

BIO-DATA (Long-Format)

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1. **Name** : **Dr. ASHOK K. TIWARY**
2. **Designation** : **Professor (Pharmaceutics)  
& Former Dean (Faculty of  
Medicine)**
3. **Department** : **Pharmaceutical Sciences &  
Drug Research**
4. **Date of Birth** : **16-11-1965**
5. **Address for  
Correspondence** : **Dept. Pharm. Sci. & Drug  
Res., Punjabi University,  
Patiala – 147 002 (Punjab)**



**Photograph**

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**E-mail** : aktiwary2@rediffmail.com

	<b>All</b>
<b>Citations</b>	<b>5077</b>
<b>h-index</b>	<b>39</b>
<b>i10-index</b>	<b>86</b>

- 6 **Areas of Specialisation** : **PHARMACEUTICS**
- Contraception (Spermicidal agents)**
- Transdermal Dosage Forms (Permeation Enhancement)**
- Transdermal Dosage Forms (Artificial Films)**
- Modified Release Oral Dosage forms (Formulation  
Optimisation)**
- Suspensions (Stability Improvement)**
- Microemulsions**

7. **Academic Qualifications :**

<b>Sr. No.</b>	<b>Degree Held</b>	<b>Year</b>	<b>Board/Univ./ Inst.</b>	<b>% of marks</b>	<b>Div./ Rank</b>	<b>Subjects Taken</b>
1	Ph.D.	1997	BIT, Mesra, Ranchi			Pharmaceutics
2	M. Pharm.	1988	BIT, Mesra, Ranchi	CGPA 3.93/4.0	Ist	Pharmaceutics
3	B. Pharm.	1986	-do-	79	Ist	

8. **Membership of Professional Bodies/Organisations**  
 i) Life Member- Indian Pharmaceutical Association  
 ii) Life Member – APTI  
 iii) Fellow of Association of Biotechnology and Pharmacy (India)

9. **Medals/Awards/Honours/Received**  
 i) .....  
 ii) .....

10. **Scholarships:**  
 i) .....  
 ii) .....

11. **Details of Experience:**

S. No.	Name of the Inst./Employer	Position Held	Duration	Major Job Responsibilities and Nature of Experience
1.	Punjabi University, Patiala	Professor	Jan 2007-till date	Teaching PG and UG; Research
2.	Punjabi University, Patiala	Reader	Nov 2003-Dec 2007	Teaching PG and UG; Research
3.	Punjabi University, Patiala	Lecturer	Jan 1995-Oct 2003	Teaching PG and UG; Research
4.	BIT. Mesra, Ranchi	Assoc. Lect.	1993-94	Teaching UG and Research
5.	BIT, Ranchi (UGC-SRF)	SRF	1989-1993	Teaching UG and Research
6.	JSS College, Ooty	Lecturer	1988-1989	Teaching PG and UG; Research

12. **Published Work (Please specify numbers only):**

- a. Research Papers i) National = 15  
 ii) International = 112  
 TOTAL = 127  
 (List Attached)
- b. Conference/Seminar Presentation = 45
- c. Books  
 i) Original : 05  
 ii) Edited :  
 (List Attached)
- d. Book Chapters: 10

11. **R & D Projects**

**MAJOR PROJECTS**

S. No.	Funding Agency	Title	Grant (Rs)	Status
12	UGC, NEW DELHI	SAP-DRS II COORDINATOR	1,11,00,000/-	2015-2020 Completed

11	DST, New Delhi	Transdermal delivery system containing aliskiren and valsartan for effective management of hypertension: Formulation and evaluation	30,38,000/-	2013-2016 Completed
10	UGC, NEW DELHI	Solid microemulsionpreconcentrates containing atemether and lumefantrine: formulation optimization and evaluation	13,50,000/-	2012-2015 Completed
09	Department of Science & Technology, New Delhi	FIST- Project Coordinator	64,00,000/-	2009-2014 Completed
08	UGC, New Delhi	SAP-DRS Phase-1- Project Coordinator	51,50,000/-	2009-2014 Completed
07	ICMR, New Delhi	Formulation of colon delivery systems of 5-Fluorouracil: Investigations using biodegradable polymers-PI	33,00,000/-	Completed (2013)
06	AICTE, New Delhi-RPS	Colorectal delivery of Mesalazine: Formulation development and optimization using biodegradable polymeric complexes-PI	10,00,000/-	Completed (2012)
05	CSIR, New Delhi (Scheme No. 01(2088)/06/EMR-II	Saponins for percutaneous permeation enhancement: Biochemical, biophysical and microscopic investigations-PI	10,00,000/-	Completed (2009)
04	Lady Tata Memorial Trust, Mumbai	Anti-diabetic efficiency of transdermally delivered repaglinide ; In Vitro and In Vivo Evaluation.	4,00,000/-	Completed (2009)

03	AICTE, New Delhi – MODROBS	Modernization of pharmaceuticals research laboratory-PI	10,00,000/-	Completed (2009)
02	Kemin Industries Inc., Iowa, USA	Testing LPC compound for transdermal permeation enhancement activity-PI	US \$ 5000	Completed (2007)
01	CSIR, New Delhi (Scheme No. 01/ (1682)/00)	The role of lipid synthesis inhibitors in percutaneous permeation enhancement	6,60,000	Completed (2004)

## 12. Invited Talks/Articles

1. Invited to contribute a chapter "Crystal habit changes and dosage form performance" for Encyclopaedia of Pharmaceutical Technology, Marcel Dekker Inc., 2003.
2. Invited to contribute a chapter "B. Sapra, S. Jain and Tiwary A. K. Dissolution In: Preclinical Development Handbook: ADME and Biopharmaceutical Properties, S. C. Gad (Ed.), Chapter 15, 483-544, John Wiley and Sons, Inc., NJ, USA (2008).
3. Invited to contribute a chapter "Crystal habit changes and dosage form performance" for Encyclopaedia of Pharmaceutical Technology, Informa Healthcare, USA, 2013.
4. Invited to function as a reviewer for journals published by the American Association of Pharmaceutical Scientists (**AAPSJ, AAPS PharmSciTech**).
5. Invited to function as a reviewer for **Indian Journal of Pharmaceutical Sciences** (an official publication of Indian Pharmaceutical Association).
6. Invited to function as a reviewer for **European Journal of Pharmaceutics and Biopharmaceutics**.
7. Invited to function as a reviewer for **International Journal of Pharmaceutics**.
8. Invited to function as a reviewer for **Food Hydrocolloids**.
9. Invited to function as a reviewer for **Drug Delivery and Formulation**.
10. Invited to function as a reviewer for **Molecular Pharmaceutics**.
11. Invited to function as a reviewer for **Pakistan Journal of Pharmaceutical Sciences**.
12. Invited to function as a reviewer for **Expert Opinion on Drug Delivery**.
13. Invited to function as a reviewer for **Indian Journal of Experimental Biology**.
14. Member of **Editorial Board** of "Recent patents on drug delivery and formulation", a Bentham Publication.
15. Member of International **Editorial Board** for the journal 'Therapeutic Delivery', Future Science publishers.
16. Biography entered in Marquis Who's Who in Engineering and Technology (2003, 2004, 2005, 2006, 2007).
17. Member Gerson Lehrman Group - Council of Health Advisors (UK).
18. Subject expert appointed by Department of Technical Education, Government of Punjab for inspecting Diploma Pharmacy Institutions in Punjab.
19. Appointed Resource Person by Pharmacy Council of India, New Delhi for preparing Instruction Material for Pharmacists working in institutions catering Anti-Retroviral Therapy.
20. Convener-National Conference on Innovations in Drug Discovery and Research, Punjabi University, Patiala, 3-5 March 2009.
21. Member National Board of Accreditation (2010).
22. Chairman, Oral/Poster Session, 62<sup>nd</sup> Indian Pharmaceutical Congress, Manipal, India.

23. Guest Speaker for Lead Lecture, 7-9 Feb 2011 at 14<sup>th</sup> Punjab Science Congress, Longowal, Punjab.

13. Ph.D. Students guided/under guidance (Details) :

S. No.	Name of the Student	Title of Thesis	Status
1.	Mrs. Babita	Lipid synthesis inhibitors: A means for percutaneous permeation enhancement	Awarded Ph. D-2006
2.	Mr. VikasRana	Preparation and characterization of artificial films for in vitro permeation studies	Awarded Ph. D-2007
3.	Mrs. Richashri	Phytochemical and anti-anxiety evaluation of few medicinal plants	Awarded Ph.D.-2010
4.	Mrs. Bharti	Effect of saponins on percutaneous drug delivery	Awarded Ph. D.-2009
5.	Mrs. Gurpreet	Colon targeted drug delivery using natural polymers	Awarded Ph. D.-2010
6.	Ms. Neeraj	Investigations on plant extracts for transdermal delivery of repaglinide	Awarded Ph. D.-2011
7.	Mr. P. Rai	Investigations on biodegradable polymers for colorectal drug delivery: Formulation and evaluation	Awarded Ph. D.-2012
8.	Mr. RashmiRanjan Panda	Designing and performance evaluation of osmotically controlled dosage form of glipizide	Awarded Ph. D.-2013
9.	Mr. Manish Jindal	Formulation of colon delivery system of 5-fluorouracil: investigations using biodegradable polymers	Awarded Ph. D.-2014
10.	Mr. Anil Patni	Bioavailability of itraconazole formulation: Influence of nature of diet	Awarded Ph. D.-2015
11.	Mr. JatinSood	Submicron particulate carriers for transdermal delivery of antihypertensives: Formulation and Evaluation	Awarded Ph.D.-2018
12.	Mr. Sameer Bhandari	Solid microemulsionpreconcentrates containing artemether and lumefantrine: Formulation optimization and evaluation	Awarded Ph.D.-2018
13.	Ms. VinniKalra	Formulation and evaluation of In Silico designed nose to brain drug delivery system for Alzheimer's disease	Registered 2020

14. M.Phil./M.Tech Students guided :

S. No.	Number of Students	Title of Thesis	Year of Completion
1.	50		1995-till date

**15. List of Papers/Courses taught at P.G. and U.G. Level**

S. No.	Paper	Class
1.	General Pharmaceutics	UG
2.	Pharm. Technol.	UG
3.	Pharmacokinetics	UG
4.	Adv.Pharmacokinetics	PG
5.	Regulatory Affairs	PG

**16. Technical Proficiency**

A novel means for enhancing percutaneous permeation of drugs by inhibiting the skin lipid synthesis has been developed. Further work on evaluating the effect of herbal principles on tight junction proteins in skin using HaCat cell line was completed in collaboration with Dr. PaturuKondiah, IISc, Bangalore, India. Formulation optimisation of artificial films for testing the in vitro permeation of transdermal dosage forms has been done for future use as substitute for animal/human skin. A Franz diffusion cell assembly capable of running eight experiments simultaneously has been designed and fabricated. A novel means of contraception-targeting the ejaculated spermatozoa by utilizing intracellular calcium overload is being intensively investigated. Microspheres as a means of sustaining and enhancing drug delivery have been optimized for few drugs. Work on colon targeted drug delivery using novel polymer-ion and polymer-polymer interactions is in progress. Investigations on formulation development of microemulsions containing drugs with low aqueous solubility using dietary lipids are in progress. Attempts are being made to prepare pre concentrated solid microemulsions containing adsorbed drugs that would release the drugs on reaching the g.i.t.

**WORK PROPOSED TO BE CARRIED OUT IN FUTURE**

It is proposed to use herbal principles for enhancing the percutaneous permeation of drugs and study their mechanism of action on the skin keeping in view the reduced toxicity of these compounds as compared to the synthetic chemicals. The investigations involving mechanism of action are proposed to be carried out using cell lines.

Work involving the use of extruder, spheronizer and pelletizer for formulating sustained release and time-release drug delivery is under progress.

**17. List of Papers Published**

(Please attach the list)

**RESEARCH PAPERS**

**PUBLISHED**

S. No.	TITLE OF RESEARCH PAPER / REVIEW ARTICLE	IMPACT FACTOR
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127.	Singh, G., Kaur, P., Singh, D., <b>Tiwary, A.K.</b> , Arora, S. and Bedi, N. Lyophilized mixed micelles of exemestane: A novel paradigm to improve its absorption and anticancer activity. <i>Archiv der Pharmazie</i> p.e2200579 (2023).	4.61
126.	Singh, D., Bedi, N., <b>Tiwary, A.K.</b> , Kurmi, B.D. and Bhattacharya, S. Natural bio functional lipids containing solid self-microemulsifying drug delivery system of Canagliflozin for synergistic prevention of type 2 diabetes mellitus. <i>Journal of Drug Delivery Science and Technology</i> <b>69</b> :103-138 (2022).	5.06
125.	Sapra, B., Mahajan, D., Chaudhary, S. and <b>Tiwary, A.K.</b> Eye in metabolic disorders: manifestations and drug delivery systems. In <i>Drug Delivery Systems for Metabolic Disorders</i> 371-409 (2022).	
124.	Goel, H., Kalra, V., Verma, S.K., Dubey, S.K. and <b>Tiwary, A.K.</b> Convolutions in the rendition of nose to brain therapeutics from bench to bedside: Feats & fallacies. <i>Journal of Controlled Release</i> <b>341</b> : 782-811 (2022).	11.467
123.	Singh, D., <b>Tiwary, A.K.</b> , Kang, T.S. and Bedi, N. Polymeric precipitation inhibitor based supersaturable self-microemulsifying drug delivery system of Canagliflozin: Optimization and evaluation. <i>Current Drug Delivery</i> <b>18(9)</b> : 1352-1367 (2021).	3.75
122.	Singh, D., Singh, A.P., Singh, D., Kesavan, A.K., <b>Tiwary, A.K.</b> and Bedi. Polymeric precipitation inhibitor-based solid supersaturable SMEDD formulation of canagliflozin: improved bioavailability and anti-diabetic activity. <i>Journal of Pharmaceutical Innovation</i> <b>16</b> :317-336 (2021).	2.53
121.	Goel, H., Singla, R., Chawla, R., Sahoo, U., <b>Tiwary, A.K.</b> and Ranjan, Sinha, V. Facile validated HPLC method using photodiode array detector for the combined analysis of etodolac and 5-FU in bulk and tablet dosage form. <i>Egyptian Journal of Chemistry</i> <b>64(3)</b> : 1601-1614 (2021).	0.23
120.	Singh, D., Sharma, M., <b>Tiwary, A.K.</b> and Bedi, N. Evaluation of bio-mechanistic behavior of liquid self-microemulsifying drug delivery system in biorelevant media. <i>ASSAY and Drug Development Technologies</i> <b>19(2)</b> : 85-96 (2021).	2.47

119.	Goel, H., Razdan, K., Singla, R., Talegaonkar, S., Khurana, R.K., <b>Tiwary, A.K.</b> , Sinha, V.R. and Singh, K.K. Engineered site-specific vesicular systems for colonic delivery: trends and implications. <i>Current Pharmaceutical Design</i> <b>26(42)</b> :5441-5455 (2020).	<b>3.31</b>
118.	Singh, D., Singh, A.P., Singh, D., Kesavan, A.K., Arora, S., <b>Tiwary, A.K.</b> and Bedi, N. Enhanced oral bioavailability and anti-diabetic activity of canagliflozin through a spray dried lipid based oral delivery: a novel paradigm. <i>DARU Journal of Pharmaceutical Sciences</i> <b>28</b> :191-208 (2020).	<b>4.08</b>
117.	<b>Tiwary, A.K.</b> and Gupta, A.K. Mechanical behavior of circular concrete filled steel tube column under axial loading for sustainable building. <i>Journal of Green Engineering</i> <b>10_11</b> : 11116-11132 (2020).	<b>0.34</b>
116.	Goel, H., Singla, R. and <b>Tiwary, A.K.</b> Point-of-Care Nanoplatfoms for Glaucoma and Age-Related Macular Degeneration: Clinical Implications and Emerging Concepts. <i>Nanoformulations in Human Health: Challenges and Approaches</i> 227-257 (2020).	
115.	Singh, S., Goel, H., Singh, S. and <b>Tiwary, A.K.</b> Understanding COVID-19: origin, symptoms and current treatment guidelines. <i>Physiotherapy-The Journal of Indian Association of Physiotherapists</i> <b>14(1)</b> :5 (2020).	<b>0.2</b>
114.	<b>Tiwary, A.K.</b> Pharmaceutical Manipulations for Ocular Drug Delivery. <i>Recent Patents on Drug Delivery &amp; Formulation</i> <b>13(4)</b> :244-245 (2019)	<b>0.32</b>
113.	Choudhary, S., Kalra, V., Kumar, M., <b>Tiwary, A.K.</b> , Sood, J. and Silakari, O. Bio-Inspired Strategies against Diabetes and Associated Complications: A Review. <i>Recent Patents on Drug Delivery &amp; Formulation</i> <b>13(4)</b> :273-282 (2019).	<b>0.32</b>
112.	Singh, D., Singh, M., Tharmatt, A., <b>Tiwary, A.K.</b> and Bedi, N. Polymeric precipitation inhibitor as an effective trigger to convert supersaturated into supersaturable state in vivo. <i>Therapeutic Delivery</i> <b>10(9)</b> : 599-608 (2019).	<b>0.51</b>
111.	Sood, J., Sapra, B. and <b>Tiwary, A.K.</b> Drug in Adhesive Transdermal Formulation of Valsartan and Nifedipine: Pharmacokinetics and Pharmacodynamics in Rats. <i>Current Drug Therapy</i> <b>14(2)</b> : 153-167 (2019).	<b>0.6</b>



110.	Singh, D., <b>Tiwary, A.K.</b> and Bedi, N. Self-microemulsifying drug delivery system for problematic molecules: an update. <i>Recent Patents on Nanotechnology</i> <b>13(2)</b> : 92-113 (2019).	<b>2.32</b>
109.	Singh, D., <b>Tiwary, A. K.</b> and Bedi, N. Canagliflozin loaded SMEDDS: formulation optimization for improved solubility, permeability and pharmacokinetic performance. <i>Journal of Pharmaceutical Investigation</i> <b>49</b> : 67-85 (2019).	<b>1.09</b>
108.	Singh, D., <b>Tiwary, A. K.</b> and Bedi, N. Role of porous carriers in the biopharmaceutical performance of solid SMEDDS of canagliflozin. <i>Recent Patents of Drug Delivery and Formulation</i> <b>12</b> : 179-198 (2018).	<b>0.32</b>
107.	Singh, D., Bedi, N. and <b>Tiwary, A. K.</b> Enhancing solubility of poorly aqueous soluble drugs: Critical appraisal of techniques. <i>Journal of Pharmaceutical Investigation</i> <b>48</b> : 509-526 (2018).	<b>1.09</b>
106.	Bhandari, S., Bhandari, V., Sood, J., Jaswal, S. K., Bedi, N., Rana, V., Sehgal, R. and <b>Tiwary, A. K.</b> Improved pharmacokinetic and pharmacodynamic attributes of artemether-lumefantrine-loaded solid SMEDDS for oral administration. <i>Journal of Pharmacy and Pharmacology</i> , <b>69</b> : 1437-1446 (2017).	<b>2.40</b>
105.	Sood, J., Sapra, B., <b>Tiwary, A. K.</b> Microemulsion Transdermal Formulation for Simultaneous Delivery of Valsartan and Nifedipine: Formulation by Design. <i>AAPS PharmSciTech</i> <b>18</b> : 1901-1916 (2017).	<b>2.45</b>
104.	Bhandari, S., Rana, V. and <b>Tiwary, A. K.</b> Antimalarial solid self-emulsifying system for oral use: in vitro investigation. <i>Therapeutic Delivery</i> , <b>8</b> : 201-213 (2017).	
103.	Sood, J., Sapra, B., Bhandari, S. and <b>Tiwary, A. K.</b> Understanding pharmaceutical polymorphic transformations II: crystallization variables and influence on dosage forms. <i>Therapeutic delivery</i> 07/2015; 6(6):721-40. DOI:10.4155/tde.15.21	---
102.	<u>Thatai</u> , P., <b>Tiwary, A. K.</b> and Sapra, B. Progressive Development in Experimental Models of Transungual Drug Delivery of Antifungal Agents. <i>International Journal of Cosmetic science</i> 04/2015; DOI:10.1111/ics.12230	<b>1.45</b>
101.	Kamboj, S., Singh, K., <b>Tiwary, A. K.</b> and Rana, V. Optimization of microwave assisted Maillard reaction to fabricate and evaluate corn fiber gum-chitosan IPN films. <i>Food Hydrocolloids</i> <b>44</b> : 260-276 (2015).	<b>3.5</b>

100.	Sood, J., Sapra, B., Bhandari, S., Jindal, M. and <b>Tiwary, A. K.</b> Understanding pharmaceutical polymorphic transformations I: influence of process variables and storage conditions. <i>Therapeutic Delivery</i> <b>5</b> : 1-20 (2014).	---
99.	Khurana, R., Singh, K., Sapra, B., <b>Tiwary, A. K.</b> and Rana, V. Tamarindusindica pectin blend film composition for coating tablets with enhanced adhesive force strength. <i>Carbohydrate Polymers</i> <b>102</b> : 55-65 (2014).	3.9
98.	Sapra, B., Thatai, P., Bhandari, S., Sood, J., Jindal, M. and <b>Tiwary, A. K.</b> A critical appraisal of microemulsions for drug delivery: part II. <i>Therapeutic delivery</i> <b>5</b> : 83-94 (2014).	---
97.	Sapra, B., Thatai, P., Bhandari, S., Sood, J., Jindal, M. and <b>Tiwary, A. K.</b> A critical appraisal of microemulsions for drug delivery: part I. <i>Therapeutic delivery</i> <b>4</b> : 1547-1564 (2013).	---
96.	Singh, K., <b>Tiwary, A. K.</b> and Rana, V. Spray dried chitosan-EDTA superior microparticles as solid substrate for the oral delivery of Amphotericin B. <i>International Journal of Biological Macromolecules</i> <b>58</b> : 310-319 (2013).	2.3
95.	Singh, K., <b>Tiwary, A. K.</b> and Rana, V. Ethylenediaminediacetic acid bis(carbido amide chitosan): Synthesis and evaluation as solid carrier to fabricate nanoemulsion. <i>Carbohydrate polymers</i> <b>95</b> : 303-314 (2013).	3.9
94.	Singh K., Suri, R., <b>Tiwary, A. K.</b> and Rana, V. Exploiting the synergistic effect of chitosan–EDTA conjugate with MSA for the early recovery from colitis. <i>International Journal of Biological Macromolecules</i> <b>54</b> : 186-196 (2013).	2.6
93.	Jindal, M., Kumar, V., Rana, V. and <b>Tiwary, A. K.</b> <i>Aegle marmelos</i> fruit pectin for food and pharmaceuticals: Physico-chemical, rheological and functional performance. <i>Carbohydrate Polymers</i> <b>93</b> : 386-394 (2013).	3.9
92.	Jindal, M., Kumar, V., Rana, V. and <b>Tiwary, A. K.</b> Exploring potential new gum source <i>Aegle marmelos</i> for food and pharmaceuticals: Physical, chemical and functional performance. <i>Industrial Crops and Products</i> <b>45</b> : 312– 318 (2013).	2.86
91.	Jindal, M., Rana, V., Kumar, V., Singh, R. S., Kennedy, J. F. and <b>Tiwary, A. K.</b> Sulfation of <i>Aegle marmelos</i> gum: Synthesis, physico-chemical and functional characterization. <i>Carbohydrate Polymers</i> <b>92</b> : 1660– 1668 (2013).	3.9

80.	Jindal, M., Kumar, Vineet, Rana, V. and <b>Tiwary, A. K.</b> An insight into the properties of Aegle marmelos pectin-chitosan cross-linked films. <i>International Journal of Biological Macromolecules</i> <b>52</b> : 77-84 (2013).	2.6
89.	Jindal, M., Kumar, M, Rana, V. and <b>Tiwary, A. K.</b> Physico-chemical, mechanical and electrical performance of bael fruit gum-chitosan IPN films. <i>Food Hydrocolloids</i> . <b>30</b> : 192-199 (2013).	3.4
88.	Patni, A.K., Monif, T., Khuroo, A. H., Iyer, S. S, Jain,R., Kumar, S., <b>Tiwary, A. K.</b> Determination of pharmacokinetics of itraconazole in healthy Indian subjects under fed condition and incurred sample analysis using a validated liquid chromatography tandem mass spectrometric method. <i>Clinical Research and Regulatory Affairs</i> . <b>29</b> : 35-40 (2012).	---
87.	Sapra, B., Jindal, M. and <b>Tiwary, A. K.</b> Tight junctions in skin: New Perspectives. <i>Therapeutic Delivery</i> <b>03</b> : 1297–1327 (2012).	---
86.	Rana, V., Rai, P. and <b>Tiwary, A. K.</b> Optimization of an aqueous tablet coating process employing carboxymethylated Cassia fistula gum. <i>AAPS PharmSci Tech</i> <b>13</b> : 431-440 (2012).	1.4
85.	Singh, K., Suri, R., <b>Tiwary, A. K.</b> and Rana, V. Chitosan films: cross-linking with EDTA modifies physicochemical and mechanical properties. <i>J. Mater. Sci.: Mater. Med.</i> <b>23</b> : 687-695 (2012).	2.3
84.	Panda, R. R. and <b>Tiwary, A. K.</b> Hot melt granulation: A facile approach for monolithic osmotic release tablets. <i>Drug Development and Industrial Pharmacy</i> , <b>38</b> : 447-461 (2012).	1.6
83.	Puri, M., Sharma, D., Barrow, C. J. and <b>Tiwary, A. K.</b> Optimization of novel method for the extraction of steviosides from Stevia rebaudiana leaves. <i>Food Chemistry</i> <b>132</b> : 1113-1120 (2012).	4.3
82.	Rai, P., <b>Tiwary, A. K.</b> and Rana, V. Superior disintegrating properties of calcium cross-linked Cassia fistula gum derivatives for fast dissolving tablets. <i>Carbohydrate Polymers</i> <b>87</b> : 1098-1104 (2012).	2.4
81.	Goel, H., <b>Tiwary, A.K.</b> and Rana, V. Fabrication and optimization of fast disintegrating tablets employing interpolymeric chitosan-alginate complex and chitin as novel superdisintegrants. <i>Acta Pol. Pharm.</i> <b>68</b> : 571-583 (2011).	0.7
80.	Puri, M., Sharma, D. and <b>Tiwary, A. K.</b> Down stream processing of stevioside and its potential applications. <i>Biotechnology Advances</i> , <b>29</b> : 781-791 (2011).	10.9

79.	Singh, R. S., Bhari, R., Rana, V. and <b>Tiwary, A. K.</b> Immunomodulatory and Therapeutic Potential of a Mycelial Lectin from <i>Aspergillus nidulans</i> . <i>Applied Biochemistry and Biotechnology</i> . <b>165</b> : 624-638 (2011).	1.9
78.	Utreja, P., Jain, S. and <b>Tiwary, A. K.</b> Localized delivery of paclitaxel using elastic liposomes: Formulation development and evaluation. <i>Drug Delivery</i> , <b>18</b> : 367-376 (2011).	1.8
77.	Kaushal, N., Naz, S. and <b>Tiwary, A. K.</b> Angelica archangelica extract induced perturbation of rat skin and tight junctional protein (ZO-1) of HaCaT cells. <i>Daru Journal of Pharmaceutical Sciences</i> , <b>19</b> : 1-11 (2011).	0.7
76.	Rana, V., Rai, P., <b>Tiwary, A. K.</b> , Singh, R. S. and Kennedy, J. F. Modified gums: Approaches and applications in drug delivery. <i>Carbohydrate Polymers</i> , <b>83</b> : 1031–1047 (2011).	3.9
75.	Goel, H., Arora, A., <b>Tiwary, A. K.</b> and Rana, V. Development and evaluation of mathematical model to predict disintegration time of fast disintegrating tablets using powder characteristics. <i>Pharmaceutical Development and Technology</i> , <b>16</b> : 57-64 (2011).	1.4
74.	Singh, M., <b>Tiwary, A. K.</b> and Kaur, G. Investigations on interpolymer complexes of cationic guar gum and xanthan gum for formulation of bioadhesive films. <i>Research in Pharmaceutical Science</i> , <b>5</b> : 79-87 (2010).	---
73.	<b>Tiwary, A. K.</b> and Rana, V. Cross-linked chitosan films: effect of cross-linking density on swelling parameters. <i>Pakistan Journal of Pharmaceutical Sciences</i> , <b>23</b> : 443-8 (2010).	1.1
72.	Sharma, D., Puri, M., <b>Tiwary, A. K.</b> , Singh, N. and Jaggi, A. S. Antiamnesic effect of stevioside in scopolamine-treated rats. <i>Indian Journal of Pharmacology</i> , <b>42</b> : 164-167 (2010).	0.7
71.	Patni, A. K., Monif, T., Khuroo, A. H., Iyer, S. S. and <b>Tiwary, A. K.</b> A comparative bioavailability study of two formulations of itraconazole 100 mg capsule in healthy human Indian subjects under fasting conditions. <i>Clinical Research and Regulatory Affairs</i> , <b>27</b> : 128-132 (2010).	---

70.	Panda, R. R. and <b>Tiwary, A. K.</b> Formulation and optimization of osmotically controlled release tablets of glipizide: Hot melt granulation. <i>Therapeutic Delivery</i> , <b>6</b> : 763-774 (2010).	---
69.	Kaur, G., Jain, S. and <b>Tiwary, A. K.</b> Investigations on microbially triggered system for colon delivery of budesonide. <i>Asian Journal of Pharmaceutical Sciences</i> , <b>5</b> : 96-105 (2010).	---
68.	Kaushal, N., Jain, S. and <b>Tiwary, A. K.</b> Development of Spectrofluorimetric and HPLC Methods for <i>In vitro</i> Analysis of Repaglinide. <i>Indian Journal of Pharmaceutical Sciences</i> , <b>72</b> : 240-244 (2010).	<b>0.6</b>
67.	Goel, H., Kaur, G., <b>Tiwary, A. K.</b> and Rana, V. Formulation development of stronger and quick disintegrating tablets: A crucial effect of chitin. <i>YakugakuZasshi</i> , <b>130</b> : 729-735 (2010).	<b>0.4</b>
66.	Kaur, G., Rana, V., Jain, S. and <b>Tiwary, A. K.</b> Colon delivery of budesonide: Evaluation of chitosan–chondroitin sulfate interpolymer complex. <i>AAPS PharmSciTech</i> , <b>11</b> : 36-45 (2010).	<b>1.4</b>
65.	Singh, H. P., <b>Tiwary, A. K.</b> and Jain, S. Preparation and in vitro, in vivo characterization of elastic liposomes encapsulating cyclodextrin-colchicine complexes for topical delivery of colchicine. <i>YakugakuZasshi</i> , <b>130</b> : 397-407 (2010).	<b>0.4</b>
64.	Kaur, G., Jain, S. and <b>Tiwary, A. K.</b> Chitosan-carboxymethyl tamarind kernel powder interpolymer complexation: Investigations for colon drug delivery. <i>ScientiaPharmaceutica</i> , <b>78</b> : 57-78 (2010).	<b>0.8</b>
63.	Utreja, P., Jain, S. and <b>Tiwary, A. K.</b> Novel Drug Delivery Systems for Sustained and Targeted Delivery of Anti- Cancer Drugs: Current Status and Future Prospects. <i>Current Drug Delivery</i> , <b>7</b> : 152-161 (2010).	<b>2.2</b>
62.	Kaushal, N., Jain, S., Kondaiah, P. and <b>Tiwary, A. K.</b> Influence of piperine on transcutaneous permeation of repaglinide in rats and on tight junction proteins in HaCaT cells: Unveiling the mechanisms for enhanced permeation. <i>ScientiaPharmaceutica</i> , <b>77</b> : 877–897 (2009).	<b>0.8</b>
61.	Goel, H., Vora, H., <b>Tiwary, A. K.</b> and Rana, V. Understanding the mechanism for paradoxical effect of ionized and unionized chitosan: Orodispersible tablets of Ondansetron Hydrochloride. <i>Pharmaceutical Development and Technology</i> , <b>14(5)</b> : 476-484 (2009).	<b>1.4</b>

60.	Goel, H, Vora, N., <b>Tiwary, A. K.</b> and Rana, V. Formulation of orodispersible tablets of ondansetronHCl: Investigations using glycine-chitosan mixture as superdisintegrant. <i>YakugakuZasshi</i> <b>129</b> : 513-521 (2009).	<b>0.4</b>
59.	Singh H. P., Utreja, P., <b>Tiwary, A. K.</b> and Jain, S. Elastic liposomal formulation for sustained delivery of colchicine: in vitro characterization and in vivo evaluation of anti-gout activity. <i>The AAPS Journal</i> <b>11</b> : 54-64 (2009).	<b>5.0</b>
58.	Sapra, B., Jain, S. and <b>Tiwary, A. K.</b> Transdermal Delivery of Carvedilol in Rats: Probing the Percutaneous Permeation Enhancement Mechanism of Soybean Extract-Chitosan Mixture. <i>Drug Development and Industrial Pharmacy</i> <b>35</b> : 1230-1241 (2009).	<b>1.6</b>
57.	Khurana, S., Utreja, P., <b>Tiwary, A. K.</b> , Jain, N.K. and Jain,S. Nanostructured Lipid Carriers and their application in drug delivery. <i>Int. J. Biomedical Engineering and Technology</i> , <b>2</b> : 152-157 (2009).	---
56.	Sapra, B., Jain, S. and <b>Tiwary, A.K.</b> Effect of Asparagus racemosus Extract on Transdermal Delivery of Carvedilol: A Mechanistic Study. <i>AAPS PharmSciTech</i> <b>10</b> : 199-210 (2009).	<b>1.4</b>
55.	Singh, R. S., <b>Tiwary, A. K.</b> , and Bhari, R. Screening of Aspergillus species for occurrence of lectins and their characterization. <i>J Basic Microbiol.</i> <b>48</b> : 112-117 (2008).	<b>1.2</b>
54.	Kaur, A., Jain, S. and <b>Tiwary, A. K.</b> Mannan-coated gelatin nanoparticles for sustained and targeted delivery of didanosine: in vitro and in vivo evaluation. <i>Actapharmaceutica</i> <b>58</b> : 61-74 (2008).	<b>0.9</b>
53.	Honey, Rai, P., Rana, V. and <b>Tiwary, A.K.</b> Orally Disintegrating Systems: Innovations in Formulation and Technology. <i>Recent Patents on Drug Delivery &amp; Formulation</i> <b>2</b> : 258-74 (2008).	---
52.	Jain S., Jain N.K. and <b>Tiwary, A.K.</b> PEGylated Elastic Liposomal Formulation for lymphatic targeting of zidovudine. <i>Current Drug Delivery</i> . <b>5</b> : 275-281 (2008).	<b>2.2</b>
51.	Garg, T., Jain, S., Singh, H.P., Sharma, A. and <b>Tiwary, A.K.</b> Elastic liposomal formulation for sustained delivery of anti-migraine drug: In vitro characterization and biological evaluation. <i>Drug Develop. Ind. Pharm.</i> , <b>34</b> : 1100-1110 (2008).	<b>1.6</b>

50.	Dhaliwal, S., Jain, S., Singh, H.P. and <b>Tiwary, A.K.</b> Mucoadhesive microsphere for gastroretentive delivery of acyclovir: In vitro and in vivo evaluation. <i>The AAPS J.</i> <b>10</b> : 322-330 (2008).	<b>5.0</b>
49.	Sapra, B., Jain, S. and <b>Tiwary, A. K.</b> Transdermal Delivery of Carvedilol Containing Glycyrrhizin and Chitosan as Permeation Enhancers: Biochemical, Biophysical, Microscopic and Pharmacodynamic Evaluation. <i>Drug Delivery</i> <b>15</b> : 443-454 (2008).	<b>1.8</b>
48.	Sapra, B., Jain, S. and <b>Tiwary, A. K.</b> Percutaneous Permeation Enhancement by Terpenes: Mechanistic View. <i>The AAPS J.</i> <b>10</b> : 120-132 (2008).	<b>5.0</b>
47.	Kumar, N., Jain, S., Gupta, A. and <b>Tiwary, A. K.</b> Spermicidal activity of sulphonyl ureas and meglitinide analogues: role of intrasperm $Ca^{2+}$ elevation. <i>Journal of Pharmacy and Pharmacology</i> <b>60</b> : 323-330 (2008).	<b>2.1</b>
46.	Jain, S., <b>Tiwary, A. K.</b> , Sapra, B. and Jain, N. K. Formulation and Evaluation of Ethosomes for Transdermal Delivery of Lamivudine. <i>AAPS PharmSciTech</i> <b>8</b> : E1 – E9 (2007).	<b>1.4</b>
45.	Rana V, <b>Tiwary A. K.</b> , Jain, S. and Singh, S. Chitosan-Chondroitin Composite Films: Comparison with In Vitro Skin Permeation Data of Hydrophilic and Lipophilic Drugs. <i>Iranian Journal of Pharmaceutical Research</i> , <b>6</b> : 231-242 (2007).	<b>0.6</b>
44.	Kaur, G., Jain, S. and <b>Tiwary, A.K.</b> Recent approaches for colon drug delivery. <i>Recent Patents in Drug Delivery and Formulation</i> <b>1</b> : 222-229 (2007).	---
43.	Kaur K., Jain S., Sapra B. and <b>Tiwary, A.K.</b> Niosomal gel for site specific sustained delivery of anti-arthritic drug: In vitro in vivo evaluation. <i>Current Drug Delivery</i> . <b>4</b> : 276-282 (2007).	<b>2.2</b>
42.	Sapra, B., Jain, S. and <b>Tiwary, A.K.</b> Innovations in transdermal drug delivery: Formulations and techniques. <i>Recent Patents on Drug Delivery and Formulation</i> <b>1</b> : 23-36 (2007).	---
41.	Jain S., Mishra D., Kuksal A., <b>Tiwary A.K.</b> and Jain N.K. Vesicular Approach for Drug Delivery into or Across the Skin: Current Status and Future Prospects. <i>Pharmacy Online</i> <b>1</b> : 1-32 (2006).	---
40.	Sharma, G., Jain, S. K., <b>Tiwary A. K.</b> and Kaur, G. Once daily bioadhesive vaginal clotrimazole tablets: Design and Evaluation. <i>Acta Pharmaceutica</i> <b>56</b> : 337-345 (2006).	<b>0.9</b>

39.	Gulati, A., <b>Tiwary, A. K.</b> , Jain, S., Moudgil, P. and Gupta, A. Intrasperm Ca <sup>2+</sup> modulation and human ejaculated sperm viability: Influence of miconazole, clotrimazole and loperamide. <i>Journal of Pharmacy and Pharmacology</i> <b>58</b> : 1145-1151(2006).	2.1
38.	Jain, S., <b>Tiwary, A. K.</b> and Jain, N. K. Sustained and targeted delivery of an anti-HIV agent using elastic liposomal formulation: Mechanism of action. <i>Current Drug Delivery</i> <b>3</b> : 157-166 (2006).	2.2
37.	Kuksal, A., <b>Tiwary, A. K.</b> , Jain, N. K. and Jain, S. Formulation and In Vitro, In Vivo Evaluation of Extended Release Matrix Tablet of Zidovudine: Influence of Combination of Hydrophilic and Hydrophobic Matrix Formers. <i>AAPS PharmSciTech</i> <b>7</b> : E1-E9 (2006).	1.4
36.	Jain, S., Sapre, R., <b>Tiwary, A. K.</b> and Jain, N. K. Proultraflexible Lipid Vesicles for Effective Transdermal Delivery of Levonorgestrel: Development, Characterization and Performance Evaluation. <i>AAPS Pharm Sci Tech</i> <b>6</b> : E513-E522 (2005).	1.4
35.	Babita, K., Kumar, V., Rana, V., Jain, S. and <b>Tiwary, A. K.</b> Thermotropic and spectroscopic behaviour of skin: Relationship with percutaneous permeation enhancement. <i>Current Drug Delivery</i> <b>3</b> : 95-113 (2006).	2.2
34.	Gupta, A., Gupta, P., Jain, S., Moudgil, P. and <b>Tiwary, A. K.</b> Modulation of intrasperm Ca <sup>2+</sup> : A possible maneuver for spermicidal activity. <i>Drug Development Research</i> <b>65</b> : 1-16 (2005).	1.2
33.	Babita, K., Rana, V. and <b>Tiwary, A. K.</b> Lipid synthesis inhibitors: Effect on Epidermal Lipid Conformational Changes and Percutaneous Permeation of Levodopa. <i>AAPS PharmSciTech</i> <b>6</b> : E473-E481 (2005).	1.4
32.	Jain, S., Jain, N., Bhadra, D., <b>Tiwary, A. K.</b> and Jain, N. K. Transdermal delivery of an analgesic agent using elastic liposomes: Preparation, characterization and performance evaluation. <i>Current Drug Delivery</i> <b>2</b> : 223-233 (2005).	2.2
31.	Kumar, B. and <b>Tiwary, A. K.</b> Transcutaneous delivery of levodopa: Enhancement by fatty acid synthesis inhibition. <i>Molecular Pharmaceutics</i> <b>2</b> : 57-63 (2005).	4.7
30.	Rana, V., Babita, K., Goyal, D. and <b>Tiwary, A. K.</b> Sodium citrate cross-linked chitosan films: Optimization as substitute for human/rat/rabbit epidermal sheets. <i>Journal of Pharmacy and Pharmaceutical Sciences</i> <b>8</b> : 10-17 (2005).	2.3



29.	Saini, M., Jain, S., <b>Tiwary, A. K.</b> and Kaur, G. Chitosan based buccoadhesive tablets of pentazocine hydrochloride: In vitro and in situ kinetics. <i>Indian Journal of Pharmaceutical Sciences</i> <b>67</b> : 743-747 (2005).	<b>0.6</b>
28.	Kumar, B., Rana, V. and <b>Tiwary, A. K.</b> Epidermal lipids: Thermotropic behaviour and role in transcutaneous delivery of levodopa. <i>Drug Development Research</i> <b>63</b> : 190-199 (2004).	<b>1.2</b>
27.	Rana, V., Babita, K., Gorea, R., Goyal, D. and <b>Tiwary, A. K.</b> Optimization of chitosan films as substitute of animal and human epidermal sheets for in vitro permeation of polar and non polar drugs. <i>Acta Pharmaceutica</i> <b>54</b> : 287-299 (2004).	<b>0.9</b>
26.	Kumar, B. and <b>Tiwary, A. K.</b> Skin lipid synthesis inhibition: A possible means for enhancing percutaneous permeation of levodopa. <i>Current Drug Delivery</i> <b>1</b> : 397-403 (2004).	---
25.	Gupta, A., Khosla, R., Gupta, S. and <b>Tiwary, A. K.</b> Influence of histamine and H <sub>1</sub> -receptor antagonists on ejaculated human spermatozoa: Role of intrasperm calcium. <i>Indian Journal of Experimental Biology</i> <b>42</b> : 481-485 (2004).	<b>1.3</b>
24.	Mahajan, A., Gupta, M., Babita, Gupta, S. and <b>Tiwary, A. K.</b> Inhibition of skin sphingosine synthesis: Enhanced percutaneous permeation of 5-fluorouracil. <i>Pharmazie</i> <b>59</b> : 212-216 (2004).	<b>1.8</b>
23.	Gupta, A., Gupta, S. and <b>Tiwary, A. K.</b> Spermicidal efficacy of H <sub>2</sub> -receptor antagonists and potentiation with 2',4'-dichlorobenzamil hydrochloride: Role of intrasperm Ca <sup>2+</sup> . <i>Contraception</i> <b>68</b> : 61-64 (2003).	<b>2.7</b>
22.	Moudgil, P., <b>Tiwary, A. K.</b> and Gupta, S. Artificial intelligence in pharmaceutical research: Theory and applications. <i>Indian Journal of Pharmaceutical Sciences</i> <b>64</b> : 509-514 (2002).	<b>0.6</b>
21.	Moudgil, P., Gupta, A., Sharma, A., Gupta, S. and <b>Tiwary, A. K.</b> Potentiation of spermicidal activity of 2',4'-dichlorobenzamil hydrochloride by lidocaine. <i>Indian Journal of Experimental Biology</i> <b>40</b> : 1373-1377 (2002).	<b>1.3</b>
20.	Moudgil, P., Gupta, A., Sharma, A., Gupta, S. and <b>Tiwary, A. K.</b> Spermicidal activity of some membrane stabilizers. <i>Pharmacology Reviews and Communications</i> <b>12</b> : 1-8 (2002).	<b>1.5</b>

19.	Babita, Gupta, S. and <b>Tiwary, A. K.</b> Role of sphingosine synthesis inhibition in transcutaneous delivery of levodopa. <i>International Journal of Pharmaceutics</i> <b>238</b> : 43-50 (2002).	<b>3.8</b>
18.	Reddy, P. R., Sharma, A., Gupta, S. and <b>Tiwary, A. K.</b> Contact spermicides as contraceptives: Efficacy and current status. <i>Indian Journal of Pharmaceutical Sciences</i> <b>64</b> : 1-9 (2002).	<b>0.6</b>
17.	Patni, A. K., Gupta, S., Sharma, A., <b>Tiwary, A. K.</b> and Garg, S. K. Role of intracellular calcium in the spermicidal action of 2', 4'-dichlorobenzamil, a novel contact spermicide. <i>Journal of Pharmacy and Pharmacology</i> <b>53</b> : 1387-1392 (2001).	<b>2.1</b>
16.	Agarwal, A., <b>Tiwary, A. K.</b> and Gupta, S. Preparation of indomethacin microspheres by aqueous process. <i>Journal of Microencapsulation</i> <b>18</b> : 819-823 (2001).	<b>1.6</b>
15.	<b>Tiwary, A. K.</b> Modification of crystal habit and its role in dosage form performance. <i>Drug Development and Industrial Pharmacy</i> <b>27</b> : 699-709 (2001).	<b>1.6</b>
14.	Reddy, P., Patni, A. K., Sharma, A., Gupta, S. and <b>Tiwary, A. K.</b> Effect of 2', 4'-dichlorobenzamil hydrochloride, a Na <sup>+</sup> -Ca <sup>2+</sup> exchange inhibitor, on ejaculated human spermatozoa. <i>European Journal of Pharmacology</i> <b>418</b> : 153-155(2001).	<b>2.7</b>
13.	Anand, O. and <b>Tiwary, A. K.</b> Role of skin cholesterol in permeation of indomethacin. <i>Indian Journal of Pharmaceutical Sciences</i> <b>63</b> : 147-150 (2001).	<b>0.6</b>
12.	Dureja, H., <b>Tiwary, A. K.</b> and Gupta, S. Simulation of skin permeability in chitosan membranes. <i>International Journal of Pharmaceutics</i> <b>213</b> : 193-198 (2001).	<b>3.8</b>
11.	Anand, O., Gupta, S. and <b>Tiwary, A. K.</b> Regulation of skin lipid biosynthesis: Role in transcutaneous permeation enhancement. <i>Indian Journal of Pharmaceutical Sciences</i> <b>62</b> : 407-414 (2000).	<b>0.6</b>
10.	Sapra, B., Gupta, S. and <b>Tiwary, A. K.</b> Role of skin cholesterol and volatile oil pretreatment on permeation of primary amine-diclofenac sodium ion-pairs. <i>Indian Journal of Experimental Biology</i> <b>38</b> : 895-900 (2000).	<b>1.3</b>
9.	<b>Tiwary, A. K.</b> and Panpalia, G. M. Enhanced suspension stability: Choice of crystal habit. <i>Indian Journal of Pharmaceutical Sciences</i> <b>62</b> : 267-272 (2000).	<b>0.6</b>

8.	Chawla, V., <b>Tiwary, A. K.</b> and Gupta, S. Characterization of polyvinylalcohol microspheres of diclofenac sodium: Application of statistical design. <i>Drug Development and Industrial Pharmacy</i> <b>26</b> : 675-680 (2000).	1.6
7.	<b>Tiwary, A. K.</b> and Singh, R. S. Lectins: Novel drug targeting molecules. <i>Indian Journal of Pharmaceutical Sciences</i> <b>60</b> : 259-267 (1999).	0.6
6.	Sapra, B., <b>Tiwary, A. K.</b> and Gupta, S. Techniques for studying the molecular basis of percutaneous permeation enhancement. <i>Indian Drugs</i> <b>36</b> : 492-500 (1999).	---
5.	Rana, V., Rai, P., <b>Tiwary, A. K.</b> and Gupta, S. Enhanced in vitro permeation of diclofenac sodium with primary amine and pyrrolidone ion-pairs. <i>Indian Drugs</i> <b>36</b> : 21-28 (1999).	---
4.	<b>Tiwary, A. K.</b> and Panpalia, G. M. Influence of crystal habit on trimethoprim suspension formulation. <i>Pharmaceutical Research</i> <b>16</b> : 261-265 (1999).	4.1
3.	Singh, R. S., <b>Tiwary, A. K.</b> and Kennedy, J. F. Lectins: Sources, activities and applications. <i>Critical Reviews in Biotechnology</i> <b>19</b> : 145-178 (1999).	6.4
2.	<b>Tiwary, A. K.</b> and Singh, R. S. Lectins as tumor cell specific and drug targeting molecules. <i>Research Bulletin</i> <b>48</b> : 55-85 (1998).	---
1.	Rana, V., Rai, P. and <b>Tiwary, A. K.</b> Logics of percutaneous permeation enhancement by amides and amines. <i>Indian Drugs</i> <b>35</b> : 673-681 (1998).	---

## PATENTS

1. S. Jain; S. Dhaliwal; M. Rana; H. P. Singh and **A. K. Tiwary. Sustained release drug delivery system, US Patent 9622977 B2**, Publication Date 2017/4/18.
2. Processing induced crystal modification for improving dissolution, stability and bioavailability of telmisartan, Indian Patent (Filed)

## BOOKS PUBLISHED

1. Rana, V. and **Tiwary, A. K.** Optimization technique: Polymeric films with comparable permeation to animal skin. Lap Lambert Publishing GmbH & Co. KG, Germany (2011).
2. Kaur, G. and **Tiwary, A. K.** Interpolymer complexed polysaccharides: A means for colon targeting. Lap Lambert Publishing GmbH & Co. KG, Germany (2011).

3. Sapra, B. and **Tiwary, A. K.** Natural surfactants in transcutaneous delivery of carvedilol. Lap Lambert Publishing GmbH& Co. KG, Germany (2011).
4. **Tiwary, A. K.**, Sapra, B., Kaur, G. and Rana, V. Chitosan: Modifications and applications in dosage form design. Nova Science Publishers Inc. New York (2012).
5. Goel H., Kalra V. and **Tiwary A.K.**: Fundamentals of Pharmaceutics and Dispensing Pharmacy (Theory with Practical Applications). PharmaMed Press, Hyderabad (2023).

## BOOK CHAPTERS

1. **A. K. Tiwary**, *Crystal Habit Changes and Dosage Form Performance*, In: ENCYCLOPEDIA OF PHARMACEUTICAL TECHNOLOGY, Vol. 2, pp. 820-833, J. Swarbrick (Ed.), Marcel Dekker, Inc., New York, USA (2003).
2. S. Jain, **A. K. Tiwary** and N. K. Jain, *Topical Drug Delivery*, In: PHARMACEUTICAL PRODUCT DEVELOPMENT, N.K. Jain (Ed.), CBS Publishers and Distributors, New Delhi, India, Chapter 7, 197-228 (2005).
3. S. Jain, **A. K. Tiwary** and N. K. Jain, *Rectal Drug Delivery*, In: PHARMACEUTICAL PRODUCT DEVELOPMENT, N.K. Jain (Ed.), CBS Publishers and Distributors, New Delhi, India, Chapter 7, 229-250 (2005).
4. Rana, V., Kumar, B., Jain, S. and **A. K. Tiwary**, *Chitosan: Formulation of drug delivery systems*, In: CHITIN and CHITOSAN: OPPORTUNITIES & CHALLENGES, P. K. Dutta (Ed.), SSM International Publication, Midnapore, India, Chapter 16, 283-314 (2005).
5. B. Sapra, S. Jain and **Tiwary A. K.** *Dissolution* In: *Preclinical Development Handbook: ADME and Biopharmaceutical Properties*, S. C. Gad (Ed.), Chapter 15, 483-544, John Wiley and Sons, Inc., NJ, USA (2008).
6. 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).
7. **Tiwary, A. K.**, Sapra, B., Kaur, G. and Rana, V. *Chitosan: Modifications and applications in dosage form design*, In: Chitosan: Manufacture, Properties and Usage, Davis, S. P. (Ed.), Chapter 2, 71-132, Nova Publishers, Hauppauge, NY, USA (2011).
8. **A. K. Tiwary** and Manish Jindal. *Crystal Habit Changes and Dosage Form Performance*, In: ENCYCLOPEDIA OF PHARMACEUTICAL SCIENCE & TECHNOLOGY, Chapter 70, 4<sup>th</sup> Edition, J. Swarbrick (Ed.), Informa Healthcare, London, UK (2012).
9. Goel, H., Singla, R. and **Tiwary, A.K.**: *Point-of-Care Nanoplatfoms for Glaucoma and Age-Related Macular Degeneration: Clinical Implications and Emerging*

*Concepts*, In: Nanoformulations in Human Health: Challenges and Approaches, Talegaonkar, S., Rai, M. (eds), Chapter 11, 227-257, Springer, Cham (2020).

10. Sapra, B., Mahajan, D., Chaudhary, S. and **Tiwary, A.K.**: *Eye in metabolic disorders: manifestations and drug delivery systems*. In: Drug Delivery Systems for Metabolic Disorders, Dureja, H., Murthy S.N., Wich P.R., Dua K. (eds), 1<sup>st</sup> edition, Chapter 26, 371-409, Academic Press (2022).

### ***LIST OF PRESENTATIONS***

1. R. N. Thakur, A. K. Tiwary and G. M. Panpalia (Abs # CK15). Physical stability and pharmacokinetics of commercial cotrimoxazole suspensions, 41<sup>st</sup> Indian Pharmaceutical Congress, Bombay, India, December 15-18, 1989.
2. A. K. Tiwary, M. Khatore and G. M. Panpalia (Abs # IP3). Influence of crystal habit on pharmacokinetic profile of trimethoprim deflocculated suspensions, 43<sup>rd</sup> Indian Pharmaceutical Congress, Goa, India, December 27-29, 1991.
3. A. K. Tiwary, M. Khatore and G. M. Panpalia (Abs # C39). Role of crystal habit in the physical stability of trimethoprim deflocculated suspensions, 43<sup>rd</sup> Indian Pharmaceutical Congress, Goa, India, December 27-29, 1991.
4. A. K. Tiwary and G. M. Panpalia (Abs # A29). Influence of crystal habit on dissolution profile of sulphamethoxazole, 44<sup>th</sup> Indian Pharmaceutical Congress, Bangalore, India, December 11-13, 1992.
5. A. K. Tiwary and G. M. Panpalia (Abs # P8). Influence of crystal habit on physical stability of trimethoprim flocculated suspensions, 44<sup>th</sup> Indian Pharmaceutical Congress, Bangalore, India, December 11-13, 1992.
6. A. K. Tiwary, R. Krishnamoorthy and G. M. Panpalia (Abs # C44). Role of crystal habit in the formulation of sulphamethoxazole suspensions-I, 45<sup>th</sup> Indian Pharmaceutical Congress, Manipal, India, December 29-31, 1993.
7. M. Khatore, A. K. Tiwary and G. M. Panpalia (Abs # C49). Effect of crystal habit on the dissolution profile of trimethoprim, 45<sup>th</sup> Indian Pharmaceutical Congress, Manipal, India, December 29-31, 1993.
8. A. K. Tiwary, R. Krishnamoorthy and G. M. Panpalia (Abs # C51). Role of crystal habit in the formulation of sulphamethoxazole suspensions-II, 45<sup>th</sup> Indian Pharmaceutical Congress, Manipal, India, December 29-31, 1993.
9. A. K. Tiwary, B. Sapra and S. K. Garg (Abs # O01). Enhancement in percutaneous permeation of diclofenac sodium: Influence of ion-pairing and volatile oil skin pretreatment, National Seminar, Pharmacy Education and Research: Yesterday, Today and Tomorrow, B. I. T., Mesra, Ranchi, India, November 8-10, 1998.
10. B. Sapra, S. K. Garg, and A. K. Tiwary (Abs # IAP9). Influence of skin pretreatment with volatile oils on the permeation of diclofenac sodium-laurylamine ion-pairs: pharmacodynamic study in rats, 50<sup>th</sup> Indian Pharmaceutical Congress, Bombay, India, December 10-12, 1998.

11. A. K. Tiwary and P. R. Reddy (Abs # EP1). Spermicidal activity of 2', 4'-dichlorobenzamil hydrochloride, a Na<sup>+</sup> / Ca<sup>2+</sup> exchange inhibitor, 51<sup>st</sup> Indian Pharmaceutical Congress, Indore, India, December 18-20, 1999.
12. A. Mahajan, M. Gupta, Babita, S. Gupta, and A. K. Tiwary (Abs # F5). Sphingosine synthesis inhibition: an approach for enhancing percutaneous permeation of 5-FU, 54<sup>th</sup> Indian Pharmaceutical Congress, Pune, India, December 13-15, 2002.
13. M. Gupta, K. Babita and A. K. Tiwary (Abs # FP3). Comparison of polar and non-polar drug permeation: Importance of epidermal cholesterol, 56<sup>th</sup> Indian Pharmaceutical Congress, Kolkata, India, December 3-5, 2004.
14. B. Kumar, V. Rana and A. K. Tiwary (Abs # F16). Transdermal delivery of levodopa: Enhancement by skin sphingosine and cholesterol synthesis inhibition, 56<sup>th</sup> Indian Pharmaceutical Congress, Kolkata, India, December 3-5, 2004.
15. V. Rana, K. Babita and A. K. Tiwary (Abs # A33). In-vitro permeation of 5-FU and Indomethacin across sodium tripolyphosphate cross-linked chitosan films, 56<sup>th</sup> Indian Pharmaceutical Congress, Kolkata, India, December 3-5, 2004.
16. A. Kuksal, K. Kaur, A. K. Tiwary, N. K. Jain and S. Jain (Abs # A68). Formulation and evaluation of extended release matrix tablets of an anti-HIV agent, 56<sup>th</sup> Indian Pharmaceutical Congress, Kolkata, India, December 3-5, 2004.
17. K. Kaur, A. Kuksal, A. K. Tiwary, N. K. Jain and S. Jain (Abs # AP106). A novel niosomal gel formulation for topical delivery of anti-arthritis drug celecoxib, 56<sup>th</sup> Indian Pharmaceutical Congress, Kolkata, India, December 3-5, 2004.
18. K. Babita, and A. K. Tiwary (Abs # E34). Transdermal Delivery of Polar Drug: Relationship with Thermotropic Behaviour of Skin Lipids, 8th Punjab Science Congress, Punjabi University, Patiala, India, February 7-9, 2005.
19. S. Jain, N. K. Jain and A. K. Tiwary (Abs # E32). Sustained delivery of an anti-HIV agent using elastic liposomal formulation: suggestive mechanism of action, 8th Punjab Science Congress, Punjabi University, Patiala, India, February 7-9, 2005.
20. A. Fanda, P. Gupta, A. Gupta, S. Jain, and A. K. Tiwary (Abs # P14). Investigations on *Annona squamosa* and *Euphorbia nivulia* extracts for management of ticks and lice, 7th International Conference on Vectors and Vector Borne Diseases, Punjabi University, Patiala, India, February 18-20, 2005.
21. Twinkle Garg, Hardevinder Singh, Subheet Jain and A. K. Tiwary. (Abs #AO18). Elastic liposomes for sustained and site specific delivery of Rizatriptan: In vitro and In vivo evaluation, 58<sup>th</sup> Indian Pharmaceutical Congress, Mumbai, India, December 1-3, 2006.
22. 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 and indomethacin. 58<sup>th</sup> Indian Pharmaceutical Congress, Mumbai, India, December 1-3, 2006.
23. 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.
24. NeerajKaushal, Subheet Jain and A. K. Tiwary (Abs # PP9). Effect of piperine on percutaneous permeation: Microscopic studies. Symposium on Herbal Drug Research and Therapy, Delhi, India, Dec 9-10, 2006.
  25. Hardevinderpal Singh, Subheet Jain and A. K. Tiwary(Abs # YE-01). PEGylated elastic liposomal formulation for sustained and targeted delivery of zidovudine. 10<sup>th</sup> Punjab Science Congress, Jalandhar, India, Feb-2007.
  26. Sumeet, Subheet Jain and A. K. Tiwary (Abs # YE-02). Mucoadhesive microsphere for sustained and targeted delivery of acyclovir, 10<sup>th</sup> Punjab Science Congress, Jalandhar, India, Feb-2007.
  27. Hardevinderpal Singh, Subheet Jain and A. K. Tiwary. PEGylated elastic liposomal formulation for lymphatic targeting of anti-HIV drug. National Symposium of Controlled Release Society, Lucknow, India, June-2007.
  28. Bharti Sapra, NamitaMehra, Subheet Jain and A. K. Tiwary (Abs # B 13). Transdermal delivery of isoniazid: Role of polymeric vehicles. 12<sup>th</sup> APTI Convention, Chandigarh, India, 25-27 October, 2007.
  29. Gurpreet Kaur, Jaswinder Singh and A. K. Tiwary (Abs # B 14). Design and evaluation of buccoadhesive tablets of pravastatin sodium. 12<sup>th</sup> APTI Convention, Chandigarh, India, 25-27 October, 2007.
  30. Honey, VikasRana and A. K. Tiwary (Abs # B 18). Effect of concentration of sodium tripolyphosphate on in vitro permeation of 5-FU and indomethacin across cross-linked chitosan films. 12<sup>th</sup> APTI Convention, Chandigarh, India, 25-27 October, 2007.
  31. Neeraj, Harneet Kaur, Lalit, MadhuRana, A. K. Tiwary and Subheet Jain (Abs # B 29). Eudragit I-100-55 coated chitosan microspheres for sustained and targeted delivery of acyclovir. 12<sup>th</sup> APTI Convention, Chandigarh, India, 25-27 October, 2007.
  32. Arvind, Navjyot Kaur, Ashok Kumar, A. K. Tiwary and Subheet Jain (Abs # B 30). Elastic liposomal formulation for lymphatic targeting of anti-HIV drug: In vitro and in vivo evaluation. 12<sup>th</sup> APTI Convention, Chandigarh, India, 25-27 October, 2007.
  33. Harneet Kaur, NamitaMehra, lalit, Subheet Jain and A. K. Tiwary (Abs # A 229). Role of cyclodextrin and its derivatives in transdermal delivery of isoniazid. 59<sup>th</sup> Indian Pharmaceutical Congress, BHU Varanasi, India, 20-23 December, 2007.
  34. Lalit, Harneet Kaur, Abhishek Gulati, Subheet Jain and A. K. Tiwary (Abs # D 110). Anti-fungal drugs as post ejaculation contraceptives: Role of intrasperm calcium. 59<sup>th</sup> Indian Pharmaceutical Congress, BHU Varanasi, India, 20-23 December, 2007.

35. Neeraj Kaushal, Subheet Jain and A. K. Tiwary (Abs # C 78). Effect of piperine on percutaneous permeation: Microscopic studies. 59<sup>th</sup> Indian Pharmaceutical Congress, BHU Varanasi, India, 20-23 December, 2007.
36. Arvind Sharma, Puneet Utreja, Ashok Kumar, A. K. Tiwary and Subheet Jain (Abs # A 227). Use of microscopic techniques to determine enhanced skin permeation of elastic liposomes. 59<sup>th</sup> Indian Pharmaceutical Congress, BHU Varanasi, India, 20-23 December, 2007.
37. 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. 11<sup>th</sup> Punjab Science Congress, Thapar University, Patiala, India, 7-9 February, 2008.
38. Harneet Kaur, Bharti Sapra, Subheet Jain and A. K. Tiwary (Abs # YSA – E3). The role of polymeric vehicles in transdermal drug delivery. 11<sup>th</sup> Punjab Science Congress, Thapar University, Patiala, India, 7-9 February, 2008.
39. Neeraj Kaushal, A. K. Tiwary, Manish Jindal and S. K. Jain. Effect of Angelica archangelica on percutaneous permeation: Microscopic studies. 1st International Conference on Drug Discovery and Traditional Medicine, NIPER, Mohali, 16-18 Nov, 2008.
40. Tiwary, A. K. Drug absorption enhancement. 4<sup>th</sup> Annual Convention and National Seminar, Association of Biotechnology and Pharmacy, 11-13 November 2010, Thapar University, Patiala.
41. Tiwary, A. K. Bioavailability modulations: Modification of drug transport and metabolism by herbal principles. 14<sup>th</sup> Punjab Science Congress, SLIET, Longowal, Sangrur, Punjab, 8th February, 2011.
42. Tiwary, A. K. Recent advancement in novel drug delivery systems and technology, ASBASJS Memorial College of Pharmacy, 15-16 November, 2014.
43. Tiwary, A. K. Transdermal drug delivery: Critical Factors. UGC Networking Resource Centre, UIPS, Panjab University, Chandigarh, 2-7 February, 2015.
44. Tiwary A. K. Pharmaceutical skills development with innovative ideas. Phamazenith, SBSM PG Institute of Biomedical Sciences, Balawala, Dehradun, 27-27 March, 2015.
45. Tiwary, A. K. Polysaccharides for modified drug delivery: A case study with Bael pectin and gum. MPDDNP, Chitkara University, Ramnagar, Rajpura, Punjab, 28 March, 2015.
46. Tiwary, A. K. Animal testing: New paradigms. IKGPTU – PITTR, Faculty Development Programme, 6-12 March 2016, GHG Khalsa College of Pharmacy, Gurusar Sadhar (Punjab).



47. Tiwary, A. K. Modified drug release using derivatized polysaccharides. Advances in Pharmaceutical technology, SRM University, Chennai, 11<sup>th</sup> March 2016.
48. Tiwary, A. K. Nano particle toxicity. National Conference on Recent trends in nanotechnology in biomedical drug research, Himachal Institute of Pharmaceutical Education & Research, Nadaun (HP) 25-26 February, 2017.
49. Tiwary, A. K. Academia-Industry Partnerships: Indian Scenario. International Conference on Drug Discovery: Biotech and Pharma at Cross Roads, Thapar Institute of Engineering and Technology, 15-17 February, 2018.
50. Tiwary, A. K. Regulatory aspects of nano particle toxicity. National Seminar on Current status and future scope for nanomaterials and nanotechnology in drug discovery and development, Himachal Institute of Pharmaceutical Education & Research, Nadaun (HP) 23-24 February, 2018.
51. Tiwary, A. K. Careers in Pharmaceutical Sciences. Aryan College of Pharmacy, Rajpura, 24 September, 2018.
52. Tiwary, A. K. Testing of pharmaceuticals in Animal Models: Need or Greed. PCI Sponsored Continuing Education Programme, School of Pharmaceutical Sciences & Technology, SBS University, Balawala, Dehradun, 20-22 September, 2018.
53. Tiwary, A. K. Swift College of Pharmacy, Rajpura,
54. Tiwary, A. K. IKG PTU Sponsored faculty Development Program, ASJS College of Pharmacy, Bela, 5 January, 2019.

**Date:** \_\_/\_\_/\_\_\_\_

**(Signature of the Teacher)**