

# CURRICULUM VITÆ



**Name** : Dr Amita Sarwal  
**M.S.Pharm., Ph.D.**

**Present Status** : Assistant Professor in Pharmaceutics,  
University institute of Pharmaceutical Sciences,  
UGC-Centre of Advanced Studies  
Panjab University Chandigarh  
(From September 12, 2012 to till date)

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## Academic Qualifications:-

Qualification	Year of Award	Board/ University	Percentage/ CGPA/Rank	Division
Ph.D. (Pharmaceutics)	2007	Faculty of pharmaceutical sciences, Panjab University, Chandigarh	---	----
M.S. Pharm. (Pharmaceutics)	2000	National Institute of Pharmaceutical Education and Research (NIPER), Mohali.	7.52 GPA	First
B.Pharmacy	1998	University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh	60.26 %	First
10+2	1994	Central Board of Secondary Education (CBSE)	64.4 %	First
10th	1992	Central Board of Secondary Education (CBSE)	84.8 %	First

## **EXPERIENCE-**

<b>Designation</b>	<b>Industry/Institute &amp; Funding Agency</b>	<b>Period</b>
<b>Junior Research Fellow</b>	<b>UGC, New Delhi, India</b>	<b>Dec, 2001 to October, 2002</b>
<b>Senior Research Fellow</b>	<b>CSIR, New Delhi, India</b>	<b>October 2002 to March, 2007</b>
<b>Research trainee in formulation R&amp;D</b>	<b>IND-SWIFT Laboratories, Pvt. Ltd. Panchkula, India</b>	<b>3 Months</b>
<b>Lecturer</b>	<b>Shri Guru Ram Rai Institute of Technology and Science</b>	<b>10 Months</b>
<b>Research Scientist</b>	<b>Formulation R&amp;D center of Jubilant Organosys from</b>	<b>Feb 1, 2008 to May 13, 2011</b>
<b>Associate Professor (Pharmaceutics), Faculty of Pharmacy</b>	<b>Sunder Deep Group of Institution, Ghaziabad</b>	<b>From June 15, 2011 to September 2012</b>
<b>Assistant Professor (Pharmaceutics),</b>	<b>University Institute Of Pharmaceutical Sciences, UGC-centre for advanced studies, Panjab University, Chandigarh</b>	<b>From September 12, 2012 to till date)</b>

### **Research and Teaching Experience:10+ years**

#### **RESEARCH PROJECTS IN ACADEMIA**

- Inclusion complexation of Celecoxib and Etodolac with cyclodextrins: formulation, physicochemical characterization and evaluation
- Development and evaluation of novel taste-masked suspension and mouth dissolving dosage form of Dicyclomine hydrochloride
- Development and evaluation of intravaginal bioadhesive delivery systems of acyclovir.
- Development of Mucoadhesive in-situ gelling systems of Fluconazole: *in –vitro* and *in-vivo* evaluation and characterisation.

#### **SKILLS DEVELOPED BY WORKING IN PHARMACEUTICAL INDUSTRY-**

##### **Key role activities in the Pharmaceutical dosage form development and Regulatory skills:**

- New formulation development of various dosage forms

- Planning detailed activities related to formulations and execution of the same within targeted time limits and on cost effective basis
- Optimization of formula, process optimization trials, feasibility and validation batches, forced degradation, stability studies and packing development for smooth execution at scale up level
- Co-ordination with Regulatory Affairs department for preparation of technical documents of a new product
- To prepare license information form, product approval form, tentative finished product specification, operational raw material list, product development report (PDR) etc.
- Scaling up batches, trouble shooting and technology transfer to production department
- Master document like bill of material, manufacturing instructions, batch manufacturing record, process validation protocol, process validation, master packing record as per the requirement for Regulated market for execution of stability batches at production level
- Co-ordination with various departments like vendors, purchase, production, QA-QC, IPR and regulatory for smooth development and execution of drug product.
- Reviewing of Protocol for BE study.
- Reviewing of Bioequivalence study
- Reviewing of Expert Report for various products for regulatory submission
- Participation in Preparation of PSUR Data
- Knowledge about ICH-GCP Guidelines
- Guideline of Bioavailability and Bioequivalence for CDSCO, US-FDA, EMEA & Canada.

### **Other Technical Skills**

- Handling software packages and Literature search for patents.
- Preparation of Technical dossier, Stability Protocol and Development Report.
- Sound knowledge of MS Word, Excel & Power point.

### **Computers**

- Well versed in MS-DOS, MS-Word, MS-PowerPoint, MS-Excel, Sigma-Stat software, Endnote, Adobe photoshop, Chemdraw, ISIS draw, and pharmacokinetic software

### **SKILLS DEVELOPED BY WORKING IN ACADEMIA**

- Key role activities in the Pharmaceutical dosage form development of NDDS products by various methods of preparations, stability studies. Pharmacodynamic and Pharmacokinetics study in suitable animal models (HPLC/LCMS/MS/Biodistribution Studies).

- Communicated various research/review papers/Book Chapters/ to national and international journals.
- Attended various national and international conferences and presented research work. (Invited lecture/oral lectures/poster presentations)

### **Publications: -**

<b>Publication</b>	<b>Journal</b>	<b>Impact factor</b>
Gurpreet Singha, Amita Sarwal , Sachin Sharma , Priya Prasad , Anurag Kuhad And Waseem Ali (2020) Polymer-Based Prolonged-Release Nanoformulation Of Duloxetine: Fabrication, Characterization and Neuropharmacological Assessments Drug Development and Industrial Pharmacy Doi.Org/10.1080/03639045.2020.1851240	<b>Drug Development and Industrial Pharmacy</b>	<b>2.4</b>
Rajiv Kumar, V. R. Sinha, Lalita Dahiya, Gurpal Singh & <b>Amita Sarwal</b> (2020) Impact of cyclodextrin derivatives on systemic release of duloxetine HCl via buccal route, Drug Development and Industrial Pharmacy, 46:6, 931-945, DOI: <a href="https://doi.org/10.1080/03639045.2020.1764019">10.1080/03639045.2020.1764019</a>	<b>Drug Development and Industrial Pharmacy</b>	<b>2.4</b>
Rajiv Kumar, <b>Amita Sarwal</b> , Lalita Dahiya, Dikshi Gupta & V. R. Sinha Experimental investigations, cytotoxicity and cellular uptake outcomes of physically modified duloxetine HCl inclusion complexes. January 2019, Polymer Bulletin DOI: <a href="https://doi.org/10.1007/s00289-019-02686-2">10.1007/s00289-019-02686-2</a>	<b>Polymer Bulletin</b>	<b>1.5</b>
<b>Amita Sarwal</b> , Gurpreet Singh, Kirti Singh, Sanjay Garg Recent interventions for nanotechnology based drug products: Insights in the regulatory aspects. January 2019 Current Pharmaceutical Design DOI: <a href="https://doi.org/10.2174/1381612825666190117094250">10.2174/1381612825666190117094250</a>	<b>Current Pharmaceutical</b>	<b>2.75</b>
<b>Amita Sarwal</b> ,Gurpreet Singh, Nisha Rawat, Kirti Singh, , V. R. Sinha. Investigating the potential of an antidepressant intranasal mucoadhesive microemulsion, <b>International Journal of Pharmacy and Pharmaceutical Sciences</b> , 2018; 10(6) 125-132	<b>International Journal of Pharmacy and Pharmaceutical Sciences</b> ,	<b>0.51</b>
<b>Amita Sarwal</b> , Gurpreet Singh, Shilpa Singh, Kirti Singh, V. R. Sinha Novel and effectual delivery of an antifungal agent for the treatment of persistent vulvovaginal candidiasis, <b>Journal of Pharmaceutical Investigation</b>	<b>Journal of Pharmaceutical Investigation</b>	<b>2.30</b>
Navjot Kanwar, Rakesh Kumar, <b>Amita Sarwal</b> , and V. R. Sinha, Preparation and evaluation of floating tablets of pregabalin, <b>Drug Dev Ind Pharm</b> , 2015; 42(4) 654-660.	<b>Drug Development and Industrial Pharmacy</b>	<b>2.29</b>
Vivek Ranjan Sinha, <b>Amita</b> , Renu Chadha, Honey Goel, Inter-molecular physicochemical characterization for etodolac-hydroxypropyl- $\beta$ -cyclodextrin polymeric systems in solid and liquid state, <b>Central European Journal of Chemistry</b> , 2010; 8 (4), 953-962.	<b>Central European Journal of Chemistry</b>	<b>1.22</b>
Vivek Ranjan Sinha, * <b>Amita</b> , and Honey Goel, Molecular simulation of hydroxypropyl- $\beta$ -cyclodextrin with hydrophobic selective COX-II chemopreventive agent using host-guest phenomena, <b>Acta poloniae pharmaceutica</b> , 68(4), 585-92	<b>Acta poloniae pharmaceutica</b>	<b>0.84</b>

Vivek Ranjan Sinha,* <b>Amita</b> , and Honey Goel, In Vivo Bioavailability and Therapeutic Assessment of Host-Guest Inclusion Phenomena for the Hydrophobic Molecule Etodolac: Pharmacodynamic and Pharmacokinetic Evaluation, <b>Sci Pharm.</b> 2010; 78(1), 103–115.	<b>Scientia Pharmaceutica</b>	1.07
V. R. Sinha, <b>Amita</b> , Renu Chadha, Honey Goel, Enhancing the dissolution of hydrophobic guests using solid state inclusion complexation: characterization and in vitro evaluation, <b>Journal of Inclusion Phenomena and Macrocyclic Chemistry</b> , 2010; 66(3), 381-392.	<b>Journal of Inclusion Phenomena and Macrocyclic Chemistry</b>	1.31
Sinha V. R., Anitha R, Ghosh S, <b>Amita</b> , Bhinge J R, Kumar Manoj, Physicochemical characterization and in vitro dissolution behaviour of celecoxib- $\beta$ -CD inclusion complexes, <b>Actapharma</b> , 2007; 57, 47-60.	<b>Actapharmaceutica</b>	1.62
Sinha V. R., Anitha R, Ghosh S, <b>Amita N</b> , Complexation of celecoxib with $\beta$ -Cyclodextrin: Characterization of the interaction of the interaction in solution and in solid state, <b>J. Pharm. Sci</b> , 2007; 94, 676-687.	<b>Journal of Pharmaceutical Sciences</b>	3.07
Dinesh Kumar, Amita Nanda, Gaurav Narang, Sheetal Guleria and Ranju Bansal, Importance of Drug regulatory affairs in pharmaceutical education, <b>J. Sci. Tech.</b> , 2005; 1 (2), 74-78.	<b>Journal of Science and Technology</b>	0.13
Sinha V. R., Nanda Amita, Kumaria Rachna, Cyclodextrins as sustained-release carriers, <b>Pharm. Technol.</b> , 2002; 26, 36-46.	<b>Pharmaceutical Technology</b>	1.9
Sinha V. R., Bindra S, Kumaria Rachna, Nanda Amita. "Cyclodextrins as skin-penetration enhancers" <b>Pharm. Technol.</b> , 27, Pg 120-128, 2003	<b>Pharmaceutical Technology</b>	1.9
Nanda Amita, Kandarapu R., Garg S. "An update on taste masking technologies for oral pharmaceuticals" <b>Indian J. Pharm. Sci.</b> , 64, Pg 10-17, 2002	<b>Indian Journal of Pharmaceutical Sciences</b>	0.76

1. Recent Advances in Nanocarrier-Based Brain-Targeted Drug Delivery for Effective Treatment of Central Nervous System Disorders July 2020 DOI: 10.1007/978-3-030-41858-8\_9 In book: Nanoformulations in Human Health.
2. Nanonutraceuticals in Central Nervous System Disorders November 2018 in book: NanoNutraceuticals Publisher: CRC Press Taylor & Francis Group.
3. Chitosan-Based Nanocarriers A Promising Delivery System for Bioactives CRC Press NanoAgrochemicals & NanoPhytochemicals March 2019.
4. Nanoarchitectonics for smart delivery and drug targeting by William Andrew 2016, edited

by Alina Maria Holban, Alexandru Mihai Grumezescu. Current polyestheric systems in advanced drug delivery: V.R.Sinha, S. Sharma, Silki, M. Kaur, **A. Sarwal**.Pg no. 143-169

5. Pharmaceutical product development by N K Jain, Vaginal Drug Delivery systems: V R Sinha, Amita Sarwal, Sandeep Kaur, Harneet Kaur, Sumit Sharma

### **CONFERENCES AND SEMINARS**

1. **54<sup>th</sup> Indian Pharmaceutical Congress, an international conference held at Pune in Dec. 2002**, Sinha V. R., Anitha R, Ghosh S, **Amita, N**; “Complexation of celecoxib with  $\beta$ -Cyclodextrin: Characterization of the interaction of the interaction in solution and in solid state”.
2. **National seminar on pharmaceuticals in the light of drug delivery challenges, March, 2003**, Sinha V. R., Anitha R, Ghosh S, Kaushik R, **Amita**; “Physicochemical characterization and *in vitro* dissolution behaviour of Celecoxib- $\beta$ -CD inclusion complexes”. (Abst. No.-P14)
3. **56<sup>th</sup> Indian Pharmaceutical Congress, an international conference in Dec, 2004**, Manish Sharma, Dinesh Kumar, Priyanka Jain, Gaurav Narang, Sheetal Guleria, **Amita Nanda** and Ruchi Malik. “Safety in Pharmaceutical Chemistry Laboratory.” (Abst. No.-KP32)
4. **57<sup>th</sup> Indian Pharmaceutical Congress, an international conference held at Hyderabad from 3<sup>rd</sup>-5<sup>th</sup> Dec, 2005**, Dinesh Kumar, Priyanka Jain, Gaurav Narang, Sheetal Guleria, **Amita Nanda** and Ranju Bansal; “Outsourcing lead optimization in India”.
5. **58<sup>th</sup> Indian Pharmaceutical Congress, an international conference held at Mumbai from 1<sup>st</sup> - 3<sup>rd</sup> Dec, 2006**, Dinesh Kumar, Gaurav Narang, Praveen Aggarwal, Sheetal Guleria, Priyanka Jain, **Amita Nanda** and Ranju Bansal. “Importance of Intellectual Property Rights (IPR) in Pharma education”.
6. **66<sup>th</sup> Indian Pharmaceutical Congress, an international conference held at Hitex City, Hyderabad, 23<sup>rd</sup> to 25<sup>th</sup> Jan, 2015**, Sandeep Kaur, Manpreet Kaur, **Amita Sarwal**, V.R. Sinha. “Studies on prolonged release formulations for parenteral administration of Aceclofenac”. (Abst. No. A-238)
7. **66<sup>th</sup> Indian Pharmaceutical Congress, an international conference held at Hitex City, Hyderabad, 23<sup>rd</sup> to 25<sup>th</sup> January 2015**, Lavjot Kaur, Harneet Kaur, **Amita Sarwal**, V.R. Sinha. “Preparation and evaluation of Voriconazole microemulsion gel for topical delivery”. (Abst. No. A-154)

8. **Chandigarh Science Congress, Panjab University, Chandigarh, 25<sup>th</sup> to 27<sup>th</sup> Feb 2015**, Sandeep Kaur, Harneet Kaur, **Amita Sarwal**, V.R. Sinha. Vaginal drug delivery systems. 9<sup>th</sup> (Abst. No. PP-24)
9. **9<sup>th</sup> Chandigarh Science Congress, Panjab University, Chandigarh, 25<sup>th</sup> to 27<sup>th</sup> Feb 2015** Harneet Kaur, Sandeep Kaur, **Amita Sarwal**, V.R. Sinha. Novel Drug Delivery Systems for Antiviral Agents.(Abst. No. PP-25)
10. **67<sup>th</sup> Indian Pharmaceutical Congress, an international conference held at JSS University, Mysuru, 19<sup>th</sup> to 21<sup>st</sup> Dec 2015**, Shilpa, Sandeep Kaur, **Amita Sarwal**, V.R. Sinha. “Development and Evaluation of intravaginal bioadhesive delivery systems”. (Abst. No. - A-530)
11. **10<sup>th</sup> National Conference on Thermodynamics of Pharmaceutical, chemical and biological systems at Panjab University, Chandigarh, 20-21 Nov. 2015**, Oral Presentation entitled Development and evaluation of intravaginal bioadhesive tablets of Acyclovir.
12. **Nanoscitech, Panjab University, Chandigarh, 18<sup>th</sup> to 20<sup>th</sup> Feb 2016**, Shilpa, Sandeep Kaur, **Amita Sarwal**, V.R. Sinha. “Preparation and Characterization of intravaginal bioadhesive delivery systems of acyclovir”. (Abst. No.- NANO/16/DD/0144)
13. **10<sup>th</sup> Chascon, Panjab University, Chandigarh. 29<sup>th</sup> Feb to 2<sup>nd</sup> March 2016**, **Amita Sarwal**, Sandeep Kaur, Shilpa, V.R. Sinha. “Development and evaluation of intravaginal bioadhesive system for anti-viral therapy”. (Abst. No. PP-2)
14. **11<sup>th</sup> Chascon, Panjab University, Chandigarh. 9<sup>th</sup> to 11<sup>th</sup> March 2017** **Amita Sarwal**, Gurpreet Singh, Nisha Rawat, V.R.Sinha “**Approaches to transport of drugs across the blood–brain barrier to treat brain diseases**”. (Abst. No. PS\_0057)
15. **11<sup>th</sup> Chascon, Panjab University, Chandigarh. 9<sup>th</sup> to 11<sup>th</sup> March 2017** **Amita Sarwal**, Gurpreet Singh, Nisha Rawat, V.R.Sinha “**Preparation and characterization of bioadhesive intravaginal system for antiviral therapy**”(Abst. No. PS\_0058)

## **5. ACADEMIC ACHIEVEMENTS:**

- Awarded **Merit Scholarship** by UGC and NIPER during M.S (Pharmaceutics) (1998-2000)
- Awarded **Junior Research Fellowship** (open Fellowship) by U.G.C, New Delhi, India. (2001-2002)

- Awarded **Senior Research Fellowship** (open fellowship) by CSIR, New Delhi, India. (2002-2006)
- Awarded **BEST POSTER PRESENTATION** in Nanosci-tech, Panjab University, Chandigarh, 18<sup>th</sup> to 20<sup>th</sup> Feb 2016.(Abst. No.- NANO/16/DD/0144)
- Attended workshop on **Patent awareness** held in Aug 2004 at Panjab University, Chandigarh
- Attended workshop on **assessment of quality of drugs and pharmaceutical** held at NIPER, Mohali.
- Attended workshop on **Preparation and assessment of pharmaceutical registration dossier** held at NIPER, Mohali.
- Attended **Indian Pharmaceutical Congress (IPC)** held in Dec 1994 at Panjab University, Chandigarh.
- Attended **Indian Pharmaceutical Congress (IPC)** held in Dec 2002 at Pune.
- Attended **Indian Pharmacy Graduates Association (IPGA)** conference held in Feb 2003 at Panjab University, Chandigarh.
- Attended **Joint International Conference of Cardiology (JIC)** held in Jan 2005 at Ahmedabad.
- Attended **Diamond Jubilee** celebrations of UIPS and international symposium on drug discovery held in Feb 2005 at Panjab University, Chandigarh.
- Attended National seminar on **Pharmaceutics in the light of drug delivery challenges** held at Panjab University
- Delivered an oral presentation on “Development and Evaluation of Intravaginal Bioadhesive Tablets of Acyclovir” in 10<sup>th</sup> National Conference on “Thermodynamics of Pharmaceutical, Chemical and Biological Systems”

#### **6. MEMBERSHIP OF OTHER ACADEMIC BODIES:**

1. Life member of Indian Pharmacy graduates association (**IPGA**)
2. Registered Pharmacist with **Chandigarh Pharmacy Council**.

#### **Grants Received:**

**MHRD / UGC EMPOWERED “START-UP GRANT”** for a project titled *“Development and evaluation of vaginal delivery system of acyclovir for the prevention of viral disease”*

**ICMR Extramural Research Programme**

**Titled “Safer mucoadhesive novel drug delivery system for nose to Brain Delivery of Duloxetine**



## **Hydrochloride: Preparation, Characterization and Dosage form Design**

### **No. of M Pharm. /Ph. D students:**

- a) **Guided:** 9 M. Pharm.
- b) **Presently supervising:** 2 Ph. D + 3 M. Pharm.

**Date and Place**

**(Amita Sarwal)**