

1. Name of the faculty (Add current photo)

Dr. Shivani Rai Paliwal



2. Designation and specialization

Assistant Professor (Pharmaceutics)

3. Educational qualification

M.Pharm. Ph.D

4. Contact information (Address, email and cell no)

SLT Institute of Pharmaceutical Sciences

Guru Ghasidas Vishwavidyalaya Bilaspur, C.G., 495009

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5. Date of joining

23-Dec-2011

6. Past employment (From latest)

Assistant Professor (Pharmacy)	SLT Institute of Pharmaceutical Sciences Guru Ghasidas Vishwavidyalaya Bilaspur, C.G., 495009	From 23-12-2012 to till date
Senior Research Fellow (UGC-SRF) Engineering and Technology	Department of Pharmaceutical Science Dr. H. S. Gour Vishwavidyalaya (A Central University), Sagar, M.P.	From 01-10-2009 to 22-12-2011

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Lecturer (Asth. Professor)	ISF College of Pharmacy, Moga, Punjab (Punjab Technical University)	From 17-03-2008 to 28-06- 2009
Lecturer (Asth. Professor)	Globus College of Pharmacy, Bhopal, M.P. (Rajiv Gandhi Prodyogiki Vishwavidyalaya)	From 10-06-2007 to 15-03- 2008

7. List of publication/patents (National and International)

International Publications (27)

1. **Shivani Rai Paliwal**, Rishi Paliwal, G. P. Agrawal, S. P. Vyas, Targeted Breast Cancer Nanotherapeutics: Options And Opportunities With Estrogens Receptors, Critical Reviews™ in Therapeutic Drug Carrier Systems, (In press).
2. **Shivani R Paliwal**, Rishi Paliwal, Harish C Pal, Ajit K Saxena, Praduman R Sharma, Prem N Gupta, Govind P Agrawal, Suresh P Vyas. Estrogen-Anchored pH-Sensitive Liposomes as Nanomodule Designed for Site-Specific Delivery of Doxorubicin in Breast Cancer Therapy, Mol Pharm. 2012 Jan 1;9(1):176-86.
3. Rishi Paliwal, **Shivani Rai Paliwal**, G. P. Agrawal, S.P. Vyas, "Chitosan nanoconstructs for improved oral delivery of low molecular weight heparin: In vitro and in vivo evaluation" International Journal of Pharmaceutics, 2012 Jan 17;422(1-2):179-84.
4. Rishi Paliwal, **Shivani Rai Paliwal**, G. P. Agrawal, S.P. Vyas, "Biomimetic Solid Lipid Nanoparticles for Oral Bioavailability Enhancement of Low Molecular Weight Heparin and Its Lipid Conjugates: In vitro and in vivo evaluation", Molecular Pharmaceutics, 2011, 8(4):1314-21.
5. Rishi Paliwal, **Shivani Rai**, S.P. Vyas, "Lipid drug conjugate (LDC) nanoparticles as autolymphotrophs for oral delivery of methotrexate", Journal of Biomedical Nanotechnology, 2011, 7(1):130-131.
6. **Shivani Rai**, Rishi Paliwal, S.P. Vyas, "Doxorubicin encapsulated nanocarriers for targeted delivery to estrogen responsive breast cancer" Journal of Biomedical Nanotechnology, 2011, 7(1):121-122.

7. **Shivani Rai Paliwal**, Rishi Paliwal, G. P. Agrawal, S. P. Vyas, "Liposomal Nanomedicine in Breast Cancer Therapy" *Nanomedicine (UK)*, 2011, 6(6):1085-100.
8. Rishi Paliwal, **Shivani Rai Paliwal**, Govind Prasad Agrawal, S.P. Vyas. Recent advances in search of oral heparin therapeutics. *Medicinal Research Reviews*. 2012 32(2):388-409.
9. Rishi Paliwal, **Shivani Rai Paliwal**, S. P. Vyas. Advances in effective vaccine development against hepatitis B: focus on mucosal immunization strategies. *Therapeutic Delivery*, 2010, Vol. 1, No. 3, Pages 397-410.
10. Sheetu Wadhwa, Rishi Paliwal, **Shivani Rai Paliwal**, S. P. Vyas, Hyaluronic Acid modified Chitosan Nanoparticles for Effective Management of Glaucoma: Development, characterization and evaluation, *Journal of Drug Targeting*, 2010, 18, 4, 292-302.
11. **Shivani Rai Paliwal**, Rishi Paliwal, Neeraj Mishra, Abhinav Mehta, Suresh P. Vyas. A novel cancer targeting approach based on estrone anchored stealth liposome for site-specific breast cancer therapy. *Current Cancer Drug Target*, 2010, 10, 3, 343-353.
12. Bhuvaneshwar Vaidya, Amit K. Goyal, Kapil Khatri, Neeraj Mishra, Rishi Paliwal, **Shivani Rai**, Shailja Tiwari, S.P. Vyas, Bolaamphiphiles based novel liposomes: a possible approach for drug delivery, *Int. J. Biomedical Nanoscience and Nanotechnology*, 2010, 1, 2/3/4, 95-108.
13. Neeraj Mishra, Amit Kumar Goyal, Shailja Tiwari, Rishi Paliwal, **Shivani Rai Paliwal**, Bhuvneshwar Vaidya, Sharad Mangal, Madhu Gupta, Devyani Dube, Abhinav Mehta, Suresh P. Vyas. Recent advances in mucosal delivery of vaccine: Role of mucoadhesive/ biodegradable polymeric carriers. *Expert Opinion on Therapeutic Patents*. 2010, 20, 5, 661-679.
14. Madhu Gupta; Amit K. Goyal; **Shivani Rai Paliwal**; Rishi Paliwal; Neeraj Mishra; Bhuvneshwar Vaidya; Devyani Dubey; S.K. Jain; S.P. Vyas. Development and characterization of effective topical liposomal system for localized treatment of cutaneous candidiasis. *Journal of Liposome Research*. 2010, 20, 4, 341-50.
15. Daisy Arora, Amit K. Goyal, **Shivani R. Paliwal**, Bharat Khurana, Suresh P. Vyas, Oral Mucosal Immunization: Recent Advancement and Future Prospects, 2010, 6, 3, 234-259.
16. Rishi Paliwal, **Shivani Rai**, Bhuvaneshwar Vaidya, Kapil Khatri, Amit K. Goyal, Neeraj Mishra, Abhinav Mehta, Suresh P. Vyas, Effect of lipid core material on characteristics

of solid lipid nanoparticles designed for oral lymphatic delivery. *Nanomedicine: Nanotechnology, Biology, and Medicine*, 2009, 5, 2, 184-191.

17. Rishi Paliwal, **Shivani R Paliwal**, Neeraj Mishra, Abhinav Mehta, S.P. Vyas “Engineered Chylomicron Mimicking Carrier Emulsome for Lymph Targeted Oral Delivery of Methotrexate”, *International Journal of Pharmaceutics*. 2009, 380, 1-2, 181-188.
18. Sheetu Wadhwa, Rishi Paliwal, **Shivani R Paliwal**, S. P. Vyas “Nanocarriers in Ocular Drug Delivery: An Update Review”, *Current Pharmaceutical Design*. 2009, 15, 23, 2724-2750.
19. Sheetu Wadhwa, Rishi Paliwal, **Shivani Rai Paliwal**, S. P. Vyas, Chitosan and its role in ocular therapeutics, *Mini Reviews in Medicinal Chemistry*, 2009, 9, 14, 1639-1647.
20. Bhuvaneshwar Vaidya, Rishi Paliwal, **Shivani Rai**, Kapil Khatri, Amit K. Goyal, Neeraj Mishra, Suresh P Vyas, Cell-selective mitochondrial targeting: A new approach for cancer therapy, *Cancer Therapy*, 2009, 7, 141-148.
21. Amit K. Goyal, Kapil Khatri, Neeraj Mishra, Abhinav Mehta, Bhuvaneshwar Vaidya, Shailja Tiwari, Rishi Paliwal, **Shivani Paliwal**, Suresh P. Vyas, Development of Self-assembled Nanoceramic Carrier Construct(s) for Vaccine Delivery, *Journal of Biomaterials Applications*, 2009, 24, 1, 65-84.
22. **Shivani Rai**, Rishi Paliwal, Bhuvaneshwar Vaidya, Prem N. Gupta, Kapil Khatri, Amit Goyal, S. P. Vyas, Solid lipid nanoparticles (SLNs) as a rising tool in drug delivery science: one step up in nanotechnology, *Current Nanoscience*, 4,1, 2008, 30-44.
23. **Shivani Rai**, Rishi Paliwal, Bhuvaneshwar Vaidya, Kapil Khatri, Amit Goyal, Prem N. Gupta, S. P. Vyas, Targeted delivery of doxorubicin via estrone appended liposome, *Journal Drug Targeting*, 2008, 16, 6, 455- 463.
24. Neeraj Mishra, Amit K. Goyal, Kapil Khatri, Bhuvaneshwar Vaidya, Rishi Paliwal, **Shivani Rai**, Abhinav Mehta, Shailja Tiwari, Shiva Vyas, Suresh P. Vyas, “Biodegradable Polymer Based Particulate Carrier(s) for the Delivery of Proteins and Peptides” *Anti-Inflammatory & Anti-Allergy Agents in Medicinal Chemistry*, 2008, 7, 240-251.

25. Rishi Paliwal, **Shivani Rai**, Bhuvaneshwar Vaidya, Sunil Mahor, Prem N. Gupta, Amit Rawat, S.P. Vyas, Cell-selective Mitochondrial Targeting: Progress in Mitochondrial Medicine, Current Drug Delivery, 2007, 4, 3, 211-214.
26. **Shivani Rai**, Rishi Paliwal, Bhuvaneshwar Vaidya, Prem N. Gupta, Sunil Mahor, Kapil Khatri, Amit K. Goyal, Amit Rawat, S.P. Vyas, Estrogen(s) and Analogs as a Non Immunogenic Endogenous Ligand in Targeted Drug/DNA Delivery, Current Medicinal Chemistry, 2007, 14, 2095-2105.
27. Amit Rawat, Bhuvaneshwar Vaidya, Kapil Khatri, Amit K. Goyal, Prem N. Gupta, Rishi Paliwal, **Shivani Rai**, S.P. Vyas, Targeted intracellular delivery of therapeutics: An overview, Die Pharmazie, 2007, 62, 9, 643-58.

8. List of Presentations (National and International)

International (03)

1. **Shivani Rai** and S. P. Vyas, "International Conference on Bioencapsulation" Amboise, France, October, 5-8, 2011.
2. **Shivani Rai**, S. P. Vyas, International conference on Bioengineering and Nanotechnology, Singapore, 1-4 August 2010.
3. **Shivani Rai**, Suresh P Vyas. 22nd European Conference on Biomaterials, 7-11 September, 2009, Lausanne, Switzerland.

National (11)

1. **Shivani Rai**, National Seminar on Recent Trends in Chemical Research, Bilaspur, 30-31 Feb 2012
2. **Shivani Rai**, G. P. Agrawal, S. P. Vyas, National Seminar on Standardization of Herbal Formulations: A Holistic Goal, Bilaspur, 25-26 Feb 2012.
3. **Shivani Rai**, G. P. Agrawal, S. P. Vyas, Bioasia 2011, Hyderabad, 9-11 Feb 2012.
4. **Shivani Rai**, Rishi Paliwal, S. P. Vyas, "International Symposium on The Safe Use of Nanomaterials & workshop on Nanomaterial Safety: Status, Procedures, Policy and Ethical Concerns, IITR, Lucknow, February, 1-3, 2011.
5. **Shivani Rai**, "M.P. Mahila Vigyan Sammelan", Jabalpur, December, 2010.

6. **Shivani Rai**, Suresh P Vyas. Second Winter School on Nanotechnology in Advanced Drug Delivery, 2009, NIPER, Mohali, Punjab, India.
7. **Shivani Rai**, Suresh P Vyas. M. P. Young Scientist Conference, 2009, Bhopal.
8. **Shivani Rai**, Daisy Arora, S. P. Vyas, National Seminar on Nanocarriers: site specific and controlled drug delivery, ISF College of Pharmacy, Moga, Punjab, India. 10-11 October, 2008.
9. **Shivani Rai**, Suresh P Vyas. All India Young Scientist Conference, 2007, Bhopal.
10. **Shivani Rai**, Prem N. Gupta, Kapil Khatri, Amit Goyal, Sunil Mahor and S. P. Vyas, CRS Indian Chapter, Mumbai, India, 2007.
11. **Shivani Rai**, Prem N. Gupta, Kapil Khatri, Amit Goyal, Sunil Mahor, S. P. Vyas, National seminar on nanotechnology controlled and targeted delivery, Sagar, INDIA 17-18 March, 2007.

9. Books published/ Book chapters (09)

International (05)

1. Shivani R Paliwal, **Rishi Paliwal**, Suresh P Vyas “*pH sensitive liposomes in drug delivery*” In: Smart Materials for Drug Delivery, Royal Society of Chemistry, UK (In press).
2. **Rishi Paliwal**, Shivani R Paliwal, Suresh P Vyas “*Novel Carrier(s) Based Vaccine Design against Hepatitis B: Recent Updates*” In: Hepatitis B: New Research, Nova Science Publishers, (In press).
3. Suresh P Vyas, **Rishi Paliwal**, Shivani R Paliwal, “*Chitosan-based Systems for Ocular Biopharmaceuticals Delivery*” In: Chitosan-Based Systems for Biopharmaceuticals: Delivery, Targeting and Polymer Therapeutics Ed. Sarmento B and Neves JD, John Wiley & Sons, Ltd. 2012, pp. 243-254.
4. Suresh P Vyas, **Rishi Paliwal**, Shivani R Paliwal “*Ocular Delivery of Proteins and Peptides*” In: Protein and Peptide Delivery, Ed. Chris Walle, Elsevier. 2011, pp. 87-103
5. Suresh P Vyas, **Rishi Paliwal**, Shivani R Paliwal “*Chitosan/Chitosan Derivatives as Carriers and Immunoadjuvants in Vaccine Delivery*” In: Chitin, Chitosan, Oligosaccharides and Their Derivatives: Biological Activities and Applications, Ed. SN Kim CRC press. 2010, pp. 335-349.

National (04)

1. Suresh P Vyas, Shivani R Paliwal, **Rishi Paliwal** “*Targeted Drug Delivery*” In: Lachman’s Industrial Pharmacy, Ed. Vyas SP and Khar RK, CBS Publishers, New Delhi, India (In press).
 2. **Rishi Paliwal**, Shivani R Paliwal, Suresh P Vyas, “*Ocular Nanomedicine*” In Nanocolloidal carriers in site specific and controlled drug delivery, CBS Publishers, New Delhi, India, 2010, 154-171.
 3. Shivani R Paliwal, **Rishi Paliwal**, Suresh P Vyas, “*Nanocarriers in Breast Cancer Therapy*” In: Nanocolloidal carriers in site specific and controlled drug delivery, CBS Publishers, New Delhi, India, 2010, 554-577.
 4. **Rishi Paliwal**, Shivani R Paliwal, Suresh P Vyas, “*Nanocarriers: Toxicological Aspects*” In Nanocolloidal carriers in site specific and controlled drug delivery, CBS Publishers, New Delhi, India, 661-674.
10. Research experiences

05 Years

11. Research Project details

NIL

12. Research area (Interest)

Engineered Nanomedicine for Biomacromolecules, Targeted Oncology Therapeutics, Non-Invasive Delivery of Bioactives

13. Awards

1. **Rudolf Cimdins Award** by European Society of Biomaterials at Laussane, Switzerland in 2009.
2. **Young Scientist Award** by M.P. Council of Science and Technology in 2010.
3. **Young Scientist Award** in Ist Women Science Congres by MPCOST, M.P. in 2010.