CURRICULUM VITAE

S. NARASIMHA MURTHY

RESIDENCE OFFICE

501 Bowie Drive Associate Prof-Pharmaceutics

Oxford, MS 38655, USA 113 Faser Hall

Tel: 662-513-0024 The University of Mississippi **Cell**: 662-202-4929 University, MS 38677

Tel: 662-915-5164 Fax:: 662-915-1177

E-mail: murthy@olemiss.edu

Research Group: http://www.olemiss.edu/~murthy

EDUCATION

1988-1992	Bachelor of Pharmacy (Bangalore University, India)
1992-1994	Master of Pharmacy- Pharmaceutics (Bangalore University, India)
1996-2002	PhD-Pharmaceutics (Bangalore University, India)
2002-2005	Postdoctoral Research Associate- Molecular and Cellular Biophysics at
	Roswell Park Cancer Institute Ruffalo NY LISA

POSITIONS AND INSTITUTES

1994-2002	Assistant Professor (Pharmaceutics)- M.S.R College of Pharmacy, India
2005-2006	Assistant Professor (Pharmaceutics)-Ohio Northern University, OH
2006-2011	Assistant Professor (Pharmaceutics) – The University of Mississippi, MS
2011-	Associate Professor (Pharmaceutics)-The University of Mississippi, MS
2013-	Founder-Director, Institute for Drug Delivery and Biomedical Research,
	Bangalore India (<u>www.IDBResearch.Org</u>)

OTHER AFFILIATIONS

Research Associate Professor- Research Institute of Pharmaceutical Sciences

Chair-Dermatopharmaceutics Focus Group-AAPS

Member- AAPS Member groups Co-ordination Committee

Manager-Phoretek Pharma LLC, Oxford, MS.

Chief Scientific Advisor-Dermaperm Research Inc, Bangalore, India.

Editor in Chief-Research and Reports in Transdermal Drug Delivery

Member of the Roaster of Central Scientific Review, Dermatology, Rheumatology and Inflammation Committee, CRS, **National Institutes of Health**.

Editorial Advisory Board Member

Journal of Pharmaceutical Research
Drug Development and Industrial Pharmacy
Recent Patents on Drug Delivery & Formulation.



Clinical Medicine-Dermatology.
ScientiaPharmaceutica.
The Open Dermatology Journal
Journal of Interactive experiment and protocol

Research Grant Reviewer

National Institutes of Health, USA
Wellcome Foundation, UK
British Skin Foundation, UK
Ohio Northern University, Ada, OH
Department of Innovation, Government of Italy
Portuguese Foundation for Science and Technology

Ph.D Dissertation Reviewer/Evaluator

The University of Mississippi, Oxford, MS
Jadavpur University, Kolkata, India.
Manipal Academy of Higher Education, Manipal, India.
Vinayaka Missision University, Coimbatore, India
Tamilnadu MGR University, Chennai, India
Berhampur University, Orissa, India.

AWARDS & RECOGNITION

Top Reviewer by the American Pharmacists Association (APhA)
Top Reviewer by the American Pharmacists Association (APhA).
Top Reviewer" by Elsevier Publications Ltd.
Certification of "Highly cited publication in Journal of Dermatological Sciences".
New Investigator Award- The University of Mississippi School of Pharmacy.
Top Reviewer by the American Pharmacists Association (APhA)
"Global Indus Technovator's Award" from MIT, Boston, MA.
Top Reviewer by the American Pharmacists Association (APhA)
Faculty Research Fellow. The University of Mississippi.
Endowed Chair for Research at Ohio Northern University, Ada, OH.
Biography included in Marquis Who's Who in the World (23rd Edn)
Biography included in Marquis Who's Who in Science and Engineering
Biography included in Marquis Who's Who is Health and Healthcare.

RESEARCH GRANTS (PRINCIPAL INVESTIGATOR-MURTHY)

2014-19	TOPICALS PRODUCTS AND CQA (1U01FD005233-01) funded by USFDA	\$1.250.000
2014-15	NAIL PENETRATION OF ANTIFUNGAL DRUG (ARNO THERAPEUTICS, USA)	\$22,500



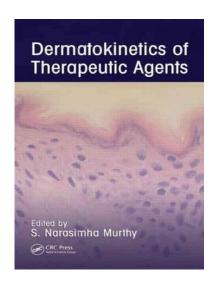
2014-15	Dermal Delivery of therapeutics using Cyclodextrins (Ligand Ltd, CA)	\$40,000
2013	Travel grant-3 rd European Cyclodextrin Conference in Turkey. Cydex Pharmaceuticals, La Jolla, CA	\$4,000
2013-14 Role: PI	Formulation of Intrathecal Controlled Release Microspheres Small grant program (COBRE awarded to Univ. Mississippi)	\$50,000
2012-14 Role-PI	Taste Masking of API's by Hot melt Extrusion Roquette Pharma, Chicago, IL	\$10,000
2012-14 Role-PI	A Novel method for treating Chronic pain National Institute of Neurological Disorders and Stroke (NINDS)	\$369,000 5)
2010-12 Role-PI	Transdermal delivery of iron National Institute of Neurological Disorders and Stroke (NICHD)	\$138,000
2010 Role-Pl	Bioadhesive properties of Nail lacquers Chanelle Group, France	\$5000
2009-11 Role: PI	Vehicles to enhance nose to brain bioavailability of drugs CORE-NPN (NCRR)-Junior Investigator	\$264,000
2008-09 Role: PI	Rapid transdermal delivery of drugs. Transport Pharmaceuticals Inc.	\$140,000
2008-10 Role: PI	Electropulsation mediated Drug therapy for Onychomycosis National Institute of Biomedical Engineering and Bioimaging (N	\$150,000 IIBIB)
2007-08 Role: PI	Iontophoretic trans-ungual Delivery of Drugs" Transport Pharmaceuticals Inc.	\$128,000
2007-08 Role: PI	Noninvasive transcorneal drainage of aqueous humor Faculty Research Fellow-2007, Univ. of Mississippi.	\$ 8,000
2007-2009 Role:Pl	Enhancement of brain uptake of Neurotrophins CORE-NPN (NCRR)-Small grants program	\$20,000
2006-2009 Role: PI	Electroporation and transcutaneous extraction of drugs National Institute of Arthritis Musculoskeletal and Skin disease	\$145,000 s (NIAMS)
2005-06 Role: PI	Electret Effects on the Skin permeability Rad Elec Inc., MD	\$ 10,000

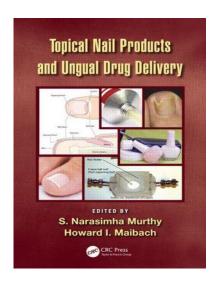


2005-06 Role: PI	Effect of electroporation on transcorneal water permeation Endowed Chair Research Grant-Ohio Northern University	\$ 21,000
2005-06 Role-PI	ONU Teaching with Technology Grant Office of Dean-Ohio Northern University	\$ 5,000
2001	Travel grant from Karnataka State Pharmacy Council for preser Research paper at FIP2000, Sydney, Australia. 2001.	ntation of Rs 15,000

PUBLICATIONS

BOOKS- CHIEF EDITOR





BOOK CHAPTERS (Eleven)

Chapters authored in the book "Advances in Pharmaceutical Technology" Edited by Shobharani R. Hiremath. (Publisher: Orient Longman).

- 1. Transdermal drug delivery
- 2. Ocular drug delivery
- 3. Intranasal drug delivery
- 4. Buccal drug delivery
- 5. Implant Drug delivery systems

Chapter authored in the book "Minimally invasive techniques of drug delivery" edited by Dr.Kulkarni, DPT laboratories. (CRC Press)

6. Dermal and Transdermal drug delivery

Chapter authored in the book "Percutaneous Enhancement Techniques edited by Dr. Howard Maibach.

7. Therapeutic applications of Transdermal Electroporation



Chapters authored in the book "Dermatokientics of therapeutic agents" edited by S.Narasimha Murthy

8. Formulation approaches to modulate the dermatokinetics of drugs

Chapters authored in the book "Topical Nail Products and Ungual Drug Delivery" edited by S.Narasimha Murthy

- 9. Topical nail formulations
- 10. Approaches to enhance ungual and trans-ungual drug delivery.
- 11. In vitro and in vivo models to evaluate topical nail formulations.

PEER REVIEWED PUBLICATIONS

- Maurya A, Murthy S.N. Pretreatment with Skin Permeability Enhancers: Importance of composition and duration of treatment in diclofenac delivery. J. Pharm. Sci. 2014: 103(4), 1178-83
- 2. Juluri, A., **Murthy, S. N** (2014). Transdermal iontophoretic delivery of a liquid lipophilic drug by complexation with an anionic cyclodextrin. *Journal of Controlled Release*, 2014:189, 11-18.
- 3. Manda P, Angamuthu M, Hiremath S, **Murthy S.N**. Iontophoretic drug delivery for the treatment of scars" *J.Pharm Sci 2014*,:03(6), 1638-42
- 4. Jo.S, **Murthy S.N** et al., Quinone Propionic Acid-based Redox-triggered Polymer Nanoparticles for Drug Delivery: Computational Analysis and *in Vitro* Evaluation. *J.Applied. Polymer.Sci (In Press)*
- 5. Shivakumar H.N, Repka M.A, **Murthy S.N**. Delivery of drugs across the nail plate. *J.Drug.Del.Sci. Tech. 2014*.
- 6. Abhshek J, Shivakumar H.N, Vanakja K, **Murthy S.N**. Passive approaches of transcutaneous vaccine delivery *J.Drug.Del.Sci. Tech. 2014*
- 7. Modepalli N, **Murthy S.N**. Irontophoresis for treating Anemia. *J.Drug.Del.Sci. Tech.* 2014
- 8. Angamuthu M, **Murthy S.N.** Controlled release Intralesional Injection of Terbinafine hydrochloride for treating onychomycosis. *J.Pharm.Sci* 2014:103(4), 1178-1183.
- 9. Perumal. O., **Murthy S. N.**, & Kalia, Y. N. The Development of Modern Transdermal Drug Delivery Systems and Future Trends. *Skin Pharmacol. Physiol.*, 2013: 26(4-6), 331-342.
- 10. **Murthy, S. N**. Iontophoresis for treating nail diseases. *Therapeutic delivery, 2013:* 4(6), 647-650.
- 11. Loria, M. J., White, S. W., Robbins, S. A., Salmeto, A. L., Hymel, K. A., **Murthy, S. N.**, & Sufka, K. J. Brain-derived neurotrophic factor response in vulnerable and resilient genetic lines in the chick anxiety-depression model. *Behavioral Brain Res.*. 2013: 245, 29-33.
- 12. Juluri A, Modepalli N, Shivakumar H.N, Repka M, Jo.S, **Murthy S.N.**, Minimally invasive transdermal delivery of iron dextran using microneedles. *J.Pharm.Sci.* 2013:102(2), 987-993.



DOCKET

Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

