

DR. BHARTI SAPRA

PERSONAL DETAILS:

Date of Birth: 25th March 1974

EDUCATIONAL QUALIFICATION:

S.No.	Diploma/Degree	Year	Board/University
1.	D.Pharm	1991	Haryana State Board of Technical Education
2.	B.Pharm	1995	Bangalore University
3.	M.Pharm	1999	Punjabi University
4.	Ph.D.	2009	Punjabi University

TITLE OF THESIS IN M.PHARM (PHARMACEUTICS):

Volatile oil skin pretreatment: *In vitro* permeation of dodecylamine-diclofenac sodium ion pair.

TITLE OF RESEARCH WORK (Ph.D.):

Effect of Saponins on Percutaneous Drug Delivery

Academic Qualifications (Matric onwards):

Examination	Board/University	Year	% of marks obtained	Division/Class/Grade
Matric	Haryana School Education Board	1989	84.5	First
D. Pharm	Haryana state Technical Education Board	1991	69.6	First
B. Pharm	Bangalore University, Patiala	1995	67	First
M. Pharm	Punjabi University, Patiala	1999	62.3	First
Ph.D.	Punjabi University, Patiala	2009		First
Industrial Program In Pharma Regulatory Affairs	Bioinformatics Institute of India, Noida	2016	A grade	

Record of academic services prior to joining Punjabi University:

Designation	Organization/employer	Date of joining	Date of leaving
quality assurance	Oscar remedies Pvt. Ltd., Yamunanagar	1-7-95	31-12-95
Lecturer	G.H.G. Khalsa college Gurusar sudhar, Ludhiana	1-1-96	7-10-96
Lecturer	Gurunanak Khalsa College, yamunanagar	25-1-99	5-3-2000
Head of quality assurance	Oscar remedies Pvt. Ltd., Yamunanagar	10-3-2000	31-3-2001
Head of quality assurance	Industrial testing laboratory, Patiala	1-4-2001	25-8-2002
Lecturer	Guru Gobind Singh College of Pharmacy, Yamunanagar	25-8-2002	31-3-2004

Record of service in Punjabi University

Designation	Essential qualifications for the post at the time of appointment	Nature of appointment (Regular/Fixed term/ Temporary/ Adhoc)	Date of actual joining	Grade
Lecturer	M. Pharm (First class)	Regular	4 November 2009	6000
Assistant professor	Promoted under CAS	Regular	4 November, 2013	7000

Ph.D. Guided

1. Jatin Sood (DST, Research Fellow): Thesis submitted
2. Purva Thatai (ICMR: direct fellowship): Thesis submitted

PUBLICATIONS:

1. Tiwary, A. K., Sapra, B. and Gupta, S. Techniques for studying the molecular basis of percutaneous permeation enhancement. *Indian Drugs* 36: 492-500 (1999).
2. Sapra, B., Gupta, S. and Tiwary, A. K. Role of skin cholesterol and volatile oil pretreatment on permeation of primary amine-diclofenac sodium ion-pairs. *Indian Journal of Experimental Biology* 38: 895-900 (2000).
3. Sapra, B., Jain, S. and Tiwary, A. K. Innovations in transdermal Drug Delivery Systems: Formulations and Techniques. *Recent Patents on Drug Delivery and Formulation*, 1: 23-36, (2007).
4. Jain S., Tiwary, A.K., Sapra, B. and Jain, N.K. Formulation and In Vitro, Use of Visualization Techniques to Determine the Enhanced Inter and Intracellular Delivery of Ethosomes. *AAPS Pharm. Sci. Tech.* 8(4): Article 111, (2007). **impact factor 1.95**
5. Kaur K., Jain S., Sapra B. and Tiwary, A.K. Niosomal gel for site specific sustained delivery of anti- arthritic drug: In vitro in vivo evaluation. *Current Drug Delivery.* 4(4): 1-8, (2007).
6. Sapra, B., Jain, S. and Tiwary, A.K. Percutaneous Permeation Enhancement by Terpenes: Mechanistic View. *The AAPS J.*, 10: 120-132 (2008). **4.01 impact factor**
7. Sapra, B., Jain, S. and Tiwary, A. K. Transdermal delivery of Carvedilol containing glycyrrhizin and chitosan as permeation enhancers: Biochemical, biophysical, microscopic and pharmacodynamic evaluation. *Drug Delivery*, 15: 443-454, (2008). **4.63 impact factor**
8. Sapra, B., Jain, S. and Tiwary, A. K. Effect of Asparagus racemosus Extract on Transdermal Delivery of Carvedilol: A Mechanistic Study. *AAPS PharmSciTech*, 10: No. 199-210 (2009). **impact factor 1.95**
9. Sapra, B., Jain, S. and Tiwary, A. K. Transdermal Delivery of Carvedilol in Rats: Probing the Percutaneous Permeation Enhancement Mechanism of Soybean Extract-Chitosan Mixture. *Drug Development and Industrial Pharmacy.* 35(10) 1230-1241 (2009) **impact factor: 2.101**

10. Tiwary A. K., Sapra, B., Rana V., and Kaur G. Oral Insulin Delivery: Unveiling Patented Approaches. *Reviews in Advanced Sciences and Engineering*. (2012) 1, 1–11.
11. Sapra, B., Jindal, M. and Tiwary, A. K. Tight junctions in skin: New Perspectives. *Therapeutic Delivery* (11):1297-327, (2012).
12. Manish Jindal, Vineet Kumar, Vikas Rana, Bharti Sapra, Ashok K. Tiwary Synthesis, physico- chemical and biomedical applications of sulfated Aegle marmelos gum: Green chemistry approach. *Arabian Journal of Chemistry*. (2013) <http://dx.doi.org/10.1016/j.arabjc.2013.07.048>, **impact factor 3.7**
13. Sapra, B., Thatai, P., Bhandari, S., Sood, J., Jindal, M. and Tiwary, A. K. Microemulsions For Drug Delivery: A Critical Appraisal I *Therapeutic Delivery*. 2013, Vol. 4, No. 12, 1547-1564, (2013).
14. Sapra, B., Thatai, P., Bhandari, S., Sood, J., Jindal, M. and Tiwary, A. K. Microemulsions For Drug Delivery: A Critical Appraisal II *Therapeutic Delivery*. January 2014, Vol. 5, No. 1, Pages 83-94.
15. Kaur R., Sood J, Thatai, P., Tiwary, A. K. and Sapra, B. Once daily sustain release matrix tablets of glipizide: formulation, optimization and in vitro in vivo correlation. *Controlled release Journal*. <http://www.cr-journal.com/en/images/stories/Issue2/2-4a.pdf>
16. Rajneet Khurana, Kuldeep Singh, Bharti Sapra, A K Tiwary, Vikas Rana. Tamarindus indica pectin blend film composition for coating tablets with enhanced adhesive force strength. *Carbohydr Polymer*. Feb 13; 102:55-65, (2014) **impact factor 4.219**
17. Purva Thatai, Bharti Sapra. Transungual delivery: Deliberations and Creeds. *Int J Cosmet Sci*. 2014, 36, 398-411. DOI: 10.1111/ics.12142. **impact factor 1.54**
18. J Sood, B Sapra, S Bhandari, M Jindal, AK Tiwary. Understanding pharmaceutical polymorphic transformations I: influence of process variables and storage conditions. *Therapeutic delivery* 5 (10), 1123-1142, (2014).
19. Anoopinder Kaur, Purva Thatai, Bharti Sapra. Need of UV Protection and Evaluation of Efficacy of Sunscreens. *Journal of Society of Cosmetic Chemists. Journal of Cosmetic Science*, 65, 315-345, (2014).
20. J Sood, B Sapra, S Bhandari, AK Tiwary Understanding pharmaceutical polymorphic transformations II: crystallization variables and influence on dosage forms. *Therapeutic Delivery*. 6(6):721-40, (2015).
21. Purva Thatai, Bharti Sapra. Spectrophotometric and HPLC method validation for the determination of terbinafine hydrochloride in transungual dosage forms. *Household and Personal Care TODAY*, 10 (3), 26-29, (2015).
22. Purva Thatai, Ashok K Tiwary, Bharti Sapra. The physicochemistry and percolation behavior of microemulsions as a function of chain length of cosurfactant and surfactant. *J. Excipients and Food Chem*. 6(2), 47 -60, (2015)

23. Purva Thatai, Ashok K Tiwary, Bharti Sapra. Progressive development in experimental models of transungual drug delivery of anti-fungal agents. *Int J Cosmet Sci.*, Feb;38(1):1-12, (2016) **impact factor 1.54**
24. Anoopinder Kaur, Purva Thatai, Shikha Sharma, Bharti Sapra. Green tea extract in microemulsion: Stability, Dermal Sensitization and efficacy against UV induced damages. Anoopinder Kaur, Purva Thatai, Shikha Sharma, Bharti Sapra. *Int. J. Pharm. Pharm. Sci.* 8(Supp 1) 2016.
25. Purva Thatai, Bharti Sapra. Critical Review on Retrospective and Prospective Changes in Antifungal Susceptibility Testing for Dermatophytes. *Mycoses* . 55, 615-627, (2016). **impact factor 2.23**
26. Purva Thatai, Bharti Sapra. Structural and component mining of nails using Bioengineering techniques. *Int J Cosmet Sci.* 39 (3), 225-240, (2017) **Impact factor 1.54**
27. Purva Thatai, Bharti Sapra. Transungual gel of terbinafine hydrochloride for the management of onychomycosis: Formulation, optimization and evaluation. *AAPS Pharm Sci Tech.* Aug;18(6):2316-2328. (2017) **Impact factor 1.954**
28. Neha Goyal, Purva Thatai, Bharti Sapra. A critical appraisal on skin cancer: Symptoms, mechanistic pathways, and treatment rationale. *Therapeutic Delivery.*8 (5), 265-287, (2017).
29. Neha Goyal, Purva Thatai, Bharti Sapra. Surging footprints of mathematical modeling for prediction of transdermal permeability. *Asian Journal of Pharmaceutical Sciences.* (doi: 10.1016/j.ajps.2017.01.005) SNIP: 0.703. 12 (4),299-325, (2017).
30. Purva Thatai, Bharti Sapra. Is this the right drug or the dose for the management of onychomycosis? *Journal of Cosmetology and Trichology.* 3,1,1-11, (2017).
31. Purva Thatai, Bharti Sapra. Photodynamic Therapy for the Management of Onychomycosis: A Promising Strategy. *Annals of Pharmacology and Pharmaceutics.* 2(2): 1014 (. 2017).
32. Ashok K Tiwary & Bharti Sapra. High failure rate of transungual drug delivery: need for new strategies. *Therapeutic Delivery.* 8(5), 239-242, (2017).
- 33 J Sood, B Sapra, AK Tiwary. Microemulsion Transdermal Formulation for Simultaneous Delivery of Valsartan and Nifedipine: Formulation by Design. 1 *AAPS PharmSciTech*, 8 (6) 1901-1916, (2017).
34. Purva Thatai, Bharti Sapra. Nail lacquer formulation for the management of onychomycosis: Formulation, characterization and in vitro evaluation. *Therapeutic Delivery.* **accepted**

BOOK CHAPTER:

1. Sapra, B., Jain, S. and Tiwary, A. K. *Terpenes: Penetration enhancers for transdermal drug delivery*, In: *Recent Advances in Herbal Drug Research and Therapy*, Ray, A. and Gulati, K. (Eds.), Chapter 24, 379-400, I. K. International Publishing House Pvt. Ltd., New Delhi, India (2010). ISBN no. 978-93-80026-97-8
2. Tiwary A. K., Sapra B. and Jain S. *Dissolution*, In: *PRECLINICAL DEVELOPMENT HANDBOOK*, S. C. Gad (Ed.), John Wiley and Sons, Inc., NJ, USA, Chapter 15, 483-544, (2008).
3. Tiwary A. K., Sapra B. Kaur G. and Rana V. Chitosan: Modifications and Applications in Dosage Form Design, In *Chitosan: Manufacture, Properties, and Usage in Chitosan* : Davis S. P. (Ed), Chapter 2, 71-132. Nova Science Pub Inc. , NY (2011) ISBN No. 978-1-61728-831-9.

BOOK:

1. Tiwary A. K., Sapra B. , Kaur G. and Rana V. Chitosan: Modifications and Applications in Dosage Form Design Published by Nova Science Pub Inc. ISBN is 978-1-61761-174-2
2. Sapra B. and Tiwary A.K. Natural surfactants in transcutaneous delivery of carvedilol. LAP Lambert Academic Publishing. ISBN no. 978-3-8443-9952-3, (2011)
3. Thatai P, Sood J and Sapra B. Phase Behavior and Physicochemical parameters of microemulsions. LAP Lambert Academic Publishing. ISBN no. 978-3-659-66494-6, (2014)
4. Bharti Sapra, Om Silakari and Neha Goyal. Prognosis of in vitro transdermal permeation using in silico modelling. LAP Lambert Academic Publishing. ISBN no. 978-3-330-33088-7 (2017)

PRESENTATIONS:

1. Bharti Sapra, Vikas Rana and A. K. Tiwary. (Abs # P 08). Chitosan citrate ionic complexes: Effect of pH on in vitro permeation of indomethacin. *AICTE sponsored seminar*, Sep 10-12 2006.
2. Bharti Sapra, Vikas Rana and A. K. Tiwary. (Abs # P 175). Chitosan citrate ionic complexes: Effect of pH on in vitro permeation of 5-FU. *58th Indian Pharmaceutical Congress*, Mumbai, India, December 1-3, 2006.
3. Bharti Sapra, Anuj Fanda, Subheet Jain and A. K. Tiwary (Abs # PP8). Role of Fenugreek in transcutaneous permeation: Biophysical and biochemical manifestations. *International Symposium on Herbal Drug Research and Therapy*, Delhi, India, Dec 9-10, 2006.
4. Bharti Sapra, Namita Mehra, Subheet Jain and A. K. Tiwary (Abs # B 13). Transdermal delivery of isoniazid: Role of polymeric vehicles. *12th APTI Convention*, Chandigarh, India, 25-27 October, 2007.

5. Ikmeet K. Grewal, A. K. Tiwary and Bharti Sapra (Abs # YSA – E10). Transdermal permeation enhancing activity of a novel lysophospholipid carrier: Investigations on model polar and non-polar drugs. *11th Punjab Science Congress*, Thapar University, Patiala, India, 7-9 February, 2008.
6. Harneet Kaur, Bharti Sapra, Subheet Jain and A. K. Tiwary (Abs # YSA – E3). The role of polymeric vehicles in transdermal drug delivery. *11th Punjab Science Congress*, Thapar University, Patiala, India, 7-9 February, 2008.
7. Bharti Sapra, Sukhram Sandhu, Subheet Jain and A. K. Tiwary (Abs # POP 4) Transdermal formulation of carvedilol containing soybean extract-chitosan mixture as enhancer: Pharmacokinetic and pharmacodynamic evaluation in rats. *National Conference on Innovations in Drug Discovery and Research*, Punjabi University, Patiala, 3rd-5th March, 2009.
8. Ikmeet K. Grewal, A. K. Tiwary and Bharti Sapra (Abs # POP 3). Transdermal permeation enhancing activity of a novel lysophospholipid carrier: Investigations on model polar and non-polar drugs. *National Conference on Innovations in Drug Discovery and Research*, Punjabi University, Patiala, 3rd-5th March, 2009.
9. Bharti Sapra, A. K. Tiwary (Abs # D-22). Transdermal delivery of carvedilol containing saponin and chitosan as permeation enhancers: mechanistic study. *Botanical Researches: Present Scenario*. Department of Botany, Punjabi University, Patiala, 18th-19th Feb, 2010.
10. Bharti Sapra. Osteoporosis: A Bane For Women. International Conference on Women and Development: Issues and Initiatives, held at Punjabi University, organized by Women Studies Centre on March 26-27, 2010.
11. Bharti Sapra, A. K. Tiwary . Effective transdermal delivery of carvedilol using Tribulus terrestris-extract and chitosan: pharmacodynamic, pharmacokinetic and ultrastructural evidences. 4th Annual Convention and National Seminar, Association of Biotechnology and Pharmacy, 11-13 November 2010, Thapar University, Patiala.
12. Bharti Sapra Pregnancy: Health Issues and Their Solutions. International Conference on Women and Child Issues: National and International Perspectives., held at Punjabi University, organized by Women Studies Centre on February 11-12, 2011.
13. Bharti Sapra. Impact of engineered crops on environment. National Seminar on Ecological Crisis organized by Department of Distance Education, National, Sept 8-9, 2011.
14. Bharti Sapra. Cardiomyopathy in relation to exercise. National seminar on health fitness. Organised by Sports sciences dept, Punjabi university, Patiala. National, Sept 28, 2011
15. Bharti Sapra. National seminar on Recent trends in Herbal Drug Research, organized by M.M. University, Mulana, Ambala, 20-21 October, 2011.

16. Bharti Sapra. Anaemia during pregnancy. International Conference on Mainstreaming Gender: Issues and Challenges, held at Punjabi University, organized by Women Studies Centre on November 25-26, 2011
17. Bharti Sapra. Health Insurance for Athletes. National seminar on health, fitness. And sports technologies. Organised by Sports sciences dept, Punjabi university, Patiala. National, Oct 12, 2012.
18. Bharti Sapra.. Reproductive Health Security: Feminine Perspective. International Conference on held at Punjabi University, organized by Women Studies Centre on October, 26-27, 2012.
19. Bharti Sapra. Carbohydrates for training and competition.. National seminar on Nurturing Sports Through Science. Organised by Sports sciences dept, Punjabi university, Patiala., 27th September, 2013.
20. Bharti Sapra. Characterization Of Glipizide - Polymer Mixtures For Formulation Of Matrix Tablets. National Conference on Innovative Molecules for sustainable Future. Organized by School of Chemistry and biochemistry, Thapar University. From 24th to 26th October, 2013.
21. Bharti Sapra. Menopause: Role of Hormone Replacement Therapy. International Conference on Women and Development held at Punjabi University, organized by Women Studies Centre on 22nd-23rd November, 2013.
22. Anoopinder Kaur and Bharti Sapra. Formulation and evaluation of microemulsions containing green tea extract. International Conference on Progress and Advances in Human Health management and Healthcare Reforms organized by ADINA Institute of Pharmaceutical Sciences, Sagar (Madhyapradesh) on 11th and 12th October, 2014.
23. Bharti Sapra and Anoopinder Kaur. Photoprotective Microemulsions: Formulation and Evaluation. Presented in 7th National Conference on Recent Advances in Chemical, Biological and Environmental Sciences, Jan 30 to 31st, 2015.
24. Bharti Sapra and Anoopinder Kaur. Health Fitness 2014, International Seminar on Sports Sciences: Challenges and Endeavour at Department of Sports Sciences, Punjabi University, Patiala from 9Th -10Th Feb, 2015.
25. Bharti Sapra. Antioxidant potential of colloidal formulations containing catechins and epigallocatechin gallate in International conference on Novel Frontiers in Pharmaceutical and Health Sciences organized by Innovare Sciences on 10-11 Oct, 2015.
26. Bharti Sapra, Purva Thatai. Fungal nail infections in sports person. International seminar on Issues and fitness management organized by Dept of sports Sci. at Punjabi University, patiala, on 28th oct, 2015.

26. Bharti Sapra. Breast Cancer in Women. 7th International Conference on Empowering Women, Empowering Humanity, organized by Women's Studies Centre at Punjabi University, Patiala on 11th-12th December, 2015.
27. Bharti Sapra. Dermacon, 2016, 44th National Conference of Indian Association of Dermatologists, Venereologists & Leprologists (IADVL) at Codissia, Coimbatore on 22nd-24th January, 2016.
28. Bharti Sapra and Purva Thatai. Effect of Polysorbates on physiochemistry of Microemulsions. UGC UKIERI International Seminar Nanotherapeutics & Crystal Engineering:Challenges and Future Perspectives at Department of Pharmaceutical Sciences & Drug Research,, Punjabi University, Patiala on Feb 8, 2016.
29. Bharti Sapra. Emerging Scinario in Human Resource Development for Pharmacy Proffession, 2nd Annual National Convention organized by APTI at Govt. Polytechnic College for Girls, Patiala on 18th – 19th March, 2016.
30. Bharti Sapra. Indian Council Medical Research Sponsered 5th Annual International Conference organized by Chitkara College of Pharmacy, Chitkara University, Punjab on 7th - 8th April, 2017. (participated)

Plenary Lecture:

1. AICTE sponsored Seminar organized by Rajasthan Pharmacy College, Jaipur in August, 2009.

WORKSHOPS ATTENDED:

1. II Teachers' Reorientation in Biological Sciences (Feb 21-22, 2004).
2. Accreditation Awareness Workshop at National Technical Teachers Training Institute, Chandigarh (3-3-2004).
3. Patent Awareness Workshop, sponsored by Technology, Information Forecasting and Assessment Council, DST, Govt. of India, New Delhi (Sep 30, 2005).
4. National Symposium on New horizons in fermentation and food technology, March21-22, 2006 at Punjabi University, Patiala.
5. Cuticorn, Sponsored by IADVL, at Pushkar (Rajasthan) in Oct., 2008
6. Completed a certified CME programme from Americal Academy of dermatology , 2010
7. "Sensitization/Motivation" Capacity Building workshop for women in higher management (from 23rd Aug to 27th Aug, 2011)
8. Workshop on Research Supervision at Academic Staff college, Punjabi University, Patiala organized by U.G.C. (12/9/2011 to 14/9/11).
9. Workshop on Stress management, organized by WSC, Punjabi University, Patiala.

10. Attended First National Knowledge Network Public Lecture Series brought by National Innovation Council and The National Informatics Centre on the topic “Democratising Information, Justice, Equality, and the Rule of Law on 24th Jan, 2013.
11. National Seminar on Advancement, challenges and opportunities in Pharmaceutical Research, sponsored by AICTE and PTU, organized by Amar Shaheed Baba Ajit Singh Jujhar Singh Memorial College of Pharmacy, Bela from 18th to 20th October, 2013
12. Pre-Conference workshop on “Development and characterization of nanostructured systems” on 12th Feb, 2014 during International Conference, NanoSciTech 2014, held at Panjab University, Chandigarh.
13. IPR clinic. A workshop on “Patent, copyright Drafting, Filing and Design Registration”. On 16th January, 2015, organized by Chitkara College of Pharmacy in association with Punjab State Council for Science and Technology, Chandigarh and APTI, Punjab State Branch.
14. A workshop on “Gender sensitization: issues and challenges” organized by WSC, Punjabi University, Patiala, under Faculty Development Programme from 26th Feb to 4th March 2015.
15. A workshop on “Relevance of research for society” organized by HRDC, Punjabi University, Patiala, from 22nd Dec to 28th Dec., 2015.
16. A workshop on medical writing and meta-analysis organized by Department of Pharmaceutical Sciences & Drug research, Punjabi University, Patiala on 7th October, 2016.
17. A workshop on Psychosocial Issues in work environment organized by Department of distance education, Punjabi University, Patiala on Sept 22- October 3, 2016.

.SEMINARS ATTENDED

1. National seminar on Recent advances in Oral Controlled Drug Delivery System, organized by Amar Shaheed Baba Ajit Singh Jujhar Singh Memorial College of Pharmacy, Bela, Ropar on October 1, 2011.
2. UGC sponsored national Seminar on Drug Delivery and Pharmacovigilance, Organized by Department of Pharmaceutical Sciences & Drug Research, Punjabi University, Patiala on 18th October, 2012
3. Symposium on Advances in Drug Delivery Systems and Clinical Research Methodologies at Chitkara College of Pharmacy on 26th-27th November, 2012.
4. International conference “Drug resistance, development, pharmaceutical technology and outcomes” (DRPTO-2014) organized by Chitkara college of Pharmacy on 11th and 12th April
5. Bharti Sapra. 44th National conference of Indian association of Dermatologists, Venerologists and leprologists. Dermacon 2016 held at Coimbatore, Tamilnadu, on 22nd-24th January 2016.

FELLOWSHIPS / AWARDS:

1. University Junior Research Fellowship: For a period of one year
2. Senior Research Fellowship: CSIR Project “Saponins for percutaneous permeation enhancement: Biochemical, biophysical and microscopic investigations.” Scheme No. 01/(2088)/06/EMR-I
3. Best Oral Presentation Award in National Conference on Innovations in Drug Discovery and Research, Punjabi University, Patiala, 3rd-5th March, 2009.
4. Second prize in oral presentation in ABVP-Young scientist Competition, in 4th Annual Convention and National Seminar, Association of Biotechnology and Pharmacy, 11-13 November 2010, Thapar University, Patiala.

Academic achievements:

Passed Post graduate Diploma in the examination course of study on Industrial Programmin PharmaRegulatory affairs From BII, Noida.