

International and National Funding – AS PRINCIPAL INVESTIGATOR

Funding Agency	Total Award amount	Start (mm/ yyyy)	Duration (months)	Research Work
German Federal Ministry for Economic Cooperation and Development (BMZ) - DAAD Germany.	Sixteen thousand Euros	07/ 2016	24	Lipid Carrier Systems For The Delivery Of Anti-Oxidants
Rajiv Gandhi University of Health Sciences, Bangalore	Nine lakhs INR	03/ 2016	26	Formulation and clinical evaluation of novel topical formulation in the treatment of VAP
Erwin- Reisch Stiftung , University of Tuebingen, Germany	One thousand Euros	05/ 2016	01	Lipid Carrier Systems For The Delivery Of Anti-Oxidants
Department of Biotechnology DBT – BIRAC, Government of India	Forty lakhs and fifty thousand INR	03/ 2015	18	A safe and effective technology for treating musculoskeletal disorders
The Tuberculosis Association of India, Government of India	Twenty thousand INR	03/ 2014	6	A study on knowledge and awareness about tuberculosis in school children in the urban region of Karnataka
Institute of Physiology, Eberhard Karls Universitat Tuebingen, Germany	Twenty-two thousand Euros	09/ 2013	9	Liposomes as carriers for herbal preparations in the intestinal system
DAAD (German Academic Exchange Service), Germany	Fifteen thousand Euros	09/ 2008	12	Liposomes as carriers for antioxidants in the vascular system
Indian Council for Medical Research (ICMR), Government of India	Five lakhs INR	09/ 2005	32	Formulation of ultradeformable liposomes for the treatment of psoriasis

Achievements

Year	Honor/Award
2024	Received first prize for the concept of the project title "Formulation and Evaluation of lipid based nanoformulation loaded with antiviral agents for oral delivery in the Diss Fest 2024 held on April 28 th , 2024 at the Department of Pharmaceutical Technology, UCE, BIT Campus, Anna University, Tiruchirapalli.
2015	Honoured by the Deputy Consulate General of German Consulate, Bangalore Mrs. Andrea Christ to confer the award certificate and attach the official DAAD stickers on the award of equipments from Germany.
2015	Best poster award "Chronopharmacokinetic study of Amlodipine in normal and hypertensive subjects", PES college of Pharmacy, Bangalore, India.
2013	Featured as Key Scientific Article in Global Medical Discovery. Vanaja K , Wahl M, Gojkovic-Bukarica, Heinle H. Liposomes as carriers of the lipid soluble antioxidant resveratrol: evaluation of amelioration of oxidative stress by additional antioxidant vitamin. Life Sciences , 93 (2013), pp. 917-923. DOI information: 10.1016/j.lfs.2013.10.019. IF – 3.647
2009	Best poster award "Topical delivery of deformable Methotrexate liposomes", Skin & Formulation 3 rd Symposium held at Versailles, France. Cash Prize 100 pounds from MERCK, UK
2006	Best Research Paper of the Convention "Application of Plackett Burman Screening Design in the formulation of ultradeformable liposomes of methotrexate, APTI Convention
2006	Best Oral Presentation "Optimization of formulation variables using central composite design in formulation of flexible vesicles", IPC, Mumbai
2009	Best paper by IDMA - Vanaja.K and Shobha Rani R.H. "Application of Plackett Burman Screening Design in the formulation of ultradeformable liposomes of methotrexate, Indian Drugs, March 2008, volume 45(3) Page nos 181 – 187.
2002	7 th rank Rajiv Gandhi University of Health Sciences, India.
1999	GATE-99, Grade-76.58%
1992	Rashtrapathi (from the President of India) Award (Scouts and Guides, India)
1991	Rajyapuraskar (State- from the Governor of Karnataka) Award (Scouts and Guides, India)

Selected Original Research Articles

- **Vanaja K**, Shivakumar HN, Murthy SN. Influence of iontophoresis on delivery of NSAID-loaded deformable liposomal dispersions: *in vitro* and *in vivo* evaluation. *Ther Deliv.* 2023 Apr;14(4):281-294. doi: 10.4155/tde-2023-0005.
- Maurya A, Bae J, **Kenchappa V**, Shivakumar HN, Maibach H, Repka MA, Murthy SN. Convective Solvent Transport Pathways for Absorption of Drugs from Topical Formulation. *AAPS PharmSciTech.* 2022 Jun 27;23(6):178. doi: 10.1208/s12249-022-02320-x.
- **Kenchappa, V.**, Cao, R., Venketaraman, V., & Betageri, G. V. (2022). Liposomes as Carriers for the Delivery of Efavirenz in Combination with Glutathione—An Approach to Combat Opportunistic Infections. *Applied Sciences*, 12(3), 1468.
- Michael A Repka. Abhijeet Maurya, Jungeun Bae, **Vanaja Kenchappa**, Shivakumar Nanjappa, Howard Maibach, Convective solvent transport pathways for absorption of drugs from Topical formulation. *AAPS PharmSciTech* ,2021.
- **K Vanaja**, Salwa S, Murthy SN, Shivakumar HN. Iontophoretic mediated Intraarticular delivery of Deformable Liposomes of Diclofenac sodium. *Current Drug Delivery*, 2020. DOI: [10.2174/1567201817666201014144708](https://doi.org/10.2174/1567201817666201014144708).
- **K. Vanaja**, M Wahl, H Heinle. Liposomes as carriers of resveratrol and vitamin E: Evaluating ameliorative antioxidant effect using chemical and cellular test systems. *International Journal for Vitamin and Nutrition Research* 2020, 1–7. <https://doi.org/10.1024/0300-9831/a000680>.
- **K Vanaja**, Zare M, Basavaraju B, Salwa S, Murthy SN, Shivakumar HN. Thermosensitive *in situ* liposomal gels loaded with antimicrobial agent for oral care in critically ill patients. *Therapeutic Delivery*. 2020 Apr 29. doi: 10.4155/tde-2019- 0092.
- Khodadoustan S, Nasri A, **Vanaja K**, Chetan K, Shekar H S, Chikkalingaiah S. 2017. Evaluation of effect of time dependent dosing on pharmacokinetic and pharmacodynamics of Amlodipine in normotensive and hypertensive human subjects. *Clin Exp Hypertens.* 2017 Jun 9:1-7. doi: 10.1080/10641963.2017.1281947.
- Pimparade MB, Vo A, Maurya AS, Bae J, Morott JT, Feng X, Wuk Kim D, Kulkarni VI, Tiwari R, **Vanaja K**, Murthy R, Shivakumar HN, Neupane D, Mishra SR, MurthySN, Repka MA. Development and Evaluation of an Oral Fast Disintegrating Anti- allergic Film Using Hot-melt Extrusion Technology. *Eur J Pharm Biopharm.* 2017 Jun 5. pii: S0939-6411(17)30400-9. DOI: 10.1016/j.ejpb.2017.06.004.
- Reena Murthy, S. Rangappa, Michael A. Repka, **K. Vanaja**, S. Narasimha Murthy. Infrared thermal measurement method to evaluate the skin cooling effect of topical products and the impact of microstructure of creams. *Journal of Drug Delivery Science and Technology*, Vol 39, June 2017, 296-299.
- Varghese BM, **Vanaja K**, Banu R. Assessment of Drug Usage Pattern during Pregnancy at a Tertiary Care Teaching Hospital. *Int J. Med. Public Health*, 2016; 6(3):130-5.

- **Vanaja K**, Shobha Rani RH, Narendra C (2016) Application of Statistical Designs in the Formulation of Lipid Carriers of Methotrexate. **J Drug Res Dev** 2(2): doi:<http://dx.doi.org/10.16966/2470-1009.113>
- **Vanaja K**, et al. A study on knowledge and awareness about tuberculosis in senior school children in Bangalore, India, **Indian Journal of Tuberculosis**. (2015), <http://dx.doi.org/10.1016/j.ijtb.2015.07.001>.
- Juluri A, Popescu C, Zhou L, Murthy RN, **Gowda VK**, Chetan Kumar P, Pimparade MB, Repka MA, Murthy SN Taste Masking of Griseofulvin and Caffeine Anhydrous Using Kleptose Linecaps DE17 by Hot Melt Extrusion. **AAPS PharmSciTech**. 2016 Feb;17(1):99-105. doi: 10.1208/s12249-015-0374-1.
- K Nagaraju, **Vanaja K Satheesh**, U Shankar, R Banu. A study on creating awareness of adverse drug reactions in community pharmacists in Bangalore. **Indian Journal of Pharmacy Practice** 8 (2), 73.
- Manjeet B Pimparade, Joseph T Morott, Jun-Bom Park, Vijay I Kulkarni, Soumyajit Majumdar, SN Murthy, Zhuoyang Lian, Elanor Pinto, Vivian Bi, Thomas Durig, Reena Murthy, HN Shivakumar, **K Vanaja**, Michael A Repka. Development of taste masked caffeine citrate formulations utilizing hot melt extrusion technology and in vitro–in vivo evaluations. **International Journal of Pharmaceutics** 487 (1-2), 167- 176.
- Apporva DM, Sharath Kumar BC, **Vanaja K**. Comparative study of Effectiveness of Clindamycin Monotherapy and Clindamycin-benzoyl Peroxide combination therapy in Grade II acne patients. **Indian Journal of Pharmacy Practice**, Vol 7, Issue 1, Jan-Mar, 2014.
- **Vanaja K**, Wahl M, Gojkovic-Bukarica, Heinle H. Liposomes as carriers of the lipid soluble antioxidant resveratrol: evaluation of amelioration of oxidative stress by additional antioxidant vitamin. **Life Sciences**, 93 (2013), pp. 917-923. DOI information: 10.1016/j.lfs.2013.10.019. *Featured as Key Scientific Article in Global Medical Discovery*.
- Anu V. Kuriokose, **Vanaja Kenchappa**, Sanjeev Kumar A. Hiremath , Bency Mary Varghese. Assessment of Quality Of Life in Chronic Renal Failure Patients In India **Quality Issues And Insights In The 21st Century**, 2012; 1(1):20-28.
- Kiran N, Shobha Rani RH, JaiPrakash V, **Vanaja.K**. “Pattern of poisoning reported at south Indian tertiary care hospital”. **Indian Journal of Forensic Medicine Toxicology**, July-December, 2008, Vol 2 (2); 17-19.
- **Vanaja.K**, Shobha Rani R.H. and Sacchidananda.S “Formulation and clinical evaluation of ultradeformable liposomes in the topical treatment of psoriasis”. **Clinical Research and Regulatory Affairs**, March 2008 25(1):41–52.
- **Vanaja.K** and Shobha Rani R.H. “Application of Plackett Burman Screening Design in the formulation of ultradeformable liposomes of methotrexate, **Indian Drugs**, March 2008, volume 45(3) Page nos 181 – 187. *Awarded best paper by IDMA*.
- Markus Fridén, **K Vanaja**, Vrinda N Nandi . Drug-drug interactions of anti-infective drugs: utility of fluorescence cyp inhibition assays in drug discovery. **Drug Metabolism and Drug Interactions** 2006; 21 (3-4):163-85. IF – 0.476

Review Articles

- Sreeharsha, Nagaraja, Nataraj Chitrapriya, Yoon Jung Jang, and Vanaja Kenchappa. "Evaluation of nanoparticle drug-delivery systems used in preclinical studies." *Therapeutic Delivery* 12, no. 4 (2021): 325-336. **IF -4.3**
- Reena Murthy, S. Rangappa, Michael A. Repka, **K. Vanaja**, S. Narasimha Murthy. Infrared thermal measurement method to evaluate the skin cooling effect of topical products and the impact of microstructure of creams. **Journal of Drug Delivery Science and Technology, Vol 39, June 2017, 296-299.**
- **Vanaja.K** and Shobha Rani R.H. "Design of Experiments-Plackett Burman Screening Designs", **Clinical Research and Regulatory Affairs, Vol 24, Issue 1, 2007: pg 1-23.**

Book Chapters

Text book of Industrial Pharmacy, Edited by Dr.Shobha Rani R.H. University Press, Orient Longman Publishers, 2008: Chapters contributed Liposomes, Niosomes, Stability Study, Optimization techniques in Pharmaceutical technology.

Oral Presentations

1. Pharmacy strengthening health systems- facets of academic research at KR College of Pharmacy, Kanakpura road, Bangalore, 2023
2. Lipid based carriers of lipid soluble anti-oxidants: Its implications on oxidative stress, Apticon-2016, Manipal University, Mangalore, India, 2016
3. Lipid Carriers Loaded With Antimicrobial Agents For The Prevention Of Ventilator Acquired Pneumonia (VAP) , **Young Scientist Talk** At Second Annual *Meeting Of Society For The Study Of Xenobiotics* (SSX)-India conducted and JN Tata Auditorium, November 2017
4. "Application of statistical design in the formulation of lipid nanocarriers" at RGUHS and DSU Sponsored National Seminar at Dayananda Sagar College Of Pharmacy, Bengaluru on 16th & 17th March 2016 (Quality by Design – Significance in Development of Novel Drug Delivery Systems & Nanomedicine – Applications and Advances)
5. At Two day National Symposium 'DBT Heralding a New Era in Bio-Innovations' at MLA college for Women, Bengaluru (16-17th Feb 2016) and presented on 'Insights of BIG scheme'.
6. Lipid based Nano Drug Delivery Systems and their Therapeutic Applications during **National Seminar on Recent Advances in Spectroscopy and Analytical Techniques**, SVKM's NMIMS (Deemed to be University), Vile Parle (West), Mumbai
7. Lipid based nanocarriers for the delivery of antioxidants at TEQIP sponsored **International Conference on Innovations and Research Dimensions in Nanobiopharmaceutical Technology** during 7-8th October, 2014 at the Department of Pharmaceutical Technology, Anna University, Bharathidasan Institute of Technology Campus, Tiruchirappalli, Tamil Nadu.
8. Oxidative Stress: Therapeutic Implications And Its Treatment Using Antioxidant Nano-Carriers' at **International Pharmacon 2014** on Global Trends In Research In Prevention And Effective Management Of Non Communicable Diseases held on 19th and 20th December 2014 at Nehru College of Pharmacy, Pampady, Thrissur.
9. "Optimization of formulation variables using central composite design in formulation of flexible vesicles" in the oral Scientific session – Pharmaceutical Technology at the 58th Indian National Congress held at Mumbai from 1st to 3rd December, 2006. (**Best oral presentation**)

Conference Papers (International and National)

1. Evaluation of suitability of USP type IV apparatus to examine the dissolution behavior of efavirenz delivered via proliposomes at DRPI, India 2023
2. Design and *in vitro* characterization of lipid carriers loaded with antiretroviral for oral drug delivery, San Antonio, **AAPS 2019**.
3. Liposomes as carriers for the delivery of Efavirenz in combination with Glutathione – a novel approach to combat opportunistic infections, San Antonio, **AAPS 2019**.
4. Thermosensitive In Situ Liposomal Gels Loaded with Antimicrobial Agents for Oral Care in Critically Ill Patients, Washington DC, **AAPS 2018**
5. Lipid Carriers Loaded With Antimicrobial Agents For The Prevention Of Ventilator Acquired Pneumonia (VAP) at Second Annual *Meeting* of society for the study of *Xenobiotics* (SSX) - India conducted and JN Tata Auditorium, November 2017.
6. Liposomes as carriers of Rosmarinic Acid and Evaluation of Antioxidant Activity, *Apticon-2016*
7. Caffeine Anhydrous Taste Masking by Hot Melt Extrusion , AAPS 2014
8. Investigation of the Taste Masking Behavior of Hot Melt Extruded Caffeine Citrate by e-Tongue and Human Taste Panel Studies , AAPS 2014
9. Unveiling the Mechanisms of Drug Penetration into Stratum Corneum during the Short Duration Exposure of Topical Formulation , AAPS 2014
10. Development and Evaluation of an Oral Fast Disintegrating Anti-Allergic Film Utilizing Melt Extrusion Technology , AAPS 2016
11. Liposomes Loaded with Combination of Antimicrobial Agents for Treating Ventilator Acquired Pneumonia (VAP), AAPS 2016.
12. Liposomes as Carriers of Lipid Soluble Antioxidants- Resveratrol in presence of Vitamin E at Ist European Conference in Pharmaceutics held in Reims, France from April 13-14, 2015
13. Anti-oxidative Effects of Liposomes Loaded with Resveratrol and Vitamin C presented at 2013 AAPS Annual Meeting and Exposition in November 10-14 at San Antonio, Texas, United States.
14. Chronopharmacokinetic studies of anti-hypertensive agents at 2013 AAPS Annual Meeting and Exposition in November 10-14 at San Antonio, Texas, United States.
15. Drug utilization studies of Anti-Malarial drugs, PRIMM conference, 24th Annual Scientific Meeting “Intelligent Polypharmacy. It’s not all about the number” 24th January 2013, Imperial Hotel, London
16. Drug usage studies during pregnancy in a tertiary care hospital, PRIMM conference, 24th Annual Scientific Meeting “Intelligent Polypharmacy. It’s not all about the number” 24th January 2013, Imperial Hotel, London
17. Comparative study effectiveness of Clindamycin Mono therapy and Clindamycin benzoyl peroxide combination therapy in Acne at DUPHAT – Dubai International Pharmaceuticals and Technologies Conference and Exhibition during 12-14 MARCH, 2012
18. ‘Liposomes As Delivery Systems For Antioxidants During Oxidative Stress’ at the Phospholipid Symposium, held at Heidelberg, Germany during May 11-12th, 2009.
19. ‘Liposomes As A Delivery System For The Lipid Soluble Antioxidant Resveratrol’ at 4th Joint Meeting of the French, Swiss and German Atherosclerosis Societies, held at Blauberger, Germany during 12th- 14th March, 2009.

20. 'Topical delivery of deformable Methotrexate liposomes' at Skin & Formulation 3rd Symposium held at Versailles, France during 9th – 10th March, 2009 (**Best Poster of the Symposium**)
21. 'Topical Delivery Of Ultradeformable Liposomes Of Methotrexate In The Treatment Of Psoriasis: Preparation, Characterization And In-Vivo Performance Evaluation' at 9th Commonwealth Pharmaceutical Association - Malaysian Pharmaceutical Society Scientific Conference held at Kuala Lumpur, Malaysia, from 1-5th August 2007. Technology section.
22. "Osmotic drug delivery systems of Felodipine" at Ist Indo-Japanese Conference, November 25th – 29th, 2005 at Mumbai.
23. "Prediction of ADME using computers" at International Convention of APTI, 2nd-3rd October, 2004 held at Visakhapatnam.
24. "Emerging role of ADME screening for herbal drugs" at International Convention of APTI, 2nd-3rd October, 2004 held at Visakhapatnam.
25. "Efficacy of Hair Care Products" at 2nd Global Congress on Cosmetic Technologies of ICTA, Feb 13th-15th, 2004 held at Belgaum.
26. "GMP of Cosmetic Ingredients" at 2nd Global Congress on Cosmetic Technologies of ICTA, Feb 13th-15th, 2004 held at Belgaum.
27. "Assessment of drug-drug interactions in medicine department of tertiary care teaching hospital, Bangalore" at 63rd Indian pharmaceutical congress held during 6- 18 december 2011, bengaluru
28. "A pharmacovigilance study at KIMS hospital", bangalore at 63rd Indian pharmaceutical congress held during 6-18 december 2011, bengaluru
29. "Assessment of health related quality of life in dialysis patients at a tertiary care hospital, Bangalore" at 63rd Indian Pharmaceutical Congress held during 6-18 December 2011, Bengaluru
30. "Enhancing topical delivery of methotrexate with deformable liposomes" in the postersession at the 59th Indian Pharmaceutical Congress held at Varanasi from 20 – 23rd December 2007.
31. "Design of flexible vesicles in the treatment of psoriasis" in the poster session – Pharmaceutical Technology at the 58th Indian National Congress held at Mumbai from 1st to 3rd December, 2006.
32. "Application of Plackett Burman Screening design in the formulation of ultradeformable liposomes" at APTI 11th Annual National Convention 2006, to be held at Bangalore, September 1st to 3rd, 2006 (**Best Poster of the Convention**)
33. "Good Manufacturing Practices for Herbal Medicinal Products" at 10th Annual National Convention of APTI, October 17th and 18th, 2005 held at Nagpur.
34. "Pharmacokinetic Evaluation of Potent Anti-inflammatory, Analgesic Aryl Amino Thiazole-S-Acetic Acid Derivatives" at 55th IPC, Chennai, 2003.
35. "Bioinformatics- Recent trends in Pharmaceutical Research" at 7th Annual National Convention of APTI, September 20th and 21st, 2002 held at Goa.
36. "Pharmacogenomics: future of Personalized Medical Therapy" at 7th Annual National Convention of APTI, September 20th and 21st, 2002 held at Goa.
37. "HPLC determination of 2-aryl amino 4-(4-chlorophenyl) - thiazole acetic acid/esters in plasma" at 7th Annual National Convention of APTI, September 20th and 21st, 2002 held at Goa.
38. "Proniosomes: A novel drug carrier system" at the 53rd IPC, Dec 21 –23, 2001, held at New Delhi.
39. "Compartment modeling of selected Pharmacokinetic data" IPC, 2000