

## **BIO-DATA**

**Name:** Ambikanandan Rajnarayan Misra

**Date of Birth:** 15-11-1955.

**Sex (M/F):** M

**Designation:** Professor in Pharmacy and Dean,  
Faculty of Technology & Engineering

**University:** The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat

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**Education** (Post-Graduation onwards & Professional Career)

Sr. No.	Institution Place	Degree Awarded	Year	Field of Study
1	University of Saugar, Sagar, M.P., India	M.Pharm	1979	Pharmaceutics
2	The M.S. University of Baroda, Vadodara, Gujarat, India.	Ph.D	1985	Pharmacy

### **A Position and Honors**

**Position and Employment** (Starting with the most recent employment)

Sr. No.	Institution Place	Position	From (Date)	To (date)
1	Faculty of Technology and Engineering, The M.S. University of Baroda, Vadodara	Dean	Aug 2011	Till date
2	Pharmacy Department, Faculty of Technology and Engineering,	Head	2003	2008



	The M.S. University of Baroda, Vadodara			
3	Pharmacy Department, Faculty of Technology and Engineering, The M.S. University of Baroda, Vadodara	Professor	1996 onwards	Continued
4	Pharmacy Department, Faculty of Technology and Engineering, The M.S. University of Baroda, Vadodara	Reader	1990	1996
5	Cadila Laboratories Ltd.	Manager	1988	1990
6	Sarabhai Chemicals	Asst. Manager	1985	1988
7	Sarabhai Research Center	Scientist	1979	1985

### **Honors/Awards**

- 1. Gold Medal (1977)** Saugar University, Sagar, Madhya Pradesh (M.P.), India,
- 2. Gold Medal (1978)** Indian Drug Manufacturer's Association G.P. Nayar, India
- 3. Won second prize (1987)** in National Essay competitions on "Advances in Technology of Industrial Pharmacy"
- 4. Member (1990 onwards)** Faculty of Technology and Engineering, The M. S. University of Baroda, India.
- 5. Member,** Designing a Model Syllabus for M.Pharm. Courses (Pharmaceutics) All India Council of Technical Education, India.
- 6. Member of team of inspectors** of Pharmacy Council of India, India and All India Council of Technical Education, India **(1993 onwards).**
- 7. Panel of referees – 3 International Journals** (American Association of Pharmaceutical Sciences, PharmSci Tech and Pharm. Sci., and Medical Science Monitor) **(2000 onwards)**
- 8. Member,** Board of Studies, Pharmacy Dept., M.S.University of Baroda, India (1990 onwards) and Dr. H.S. Gour University, Sagar, M.P., India **(July 2002 – June 2005)**
- 9. AICTE member** on Board of Trustees of S.K. Patel College of Pharmacy, Mehsana, Gujarat,

India and S.N. Nahata College of Pharmacy, Mandsur, M.P. India (2002 onwards).

10. **National Award - Best All India Council for Technical Education - TAPTEC Project Award** for the research work entitled “Development of Liposomal Dry Powder Inhaler (DPI) formulations” on the occasion of National Awards Function on Technology Day, India (11 May, 2003)
11. **Nominated as a member of Scientific Service Committee**, Indian Pharmaceutical Congress, India for period of three years 2004 -2007.
12. **President**, Indian Pharmaceutical Association, Vadodara branch, Gujarat, India (2006 onward).
13. **International Award - Won Outstanding Manuscript Award at 2008 American Association of Pharmaceutical Scientists - Annual Meeting and Exposition** held at Atlanta (Georgia) USA, on 16 Nov. 2008, for manuscript entitled “**Preliminary Brain Targeting Studies of Intranasal Mucoadhesive Microemulsions of Sumatriptan**”
14. **National Award - Dr. Manjusree Pal Memorial Award 2009** for the Best Pharmaceutical Scientist of the year – Association of Pharmaceutical Teachers of India – Annual Meeting held at Jodhpur, India, on 3<sup>rd</sup> Oct, 2009
15. **National Award – Dr. R. K. Upadhyay memorial award** conferred for contribution in pharmacy education by IES group of Bhopal on December 16, 2009
16. **International Award- Best Reviewers** in Pharmaceutical Sciences for Elsevier journals letter of Executive Publisher and publisher, dr. jaap van harten and dr. irene kanter-schlifke of january 3, 2011
17. **Nominated as a member of Scientific Service Committee**, Indian Pharmaceutical Congress, India for period of three years 2010-2013.

**Awards with students:**

18. **National Award-** First Prize to **Aliasgar Shahiwala** and **Ambikanandan Misra** for Paper presentation in Pharmaceutics and Pharmaceutical Technology category, “Intranasal delivery for contraceptives” GUJCOST sponsored state level pharmacy paper presentation competition organized at S K Patel College of Pharmacy, Mehsana (2004).
19. **National Award-** First Prize to **Aliasgar Shahiwala**, and **Ambikanandan Misra** for Paper presentation in Pharmaceutics and Pharmaceutical Technology category, “Intranasal mucoadhesive microemulsion of Sumatriptan: investigation on Brain targeting efficiency”

GUJCOST sponsored state level pharmacy paper presentation competition organized at KBIPER, Gandhi nagar (18th and 19th February, 2006).

20. **National Award-** First Prize to **Viral Vinodlal Jogani**, Tushar Vyas, and Ambikanandan Misra for Paper presentation in Pharmaceutics and Pharmaceutical Technology category, “Intranasal mucoadhesive microemulsion of Sumatriptan: investigation on Brain targeting efficiency” GUJCOST sponsored state level pharmacy paper presentation competition organized at KBIPER, Gandhi nagar (18th and 19th February, 2006).
21. **National Award-** **Pritam Kanagale** and **Ambikanandan Misra** Best Poster Award in 58<sup>th</sup> Indian pharmaceutical Congress, Dec 1-3,2006, Mumbai
22. **International Award “Scholar -in training award”** by **American Association of cancer research conference (AACR)** **Sachin Naik**, Deepa Patel, Nazneen Surti, **Ambikanandan Misra** for a paper entitled “Cell death mechanism and cancer therapy” by American Association of cancer research AACR conference of Feb 2010, San diago.
23. **International Award-“Scholar -in training award”** by **American Association of Cancer Research conference (AACR)** **Sachin Naik**, Deepa Patel, Nazneen Surti, **Ambikanandan Misra** for presentation of paper entitled ”RGD grafted Docetaxel encapsulated PLGA nanoparticles for breast cancer therapy”, by American Association of cancer research AACR conference of 101st AACR Annual meeting on 17-21st April, 2010 at Washington DC
24. **International Award-“Scholar -in training award”** by **American Association of cancer research conference (AACR)** **Deepa Patel**, Sachin Naik, **Ambikanandan Misra** for paper entitled “RGD grafted Docetexal encapsulated PLGA nanoparticles for breast cancer therapy: by American Association of cancer research AACR conference of 102 AACR Annual meeting on 2-6April, 2011 at Orlando, Florida.
25. **International Award-** **Deepa Patel**, **Sachin Naik**, **Ambikanandan Misra** “**Scholar -in training award**” for paper entitled To prepare, characterized, asses in vitro Antiproliferative activity, determine DNA content and mode of cell death of RGDfk grafted Irinotecane encapsulated PLGA nanoparticles on breast cancer cells. San Francisco, California (2011).
26. **National Award-** **Nirav Khatri** and **Ambikanandan Misra** Best Poster Award for paper entitled “siRNA nanoconstruct for effective treatment of lung cancer” in 26th Gujarat science congress, Baroda, 26<sup>th</sup> Feb. 2012
27. **National Award-** **Chetan Yewale** and **Ambikanandan Misra**. “Ranbaxy Science Scholar

Award-2013” by Ranbaxy Science Foundation, Gurgaon, Delhi. 18<sup>th</sup> Oct 2013.

**B Professional Experience and Training relevant to the Project**

**Books/Chapters:** 5/36

**Research Papers, Reports:** 129

**Patents:** 27 (Granted: 5)

**Conferences/Presentations:** 130

**PAPER PUBLISHED**

**INTERNATIONAL**

1. N.K. Jain, A.N. Misra, Controlled Release Capsule Of Tetracycline HCl, *Drug Dev. Ind. Pharm.*, 15, 825-844 (1989).
2. V.U. Rao, A.N. Misra, Effect of Penetration Enhancers on Transdermal Absorption of Insulin across Human Cadaver Skin, *Drug Dev. Ind. Pharm.*, 20, 258-259 (1994).
3. V.U. Rao, A.N. Misra, Enhancement of Iontophoretic Permeation of Insulin across Human Cadaver Skin, *Pharmazie*, 49, 538-539 (1997).
4. J.M. Baweja, A.N. Misra, Modified Guar Gum As a Tablet Disintegrant, *Pharmazie*, 52, 856-859 (1997).
5. V.B. Patel, A.N. Misra and Y.S. Marfatia, Topical Dosage Form of Liposomes Clofazimine Research and Clinical Implications, *Pharmazie*, 54, 448-451 (1999).
6. J.M. Baweja, A.N. Misra, Modified Guar Gum as a Film Former, *Pharmazie*, 54, 678-681 (1999).
7. V.B. Patel, A.N. Misra, Encapsulation and Stability of Clofazimine Liposomes, *J. Microencap.*, 16, 357-367 (1999).
8. V.B. Patel, A.N. Misra and Y.S. Marfatia, Topical Liposomal Gel of Tretinoin for the treatment of Acne: Research and Clinical Implications, *Pharm. Dev. Tech.*, 5, 455-464 (2000).
9. V.B. Patel, A.N. Misra and Y.S. Marfatia, Preparation and Comparative Clinical Evaluation of Liposomal gel of Benzoyl Peroxide for Acne, *Drug. Dev. Ind. Pharm.*, 27 (8), 863 – 869, (2001).
10. M. R. Joshi and A.N. Misra, DPI of Liposomal Ketotifen Fumarate: Formulation and Characterization, *Int. J. Pharmaceutics*, 223(1-2): 15-27 (2001).

11. V.B. Patel, A.N. Misra and Y.S. Marfatia, Clinical assessment of the combination therapy with liposomal gels of tretinoin and benzoyl peroxide in acne, *AAPS PharmSciTech*, 2(3) Technical Note 3, (2001).
12. M. R. Joshi and A.N. Misra, Liposomal Budesonide for Dry Powder Inhaler: Preparation and Stabilization *AAPS PharmSciTech*, 2(4), article 25, (2001).
13. M. R. Joshi and A.N. Misra, Pulmonary disposition of budesonide from liposomal dry powder inhaler, *Methods Find Exp Clin Pharmacol*, 23(10): 531-536, (2001).
14. A. Shahiwala and A.N. Misra. Studies in topical application of niosomally entrapped Nimesulide. *J. Pharm. Pharmaceut. Sci.*, 5(3): 220-225, (2002).
15. A.K. Seth and A.N. Misra. Mathematical Modeling of preparation of acyclovir liposomes: reverse phase evaporation method. *J. Pharm. Pharmaceut. Sci.*, 5(3): 285-291, (2002).
16. M.R. Joshi and A.N.Misra. Disposition kinetics of Ketotifen from liposomal dry powder for inhalation in rat lung. *Clin. Exp. Pharmacol. Physiol.*, 30(3): 153- 156, (2003)
17. A.K. Seth, A.N. Misra and D. Umrigar. Role of novel acyclovir gel in herpes simplex: A clinical implication. *Medical Sci. Monitor.*, 9(7): 193-198, (2003)
18. A.N. Misra and T. Mahesh, Influence of Absorption Promoters on Pulmonary Insulin Bioactivity, *AAPS PharmSciTech*, 4(2): article 15, (2003).
19. Ambikanandan Misra, Ganesh S., Aliasgar Shaiwala, Shrenik P. Shah, Drug Delivery to the Central Nervous System: A review. *J. Pharm. Pharmaceut. Sci.*, 6(2): 252-273, (2003)
20. Avinash Kumar Seth; Ambikanandan Misra; Dipak Umrigar, Topical Liposomal Gel of Idoxuridine for the Treatment of Herpes Simplex: Pharmaceutical and Clinical Implications, *Pharm. Dev. Technol.*, 9(3) 277 – 289, (2004).
21. Shah S.P. and Misra Ambikanandan, Development of Liposomal Amphotericin B Dry Powder Inhaler Formulation, *Drug delivery*, 11(4), 247-253, (2004).
22. Mayur Kalariya, Bijay Kumar Padhi, Mahavir Chougule, Methotrexate Loaded Solid Lipid Nanoparticles for Topical Treatment of Psoriasis: Formulation and Clinical Implications, *Drug delivery Technology*, 4(8), Oct. (2004).
23. Shahiwala A. and Misra Ambikanandan, Pulmonary absorption of liposomal Levonorgesterel, *AAPS PharmSciTech*, 5(1), article 13, (2004).
24. Shrenik P. Shah and Ambikanandan Misra, Liposomal Amikacin Dry Powder Inhaler: Effect of Fines on In Vitro Performance, *AAPS PharmSciTech*, 5(4), article 65, (2004).

25. T. Mahesh Kumar and Misra Ambikanandan, Pulmonary Absorption Enhancement of Salmon Calcitonin, *Journal of Drug Targeting*, 12(3), 135 – 144, (2004).
26. Shah, S. P.; Misra, Ambikanandan, Liposomal Amphotericin B dry powder inhaler: Effect of fines on *in vitro* performance, *Pharmazie*, 59(10), 812-813, (2004).
27. Shahiwala A. and Misra Ambikanandan, Nasal delivery of Levonorgesterel for contraception – an experimental study in rats, *Fertility and Sterility*, 81, 893-898, (2004).
28. Aliasgar Shahiwala and Ambikanandan Misra, Nasal Delivery of liposomal leuprolide acetate for contraception. *Drug Delivery Technology*, (Feb 2005).
29. Aliasgar Shahiwala and Ambikanandan Misra, A preliminary pharmacokinetic study of liposomal leuprolide dry powder inhaler: a technical note. *AAPS PharmSciTech*, 6(3): E482 – 486, (2005).
30. Tushar k.Vyas, Aliasgar sahiwala, Sudhanva Marathe and Ambikanandan Misra, Intranasal Drug Delivery for Brain Targeting. *Current drug Delivery*, 2, 165 – 175, (2005).
31. Sachin Naik, Mahavir Chougule, Bijay Kumar padhi, Ambikanandan Misra, Development of novel lyophilized mixed micelle Amphotericin B formulation for treatment of systemic fungal infection, *Current drug Delivery*, 2, 177 – 184, (2005).
32. Tushar K. Vyas, A.K. Babbar, R.K. Sharma, and Ambikanandan Misra, Intranasal mucoadhesive microemulsion of zolmitriptan: Preliminary studies on brain-targeting. *Journal of Drug Targeting*, 13(5):317 – 324, (2005).
33. Tushar K. Vyas, A.K. Babbar, R.K. Sharma, Shashi Singh and Ambikanandan Misra, Preliminary Brain Targeting Studies of Intranasal Mucoadhesive Microemulsions of Sumatriptan. *AAPS PharmSci Tech*, 7(1), Article 8, (2006).
34. Tushar K. Vyas, A.K. Babbar, R.K. Sharma, Shashi Singh and Ambikanandan Misra, Intranasal Mucoadhesive Microemulsions of Clonazepam: Preliminary Studies on Brain Targeting. *J Pharm Sci.*, 95(3):570 – 580, (2006).
35. Aliasgar Shahiwala and Ambikanandan Misra, Preliminary investigation of the nasal delivery of liposomal leuprolide acetate for contraception in rats, *J Pharm Pharmacol.*, 58(1): 19 – 26, (2006).
36. Shah P, Jogani V, Bagchi T, Misra A., Role of Caco-2 Cell Monolayers in Prediction of Intestinal Drug Absorption, *Biotechnol Prog.*, 22(1): 186 – 198, (2006).

37. Mahavir B. Chougule, Bijay kumar Padhi, Ambikanandan Misra, Nano-liposomal Dry Powder Inhaler of Amiloride Hydrochloride. *Journal of Nanoscience and Nanotechnology*, Vol. 6 (9-10), 3001–3009, (2006).
38. T. Mahesh Kumar and Ambikanandan Misra, Formulation and Evaluation of Insulin Dry Powder for Inhalation, *Drug Development and Industrial pharmacy*, 32 (6), 677-686, (2006).
39. Bijay K Padhi, Mahavir B. Chougule, Ambikanandan Misra, “Optimization of formulation components and characterization of large respirable powders containing high therapeutic payload”, *Pharmaceutical Development Technology*, 11(4), 465-475, (2006).
40. Mahavir B. Chougule, Bijay K. Padhi, Kaustubh A. Jinturkar and Ambikanandan Misra, “Development of Dry Powder Inhalers” *Recent Patents on Drug Delivery & Formulation*, 1, 11-21, (2007).
41. Mahavir B. Chougule, Bijay K. Padhi, and Ambikanandan Misra, Nano- liposomal dry powder inhaler of tacrolimus: preparation, characterization and pulmonary pharmacokinetics, *International Journal of Nanomedicine*, 2(4):675-88 (2007)
42. Pritam Kanagale, Braj Bhushan Lohray, Prakash Davadra, Rajesh Kini and Ambikanandan Misra, Formulation and Optimization of Porous Osmotic Pump Based Controlled Release System of Oxybutynin, *AAPS PharmSciTech.*, 13;8(3):E53, (2007)
43. Avinash Kumar Seth and Ambikanandan Misra, Preparation and Evaluation of Acyclovir Liposomes by Two Techniques: A Comparative Study, *Iranian Journal of Pharmaceutical Research*, 6 (2): 75-81(2007).
44. Naazneen Surti, Sachin Naik, and Ambikanandan Misra, Assessment of in-vitro antiproliferative activity of WGA-conjugated budesonide nanoparticles in A-549 cells, *Journal of Biomedical Nanotechnology*, 2007; 3(1):61-67..
45. Ambikanandan Misra, Pranav Shah, Viral Jogani, P. Mishra, A.K. Mishra, and T. Bagchi Role of <sup>99m</sup>Tc-Mannitol and <sup>99m</sup>Tc-PEG in Assessment of Paracellular Integrity of Cell Monolayers, *Nuclear Medicine Communications*, 28(8):653-9, (2007)
46. Jogani Viral, Shah PJ, Mishra P, Mishra AK, Misra AN, Nose to Brain Delivery of Tacrine , *Journal of Pharmacy and Pharmacology*, 59(9):1199-205, (2007)
47. Ambikanandan Misra, Pranav Shah, Viral Jogani, P. Mishra, A.K. Mishra, and T. Bagchi Modulation of Ganciclovir Intestinal Absorption in Presence of Absorption Enhancers .*Journal of Pharmaceutical Sciences*, 96(10):2710-22. (2007)
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50. Nazneen Surti, Ambikanandan Misra, Intracellular Delivery of Nanoparticles of an Antiasthmatic Drug, *AAPS PharmSciTech.* 9(1):217-23. (2008)
51. Bijay Padhi, Mahavir Chougule, Ambikanandan Misra, Development of Spray Dried Liposomal Dry Powder Inhaler of Dapsone, *AAPS PharmSciTech*, 9(1):47-53. (2008)
52. Ambikanandan Misra, Pranav Shah, Viral Jogani, P. Mishra, A.K. Mishra, and T. Bagchi In Vitro Assessment of Transepithelial Permeation of Acyclovir in presence of Absorption Enhancers, *Drug Development and Industrial Pharmacy*, 34(3):279-88. (2008).
53. Nazneen Surti, Ambikanandan Misra Wheat Germ Agglutinin Conjugated nanoparticles For Sustained Cellular And Lung Delivery of Budesonide, *Drug Deliv.*, 15(2):81-6. (2008)
54. Viral Jogani, Kaustubh Jinturkar, Tushar Vyas and Ambikanandan Misra Recent Patents Review on Intranasal Administration for CNS Drug Delivery, *Recent Patents on Drug Delivery & Formulation*, 2 (1), 25-40, (2008)
55. Pritam Kangale, Pankaj R. Patel, Avani Amin, Ambikanandan Misra, Pharmaceutical development of solid dispersion based osmotic drug delivery system for nifedipine, *Current Drug Delivery*, Oct ;5 (4):306-11 (2008).
56. Mukesh Kumar, Kamla Pathak, Ambikanandan Misra Formulation and characterization of Nanoemulsion-Based Drug Delivery System of Risperidone. *Drug Dev Ind Pharm.* 2008 Nov 17, 1-9
57. Mukesh Kumar, Ambikanandan Misra, A. K. Mishra, Pushpa Mishra, & Kamla Pathak. Mucoadhesive nanoemulsion-based intranasal drug delivery system of olanzapine for brain targeting, *Journal of Drug Targeting*, 2008, 16 (10) 806-814.
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59. Padhi Bijay, Chougule Mahavir, Misra Ambikanandan. "Aerosol Performance of Large Respirable Particles of Amikacin Sulfate Produced by Spray and Freeze Drying Techniques", *Current Drug Delivery*, Vol. 6, Issue 1, January 2009

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61. Sheetal Porecha, Tapan shah, Viral Jogani, Sachin Naik, Ambikanandan Misra. Microemulsion Based Intranasal Delivery System for Treatment of Insomnia. *Drug Delivery*, April 2009, Volume 16, No. 3, Pages 128-134
62. K. K. Upadhyay, H. G. Agrawal, C. Upadhyay, C. Schatz, J.F. Le Meins, A. Misra, and S. Lecommandoux. Role of Block Copolymer Nano-constructs in Cancer Therapy. "Critical Reviews™ in Therapeutic Drug Carrier Systems". 26(2), 157–205 (2009)
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65. Kamal K. Upadhyay, Anant N. Bhatt, Anil K. Mishra, Bilikere S. Dwarakanath, Sanyog Jain, Christophe Schatz,. Jeann F. Le Meins, Abdullah Farooque, Godugu Chandraiah, Amit K. Jain, Ambikanandan Misra, Se´bastien Lecommandoux The intracellular drug delivery and antitumor activity of doxorubicin loaded poly(g-benzyl L-glutamate)-b-hyaluronan polymersomes,. *Biomaterials*, Volume 31, Issue 10, Pages 2882-2892, (2010)
66. Kamal K. Upadhyay, Aanat N. Bhatt, Emilio Castro, Anil K. Mishra,\* Krishna Chuttani, Bilikere S. Dwarakanath, Christophe Schatz, Jean-François Le Meins, Ambikanandan Misra\*, Se´bastien Lecommandoux\*In Vitro and In Vivo Evaluation of Docetaxel Loaded Biodegradable Polymersomes, *Macromol Biosci.* 2010 May 14; 10(5):503-12.
67. Mahendra Nakarani, Ambikanandan Misra, Jayvadan Patel, Subhash Vaghani. Itraconazole nanosuspension for oral delivery: Formulation, characterization and in vitro comparison with marketed formulation. *Acta Pharmaceutica Scientia*, 2010. 52(3) 305-314
68. Sachin Naik, Deepa Patel, Nazneen Surti, Ambikanandan Misra. Preparation of PEGylated Liposomes of Docetaxel using Supercritical Fluid Technology, *The Journal of Supercritical fluids*, Volume 54, Issue 1, July 2010, Pages 110–119.
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72. Kamal Kumar Upadhyay, Anil Kumar Mishra, Krishna Chuttani, Ankur Kaul, Jean-François Le Meins, Ambikanandan Misra, and Sebastien Lecommandoux, The in vivo behavior and anti-tumor activity of doxorubicin loaded poly( $\gamma$ -benzyl L-glutamate)-b-hyaluronan polymersomes in Ehrlich Ascites Tumor (EAT) bearing BalB/c mice, *Nanomedicine: Nanotechnology, Biology, and Medicine*. 2012 Jan;8(1):71-80
73. Ambikanandan Misra, Gaurang Patel, Gitanjali Kher. Preparation and evaluation of hepatic stellate cell selective, surface conjugated, peroxisome proliferator-activated receptor-gamma ligand loaded liposomes. *J Drug Target.* 2012; 20 (2); 155-65
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83. Dipesh Baradia, Misra A.N. Inhalation therapy to treat pulmonary hypertension. *Pharmaceutical patent analyst*. 2012; 1(5): 7-588.
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86. Chetan Yewale, Dipesh Baradia, Imran Vhora, Ambikanandan Misra. Proteins: Emerging Carrier for Delivery of Cancer Therapeutics. *Expert Opinion on Drug Delivery*. 2013; 10(10): 1429-48.
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**Patents Filed and Status:**

Sr. No.	Inventors	Title of patent	Patent Application No.	Date of Filing	Date of Publication	Patent No	Status
1.	Ambikanandan Misra, T. Maheshkumar	A process for synthesis of oxidized Guar gum for use as disintegrants.	295/MUM/2002	26/03/2002	18/11/2005	----	Withdrawn
2.	Ambikanandan Misra, T. Maheshkumar	A process for modified technique of chemical synthesis of Carboxymethyl – Guar gum for aqueous film coating of pharmaceuticals.	296/MUM/2002	26/03/2002	18/11/2005	----	Withdrawn
3.	Nabros Pharma Pvt. Ltd. Ambikanandan Misra	Process of preparing stable phospholipids formation in injectable form essliver injection	615/MUM/2004	02/06/2004	11/11/2005	204070	Granted 20/02/2007
4.	Ambikanandan Misra, Tushar K Vyas	Drugs Loaded Nasoadhesive Microemulsions For Brain Targeted Brisk Delivery In Acute Epilepsy	1061/MUM/2004	07/10/2004	11/11/2005	Application Abandoned U/S 21(1)	
5.	Ambikanandan Misra, Tushar K Vyas	Sedatives Loaded Intranasal Nasoadhesive Microemulsions For Brain Targeted Delivery In Insomnia	1124/MUM/2004	20/10/2004	11/11/2005	245846	Granted 04/02/2011
6.	Ambikanandan Misra, Tushar K Vyas	Drugs Loaded Intranasal Nasoadhesive Microemulsions For Brain Targeted Delivery In Migraine	1125/MUM/2004	20/10/2004	11/11/2005	247325	Granted 31/03/2011
7.	M.R. Bajaj, R.S. Samant, B.B. Shah, and Ambikanandan Misra	Parental Formulations	1140/MUM/2004	26/10/2004	02/02/2007	234470	Granted 16/06/2009
8.	Ambikanandan Misra, Bijay Kumar Padhi, Mahavir Bhupal Chougule	Engineered Monodisperse Inhalation Powders for Effective Treatment of Lung Diseases.	228/MUM/2005	01/03/2005	25/05/2007	---	Deemed to be Withdrawn U/S 11B(4)
9.	Ambikanandan Misra, Mahavir Bhupal Chougule Bijay Kumar Padhi,	Enhancement of Pulmonary Therapeutic Index of Drugs from Dry Powder Inhaler Formulations.	648/MUM/2005	31/05/2005	25/05/2007	---	Deemed to be Withdrawn U/S 11B(4)
10.	Ambikanandan Misra, Mahavir Bhupal Chougule, S. Ganesh, Bijay Kumar Padhi,	Aerodynamically light porous dry powder inhaler formulations for targeted pulmonary deposition	953/MUM/2006	24/05/2006	30/06/2006	---	Application is under Examination



11.	Misra Ambikanandan, Dogra Arti R.	Extended release tablet formulation of Serratiopeptidase	1515/MUM/2007	06/08/2007	29/05/2009	255641	Granted 12/03/2013
12.	Ambikanandan Misra, Gitanjali Sharma	Ageing And Weight Control By Nose To Brain Drug Delivery	1649/MUM/2007	29/08/2007	19/06/2009	---	Application Abandoned U/S 21(1)
13.	Ambikanandan Misra, Sachin Naik, Yogesh Raichandani, Nazzneen Surti	Preparation of Dry liposomes by supercritical fluid technology	133/MUM/2008	21/01/ 2008	02/10/2009	---	Application is under Examination
14.	Ambikanandan Misra, Deepa Patel, Gaurang Patel, Sachin Naik	Preparation of solid lipid Nanoparticles by Supercritical fluid technology	390/MUM/2008	25/02/2008	21/10/2011	----	Application Awaiting Examination
15.	Ambikanandan Misra, Nirav Parmar, Sachin Naik, Gaurang Patel	Preparation of Amphotericin B liposomes by supercritical fluid technology	391/MUM/2008	25/02/2008	21/10/2011	----	Application is under Examination
16.	Ambikanandan Misra, Chudiwal Swapnil S	Liposomal Amphotericin B formulations for nasal and sinus fungal infections.	2714/MUM/2008	29/12/2008	----	----	Abandoned Under Section 9(1)
17.	N I Gandhi, Ambikanandan Misra, M R Bajaj, R S Samant, B B Shah, Jamil Pinjari.	Liposomal Citicholine injection.	295/MUM/2009	11/02/2009	17/06/2011	----	Application is under Examination
18.	N I Gandhi, Ambikanandan Misra, M R Bajaj, R S Samant, B B Shah.	Emergency Contraceptive	2373/MUM/2009	12/10/2009	03/02/2012	----	Application is under Examination
19.	Ambikanandan Misra, Sonia Trehan	Sustained release pharmaceutical compositions for pulmonary delivery of phosphodiesterase type 5 inhibitors for treatment of pulmonary arterial hypertension	119/MUM/2010	15/01/2010	----	----	Application Not Yet Published
20.	Ambikanandan Misra, Gitanjali Kher	Formulations for Receptor mediated improved brain uptake after intranasal administration	1315/MUM/2010	----	----	----	Application Not Yet Published

21.	N I Gandhi, Ambikanandan Misra, M R Bajaj, R S Samant, B B Shah.	Liposomal Citicholine Injection	PCT/IN2010/000074	10/02/2010	19/08/2010	---	Published
22.	Ambikanandan Misra, N I Gandhi, M R Bajaj, R S Samant, B B Shah.	Emergency Contraceptive	PCT/IN2010/000676	12/10/2010	28/04/2011	----	Published
23.	Ambikanandan Misra, N I Gandhi, M R Bajaj, R S Samant, B B Shah.	Intranasal Delivery To Improve the performance of children suffering from Dyslexia	PCT/IN2010/000719	2/11/2010	12/05/2011	---	Published
24.	Ambikanandan Misra M.R. Yadav, M. Kumar	Some polar diquatery Gemini amphiphiles and the process for their Preparation	2633/MUM/2010	----	----	----	Application Not Yet Published
25.	Amibkanandan Misra, Nirav Khatri	Small interfering RNA Nanoconstruct for chemosensitization in treatment of lung cancer	559/MUM/2012	01/03/2012	22/02/2013	---	Published
26.	Amibkanandan Misra, Nirav Khatri	Novel Non-viral vector delivery of Small interfering RNA	560/MUM/2012	01/03/2012	22/02/2013	----	Published
27.	Dipesh Baradia, Ambikanandan Misra	Dry Powder for Inhalation of SiRNA Polyplexes in Treatment of Pulmonary Arterial Hypertension	2056/MUM/2013	----	----	----	Provisional Application

**BOOKS PUBLISHED:**

S. N.	Titles with page no.	Type of Book	Publisher	Date of Publication
1.	Design of osmotic controlled drug delivery system – a novel approach.	Reference	Lap Lambert Academic Publishing AG & Co. Germany.	August 2010
2.	Ambikanandan Misra (Ed.) “Challenges in delivery of therapeutic genomics and proteomics”.	Reference	Elsevier Publishers. London.	Sep 2010
3.	Drug Delivery to the Central Nervous System,	Reference	CBS Publications, New Delhi	March 2003
4.	Aging and Weight Control by Nose to Brain Drug Delivery: Intranasal Delivery of Therapeutics for Aging and Weight Control	Reference	Lambert Academic publishing	Aug 2011
5.	Application of Polymers in Drug Delivery	Reference	Smithers Rapra Publications	Under Publication

**BOOK CHAPTERS:**

S. N.	Titles	Book Title, Editor, Publisher and Year of Publication	ISSN/ISBN No.
1.	Transdermal Drug Delivery	In “Controlled and Novel Drug Delivery (Ed. N. K. Jain)”, CBS Publications, New Delhi – 1997	9788123905174
2.	Advances in Pulmonary Drug Delivery	In “Advances in Controlled and Novel Drug Delivery (Ed. N. K. Jain)”, CBS Publications, New Delhi – 2000	81-239-0727-3
3.	“Liposomal Transdermal Delivery”	In “Liposomal (Ed. S.P. Vyas)”, CBS Publications, New Delhi – 2000.	8123907133
4.	Tablets	In “Pharmaceutical Product Development” (Ed. N. K. Jain) CBS Publishers and Distributors, New Delhi, 2005	81-239-1321-4
5.	Role of Herbal Absorption Promoters in Oral Delivery of Therapeutics”	In book series “Recent Progress in Medicinal Plants” Volume 14 (Biopharmaceuticals) Chapter 27, 2006.	0976184966
6.	“Tablets.”	In “Pharmaceutical Product Development” (Ed. N. K. Jain) CBS Publishers and Distributors, New Delhi, 2006	81-239-1321-4
7.	"Drug delivery	In “Exploring Nanotechnology”	Online

	through the blood brain barrier"	encyclopedia, <a href="http://www.nanopolis.net">http://www.nanopolis.net</a>	encyclopedia
8.	Nanoliposomal Dry Powder Formulations"	Chapter 9, in Methods in Enzymology, Volume 464 Elsevier Inc, 2009	10: 0123749697
9.	Surfactants and Block Copolymers in Drug Delivery;	In "Colloids in Drug Delivery" Published Online, CRC press. 23rd March 2010	978-1-4398-1825-1
10.	'Microemulsions in Pharmaceuticals and Biotechnology"	In "Colloids in Biotechnological Applications". (Taylor and Francis/CRC press) Sep 17, 2010.	978-1-4398-1825-2
11.	"Role of Natural Polysaccharides in Treatment and Control of Diabetes"	Vol. 25 , Recent Progress in Medicinal Plants. Studium Press LLC.2009	9781933699158
12.	"Role of Transporters In Brain Drug Delivery"	In Nanocolloidal Carriers, Editors Vyas, Murthy and Narang, CBS Publishers New Delhi. 2010	9788123919614
13.	The Cell	Ambikanandan Misra (Ed.) "Challenges in delivery of therapeutic genomics and proteomics". Elsevier Publishers. London. Sep, 2010.	78-0-12-384964-9
14.	Challenges and Opportunities in Gene Delivery	Ambikanandan Misra (Ed.) "Challenges in delivery of therapeutic genomics and proteomics". Elsevier Publishers. London. Sep, 2010.	78-0-12-384964-9
15.	Gene Delivery Using Physical Methods	Ambikanandan Misra (Ed.) "Challenges in delivery of therapeutic genomics and proteomics". Elsevier Publishers. London. Sep, 2010.	78-0-12-384964-9
16.	Gene Delivery Using Chemical Methods	Ambikanandan Misra (Ed.) "Challenges in delivery of therapeutic genomics and proteomics". Elsevier Publishers. London. Sep, 2010.	78-0-12-384964-9
17.	Gene Delivery Using Viral Vectors	Ambikanandan Misra (Ed.) "Challenges in delivery of therapeutic genomics and proteomics". Elsevier Publishers. London. Sep	78-0-12-384964-9
18.	Applications of Gene Therapy	Ambikanandan Misra (Ed.) "Challenges in delivery of therapeutic genomics and proteomics". Elsevier Publishers. London. Sep	78-0-12-384964-9
19.	Antisense Oligonucleotides and RNA Interference	Ambikanandan Misra (Ed.) "Challenges in delivery of therapeutic genomics and proteomics". Elsevier Publishers. London. Sep	78-0-12-384964-9
20.	Proteomics	Ambikanandan Misra (Ed.) "Challenges in delivery of therapeutic genomics and proteomics". Elsevier Publishers. London. Sep	78-0-12-384964-9

21.	Protein and Peptide Delivery through Respiratory Pathway	Ambikanandan Misra (Ed.) “Challenges in delivery of therapeutic genomics and proteomics”. Elsevier Publishers. London. Sep	78-0-12-384964-9
22.	Oral Delivery of Proteins and Peptides: Concepts and Applications	Ambikanandan Misra (Ed.) “Challenges in delivery of therapeutic genomics and proteomics”. Elsevier Publishers. London. Sep	78-0-12-384964-9
23.	Parenteral Delivery of Peptides and Proteins	Ambikanandan Misra (Ed.) “Challenges in delivery of therapeutic genomics and proteomics”. Elsevier Publishers. London. Sep	78-0-12-384964-9
24.	Other Routes of Protein and Peptide Delivery: Transdermal, Topical, Uterine, and Rectal	Ambikanandan Misra (Ed.) “Challenges in delivery of therapeutic genomics and proteomics”. Elsevier Publishers. London. Sep	78-0-12-384964-9
25.	Pulmonary Drug Delivery: Opportunities and Challenges	“Recent Developments in Biotechnology” published by Studium Press LLC, USA.	Under Publication
26.	Conjugation of Monoclonal Antibodies to Increase Drug Delivery Efficiency and Its Specificity.	“Monoclonal antibodies – development, delivery and applications” Publisher: Future science group, Unitec House, 2 Albert Place, London, UK	Under Publication
27.	Polymers in drug delivery	“Applications Of Polymers In Drug Delivery”, Smithers Rapra, Shrewsbury, Shropshire SY4 4NR, United Kingdom	Under Publication
28.	Applications of polymers in gastric drug delivery	“Applications Of Polymers In Drug Delivery”, Smithers Rapra, Shrewsbury, Shropshire SY4 4NR, United Kingdom	Under Publication
29.	Applications of polymers in transdermal drug delivery	“Applications Of Polymers In Drug Delivery”, Smithers Rapra, Shrewsbury, Shropshire SY4 4NR, United Kingdom	Under Publication
30.	Applications of polymers in payers patch drug delivery	“Applications Of Polymers In Drug Delivery”, Smithers Rapra, Shrewsbury, Shropshire SY4 4NR, United Kingdom	Under Publication
31.	Applications of polymers in colon drug delivery	“Applications Of Polymers In Drug Delivery”, Smithers Rapra, Shrewsbury, Shropshire SY4 4NR, United Kingdom	Under Publication
32.	Applications of polymers in parenteral drug delivery	“Applications Of Polymers In Drug Delivery”, Smithers Rapra, Shrewsbury, Shropshire SY4 4NR, United Kingdom	Under Publication
33.	Applications of polymers in rectal	“Applications Of Polymers In Drug Delivery”, Smithers Rapra, Shrewsbury,	Under Publication

	drug delivery	Shropshire SY4 4NR, United Kingdom	
34.	Applications of polymers in vaginal drug delivery	“Applications Of Polymers In Drug Delivery”, Smithers Rapra, Shrewsbury, Shropshire SY4 4NR, United Kingdom	Under Publication
35.	Applications of polymers in intra nasal drug delivery	“Applications Of Polymers In Drug Delivery”, Smithers Rapra, Shrewsbury, Shropshire SY4 4NR, United Kingdom	Under Publication
36.	Applications of polymers in lung drug delivery	“Applications Of Polymers In Drug Delivery”, Smithers Rapra, Shrewsbury, Shropshire SY4 4NR, United Kingdom	Under Publication

## **C Research Support**

### **1. Govt. Funded Projects**

#### **Ongoing Research Projects:**

<b>Sr No.</b>	<b>Title of Project</b>	<b>Funding Agency</b>	<b>Amount</b>	<b>Date of sanction and Duration</b>
1	<b>Coordinator</b> , TIFAC Centre of Relevance and Excellence in New Drug Delivery Systems	TIFAC	400 lacs	2007 Onwards
2	<b>Principal Investigator:</b> “Development, optimization and characterization of ligand (RGD peptides) targeted nano constructs encapsulating anticancer chemotherapeutic agents for effective treatment of lung cancer (Gemcitabine) and stabilization of lyophilized or spray dried formulation for direct local delivery or by injection through systemic circulation”	DBT-SBIRI	311.01 lacs (273 lacs – Jupiter biosceicnes + 38.01 lacs – MS University)	2010 onwards
3	<b>Coordinator</b> , Department research scheme (Phase II) under SAP program	UGC	50 Lacs	2007 Onwards
4	<b>Sub coordinator</b> , Interdisciplinary Life Science Programme for Advance Research and Education	DBT	13.5 Crores	2010 Onwards
5	UGC BSR one time grant	UGC	7 Lacs	2011
6	Promotion University Research For Scientific Excellence (PULSE)DST	DST	900 Lacs	May 2012 Onwards

**Completed Research Projects:**

<b>Sr No.</b>	<b>Title of Project</b>	<b>Funding Agency</b>	<b>Date of completion</b>
1	Transmucosal drug permeation studies using epithelial / endothelial cell lines	UGC	2007
2	Enhanced Pulmonary Bioavailability of Therapeutics by Particle Design	AICTE	2006
3	Development of Liposomal Dry Powder Inhalation Products	AICTE	2003
4	Department Research Scheme	UGC	2007
5	Coordinator, TIFAC- CORE in NDDS	TIFAC	2007

**2. Industrial Projects****Ongoing Industrial Projects:**

<b>Sr. No</b>	<b>Title of Project</b>	<b>Funding Agency</b>	<b>Duration</b>
1	Development of lyophilized product and other innovative research	Lyka Laboratories Ltd., Mumbai	2002-present

**Completed Industrial Projects:**

<b>Sr. No</b>	<b>Title of Project</b>	<b>Funding Agency</b>	<b>Date of completion</b>
1.	Development of parenteral and nasal formulation of Calcitonin	Adithya Biologicals	2003-2004
2.	Development of lyophilized product and other innovative research	Lyka laboratories Ltd.	2004-2007
3.	Study of the effect of ternary mixtures & particle morphology on the fine particle fraction of salbutamol sulphate.	Sun Pharma Advanced Research Centre, Vadodara.	2003-2004
4.	Dry powder inhaler for the combination drugs	Panacea Biotec Ltd, Punjab	2004-2006
5.	Development of new drug delivery and innovative products	Nabros Pharma Pvt.Ltd., Ahmedabad	2004-2007
6.	Development of new dosage forms and innovative products	M/s Comed chemicals from Vadodara	2005-2007
7.	Development of Emulsion Based Injection	Nikolas Piramal Pvt. Ltd	2007-2008
8.	Development of sustained release and other innovative products	Theraquest Biosciences Ltd., USA	2007-2009
9.	Development of liposomal products	Sven Genetech Limited, A	2008-2010

		unit of Jupiter Biosciences, Hyderabad	
10.	Development and Scale up of Pharmaceutical and Cosmetic Products	Pharmalink, Ahmedabad	2009-2011
11.	Development of Nanoemulsion based cream	Macloid Ltd, Mumbai	2010-2011

**AMBIKANDAN MISRA**