

Faculty Profile

Name: Prof (Dr). Ananda Kumar Chettupalli

Designation: Professor

Qualification:

- PhD (Pharmaceutical Sciences), Shri Jagdish prasad Jhabarmal Tibrewala University, Jhunjhunu, Rajasthan, 2016.
- M. Pharmacy in Pharmaceutics, A.M. Reddy College of Pharmacy (Affiliated to Acharya Nagarjuna University) Narasaraopet, Guntur, 2012.
- B. Pharmacy, Nirmala College of Pharmaceutical Sciences (Affiliated to Acharyam Nagarjuna University) Atmakuru, Mangalagiri, 2010.

Research Area:

- Drug Discovery & Development
- Nanotechnology / Nanomedicine
- Polymer characterization
- Pharmacokinetics (PK) & Pharmacodynamics (PD) studies
- Pre-clinical & Clinical Studies

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List of Publications:

1. Chettupalli, A.K., Sisodia, A., Jadi, R.K., Haq, A. and Kagithala, N. (2026). Genomic Research in Infectious Diseases. In Genomics and Precision Healthcare (eds S.K. Koduru, S.P.N. Bukke, H. Bello, M.M. Mundu and A. Madan). <https://doi.org/10.1002/9781394367559.ch9>
2. A. K. Chettupalli, T. Rajeshwar, and S. P. N. Bukke, "Development and Optimization of a Nanophytosomes-Based Thermogel as a Topical Anti-Psoriatic for Increased Solubility and Bioavailability," MedComm – Biomaterials and Applications5 (2026): e70050, <https://doi.org/10.1002/mba2.70050>.
3. Bukke SPN, Vuyyala B, Thalluri C, Chettupalli AK, Gupta N, Abdullah Almoyad MA, Abdalla SA, Yata VK, Eisa Shogar A, Narapureddy BR, Eftekhari Z, Aja PM and Yadesa TM (2026) Exploiting signal transduction pathways for cancer therapy: insights from natural products in preclinical models. Front. Pharmacol. 17:1804164. doi: 10.3389/fphar.2026.1804164
4. Thalluri C, Naik Bukke SP, Vasam M, Medhi J, Chettupalli AK, Mamilla Mugaiahgari BK, Narapureddy BR, Yata VK and Chander Thatipelli R (2026) Development and pharmacokinetic evaluation of granisetron hydrochloride buccal tablets for optimized chemotherapy-induced nausea and vomiting (CINV) relief. Front. Pharmacol. 17:1731072. doi: 10.3389/fphar.2026.1731072
5. Kumar GA, Pravallika P, Thirumalai V, Bukke SPN, Rao PBB, Thalluri C, et al. Persicaria hydropiper attenuates oxidative stress and reactive oxygen species, and inhibits amyloid- β /tau in SH-SY5Y cell lines via multiple pathways of Alzheimer's disease. Journal of Alzheimer's Disease. 2026;110:821–36.

<https://doi.org/10.1177/13872877261418555>.

6. Chettupalli, A. K., Chokkarapu, S., Singh, A., Babu, M. R., Singh, M. P., & Bukke, S. P. N. (2025). Development and fabrication of a novel nano-bilosomal system for enhanced oral delivery of Trametinib: apoptotic induction and anticancer efficacy evaluation. *Materials Technology*, 40(1).
<https://doi.org/10.1080/10667857.2025.2495346>
7. Chettupalli, A.K., Bukke, S.P.N., Abdul Rahaman, S. et al. Design, optimization of Niosomal gel capability for solubility and bioavailability enhancement of Kynurenic acid after intranasal administration: In Vitro and In Vivo Evaluation. *BMC Biotechnol* 25, 134 (2025). <https://doi.org/10.1186/s12896-025-01069-y>
8. Chettupalli AK, Gupta N, Bukke SPN, Singh MP, Mandal C. Therapeutic promise of α -hederin in Alzheimer's disease: Insights into inflammation, oxidative stress, and apoptosis modulation. *Biomedicine & Pharmacotherapy*. 2025;193:118803. <https://doi.org/10.1016/j.biopha.2025.118803>.
9. Chettupalli AK, Bukke SPN, Sharma CB. Cutting-edge biomaterial in implantable devices: From biocompatibility to biointegration. *Int J Biol Macromol*. 2026;335:149244. <https://doi.org/10.1016/j.ijbiomac.2025.149244>.
10. Chettupalli, A.K., Bukke, S.P.N., Babu, M.R. et al. Mucoadhesive lyophilized wafers loaded with nano-spanlastic felodipine formulation: development and characterization. *Sci Rep* 15, 39037 (2025). <https://doi.org/10.1038/s41598-025-25230-x>
11. Bukke SP, Chettupalli AK, Sharma CB, Thalluri C, Eftekhari Z, Yadesa TM. Immunoregulatory kinases and T-cell pathways in DNA-damage response and autoimmune inflammation: Emerging roles of BUB1 and IGFL2. *International Immunopharmacology*. 2026 May 15;177:116509.
12. Singh MP, Chettupalli AK, Bukke SP, Mugaiahgari BK, Uppu P, Pathak P, Narapureddy BR. Nanomedicine strategies for overcoming the blood–brain barrier in central nervous system drug delivery: mechanisms, advances, and challenges. *BioMedical Engineering OnLine*. 2026 May 21.
13. Kumar GA, Pravalika P, Thirumalai V, Bukke SP, Rao PB, Thalluri C, Chettupalli AK, Onohuean H. Persicaria hydropiper attenuates oxidative stress and reactive oxygen species, and inhibits amyloid- β /tau in SH-SY5Y cell lines via multiple pathways of Alzheimer's disease. *Journal of Alzheimer's Disease*. 2026 Mar;110(2):821-36.
14. Bukke SP, Prajapati S, Yadav S, Thalluri C, Chettupalli AK, Onohuean H, Yahaya UK, Goruntla N, Janapati YK, Shogar AE, Yadesa TM. Evolving COVID-19 subvariants and waning vaccine-induced immunity: a new public health risk for the African continent. *Vaccine: X*. 2026 Jan 2:100777.
15. Jain R, Chettupalli AK, Bukke SP, Yadav S, Sankarapandian V, Yahaya UK. Navigating toxicity in lung cancer immunotherapy: challenges and advances in Nano medicine drug delivery. *Journal of the Egyptian National Cancer Institute*. 2026 Jun 29;38(1):23.
16. Thalluri C, Bukke SP, Medhi J, Vasam M, Chettupalli AK, Gupta N, Sarma KN, Dennison MS, Naik BP. AI-integrated nanomaterial-based biosensors for biomedical diagnostics: Engineering design, signal processing, and clinical translation. *Biomed. Eng. OnLine*. 2026 Jul 27.

For more details, please refer to [Vidwan | Profile Page](#)

Research Projects (Got and Industry / Corporate): Total Grant: 5.85 Lakhs (till date)

1. “Hyaluronic Acid Conjugated Gold Nanoparticle Gel Coupled with Anti-Inflammatory drugs and Pre-Clinical Assessment of Arthritis.”. Received a Seed Grant of 3.85 Lakh Rupees for two Research projects as the principal investigator and Co-Principal investigator from Galgotias University, UP. 2024.
2. “Design Fabrication of Bacopa Monnieri Nano suspension intra Nasal Gel for Cognitive Enhancement in Sporadic Alzheimer’s Disease: A Pre-Clinical Assessment”. Received a Seed Grant of 3.85 Lakh Rupees for two Research projects as the principal investigator and Co-Principal investigator from Galgotias University, UP.2024.
3. “An QbD Approach for Optimization of Novel Vesicular Carrier for Brain Target Through Intranasal Route of Anti-Psychotic Drugs”. Received a Seed Grant of 2 Lakh Rupees from Anurag University. 2022.

Research Patents:

1. A device for the development of nanoparticles for the administration of Rizatriptan through nose to brain delivery. Patent Application Number: 2022102653. 2022
2. Method for Preparation of Polymer coated Famotidine Tablet. Patent Application Number: 2021106378. 2021
3. Method for Preparation of Polymer coated Famotidine Tablet. Patent Application Number: 202141035745A. 2021
4. Investigation of Adverse Drug Reaction Through Smart Detection of Drugs Interaction. Patent Application Number: 2021102556. 2021
5. Evaluation of improved composition of Phyto molecules C-1 derived from Mussaenda erythrophylla Schumach. & Thonn for diuretic activity. Patent Application Number: 202041047401. 2020
6. Pharmaceutical Compositions of Phytochemicals with Superior Anti-Inflammatory, Antioxidant and Antibacterial Activity, Patent Application Number: 201941012117. 2019
7. Improved Pharmaceutical Compositions of Carvedilol Ethosomes for Transdermal Delivery. Patent Application Number: 201841036874. 2018
8. An improved formulation of Poly Herbal Tablets indicated for Anti- Inflammation using Liqui-solid Compact. Patent Application Number: 201741021891. 2017