

Publications of GIPS-Tezpur

Research Articles

1. Kalita P, **Ahmed AB**, Sen S, Pachua L, Phukan M. Synthesis and characterization of citrate soft rice starch: A new strategy of producing disintegrating agent for design drug and resistant starch. *International Journal of Biological Macromolecules*. 2023 Jun 15;240:124475. <https://doi.org/10.1016/j.ijbiomac.2023.124475> [IF: 8.025]
2. Kalita P, **Ahmed AB**, Sen S, Chakraborty R. Citric acid esterified Glutinous Assam bora rice starch enhances disintegration and dissolution efficiency of model drug. *International Journal of Biological Macromolecules*. 2023 Feb 1;227:424-36. <https://doi.org/10.1016/j.ijbiomac.2022.12.149> [IF: 8.025]
3. Bordoloi R, **Ahmed AB**, Baishya H. Development and Validation of RP-UHPLC Method for Quantification of Gliclazide in Bulk and Pharmaceutical Dosage Form Using Quality-by-Design (QbD) Approach: A Shifting Paradigm. *Chromatographia*. 2022 Aug;85(8):719-32. [IF: 2.213]
4. **Ahmed AB**, Bordoloi R, Bhattacharya K. Development and validation of a RP-UHPLC method for estimation of gliclazide loaded microsphere. *Research Journal of Pharmacy and Technology*. 2022;15(2):773-8. 10.52711/0974-360X.2022.00129 [IF: 0.87]
5. **Rajan RK**, Kumar RP, Ramanathan M. Piceatannol improved cerebral blood flow and attenuated JNK3 and mitochondrial apoptotic pathway in a global ischemic model to produce neuroprotection. *Naunyn Schmiedebergs Arch Pharmacol*. 2023 Jul 20; doi: <https://doi.org/10.1007/s00210-023-02616-0> [IF: 3.195]
6. Pk N, **Rajan RK**, Nanchappan V, Karuppaiah A, Chandrasekaran J, Jayaraman S, et al. C-Glucosyl Xanthone Derivative Mangiferin Downregulates the JNK3 mediated caspase activation in Almal Induced Neurotoxicity in differentiated SHSY-5Y Neuroblastoma cells. *Toxicol Mech Methods*. 2023 Jul 17;1-13. doi: [10.1080/15376516.2023.2237106](https://doi.org/10.1080/15376516.2023.2237106) [IF: 4.019]
7. **Ahmed AB**, Chetia P. MAO-B Inhibitor “Selegiline” Attenuates Oxidative Stress and Arthritic Parameters in an Invitro Repurposed Studies. *Journal of Biomedical Engineering*. 2023 Jun 20;40(2):171-81. Doi: 10.105515/JBE.40.2.17 [IF: 2.482]
8. Kuppaswamy U, **Rajan RK**, Kumar A, Ramanathan M. In-silico and in-vitro analysis of novel substituted benzimidazolyl derivatives for antimycobacterial potentials targeting enoyl acyl carrier protein reductase (InhA). *Future Journal of Pharmaceutical Sciences*. 2022 Dec;8(1):1-<https://doi.org/10.1186/s43094-022-00449-x> [IF: 2.6]
9. **Rajan, R.K.** and Ramanathan, M., 2024. Piceatannol selectively inhibited the JNK3 enzyme and augmented apoptosis through inhibition of Bcl-2/Cyt-c/caspase-dependent pathways in the oxygen-glucose deprived SHSY-5Y cell lines: In silico and in vitro study. *Chemical Biology & Drug Design*, 103(2), p.e14458. [IF: 3]
10. Pk, N., **Rajan, R.K.**, Nanchappan, V., Karuppaiah, A., Chandrasekaran, J., Jayaraman, S. and Gunasekaran, V., 2023. C-Glucosyl Xanthone derivative Mangiferin downregulates the JNK3

mediated caspase activation in Almal induced neurotoxicity in differentiated SHSY-5Y neuroblastoma cells. *Toxicology Mechanisms and Methods*, 33(9), pp.707-718. [IF: 3.2]

11. Mateen, S., Koushik, N., Gupta, P.K., Begum, T., Patel, K.P., Patel, A., Samanta, A. and Ranjan, R., Formulation and Pharmacological Evaluation of Nano-Emulgel Containing Rheum Ribes Extract for the Treatment of Urinary Tract Infection. *Tuijin Jishu/Journal of Propulsion Technology*, 44(6), p.2023.

12. Sahariah, M., Chowdhury, R., Pegu, P., Ali, F., Dutta, R.S. and Sahu, S., 2024. Design, synthesis and in-vitro anti-depressant activity evaluation of some 2-styrylbenzimidazole derivatives. *Future Journal of Pharmaceutical Sciences*, 10(1), pp.1-16.

13. Dutta RS, Sahu S, Baishya R, Pachuau L, Kakoti BB, Mazumder B. Essential oils extracted from *Citrus macroptera* and *Homalomena aromatica* (Spreng.) Schott. exhibit repellent activities against *Aedes aegypti* (Diptera: Culicidae). *Journal of Vector Borne Diseases*. 2023. [IF: 0.5]

Review articles

1. Kalita P, Ahmad AB, Sen S, Deka B, Hazarika QK, Kapil MJ, Pachuau L. High-Value Compounds and Bioactivity of Rice Bran, Rice Bran Protein: A review. *Recent Adv Food Nutr Agric*. 2022 Dec 27. doi: 10.2174/2772574X14666221227151558. Epub ahead of print. PMID: 36578259. [IF 1.814]

2. Ali F, Alom S, Ali SR, Kondoli B, Sadhu P, Borah C, Kakoti BB, Ghosh SK, Shakya A, Ahmed AB, Singh UP. Ebselen: A Review on its Synthesis, Derivatives, Anticancer Efficacy and Utility in Combating SARS-COV-2. *Mini Reviews in Medicinal Chemistry*. 2023 Sep 14. <https://doi.org/10.2174/1389557523666230914103339> . [IF 3.8]

5. Alom S, Ali F, Ali SR, Ahmed AB. Phytochemistry and Pharmacological Properties of *Morus alba* Linn. with Reference to its SARS-CoV-2 Inhibiting Potential. *Asian Journal of Chemistry*. 2022;1983-92. <https://doi.org/10.14233/ajchem.2022.23891> [IF 0.15]

6. Alom S, Kalita D, Ahmed J, Rahman K, Boruah M, Sarmah M, Das N, Ali F. Phytochemistry, Ethnobotany and Pharmacological Uses of *Tinospora cordifolia* with Special Reference to SARS-COV-2. *Asian Journal of Chemistry*. 2022;2786-96. <https://doi.org/10.14233/ajchem.2022.23970> [IF 0.15]

7. Bezbaruah R, Chavda VP, Nongrang L, Alom S, Deka K, Kalita T, Ali F, Bhattacharjee B, Vora L. Nanoparticle-Based Delivery Systems for Vaccines. *Vaccines*. 2022; 10(11):1946. <https://doi.org/10.3390/vaccines10111946>. IF 7.8

8. Ali SR, Alom S, Kumari S, Ali F, Afruja J, Singh GK, Bhat HR, Ghosh SK, Shakya A. A Systematic Overview of Monkeypox: from Origin to Treatment. *Advanced Chemicobiology Research* [Internet]. 2023 Jun. 12;2(2):151-68. Available from: <https://ojs.wiserpub.com/index.php/ACBR/article/view/acbr.v2i22023.151-168>

9. Bhattacharjee B, Bezbaruah R, Rynjah D, Newar A, Sengupta S, Pegu P, et al. Cold Atmospheric Plasma: A Noteworthy Approach in Medical Science. *Sciences of Pharmacy*. 2023;2(2):46-76.

10. **Bhattacharjee B**, Syeda AF, **Rynjah D**, Hussain SM, Chandra Bora S, **Pegu P**, et al. Pharmacological impact of microRNAs in head and neck squamous cell carcinoma: Prevailing insights on molecular pathways, diagnosis, and nanomedicine treatment. *Frontiers in pharmacology*. 2023;14:1174330.
11. Mahapatra C, **Bora SC**, Choudhury S, Barman D, Tripathy S, Kaushik S. ANTI-CANCER POTENTIAL OF QUINOXALINE DERIVATIVES: CURRENT SCENARIO AND FUTURE PERSPECTIVE. *Journal of Pharmaceutical Negative Results*. 2022 Dec 17:2344-51. <https://doi.org/10.47750/pnr.2022.13.S07.320> [0.128]
12. Nath TM, **Das S**, Zothanpuia, Chattopadhyay P. Investigating the effects of dermal exposure to in-vivo animal models on the riot-control properties of a powder formulation of *Tragia involucrata* leaf hair lining. *Cutaneous and Ocular Toxicology*. 2023 Jul 3;42(3):151-61. <https://doi.org/10.1080/15569527.2023.2227255>.
13. Kumar A, Ladha A, Choudhury A, Iqbal AMA, **Bhattacharjee B**, Das T, Gupta G, Sharma C, Sarbajna A, Mandal SC, Choudhury MD, Ali N, Slama P, Rezaei N, Palit P, Tiwari ON. The chimera of S1 and N proteins of SARS-CoV-2: can it be a potential vaccine candidate for COVID-19? *Expert Rev Vaccines*. 2022 Aug;21(8):1071-1086. [IF:6.2]
14. **Bhattacharjee B**, Iqbal AMA, Farooqui A, Sahu RK, Ruhi S, Syed A, Miatmoko A, Khan D, Khan J. Superior possibilities and upcoming horizons for nanoscience in COVID-19: noteworthy approach for effective diagnostics and management of SARS-CoV-2 outbreak. *Chem Zvesti*. 2023 Apr 4:1-24. doi 10.1007/s11696-023-02795-3. [IF-2.2]
15. Sahu RK, Ruhi S, Jeppu AK, Al-Goshae HA, Syed A, Nagdev S, Widyowati R, Ekasari W, Khan J, **Bhattacharjee B**, Goyal M, Bhattacharya S and Jangde RK (2023) Malignant mesothelioma tumors: molecular pathogenesis, diagnosis, and therapies accompanying clinical studies. *Front. Oncol*. 13:1204722. Doi: 10.3389/fonc.2023.1204722. [IF- 4.7]
16. **Ali, F., Alom, S.,** Ali, S. R., Kondoli, B., Sadhu, P., Borah, C., Kakoti, B. B., Ghosh, S. K., Shakya, A., Ahmed, A. B., Singh, U. P., & Bhatt, H. R. (2023). Ebselen: A Review on its Synthesis, Derivatives, Anticancer Efficacy and Utility in Combating SARS-COV-2. *Mini reviews in medicinal chemistry*. <https://doi.org/10.2174/1389557523666230914103339>
17. **Bhattacharjee, B.,** Syeda, A.F., **Rynjah, D.,** Hussain, S.M., Chandra Bora, S., **Pegu, P.,** Sahu, R.K. and Khan, J., 2023. Pharmacological impact of microRNAs in head and neck squamous cell carcinoma: Prevailing insights on molecular pathways, diagnosis, and nanomedicine treatment. *Frontiers in pharmacology*, 14, p.1174330.
18. **Bhattacharjee, B.,** Bezbaruah, R., **Rynjah, D.,** Newar, A., Sengupta, S., **Pegu, P.,** Dey, N., Bora, S.C. and Barman, D., 2023. Cold Atmospheric Plasma: A Noteworthy Approach in Medical Science. *Sciences of Pharmacy*, 2(2), pp.46-76.

Book Chapters

1. **Ali, F., S. Alom,** A. Paul, N. Guha, and M. K. Zaman, in *Phytochemistry and Nutritional Composition of Significant Wild Medicinal and Edible Mushrooms Traditional Uses and*

Pharmacology, *Leucopaxillus giganteus* (Sowerby) Singer (Giant Leucopax), ed. A. Sharma, G. Bhardwaj, and G. A. Nayik, Royal Society of Chemistry, 2023, ch. 12, pp. 261-272. <https://doi.org/10.1039/BK9781837672097-00261>

2. Gohain A, **Alom S**, Choudhury D, Das AK. Species of the Genus *Selinum* Found in the Western Himalayas. In *Immunity Boosting Medicinal Plants of the Western Himalayas 2023* Mar 15 (pp. 493-510). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-19-9501-9_20

3. **Alom S**, **Ali F**, Choudhury D, Gohain A, **Ahmed AB**, Zaman MK. Tuberculosis and Drug Delivery System: Clinical Trials in TB. *Tubercular Drug Delivery Systems: Advances in Treatment of Infectious Diseases*. 2023 Mar 15:289-305. https://doi.org/10.1007/978-3-031-14100-3_14

4. **Ali F**, **Alom S**, Guha N, Paul A, Zaman MK. Introduction, Geographical Region, Mushrooms Diversity, Climate, Sustainability: An Overview of Mushrooms. *Edible and Medicinal Mushrooms of the Himalayas*. 2024:1-7.

5. Krishnatreyya H, **Hazarika H**, Das BK, Gogoi N, **Ahmed AB**, Zaman K. Drug Delivery Options for Treatment of Ebola Infection. In *Viral Drug Delivery Systems: Advances in Treatment of Infectious Diseases 2023* Apr 11 (pp. 161-191). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-20537-8_8

6. **Hazarika H**, Krishnatreyya H, **Bhattacharjee B**, **Rynjah D**, Gogoi D, **Ahmed AB**, Zaman K. Liposomal Drug Delivery in Malaria. In *Malarial Drug Delivery Systems: Advances in Treatment of Infectious Diseases 2023* Mar 7 (pp. 161-185). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-15848-3_8

7. Deka B, **Bhattacharjee B**, Shakya A, Shivavedi N. Antiinflammatory therapy as a game-changer toward antiaging, Editor (s): Sandeep Kumar Singh, Chih-Li Lin, Shailendra Kumar Mishra, *Anti-Aging Drug Discovery on the Basis of Hallmarks of Aging*. Academic Press, 2022, pp. 325-351. [Elsevier]

8. Deka B, **Bhattacharjee B**, Shivavedi N, Singh GK, Bhat HR, Ghosh SK, Shakya A (2023). Parkinson's disease: A Phytotherapeutic Prospective. In: Singh SP., Biral H., Keswani C, *Traditional Medicine for neuronal health*. Bentham Book, pp. 1-23. [Bentham Science]

9. **Bhattacharjee B**, Deka B, Shivavedi N, Bhat HR, Sinha SK, Ghosh SK, Shakya A (2023). Neuroprotective Role of Medicinal Plants from North Eastern Region of India. In: Singh SP., Biral H., Keswani C, *Traditional Medicine for neuronal health*. Bentham Book, pp. 103-128. [Bentham Science]

Patent Filed/Published

1. German Patent (Published)

Title: A Novel Herbal Formulation for the Prevention and management of Cardiovascular Disease

Inventors: **Bhattacharjee Bedanta**, Das Soma, Kalita Pallab, Kalita Rupjyoti, Kushwaha Poonam, Mittal Gaurav, Sarkar Dhurbajyoti, Sen Ashim Kumar, Somwanshi Bhagwat Tukaram **German Patent**

Application number: 20 2022 103 773.6

2. **German Patent (Published)**

Title: Fabrication of Lipid-Based Nanocarrier Drug Delivery for an Antibiotic

Inventors: Ahmed Ashique, Awasthi Shalini, Dwivedi Aparna, Nath Trishna Mani,

Rynjah Damanbhalang, Sahoo Nityananda, Saikia Kriika, Sarmah Jahnabi, Singh Lalita.

Application Number: 20 2022 104 605

3. **UK Design Patent (Granted)**

Faculty: Dr. Asish Bhaumik

Instrument for diagnosis of breast cancer. Design No. 6292790.

Grant Date: 28th June, 2023

4. **Indian patent:**

Faculty: Dr. Asish Bhaumik

Smart neck band for reducing snores. Design No.389279-001.

Reciprocity Date: 29-06-2023.