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## **SUMMARY PROFILE**

- PhD in Pharmaceutics from a prestigious pharmacy school in India.
- Highly trained research scholar in a variety of formulation, analytical, preclinical and pharmaceutical evaluation of conventional and nanoparticle dosage forms.
- Master's Degree in Pharmaceutics with 2 year academic experience as assistant professor and 12 months as research fellow.
- Extensive research expertise in product formulation, *conventional as well as QbD approaches*, novel drug delivery technology design and evaluation, methodology development, and pharmacokinetics.
- Expertise in preformulation, formulation development of oral and transdermal dosage forms.
- Experience in writing and publications. So far, published 29 journal articles, presented over 20 posters at scientific conferences.
- Received merit-based awards, including a fellowship from All Indian Council of Technical Education (AICTE) and University Grants Commission (UGC), New Delhi.
- **Lab research experience in preformulation, formulation, analytical, and in vivo pharmacological screenings. These include the following:**
  - *Formulation and evaluation of lipid based oral delivery systems for improved delivery of BCS class II and IV pharmaceutical actives.*
  - *In vitro release testing (IVRT) of topical and transdermal formulations using USP apparatus and Franz diffusion cells.*
  - *In situ single pass intestinal perfusion studies (SPIPS), Ex vivo intestinal permeation studies, Ex vivo permeation studies, Tissue distribution studies, In vitro cell uptake studies, Pharmacokinetic and pharmacodynamic studies in rats, mice and human volunteers.*
  - *Quantitative assay method development and validation using Analytical techniques such as UFLC, HPLC, UV-Visible and Atomic Absorption spectroscopic techniques.*

## **EDUCATION:**

SSC	ZPSS, GOVT SCHOOL, INDIA	2000 - 2001
INTERMEDIATE	IBE, ANDRAPRADESH, INDIA	2001 - 2003
B.PHARMACY	KAKATIYA UNIVERSITY, INDIA	2003 – 2007
M.PHARMACY	KAKATIYA UNIVERSITY, INDIA	2008 – 2010
PH.D. (PHARMACEUTICS)	KAKATIYA UNIVERSITY, INDIA	2012 – 2016
POST-DOC FELLO	UNIVERSITY OF MISSISSIPPI	2018-TILL

## **THESES TITLES:**

- *Ph.D. Thesis:*

Preparation characterization and in vivo evaluation of solid lipid nanoparticles of some anti-hypertensive and other drugs

**Mentor: Prof. V. Kishan, Kakatiya University, Warangal, India**

• **M.Pharm Thesis:**

Preparation and evaluation of gastro retentive delivery of fluoroquinolone antibiotics

**Mentor: Prof. Y. Madhusudan Rao, Kakatiya University, Warangal, India**

## **AWARDS & HONORS**

- **All India rank 382, with 99 percentile in GATE-2008.**
- **AICTE Fellowship:**  
Recipient of AICTE-JRF from 2008 to 2010
- **Best Research Paper Award (2011)**  
Recipient of best research paper award (first author) for a research paper published in the International Journal of Pharmaceutical Sciences and Nanotechnology in 2011.
- **UGC (University Grants Commission) Fellowship**  
Recipient of UGC-BSR (NDF) from 2012-2015
- **Best Research Paper Award (2014, 2016)**  
Recipient of best research paper award (co-author) for a research paper published in the International Journal of Pharmaceutical Sciences and Nanotechnology in 2014.
- **DST travel grant (2015)**  
Recipient of DST travel grant from New Delhi, India for presenting poster at AAPS-2015 Annual meeting and exposition, USA in 2015.

## **PROFESSIONAL EXPERIENCE**

**Associate Professor (Dept. of Pharmaceutics)**

**Vaagdevi Institute of Pharmaceutical Sciences**

**November 2016 – 16-10-2017**

- Teaching and research guidance for B. Pharm and M. Pharm for the fulfillment of thesis.
- 12 M. Pharmacy students thesis works were completed under my supervision.

Research Experience

**Assistant Professor (Dept. of Pharmaceutics)**

**Vaagdevi Institute of Pharmaceutical Sciences**

**Dec 2010 – Dec 2011**

Teaching and research guidance for B. Pharm for the fulfillment of thesis.

## **RESEARCH EXPERIENCE**

**PhD 2012-2016 under the supervision of Prof. V. Kishan.**

**Kakatiya University**

- Development, in vitro and in vivo characterization of solid lipid nanoparticles of candesartan cilexetil, nisoldipine, rosuvastatin calcium, zaleplon and isradipine.

**M. Pharm 2008-2010 under the supervision of Prof. Y. Madhusudan Rao. Kakatiya University**

- Development of floating matrix tablets of Ofloxacin and Ornidazole in combined dosage form: in vitro and in vivo evaluation in healthy human volunteers.
- Pharmaceutical Development and Clinical Pharmacokinetic Evaluation of Gastro retentive Floating Matrix Tablets of Levofloxacin
- Transmucosal Delivery of Domperidone or felodipine and pioglitazone combination from Bilayered Buccal Patches and pellets: *in vitro*, *ex vivo* and *in vivo* characterization (partly involved).

### Collaborative research

- Research collaboration with Prathima Medical College in clinical study case report entitled “Randomized Placebo-Controlled Clinical Study on the Role of Zinc in Low Birth Weight Neonates”. A research was published in the journal IJPSN in 2014.

### TECHNICAL EXPERTISE

- *Quality by design approaches (factorial, response surface methods)*
- High Performance Liquid Chromatography
- Differential Scanning Calorimetry
- X-ray diffractometer
- Dissolution Apparatus
- FT-IR (Perkin Elmer)
- Zeta Sizer (Malvern Nano ZS 90)
- Brookfield Viscometer
- CADMAC Tablet Punch
- Tablet coater
- Gel-electrophoresis
- SDS- PAGE gel electrophoresis
- Ultra-Fast Liquid Chromatography
- Freeze Drying
- UV-VIS Spectrophotometer
- Diffusion Apparatus
- In situ Single pass intestinal perfusion apparatus.

### PUBLICATIONS

1. Karthik Yadav Janga, Akshaya Tatke, **Narendar Dudhipala**, Sai Prachetan Balguri, Mohamed Moustafa Ibrahim, Doaa Nabih Maria, Monica M. Jablonski Soumyajit Majumdar. Gellan gum based sol-to-gel transforming system of natamycin transfersomes improves topical ocular delivery. J Pharm Exp Ther, 2019. March 14, 2019, jpet.119.256446; DOI: <https://doi.org/10.1124/jpet.119.256446>.
2. Akshaya Tatke, **Narendar Dudhipala**, Karthik Yadav Janga, Bhavik Soneta, Bharathi Avula and Soumyajit Majumdar. Melt-Cast Films Significantly Enhance Triamcinolone Acetonide Delivery to the Deeper Ocular Tissues. Pharmaceutics, 2019, 11(4), 158; <https://doi.org/10.3390/pharmaceutics11040158>.
3. Akshaya Tatke, **Narendar Dudhipala**, Karthik Yadav Janga, Sai Prachetan Balguri, Bharathi Avula, Monica M. Jablonski Soumyajit Majumdar. In Situ Gel of Triamcinolone Acetonide-Loaded Solid Lipid Nanoparticles for Improved Topical Ocular Delivery: Tear Kinetics and

- Ocular Disposition Studies. *Nanomaterials (Basel)*. 2018 Dec 27;9(1). pii: E33. doi: 10.3390/nano9010033.
4. Ruchi Thakkar, Akash Patil, Tabish Mehraj, **Narendar Dudhipala**, Soumyajit Majumdar. Updates in Ocular Antifungal Pharmacotherapy: Formulation and Clinical Perspectives. *Current Fungal Infection Reports*. 2019, doi.org/10.1007/s12281-019-00338-6.
  5. **Narendar D**, Karthik Yadav J, Thirupathi G. Comparative study of nisoldipine-loaded nanostructured lipid carriers and solid lipid nanoparticles for oral delivery: preparation, characterization, permeation and pharmacokinetic evaluation. **Artificial cells, nanomed and biotech. Early online 11 April, 2018**, doi.org/10.1080/21691401.2018.1465068.
  6. **Narendar D**, Govardhan K. Capecitabine lipid nanoparticles for anti-colon cancer activity in 1, 2-dimethylhydrazine induced colon cancer: Preparation, cytotoxic, pharmacokinetic and pathological evaluation. **Drug dev Ind pharm, Early online, March 2018**. doi: 10.1080/03639045.2018.1445264.
  7. **Narendar D** and Kishan V. Improved anti-hyperlipidemic activity of Rosuvastatin Calcium via lipid nanoparticles: pharmacokinetic and pharmacodynamic evaluation. *Euro J Pharm Biopharm*. 2017; 110 (1):47-57.
  8. **Narendar D** and Kishan Veerabrahma. Candesartan cilexetil loaded solid lipid nanoparticles for oral delivery: characterization, pharmacokinetic and pharmacodynamic evaluation. *Drug Delivery*, 2016, 23 (2); 395-404.
  9. **Narendar D** and Kishan Veerabrahma. Pharmacokinetic and pharmacodynamic studies of nisoldipine-loaded solid lipid nanoparticles developed by central composite design. *Drug Dev Ind Pharm*, 2015; 41 (12), 1968-77.
  10. **Narendar D** and Kishan V. Candesartan cilexetil nanoparticles for improved oral bioavailability. **Ther deli, 2017; 8(2):79-88**.
  11. **Narendar D** and Karthikyadav J. Lipid nanoparticles of zaleplon for improved oral delivery by Box-Behnken design: Optimization, *in vitro* and *in vivo* evaluation. *Drug Dev Ind Pharm*, **2017; 43(7):1205-1214**.
  12. **Narendar D**, K. Someshwar, N. Arjun and Y. Madhusudan Rao. Quality by design approach for development and optimization of Quetiapine Fumarate effervescent floating matrix tablets for improved oral delivery. *J Pharm Investigation.*, **2016; 46(3):253-263**.
  13. **Narendar D**, Chinna Reddy P, Sunil R and Madhusudan Rao Y. Development of floating matrix tablets of Ofloxacin and Ornidazole in combined dosage form: *in vitro* and *in vivo* evaluation in healthy human volunteers. *Int J Drug Deli* 4 (2012) 462-469.
  14. Arun Butreddy, **Narendar Dudhipala** and KishanVeerabrahma. Development of olmesartan medoxomil lipid based nanoparticles and nanosuspension: Preparation, characterization and comparative pharmacokinetic evaluation. **Artificial cells, nanomed and biotech. Early online March, 2017**; dx.doi.org/10.1080/21691401.2017.1299160.

15. Nagaraj K, **Narendar D** and Kishan V. Development of olmesartan medoxomil optimized nanosuspension using Box-Behnken design to improve oral bioavailability. *Drug Dev Ind Pharm*, 2017; 43(7):1186-1196.
16. Pitta Sravan, **Dudhipala Narendar**, Narala Arjun and Veerabrahma Kishan. Development and evaluation of zolmitriptan transfersomes by Box-Behnken design for improved bioavailability by nasal delivery. *Drug Dev Ind Pharm* (Accepted).
17. Chinna Reddy Palem, Ramesh Gannu, **Narendar D**, Vamshi Vishnu Yamsani, and Madhusudan Rao Yamsani. Transmucosal Delivery of Domperidone from Bilayered Buccal Patches: *In Vitro*, *Ex Vivo* and *In Vivo* Characterization. *Arch Pharm Res*. 34(10): 1701-1710, 2011.
18. Chinna Reddy Palem, **Narendar D**, Sunil Kumar Battu, Michael A. Repka and Madhusudan Rao Yamsani. Development, Optimization and in vivo Characterization of Domperidone Controlled Release Hot Melt Extruded Films for Buccal Delivery. *Drug Dev Ind Pharm*, 2015 Nov 4:1-12.
19. Chinna Reddy Palem, **Narendar D**, Sunil Kumar Battu, Satyanarayana Goda, and Madhusudan Rao Yamsani. Combined dosage form of pioglitazone and felodipine as mucoadhesive pellets via hot melt extrusion for improved buccal delivery with application of quality by design approach. *J Drug Del Sci Tech*. 2015, 30, 209-219.
20. A. Anusha, **D. Narendar**, B. Krishna Murthy and P. Govardhan. Influence of Single and Multi Dose Treatment of Glipizide on Pharmacokinetics and Pharmacodynamics of Irbesartan in Normal and Hypertensive Rats. *High blood press and cardiovas preve*. 2017; 24(2); 179-185.
21. Thirupathi G, Swetha E and **Narendar D**. Role of isradipine loaded solid lipid nanoparticles in the pharmacodynamic effect of isradipine in rats. *Drug res*, 2017; 67(03): 163-169.

#### **ABSTRACTS & PRESENTATIONS:**

1. Anusha K, Nagaraju B and **D Narendar**. Preparation and characterization of isradipine loaded solid lipid nanoparticles for oral bioavailability enhancement 68<sup>th</sup> IPC, held at Visakhapatnam, 16-18<sup>th</sup> December, 2016.
2. Pitta Sravan, Narala Arjun, **D Narendar** and Kishan Veerabrahma. Development and evaluation of zolmitriptan transfersomes by Box-Behnken design for improved nasal delivery held at 67<sup>th</sup> IPC, Mysore, 19-21<sup>st</sup> December, 2015.
3. **D. Narendar** and Kishan Veerabrahma. Improved Anti-hyperlipidemic Activity of Rosuvastatin Calcium via Lipid Nanoparticles: Pharmacokinetic and Pharmacodynamic Evaluation. Presented at AAPS Annual meeting and exposition held at New Orlando, USA 25-29<sup>th</sup> October, 2015.

4. **D. Narendar** and Kishan Veerabrahma. Pharmacokinetic and pharmacodynamic studies of nisoldipine-loaded solid lipid nanoparticles developed by central composite design. Oral presentation in Dr KV Rao Young Scientist award conference held at Hyderabad, 3<sup>rd</sup> April, 2015.
5. **D. Narendar** and Kishan Veerabrahma. Development of Solid lipid nanoparticles for enhancement of oral bioavailability of rosuvastatin calcium: preparation, characterization and pharmacokinetic evaluation. 66<sup>th</sup> IPC, held at Hyderabad, 23-25<sup>th</sup> January, 2015.
6. **D. Narendar** and Kishan Veerabrahma. Development of Solid Lipid Nanoparticles of Nisoldipine For Improved Oral Bioavailability: Optimization, Characterization, Pharmacokinetic and Pharmacodynamic Evaluation. National symposium held at SIPRA labs, Hyderabad, 2<sup>nd</sup> July, 2014.
7. **D. Narendar** and Kishan V. Candesartan cilexetil loaded solid lipid nanoparticles for oral delivery: characterization, pharmacokinetic and pharmacodynamic evaluation. Oral presentation in Dr KV Rao Young Scientist award conference held at Hyderabad, 23<sup>rd</sup> March, 2014.
8. **D. Narendar** and Kishan Veerabrahma. Formulation development and optimization of nisoldipine loaded solid lipid nanoparticles using central composite design. 65<sup>th</sup> IPC held at New Delhi, 22-24<sup>th</sup> December, 2013.
9. **D. Narendar** and Kishan V. Candesartan loaded solid lipid nanoparticles for improved oral bioavailability. AAPS, 2013 held at San Diego, USA..
10. **D. Narendar** and Kishan V. Preparation, characterization and *in-vivo* evaluation of solid lipid nanoparticles loaded with Candesartan cilexetil to improve oral bioavailability in ICETCPS at JNTU Anantapur, May, 2013, AP.
11. **D. Narendar**, Chinna Reddy P and Madhusudan Rao Yamsani. Development and Formulation of gastro retentive floating matrix tablets of ofloxacin and ornidazole in combined dosage form: *in-vitro* and *in-vivo* evaluation in 62<sup>nd</sup> IPC held in Manipal.
12. **D. Narendar**, Chinna Reddy P and Madhusudan Rao Yamsani. Development and Formulation of gastro retentive floating matrix tablets of levofloxacin: *in-vitro* and *in-vivo* evaluation in International Conference held in Kakatiya University, Warangal. (20-22<sup>nd</sup> November, 2010).
13. **D. Narendar**, Niranjan Reddy K, Sunil Reddy and Madhusudan Rao Yamsani. Enhancement of solubility and dissolution rate of felodipine solid dispersions. RAPS-2, 20-22<sup>nd</sup> November, 2012, KU.
14. Sunil R, **Narendar. D** and Madhusudan Rao Y. Pharmacokinetic studies of metoprolol succinate sustained release matrix tablets in healthy human volunteers. National seminar held at Kakatiya University 2012\*\**Best poster awarded with first prize*\*\*  
*Can be provided if needed.*

**REFERENCES:**

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