

## CURRICULUM VITAE

Name Dr. GURPREET KAUR

Designation PROFESSOR and Dean Faculty of  
Medicine, Former Head, DIRECTOR,  
Center for Product development through  
Novel Technology Intervention (CPD tnti)

Department Pharmaceutical Science& Drug Research,  
Punjabi University, Patiala.

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Date of birth 30th MAY 1972

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Educational M Pharm, PhD. in Pharmaceutics

Qualifications

Area of specialization PHARMACEUTICS

Modified and Targeted drug delivery  
systems using novel technologies

Derivatization and characterization of  
polysaccharides and their use in drug  
delivery systems



### Membership of Professional Bodies/Organizations

1. Life member APTI
2. Life member IPA
3. Life member Punjab Science Academy
4. Life member SPER
5. Member of Research Board Committee, Punjabi University
6. Member Secretary, Institutional Ethical Committee, Punjabi University

**Medals/Awards/Honors/Received:**

1. Junior Research Fellowship During M. Pharmacy from UGC, Ministry of Human Resource and Development, New Delhi, India (1994-1996)
2. Gold Medal in M Pharm, UIPS, Panjab University, Chandigarh (1996)
3. Travel award form DST to present my work” Colon Delivery of Drugs Employing Natural Polysaccharides” in 2<sup>nd</sup> International Conference on Pharmaceutics and Novel Drug Delivery systems. 20-22, Feb 2012, San Francisco, USA2012

**Academic Activities**

Member of Board of Studies/ Selection Committee

1. Member - Kurukshetra University, Kurukshetra
2. Member - UIPS, Panjab University, Chandigarh,
3. Member - Guru Kashi University, Talwandi Sabo
4. Member – Shoolini University, Solan
5. Evaluation of research Proposals submitted under RUSA Scheme II
6. Member of Selection Committee, UPES, Dehradun
7. Project Evaluation Committee Member to SERB, Department of Science and Technology, India
8. AICTE( All India Council For Technical Education) Evaluation Committee Member for Travel Grant
9. AICTE( All India Council For Technical Education) Evaluation Committee Member for Inspection in Various Colleges and Universities across India

**Reviewer to Journals:**

1. International Journal of Biological Macromolecules
2. Journal of Drug Delivery Science and Technology
3. Advanced Drug Delivery Reviews
4. Drug Development Industrial Pharmacy
5. Current Drug Delivery

**Phd Students Guided/Under Guidance**

S. No.	Name of Student	Title of Thesis	Status
1	Pallavi Bassi	Derivatized polysaccharides preparation and evaluation as bioadhesive polymers	PhD awarded
2	Vivekjot Brar	Formulation and Evaluation of Nasal Nanoparticles for Brain Targeting	PhD awarded
3	Neeraj Mittal	Investigations on Polysaccharide nanoparticles for Ocular Delivery in Glaucoma treatment	PhD awarded
4	Deepinder Singh	Development and evaluation of Nano Formulation for Topical Treatment of Skin Infection	PhD awarded
5	Jasleen kaur	Development of Microbially triggered system for colon targeting of hydroxycinnamic acid	Registered
6	Divya	Development and Evaluation of microemulsion Based Formulation for Topical Treatment of Psoriasis	Registered
7	Rajni		Enrolled

#### LIST OF PUBLICATIONS:

1. Saini, M., Jain, S., Tiwari, A.K. and Kaur, G. (2005) Chitosan Based Buccoadhesive Tablets of Pentazocine Hydrochloride: in vitro and in situ kinetics. Indian Journal of Pharmaceutical Science 67, 743-747.
2. Sharma, G., Jain, S., Tiwary, A.K. and Kaur, G. (2006) Once Daily Bioadhesive Vaginal Clotrimazole Tablets: Design and Evaluation. Acta Pharm. 56, 337-345.
3. Kaur, G., Jain, S., & Tiwary, A. K. (2007). Recent approaches for colon delivery. Recent Patents on Drug Delivery and Formulation, 1, 222-229.
4. Kaur, G., Rana, V., Jain, S., & Tiwary, A. K. (2010). Colon delivery of budesonide: evaluation of chitosan–chondroitin sulfate interpolymer complex. AAPS PharmSciTech, 11(1), 36-45.
5. Kaur, G., Jain, S., & Tiwary, A. K. (2010). Chitosan-carboxymethyl tamarind kernel powder interpolymer complexation: investigations for colon drug delivery. Scientia Pharmaceutica, 78, 57-78.

6. Goel, H., Kaur, G., Tiwary, A. K., & Rana, V. (2010). Formulation, development of stronger and disintegrating tablets: A crucial effect of chitin. *Yakugaku Zasshi*, 130, 729-735.
7. Bassi, P., & Kaur, G. (2010). pH modulation: A mechanism to obtain pH independent release. *Expert Opinion, Drug Delivery*, 7, 845-857.
8. Kumar, V., Tiwary, A. K., & Kaur, G. (2010). Investigations on chitosan-carboxymethyl guar gum complexes interpolymers for colon delivery of fluticasone. *International Journal of Drug Delivery*, 2, 242-250.
9. Kaur, G., Jain, S., & Tiwary, A. K. (2010). Investigations on microbially triggered system for colon delivery of budesonide. *Asian Journal of Pharmaceutical Sciences*, 5, 96-105.
10. Kailasam, P., Jamunadhevi, V., & Kaur, G. (2010). Formulation and evaluation of once daily bioadhesive vaginal tablet of metronidazole. *International Journal Research in Pharmaceutical Sciences*. 1, 308-312.
11. Singh, M., Tiwary, A. K., & Kaur, G. (2010). Investigations on interpolymers of cationic guar gum and xanthan gum formulation of bioadhesive film. *Research in Pharmaceutical Sciences*, 5, 79-87.
12. Kaur, G., Gera, M., Bassi, P., & Tiwary, A. K. (2011). Roll Compaction Dry Granulation (RCDG): Technologies and their applications in Drug Delivery and Development. *International Journal of Drug Delivery*, 3, 397-414.
13. Kaur, A., & Kaur, G. (2012). Mucoadhesive buccal patches based on interpolymers of chitosan-pectin for delivery of Carvedilol. *Saudi Pharmaceutical Journal*, 20, 21-27.
14. Tiwary, A. K., Sapra, B., Rana, V., & Kaur, G. (2012). Oral Insulin Delivery: Unveiling Patented Approaches. *Reviews in Advanced Sciences and Engineering*, 1, 280-291.
15. Kaur, G., Sridhar, D. B., & Gera, M. (2012). Optimization of roll compaction Dry Granulation (RCDG) Process for poorly flowable antiviral formulation. *American Journal of PharmTech Research*, 2, 1-14.
16. Bassi, P., & Kaur, G. (2012). Innovations in bioadhesive vaginal drug delivery system. *Expert Opinion on Therapeutic Patents*, 22, 1019-1032.

17. Randhwa, R., Bassi, P., & Kaur, G. (2012) In vitro, in vivo evaluation of inter polymer complexes between carboxymethyl fenugreek gum and chitosan or carboxymethyl guar gum and chitosan for colon delivery of tamoxifen. *Asian Pacific Journal of Tropical Disease*, 2, S202-207.
18. Kaur, H., Bassi, P., Monif, T., Khuroo. A. H., & Kaur, G. (2013). Development and validation of high performance liquid chromatographic method for analysis of clozapine. *Pakistan Journal of Pharmaceutical Sciences*, 26, 465-472.
19. Kaur, G., Mahajan, M., & Palavi, P. (2013). Derivatized polysaccharides: preparation, characterization and application as bioadhesive polymer for drug delivery. *International Journal of Polymeric Materials and Polymeric Biomaterials*, 62, 475-481.
20. Kaur, K., & Kaur, G. (2013). Formulation and evaluation of chitosan-chondroitin sulphate based nasal inserts for Zolmitriptan. *BioMed Research International*, 2013, 958465-958572.
21. Mittal, N., & Kaur, G. (2014). In situ gelling ophthalmic drug delivery system: Formulation and evaluation. *Journal of Applied Polymer Science*, 131, 39788-39896.
22. Mahajan, M., & Kaur, G. (2014). Formulation and evaluation of buccal bioadhesive patches employing derivatized Tamarind Seed Polysaccharide. *International Journal of Polymeric Materials and Polymeric Biomaterials*, 63, 310-314.
23. Kaur, H., & Kaur, G. (2014). A critical appraisal of solubility enhancement techniques of polyphenols. *J. Pharm.* 2014: 180845-180859.
24. Brar, V., & Kaur, G. (2014). Biopolymers as Carriers for Nasal Drug Delivery. *Polymer-Plastics Technology and Engineering*, 53(14), 1518-1531.
25. Kaur, G., Singh, D., & Brar, V. (2014). Bioadhesive okra polymer based buccal patches as platform for controlled drug delivery. *International journal of biological macromolecules*, 70, 408-419.
26. Kaur, J., & Kaur, G. (2015). An insight into the role of citrus bioactives in modulation of colon cancer. *Journal of Functional Foods*, 13, 239-261.
27. Bassi, P., & Kaur, G. (2015). Polymeric films as a promising carrier for bioadhesive drug delivery: Development, characterization and optimization. *Saudi Pharmaceutical Journal*.

28. Bassi, P., & Kaur, G. (2015). Bioadhesive vaginal drug delivery of nystatin using a derivatized polymer: Development and characterization. *European Journal of Pharmaceutics and Biopharmaceutics*, 96, 173-184.
29. Bassi, P., & Kaur, G. (2015). Fenugreek gum derivatives with improved bioadhesion and controlled drug release: In vitro and in vivo characterization. *Journal of Drug Delivery Science and Technology*, 29, 42-54.
30. Kaur, H., Singh, D., & Kaur, G. (2015). Enhanced Dissolution and Antioxidant Activity of Chrysin Nanoparticles Employing Co-Precipitation as a Technique. *Pharmaceutical Nanotechnology*, 3, 205- 218.
31. Singh, D., Mital, N., & Kaur, G. (2016). Topical Drug Delivery Systems: A Patent Review. Expert opinion on therapeutic patents, DOI:10.1517/13543776.2016.1131267.
32. Singh, D. & Kaur, G. (2018). Nanostructured gel for topical delivery of azelaic acid: designing, characterization, and in-vitro evaluation. *Journal of Drug Delivery Science and Technology*. 47, 123-136.
33. Singh, D. & Kaur, G. (2018). A Validated Stability-indicating RP-HPLC Method for Analysis of Azelaic Acid in Cosmeceuticals. *Indian Journal of Pharmaceutical Sciences*. 80, 503-509.
34. Kaur, J., & Kaur, G. (2018). Optimization of pH conditions and characterization of polyelectrolyte complexes between gellan gum and cationic guar gum. *Polymers for Advanced Technologies*, 29, 3035-3048.
35. Brar, V. and Kaur G. (2018) Preparation and Characterization of Polyelectrolyte Complexes of *Hibiscus esculentus* (Okra) gum and Chitosan. *International Journal of Biomaterials*. **2018**.
36. Brar, V. and Kaur, G. (2018). Preparation of Chitosan Okra Nanoparticles: Optimization and Evaluation as Mucoadhesive Nasal Drug Delivery System. *Pharmaceutical Nanotechnology*. **6**: 1-12.
37. Mittal, N. and Kaur, G. (2018). Amination of Natural Polymer, *Leucaena leucocephala*(Lam galactomannan: Synthesis Optimization and Characterization. *Journal of Polymeric Materials*, 35, 415-430

38. Diya and Kaur, G. (2019). Stimulus Sensitive Smart Nanoplatfoms: An Emerging Paradigm for the Treatment of Skin Diseases. *Current Drug Delivery*, 16 (accepted)
39. Mittal, N. and Kaur, G. (2019). Investigations on Polymeric Nanoparticles for Ocular Delivery. *Advances in Polymer Technology* (Accepted)
40. Mittal, N. and Kaur, G. (2019). *Leucaena leucocephala* (Lam.) galactomannan nanoparticles: Optimization and characterization for ocular delivery in glaucoma treatment *International Journal of biological macromolecules* 139, 1252-62
41. Singh, D. & Kaur, G. (2020). Exploring therapeutic potential of azelaic acid loaded NLCs for the treatment of acne vulgaris. *Journal of Drug Delivery Science and Technology*, 55
42. Divya, Kaur, G., Wadhwa, S. and Puri, A. (2020). Development, Pre-clinical Investigation and Histopathological Evaluation of Metronidazole Loaded Topical Formulation for Treatment of Skin Inflammatory Disorders *Drug Delivery Letters*, 2020, **10**, 1-18
43. Brar, V. and Kaur, G. (2020). Thiolated Okra Chitosan Nanoparticles: Preparation and Optimization as Intranasal Drug Delivery Agents, *J Microencapsulation* doi 10.1080/02652048.2020.1836057
44. Diya and Kaur, G. (2021). Therapeutic potential of essential oil based microemulsions: Reviewing state-of-the-art *Current Drug Delivery*, (accepted) doi: 10.2174/1567201818666210217161240.
45. Kaur, J., Mehta, V. & Kaur, G. (2021). Preparation, Development and Characterization Of *Leucaena Leucocephala Galactomannan (Llg) Conjugated Sinapic Acid: A Potential Colon Targeted Prodrug* . *Int. J. Biol. Macromol* (accepted) doi: 10.1016/j.ijbiomac.2021.02.13.

#### **BOOKS PUBLISHED:**

- (i) Kaur, G. and Tiwary A. K. (2010). *Interpolymer complexed polysaccharides: A means for colon targeting*. Published by Lambert Publishing House, Germany.
- (ii) Tiwary, A.K., Sapra, B., Kaur, G., & Rana, V. (2011). *Chitosan Modifications and Applications in Dosage form design*. Nova Sci Pub Inc.

- (iii) Mahajan, M., & Kaur, G. (2013). Natural Polysaccharides for Bioadhesive drug delivery. Lambert Pub House, Germany. V.

#### **BOOK CHAPTERS:**

- (i) Brar, V., Mittal, N., Singh, D., Kaur, J., & Kaur, G. (2014). "Chitosan Nanoparticles: Novel carriers in medicine". Volume 6, book on Nanobiomedicine chief editor Bhupinder Singh Bhoop UIPS Panjab University Chandigarh and published by M/s Studium Press LLC, USA.
- (ii) Bassi, P., & Kaur, G. (2016). "Glucomannans and Galactomannans: Drug Delivery" in Encyclopedia of Biomedical Polymers and Polymeric Biomaterials. Taylor and Francis, DOI: 10.1081/E-EBPP120049976.
- (iv) Kaur, J., Singh, D., Mittal, N., & Kaur, G. (2016). "Polysaccharide Nanocarriers: Emerging Platforms for Drug Delivery" in Encyclopedia of Nanoscience and Nanotechnology. American Scientific Publishers (Accepted for publication).
- (v) Kaur, J., & Kaur, G. (2016). "Citrus bioactives as prospective therapeutic agents for modulation of colon cancer" in "Phytochemicals in Citrus: Applications in Functional Foods", CRC press Taylor and Francis Group.
- (vi) Kaur, G., Thakur, D. and Bassi, P. (2018). Chapter title: Thermogelling Polymers: Biomedical Applications in Encyclopedia of Polymer applications CRC press Taylor and Francis Group. (ACCEPTED)Page no: 2627-2651.Print ISBN: 9781498729932
- (vii) Kaur, J., Singh, B., Medhi, B. and Kaur G. (2020) Clinical Presentation and Comorbidities in Corona: Diagnosis and Management, Bentham Science Publishers

#### **OTHER ACHIEVEMENTS:**

#### **LIST OF PROJECTS HANDLED:**

1. UGC, Major Research Project: Vaginal drug delivery systems employing natural polymer(s). Scheme No. 41-706/2012(SR) Rs. 12,45,800.
2. DST Fast Track Project: Bioadhesive nanoparticles for ocular delivery in glaucoma treatment. Scheme No. SB/FT/LS-177/2012. Rs 15.19 lakhs.



3. UGC DRS II SAP: Development of novel drug delivery system Rs 1.11 crore (coPI) (1-4-2014 to 31-3-2020)

4. UGC, Minor Research Project:

(i) Formulation of colon specific tablets of 5-Amino Salicylic acid (1999-2001) Rs. 20,000.

(ii) Inter-polymer complexation of chondroitin sulfate and chitosan: Amines of colon specific delivery of Indomethacin (2007-2009) Rs. 85,000.

#### **TRAINING PROGRAMME ATTENDED & LECTURES DELIVERED**

1. UGC sponsored First Winter School at UIPS, Panjab University from 11 Jan-16 Jan, 2010

2. Attended UGC sponsored workshop on Capacity Building for women managers in Higher Education Sensitization/Awareness/Motivation (SAM) August 23-27, 2011, at Women Studies Centre, Punjabi University, Patiala.

3. Stress and Management Two day workshop 18-19 Sept 2012 Organized by WSC.

4. UGC sponsored Winter School on Attaining Excellence and compliance through drug delivery and pharmaceutical Technology, at UIPS, Panjab University from 2 Feb-7 Feb, 2015.

5. Guest lecture on Faculty Development Programme on Bioadhesive Drug Delivery System on 25th July 2013, at SVIET, Rampur.

6. Guest lecture on Polymers in Drug Delivery System at Himalyan Group of Institutes, Kala Amb, Himachal Pradesh, on its Pharmacy Day Celebration.

7. Guest lecture on Faculty Development Programme (13th December 2013) on Emerging Paradigms in Bioadhesive Drug Delivery at Rayat and Bahra Group of Institutes, Sahauran

8. Guest lecture on Faculty Development Programme (17-08-2018) on “Participant Centered learning” at COP, Bela

9. Guest lecture on Faculty Development Programme (16 Oct 2019) on Entrepreneurial Education at COP, Bela

10. Guest Lectures (7 Nov 2019) on Modified Drug delivery using natural polymers at Guru Kashi University, Talwandi Sabo

11. Attended Disso India 2020 Online International Conference from 13 to 16 may 2020
12. Attended one day e Faculty advancement initiative Road Ahead, Scope of Online Teaching Advancement from 26 to 29 May 2020
13. Invited talk (2 Nov., 2020) Refresher course in Life Science HRDC Punjabi University, Patiala
14. Attended one week e-FDP Pharmaceutical Product Development: Challenges and Opportunities conducted 15 june 2020 t0 19 June 2020
15. Attended one day webinar on Applications of HPTLC in Pharmaceutical Sciences on 8 July 2020.
16. Attended three day FDP on Advancement and strategies on Nano Drug Delivery Systems from 25 to 27 July 2020

#### **ADMINISTRATIVE RESPONSIBILITY**

1. Director CPDnti
2. Chairperson of IAEC
3. Head DPSDR
4. Dean Faculty of Medicine
5. Member Secretary, IEC

Dr Gurpreet Kaur