq Saeed. Formulation and *in vitro* evaluation of a cosmetic emulsion containing apple juice extract. Asian Journal of Chemistry 2010, 22 (9): 7235-7242.
- Mahmood Ahmad, Muhammad Iqbal, Naveed Akhtar, Ghulam Murtaza, Muhammad Asadullah Madni and **Fatima Rasool**. Comparison of bioavailability and pharmacokinetics of diclofenac sodium and diclofenac potassium in healthy and *escherichia coli* induced febrile rabbits. Pakistan Journal of Zoology, 2010, 42(4): 395-400.
- **Fatima Rasool**, Mahmood Ahmad, Ghulam Murtaza, Haji M. S. Khan, Shujaat A. Khan, Sonia Khiljee and Muhammad Qamar-Uz-Zaman. Metoprolol tartrate-ethylcellulose tableted microparticles: development of a validated invitro in-vivo correlation. International Journal of Pharmacological and Pharmaceutical Sciences 2010, 4 (3): 113-116.
- Shujaat Ali Khan, Mahmood Ahmad, Ghulam Murtaza, Muhammad Naeem Aamir, **Fatima Rasool** and Muhammad Akhtar Raees. Influence of process parameters on nimesulide-loaded poly(d,l-lactide-co-glycolide) microcapsules. Latin American Journal of Pharmacy 2011, 30 (1): 119-125.
- Muhammad Naeem Aamir, Mahmood Ahmad, Shujaat Ali Khan, Naveed Akhtar, Ghulam Murtaza, Muhammad Akhtar, **Fatima Rasool**. Fabrication of novel gastro-retentive floating microcapsules by utilizing combination of hpmc and ec and their physicochemical assessment. Latin American Journal of Pharmacy 2011, 30 (5): 1010-1015.

- **Fatima Rasool**, Mahmood Ahmad, Ghulam Murtaza, Haji Muhammad Shoaib Khan, Shujaat Ali Khan. Comparative dissolution study of metoprolol tartrate loaded PLGA (50:50) and PLGA (75:25) microparticles. *Asian Journal of Chemistry* 2011, 23(9): 3815-3818.
- Naveed Akhtar, Masood-ur-rehman, Haji M Shoaib Khan, **Fatima Rasool**, Tariq Saeed and Ghulam Murtaza. Penetration enhancing effect of polysorbate 20 and 80 on the in vitro percutaneous absorption of L-Ascorbic acid. *Tropical Journal of Pharmaceutical research* 2011, 10 (3): 281-288.
- Naveed Akhtar, Shaiq-uz-zaman, Barkat Ali Khan, Haji M. Shoaib Khan, Mahmood Ahmad, **Fatima Rasool**, Tariq Mahmood and Akhtar Rasul. Evaluation of various functional skin parameters using a topical cream of calendula officinalis extract. *African journal of Pharmacy and Pharmacology* 2011, 5(2): 199-206.
- A Khalid, A Waseem, M Saadullah, UU Rehman, S Khiljee, A Sethi, MHHB Asad, **Fatima Rasool**, MK Waqas, G Murtaza. Antibacterial activity analysis of extracts of various plants against gram -positive and -negative bacteria. *African journal of Pharmacy and Pharmacology* 2011, 5(7): 887 – 893.
- K Farzana, S Batool, T Ismail, MHHB Asad, **Fatima Rasool**, S Khiljee, G Murtaza. Comparative bactericidal activity of various soaps against gram-positive and gram-negative bacteria. *Scientific Research and Essays* 2011, 6(16): 3514-3518.
- Shujaat A. Khan, M. Ahmad, Ghulam Murtaza, G. Shehnaz, M. N. Aamir and **Fatima Rasool**. Design of nimesulide-chitosan microparticles by pH change coacervation. *Latin American Journal of Pharmacy* 2011, 30(7): 1260-1266.
- Haji M Shoaib Khan, Naveed Akhtar, **Fatima Rasool**, Tariq Saeed, Barkat Ali Khan and Tariq Mahmood. Investigation of new sebum control cream containing apple juice extract. *Asian journal of chemistry* 2011, 23 (2): 810-812.
- Naveed Akhtar, Barkat Ali Khan, Said Muhammad, Mahmood Ahmad, Haji Muhammad Shoaib Khan, **Fatima Rasool** and Tariq Saeed. Formulation and characterization of cream containing Terminalia chebula extract. *Forschende Komplementarmedizin*, 2012, 19 (1): 20-25.
- **Fatima Rasool**, Mahmood Ahmad, Ghulam Murtaza, Haji M. Shoaib Khan and Shujaat Ali Khan. Eudragit FS based colonic microparticles of metoprolol tartrate. *Acta Poloniae Pharmaceutica- Drug Research*, 2012,69: 347-353.
- **Fatima Rasool**, Mahmood Ahmad, Ghulam Murtaza, Haji Muhammad Shoaib Khan and Shujaat Ali Khan. Pharmacokinetic studies on metoprolol – eudragit matrix tablets and bioequivalence consideration with Mepressor®. *Tropical Journal of Pharmaceutical Research*, 2012, 11 (2): 281-287.
- Mahmood Ahmad, Ghulam Murtaza, Fatima Nasim, Rehmana Rasheed, Shujaat Khan, Muhammad N. Aamir and **Fatima Rasool**. A novel granulation non-solvent addition method containing hydrophilic and lipophilic drugs. *Acta Poloniae Pharmaceutica - Drug Research*, 2012, 69 (2): 285-290.
- Haji M Shoaib Khan, Ghulam Murtaza, Muhammad Usman, **Fatima Rasool**, I.M.Qureshi and K.Farzana. Evidence based study of side effects of drugs used in the treatment of diabetes mellitis. *African journal of pharmacy and pharmacology*, 2012, 6 (24): 1805-1808.
- Imran Shair Mohammad, Haji Muhammad Shoaib Khan, Naveed Akhtar, **Fatima Rasool**. Biological potential and phytochemical evaluation of *Prosopis Cineraria*. *World applied science journal*. 2013, 27(11), 1489-1494.
- Haji Muhammad Shoaib Khan, Ghulam Murtaza, Naveed Akhtar, Shujat Ali Khan, Saira Azhar, Barkat Ali Khan, **Fatima Rasool** and Izhar Hussain. Comparison of the effects of calcium channel blockers and non-selective beta blockers on blood lipids in hypertensive patients. *Latin American Journal of Pharmacy*. 2013, 32(6), 940-943.
- Atif Ali, Naveed Akhtar, Muhammad Shoaib Khan, **Fatima Rasool**, Furqan Muhammad Iqbal, Muhammad Tahir Khan, Minhaj-ud- Din, Ehsan Elahi. Moisturizing effect of cream containing Moringa oliefera (Sohanjna) leaf extract by biophysical techniques: In vivo evaluation. *Journal of Medicinal Plant Research*. 2013, 7(8), 386-391.
- **Rasool F**, Khan MS, Ali A, Masood J. Prevalence of Risk factor of ST elevated Myocardial Infarction. *Value in Health*. 2013, Vol.16 (7) A728.

- **Fatima Rasool**, Alia Sehrish, H. M. Shoaib Khan, Naveed Akhtar, Imran Shair Muhammad, Nabila Khalid. Evaluation and training of inhalation techniques among asthmatic patients. *World applied sciences journal*. 2014, 30(4), 518-520.
- H. M. Shoaib Khan, Muhammad Sohail, Atif Ali, Naveed Akhtar, Hira Khan, **Fatima Rasool**. Symptoms based evaluation of iron deficiency anemia in students of Bahawalpur correlated with their eating habits. *Tropical Journal of Pharmaceutical Research*. 2014, 13(5), 769-772.
- **Rasool F**, Ahmad M, Masood I, Khan HMS. Evaluating relationship between white blood cells and platelets during recovery phase in dengue hemorrhagic fever cases in Punjab, Pakistan: A retrospective study. *Value in Health*. 2014, Vol.17, A536.
- Imran Shair Muhammad, Haji Muhammad Shoaib Khan, Naveed Akhtar, Najam-us-Saqib, **Fatima Rasool**, Hira Ijaz. Significance of prescription elements and reasons for prescription errors in south Punjab, Pakistan. *World Applied Sciences Journal*. 2015, Vol.33(4), 668-672.
- Hira Khan, Naveed Akhtar, Haji M Shoaib Khan, Atif Iqbal Arshad, Muhammad Naeem, Muhammad Sohail, Atif Ali, **Fatima Rasool**, Zarqa Nawaz. Synergistic effects of ascorbyl palmitate and sodium ascorbyl phosphate loaded in multiple emulsions on facial skin melanin and erythema content. *Biomedical Research*. 2016, Vol. 27 (2), 570-576.
- Muhammad Shoaib Khan, Ajwad Khan, Atif Ali, Naveed Akhtar, **Fatima Rasool**, Hira Khan, Nisar ur Rehman, Sajid Hussain Shah. Prevalence of Risk Factors for Coronary Artery Disease in Southern Punjab, Pakistan. *Tropical Journal of Pharmaceutical Research*. 2016, Vol. 15 (1), 195-200.
- **Rasool F.**, Khan HMS., Waheed A., Akhtar N. Acne Vulgaris: Prevalence, clinical forms and its management in pharmacy students from Bahawalpur, Pakistan. *Value in Health*. 2017, Vol. 20 (9), A802.
- Akhtar N., Waheed A., Khan HM., **Rasool F.** Epidemiology and clinical characterization of obsessive compulsive disorder in Bahawalpur Pakistan. *Value in Health*. 2017, Vol. 20 (9), A709.
- Sadia Urooj, Atif Ali, Hira Khan, Sajid Hussain Shah, Muhammad Hassham, Hassan Bin Asad, **Fatima Rasool**, Muhammad Shoaib Khan, Naheed Akhtar, Abdul Wahaab. Assessment of sustained release matrix tablets for quetiapine fumarate: in-vitro studies. *Acta Poloniae Pharmaceutica - Drug Research*. 2018, vol. 75 (1), 107 - 117.
- Hira Khan, Naveed Akhtar, Atif Ali, Muhammad Hassham Hassan Bin Asad, **Fatima Rasool**, Muhammad Shoaib Khan, Abdul Hameed, Ijaz Shakeel, Naheed Akhtar. Fortification of facial skin collagen efficacy by combined ascorbyl palmitate and sodium ascorbyl phosphate. *Acta Poloniae Pharmaceutica - Drug Research*. 2018, Vol. 75 (1), 129 -140.
- Imran Shair Mohammad, Muhammad Naveed, Shakeel Ijaz, Muhammad Shumzaid, Sidra Hassan, Kiran Sher Muhammad, **Fatima Rasool**, Naveed Akhtar, Hafiz Muhammad Ishaq, Haji Muhammad Shoaib Khan. Phyto cosmeceutical formulation development, characterization and its in-vivo investigations. *Biomedicine & Pharmacotherapy*. 2018, 107, 806 -817.
- Muhammad Irfan Siddique, Saima Tufail, Ze Heng Ker, Tahir Mehmood Khan, **Fatima Rasool**, Muhammad Farhan Sohail, 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. *Pakistan Journal of Pharmaceutical Sciences.*, 2019, Vol. 32 (5), 2299 - 2304.
- Amna HAFEEZ, Ummarah KANWAL, Rahat SHAMIM, **Fatima RASOOL**, Malia PERVAIZ, Aatqa RAUF, Imran TARIQ, Nasir ABBAS, Khalid HUSSAIN, Nadeem I. BUKHARI. Pediatric oral suspension of taste-masked sodium benzoate microspheres: central composite design based optimization. *Latin American Journal of Pharmacy*. 2019, Vol. 38 (12), 2352-62.
- Asad Majeed Khan, Muhammad Hanif, Nadeem Irfan Bukhari, Rahat Shamim, **Fatima Rasool**, Sumaira Rasul, Sana Shafique. Artificial Neural Network (ANN) approach to predict an optimized pH-dependent mesalamine matrix tablet. *Drug Design, Development and Therapy*. 2020, Vol. 14, 2435 – 2448.
- Sidra Huma, Haji Muhammad Shoaib Khan, Muhammad Sohail, Naveed Akhtar, **Fatima Rasool**, Fatima Majeed, Muhammad Daniyal. Development, in-vitro characterization and assessment of cosmetic potential of Beta vulgaris extract emulsion. *Journal of Herbal Medicine*. 2020, Vol. 23,1-5.



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- **Fatima Rasool**, Haris Rizwan, Haji Muhammad Shoaib Khan Rheological studies of commercially available creams at various storage conditions. 7<sup>th</sup> International Conference on Drug Discovery and Therapy held at University of Sharjah, Sharjah, United Arab Emirates on February 15-18, 2016 organized by Eureka Science and University of Sharjah.

#### **PH. D. RESEARCH PROJECTS CO-SUPERVISED**

- Formulation development, characterization and cosmeceutical evaluation of microemulsion based gel containing Lallemandiaroyleana and Linum Usitatisimum L. seed extracts. Student Name: Rabia Tasneem, session: 2017-2022.
- Formulation development of cosmetic emulgels of Piper nigrum and Siladora persica Extract: in vitro and in vivo evaluation. Student Name: Muhammad Yousuf, session: 2018-2023.

#### **M. PHIL RESEARCH PROJECTS SUPERVISED**

- Formulation, characterization and comparison of floating controlled release and mucoadhesive dosage form of amoxicillin. Student Name: Muhammad Umair Amin, Session: 2011-2013.
- Development and in vitro evaluation of optimized sustained release particulates of ranolazine. Student Name: Shamila Arshad, Session: 2015-2017.
- Determination of antibacterial effect of Salvador Persica (Miswak) against Streptococcus mutans and development of a stable mouth wash by using its extract. Student Name: Asad Ali, Session: 2014-2016.
- Formulation and evaluation of combined tablet dosage form of drotaverine hcl and piroxicam. Student name: Tahir Khan, Session: 2016-2018.
- Formulation, characterization and comparative evaluation of topical hydrocortisone sodium succinate emulgel. Student Name: Muhammad Umair Choudhary, Session: 2017-2019.
- Design, development and characterization of enteric coated sustained release lansoprazol tablet for mucoadhesive drug delivery. Student Name: Ahmad Gilani, Session: 2017-2019.
- Gender wise assessment of medication adherence and its impact on blood pressure control among hypertension patients. Student Name: Saba Qasim, Session: 2018-2020.
- Preparation and characterization of metformin loaded solid lipid nanoparticles for transdermal delivery. Student Name: Alia Ramzan, Session: 2018-2020.
- Development and in-vitro evaluation of oral hydrogels of rabeprazole sodium, as colon targeted drug delivery system. Student Name: Iqra Tariq, Session: 2018-2020.

- Design, development and characterization of self micro-emulsifying drug delivery system for a hydrophobic drug. Student Name: Zeshan Aslam, Session: 2019-2021.
- Fabrication and characterization of floating hydrogel beads for targeted stomach delivery of metronidazole. Student Name: Sabiha Sarfraz, Session: 2019-2021.
- Development and evaluation of topical hydrogel of fentaconazole nitrate. Student Name: Sehar Ghaffar. Session: 2019-2021.
- Comparison of UV spectrophotometry and high-performance liquid chromatography methods for quantification of diclofenac sodium in different marketed tablets. Student Name: Iqra Khalid, Session: 2020-2022.
- Formulation and characterization of mucoadhesive and multiparticulate drug delivery of metronidazole. Student Name: Ahmad Nawaz, Session: 2020-2022.

#### **M. PHIL RESEARCH PROJECTS CO-SUPERVISED**

- Development of pharmacist-patient diabetes care plan. Student Name: Irfan Jabbar, Session: 2014-2016.
- Counterfeit/spurious drugs and anti-counterfeiting technologies: public and industrial pharmacist perception. Student Name: Sidra Saghir, Session: 2014-2016
- Possibility of using chem- equivalence as an alternative to bio-equivalence using selected drugs with narrow therapeutic index. Student Name: Ghazi Mustansar Riaz, Session: 2015-2017
- Formulation design and in vitro evaluation of the combination therapy of atorvastatin, amlodipine and hydrochlorothiazide. Student Name: Saba Noreen, Session: 2015-2017.
- Effect of polymorphism of indomethacin on its solid dispersion by quench cool method. Student Name: Eesha Tariq Bhatti, Session: 2015-2017.
- Cost benefit analysis of generic versus branded anti hypertensives in private and public sector hospitals. Student Name: Muhammad Faheem Arif, Session: 2015-2017.
- Assessment of clinical risk of external infection in patients after cardiac bypass surgery. Student Name: Ayesha Siddiqi, Session: 2015-2017.
- Pharmacokinetic evaluation of optimized piroxicam hydrogel nano sponges. Student Name: Kubra Akhtar, Session: 2016-2018.
- Preparation and characterization of paracetamol thin films prepared by electrospray. Student Name: Sahban Khan Farani, Session: 2017-2019.
- Development of simple dissolution procedure for felodipine and combined amlodipine besylate and indapamide tablets without use of hanging basket. Student Name: Arslan Javed, Session: 2017-2019.
- Physiological based pharmacokinetic prediction of herbal drug interaction of Danshensu and Aspirin. Student Name: Iqra Arif, Session: 2018-2020.
- Development and characterization of fast dissolving oral film of piroxicam and clove oil. Student Name: Laraib Anjum, Session: 2018-2020.
- Deciphering the antiepileptic potential of Chemical Constituents from *Ficus religiosa* extract using experimental and insilico strategies. Student Name: Aqsa Ashraf, Session: 2020-2022.

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