



DR. DIMPLE SETHI (CHOPRA) is presently working as Associate Professor (Pharmaceutics) in Department of Pharmaceutical Sciences and Drug Research, Punjabi University, Patiala. Her present areas of interest are **biopharmaceutics, pharmacokinetics, green nanotechnology, molecular nanotechnology, targeted drug delivery, nanobiotechnology and nanomedicine**. Her research interest includes exploring **different types of nanoparticles** for treatment of dementia related to various **neurodegenerative disorders** like Alzheimer's disease. She is also actively engaged in developing nanocarrier systems for treatment of **rheumatoid arthritis and osteoarthritis**. She has also worked on other particulate systems like **microspheres and niosomes** for development of controlled drug delivery systems for oral as well as topical use. She has published several research papers in national and international journals of repute.

She has presented her work at several national and international conferences. **She has been granted two Indian patents on brain permeable nanoparticles. She is an invited manuscript reviewer of many international journals like Drug Discovery today, Journal of Nanoparticle Research, drug delivery, seizure, Open Access Rheumatology: Research and Reviews, International Journal of Nanomedicine, Drug Design, Development and Therapy. She is a member of American Nano Society. She is on editorial board of many international journals. She has been granted two Indian Patents on Brain Permeable Nanoparticles. She has successfully published four book chapters with publishing houses like IGI Global, INTECH OPEN, Studium Press LLC, USA, McGraw Hill Education (India) Private Limited, New Delhi. All the book chapters are on nanoparticles. The chapter with INTECH OPEN has reached 3000 downloads. She is an alumni of Panjab University, Chandigarh. She is also part of panel of examiners (M.Pharm) Panjab University, Chandigarh.**

**E MAIL:** [dimplechopra@pbi.ac.in](mailto:dimplechopra@pbi.ac.in)

Mobile no: 9814927122

**M.PHARM STUDENTS GUIDED: 25**

**Ph.D STUDENTS GUIDED: 2**

**Ph.D STUDENTS REGISTERED: 2**

## PATENTS GRANTED

1. Shah DI, Kaur G, Singh S, Java PR, **Chopra D**, Bansal G, Singh N, Singh M. STATIN LOADED BRAIN PERMEABLE NANOPARTICLES AND METHOD OF PREPARATION. WTO Indian Patent No. 286818 (87/DEL/2007).
2. Shah DI, Kaur G, Chaudhary A, Java PR, **Chopra D**, Bansal G, Singh N, Singh M. ROSAGLITAZONE LOADED BRAIN PERMEABLE NANOPARTICLES AND METHOD OF PREPARATION. WTO Indian Patent No.286815 (86/DEL/2007).

## LIST OF PAPERS PUBLISHED

1. Sood R. and **Chopra D.S.**, 2018. Optimization of reaction conditions to fabricate *Ocimum sanctum* synthesized silver nanoparticles and its application to nano-gel systems for burn wounds. Material Science and Engineering: C. 92, 575-589. **Impact factor-5.080**.
2. Mandeep K, Dimple S C. Green Synthesis of Iron Nanoparticles for Biomedical Applications. Glob J Nano. 2018; 4(4): 555643. DOI: 10.19080/GJN.2018.04.555643
3. Sood R. and **Chopra, D.S.**, 2017. Metal –plant frameworks in nanotechnology: an overview. Phytomedicine. 1-32. **Impact Factor-3.526**
4. Sood R and **Chopra D.S.**, 2018. Regulatory Approval of Silver Nanoparticles. Applied Clinical Research, Clinical Trials & Regulatory Affairs. 5:1-6.
5. Sood, R., **Chopra, D.S.**, 2017. Improved Yield of Green Synthesized Crystalline Silver Nanoparticles With Potential Antioxidant Activity. Int. Res. J. Pharm. 8, 100–104. doi:10.7897/2230-8407.080457.
6. Kaur M, Bhatia A, **Sethi D**, Kaur G, Vig K. Hypoglycemic potential of probiotic DNA loaded chitosan nanoparticles: An in vivo study. J. Drug Deliv. Ther. 2017; 7(2):70-76.
7. Kaur M, **Sethi D**, Bhatia A. Chitosan Nanoparticles: A therapeutic carrier for delivery of DNA, siRNA and CpG-oDNs. Nanoscience and Nanotechnology-Asia 2016, 6(2), 92-104. DOI: [10.2174/2210681206666160402004454](https://doi.org/10.2174/2210681206666160402004454) (ISSN 2210-6812).
8. Kaur M, Bhatia A, **Sethi D**, Kaur G, Vig K. Preparation and immunocharacterization of probiotic DNA loaded Chitosan Nanoparticles: An in vitro and in vivo study. Int. J. Drug Deliv. Tech. 2018; 8(2); 67-76. (ISSN: 0975 4415).
9. Sethi D, Gauri B. Nanotechnology build up in sports. Inveni Rapid: Sports Medicine , 2013, Article ID- " Inveni:hsm/48/13 " , 2013 [ cited 2013 May 09 ] Available From <http://www.inveni.in/Article/hsm/48/13.aspx>
10. Bajaj L. and Chopra D. Preparation and evaluation of rivastigmine nanoparticles for treatment of dementia associated with alzheimer’s disease, 2013, PHARMATUTOR-ART-1742 [www.pharmatutor.org](http://www.pharmatutor.org)
11. Gulati M.,**Chopra D.S.**, Singh S.K., Saluja V., Pathak P., Bansal, P. Patents on Brain Permeable Nanoparticles. Recent Patents on CNS Drug Discovery 2013; 8: 220-234. (9 citations), I.F 2, 17 citations

12. Bhatia A, Sharda P, **Chopra D**, Mishra T. Chitosan nanoparticles as carrier of Immunorestoratory plant extract: synthesis, characterization and Immunorestoratory efficacy. *International Journal of Drug Delivery* (ISSN: 0975-0215) 2011; 3: 381-385.
13. Gauri B, Singh SK, Chopra D. Formulation and evaluation of colon targeted oral drug delivery systems for metronidazole in treatment of amoebiasis. *International Journal of Pharma and Bio Sciences* 2011; 2: 528-538. (ISSN: 0975-6299).
14. Chopra D. Women's Health in India. Proceedings of International conference on women and child issues national and International perspectives. 2011; 149-157 (ISBN: 978-81-302-0112-2).
15. Singh B, Dhake AS, **Sethi D**, Paul Y. In Silico ADME Predictions using Quantitative Structure Pharmacokinetic Relationships. Part I: Fundamental Aspects, *The Pharma Review* 2007; August: 93-100.
16. Singh B, Paul Y, Grover M, **Sethi D**. In Silico ADME Predictions using Quantitative Structure Pharmacokinetic Relationships. Part III: Methodologies and Updated Literature Review, *The Pharma Review* 2007; December: 179-186.
17. **Chopra D**, Gulati M, Singh S, Duggal S, Kumar R. Use of Liposomal Drugs in the treatment of Rheumatoid Arthritis. *Current Rheumatology Reviews* 2008; 4(1): 63-70.
18. **Chopra, D**, Sinha, V.R., Singh, M. Thermal and Isothermal Methods in Development of Sustained Release Dosage Forms of Ketorolac Tromethamine. *E-J.Chem* 2008; 5(2): 316-322. (IF: 0.75)
19. **Chopra, D**, Gulati, M., Saluja, V., Pathak, P., Bansal, P. Brain Permeable Nanoparticles. Recent Patents on CNS Drug Discovery (ISSN: 1574-8898) 2008; 3(3): 216-225.  
(This article has been rated first in the list of top ten articles published on the same topic as per survey of BioMedLib)

#### INVITED TALKS:

1. Invited as a speaker to deliver a talk on "Formulation and Evaluation of Polymeric Nanoparticles for Treatment of Dementia", International conference, NanoSciTech2017, held at Panjab University, Chandigarh, India, 9-10 November, 2017.
2. Invited as a speaker to deliver a talk on "Biodistribution of Radiolabelled Solid Lipid Nanoparticles", International conference, NanoSciTech2014, held at Panjab University, Chandigarh, India, 13-15 February, 2014.
3. Invited as a speaker to deliver a talk on "Brain Permeable Nanoparticles", International conference on innovations in biotech and medicine held at Dr. T B Basavarajendra Auditorium, BMCRI, Bangalore, India, 21-23 October, 2013.
4. Invited as a speaker to deliver a talk on "Brain permeable nanoparticles" at Fourth Academic Congress of International Chinese Neurosurgical Sciences on June 18-20, 2010 held in Chengdu, Sichuan Province, China.

5. Invited as a speaker to deliver a talk on “Dosage Form Design” at PCTE-Institute of Pharmacy, 21 March 2011, Ludhiana.
6. Invited as a speaker to deliver a talk on “Nanomedicine in the diagnosis and therapy of neurodegenerative disorders”, National conference on medical biotechnology, held at Maharshi Dayanand University, Rohtak, Harayana, 16-18 April, 2010.

#### WORKSHOPS /DISSEMINATION PROGRAM ATTENDED

1. **ICMR NATIONAL ETHICAL GUIDELINES** organized by ICMR Bioethics Unit, National Center for Disease Informatics and Research (NCDIR) Bengaluru and PGIMER, Chandigarh, PGIMER Chandigarh, December 14, 2017.
2. **QbD-ENABLED DEVELOPMENT OF NANOSTRUCTURED DRUG DELIVERY SYSTEMS** organized by Panjab University, Chandigarh, February 17, 2016.
3. **ISSUES IN RESEARCH METHODOLOGY** organized by Department of Education and Community Service in collaboration with Bhai Gurudas Chair, Punjabi University, Patiala, September 19-25, 2016.
4. **RELEVANCE OF RESEARCH IN SOCIETY** organized by UGC-HUMAN RESOURCE DEVELOPMENT CENTRE, PUNJABI UNIVERSITY, PATIALA, 22-28 December, 2015.
5. **SMART TECNOLOGIES IN EDUCATION** organized by Academic Staff College, Punjabi University, Patiala, January 16, 2013.
6. **BIOTECH VISTAS-2011** organized by Department of Biotechnology, Punjabi University, Patiala, March 2-3, 2011.
7. **IMMOBILIZATION TECHNIQUES FOR MINIATURIZED MICROARRAY BASED BIOSENSORS** organized by Department of Biotechnology, Punjabi University, Patiala, January 10-14, 2011.
8. **PATENT AWARENESS WORKSHOP** organized by School of Management and Social Sciences, Thapar Institute of Engineering and Technology, Patiala

#### Book Chapter

1. Dimple Chopra (2011). Radiolabelled Nanoparticles for Diagnosis and Treatment of Cancer, Radioisotopes - Applications in Bio-Medical Science, Nirmal Singh (Ed.), ISBN: 978-953-307-748-2, InTech, Available from: <http://www.intechopen.com/articles/show/title/radiolabelled-nanoparticles-for-diagnosis-and-treatment-of-cancer>
2. Chopra DS, Singh B, Sood R, Kaur R, Kaul A (2015). Radiolabelling of nanoparticles for in vivo imaging and biodistribution analysis. Published by **Studium Press LLC, USA** in Volume 3: Nanotheranostics of the Series "Nanobiomedicine".edited by Professor Bhupinder Singh.
3. Chopra DS, Gupta KC, Sharma S, Khatri M, Singh B and Singh B (2015), “Nanostructured Drug Delivery: Toxicological Challenges and Safety Considerations" Published by **Studium Press LLC, USA** in Volume 1: Nanomedicine of the Series "Nanobiomedicine " edited by Professor Bhupinder Singh.
4. Chopra DS, Kaur R and Sood R (2015), Pharmacokinetics and Biodistribution of Nanoparticles Published by **McGraw Hill Education (India) Private Limited,**

New Delhi in Nanotechnology: Novel Perspectives and Prospects edited by Professor Bhupinder Singh

5. Chopra DS. CNS targeted nanoparticle drug delivery: CNS drug delivery. Advancing Medicine through Nanotechnology and Nanomechanics Applications, Editors Keka Talukdar K, Bhushan M, Malipatil AS, IGI Global USA, 2016, Book Chapter 5, 133-154.  
DOI: 10.4018/978-1-5225-1043-7.ch005 (Indexed in **Scopus**)
6. Chopra DS. "Nanocomposites in Drug Delivery and Imaging Applications" "Multifunctional Nanocarriers for Contemporary Healthcare Applications. Editors Ahmed F, Beg S, Barkat A, Harshita, IGI Global USA, 2017 (under Review).
7. Chopra DS. "Effect of coatings in development of SPIONs as MRI contrast agent" Handbook of Modern Coating Technologies. Coating Properties, Volume 3, Elsevier (under review).

#### **LIST OF PUBLICATIONS IN CONFERENCE PROCEEDINGS**

1. Chopra DS. Preparation and Evaluation of Fluvastatin loaded Nanoparticles in Treatment of Dementia. **69<sup>th</sup> Indian Pharmaceutical Congress** held at Chitkara University, Rajpura, 22-24 December, 2017.
2. Chopra DS. Menopause and Female Health Care. **9<sup>th</sup> International Conference on Women in the Changing World of Work: Planet 50-50 by 2030**. Women's Studies Centre, Punjabi University, Patiala, 22<sup>nd</sup> November, 2017.
3. Chopra DS. Green Synthesis of Metallic Nanoparticles for Biomedical Application. **National Conference on Basic and Applied Researches in Plants and Microbes**, Department of Botany, Punjabi University, Patiala, 3-5 November, 2016.
4. Chopra DS. Effect of Gender on Incidence and Prevalence of Migrane. **8<sup>th</sup> International Conference He For She: A Solidarity Movement for Gender Equality**, Women's Studies Centre, Punjabi University, Patiala, 16-17 November, 2016.
5. Chopra DS. Surface functionalized superparamagnetic iron oxide nanoparticles as diagnostic tools for non-invasive molecular imaging. **International conference, NanoSciTech2016**, held at Panjab University, Chandigarh, India, 18-20 February, 2016.
6. Chopra DS. Green Synthesis of Silver Nanoparticles. International Conference on "Harnessing Engineering, Technology and Innovation for Sustainable Development (HETIS-2014) held at Dr. S.S Bhatnagar University Institute of Chemical Engineering & Technology, Panjab University, Chandigarh. September 19-20, 2014
7. Saluja V, Pathak P, **Chopra D**. Nanoparticle: As a drug delivery vehicle to brain. **National Seminar on Modern Trends in Supramolecular Nanotechnology & Nanomedicine**. held at Institute of Pharmacy, Nirma University of Science and Technology, Ahmedabad on 16-17 March, 2007.
8. **Chopra D**, Arora S, Singh M, Gulati M, Singh S. Therapeutic effect of azathioprine loaded poly (D,L-lactic/glycolic acid) nanoparticles on adjuvant- induced arthritis in rats.

- Nanotechnology in Advanced Drug Delivery**. held at National Institute of Pharmaceutical Education and Research, Mohali on 17-18 February, 2006.
9. Kaur J, **Chopra D**, Singh M. Biodegradable PLGA nanoparticles as drug carriers for azathioprine: an immunosuppressive agent. **MED BIOTECH 2005** held at Department of Biotechnology, Punjabi University, Patiala, on 2-3 February, 2005.
  10. **Chopra D**, Singh M, Sinha VR. Influence of formulation variables on sustained release tablets of ketorolac tromethamine. **National Seminar on Pharmaceutics in the light of drug delivery challenges** held at University Institute of Pharmaceutical Sciences, Punjab University, Chandigarh, on 14-15 March, 2003.
  11. Aggarwal G, **Chopra D**, Singh M. Various approaches for complete and sustained release of Prednisolone, a poorly water soluble drug. 56<sup>th</sup> **Indian Pharmaceutical Congress** held at Kolkata, on 3-5 December, 2004.
  12. Jindal M, Chawla S, Kaushal N, **Chopra D**. Formulation and Evaluation of Capsaicin Loaded Niosomal Gel as Anti-Arthritic Agent. **International Conference on Drug Discovery on Natural Products and Traditional Medicine (DDNP-TM)**, held at NIPER, Mohali, on 16-20 November, 2008.
  13. Jindal M, **Chopra D**. Formulation and Evaluation of Curcumin Loaded Niosomal Gel as Anti-Arthritic Agent, National conference on Innovations in Drug Discovery and Research held at Punjabi University, Patiala. 3-5 March- 2009.
  14. Saluja V, Jindal M, Jaggi AS, Singh N, **Chopra D**. Preparation and Characterization of Chitosan Nanoparticles as a Carrier to Evaluate Anti-inflammatory Potential of Dapsone in Streptozotocin Induced Experimental Dementia. Second Winter School on Nanotechnology in Advanced Drug Delivery, held at NIPER, Mohali, on 24-28 February, 2009.
  9. Sharma R, Kumar A, Sardana S, **Chopra D**. Celecoxib embedded lipid nanoconstructs for the management of osteoarthritis, 61<sup>st</sup> Indian Pharmaceutical Congress, held at Ahmedabad, 11-13 December, 2009.
  10. Bhatia A, Sharad P, **Chopra D**. Immunorestoratory efficacy of Ziziphus mauritiana leaf extract loaded chitosan nanoparticles in immunosuppressed mice, International Conference on Biotechnology and Food Science, held at Bangalore, 9-10 February, 2010.

11. Chopra D. General Awareness on Breast Cancer and Cervical Cancer, International conference on women and development: Issues & Initiatives held at Punjabi University, Patiala, 26-27 March, 2010.
12. Chopra D. Women's Health in India, International conference on women and development: Issues & Initiatives held at Punjabi University, Patiala, 11-12 February, 2011.
13. Bhatia A, Mishra T, Sharad P, Chopra D. Alternative immunotherapeutic agents and amelioration of their potency through nanoparticle delivery, National conference on medical biotechnology, held at Maharshi Dayanand University, Rohtak, Hararyana, 16-18 April, 2010.
14. Chopra DS. **Alarming Rise of Breast Cancer in India**, Seventh International conference on empowering women, empowering humanity held at Punjabi University, Patiala, 11-12 December, 2015.

Participated in

UGC-SAP (DRS-II) sponsored International Seminar- CUM-Workshop on "New Paradigms in drug discovery and delivery research" organized by Department of Pharmaceutical Sciences & Drug Research, Punjabi University, Patiala on 26-27 February, 2020.

