

## HANUMANT SINGH RATHORE

Assistant Professor

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### EMPLOYMENT DETAIL

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Currently working as **Head I/c & assistant professor** in the Department of Biotechnology, School of Engineering & Technology, Nagaland Central University, Dimapur (Nagaland)

### EDUCATIONAL QUALIFICATION

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- **Doctor of Philosophy in Technology** at Central Leather Research Institute (CSIR-CLRI), Chennai and Anna University, Chennai (2017)
- **Master of Technology** in Biotechnology at A. C. College of Technology (Centre for Biotechnology), Anna University, Guindy, Chennai from 2007-2009
- **Bachelor of Pharmacy** in S.L.T. Inst. of Pharmaceutical Sciences, Guru Ghasidas University, Bilaspur (C.G.) from 2003-2007

### FIELDS OF INTEREST

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- Tissue engineering
- Biopharmaceutical and drug delivery

### RESEARCH PROJECT

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- **“Death receptor-5 targeted lipid nanoparticles of  $\gamma$ -secretase inhibitor for simultaneous targeting of breast cancer cells and cancer stem cells”**, DBT, Delhi, Govt of India (Ongoing)-Principal Investigator
- **“Systematic exploration and analysis of indigenous Nagaland medicinal plant *Clematis nepaulesis* for the effective treatment of Rheumatoid Arthritis”**, DBT, Delhi, Govt of India (Completed)- Co-Principal Investigator
- **“An effective treatment approach of T-cell induced autoimmune diabetes through sitagliptin-anti CD4 immuno-nano Conjugates in BALB/c mice ”**, DBT, Delhi, Govt of India (Completed)- Principal Investigator

## PUBLICATIONS

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- Singh, P., **Rathore, H. S.**, Chhetri, N. B., & Gargate, G. (2024). IP audit of an academic institute-case study of central university and institute of excellence in India. *International Journal of Intellectual Property Management*, 14(2), 160-181.
- Gomathi, E., Maharaja, P., **Rathore, H. S.**, Boopathy, R., Panda, R. C., Senthilvelan, T., & Arthanareeswari, M. (2023). Treatment of textile dye consortium through photo-electro-fenton process using graphite-Ti electrode system and toxicity studies. *Carbon Letters*, 33(7), 2011-2025.
- Senthilvelan, T., **Rathore, H. S.**, Gomathi, E., Panda, R. C., Issac, P. K., Guru, A., & Arockiaraj, J. (2023). The enzymatic decolorization of leather azo dyes (AB 113 and AB 52) using crude fungal laccase: an eco-friendly approach towards pollution reduction. *Biomass Conversion and Biorefinery*, 1-13.
- **Rathore, H. S.**, Sivagnanam, U. T., Abraham, L. S., Prakash, D., Panda, R. C., & Senthilvelan, T. (2022). Green synthesized silver nanoparticles-impregnated novel gum kondagogu–chitosan biosheet for tissue engineering and wound healing applications. *Polymer Bulletin*, 79(9), 7215-7227.
- Konyak, P. M., Hiese, Z., Prabu, S. L., Ruckmani, K., Hiese, V., Ajungla, T., & **Rathore, H. S.** (2022). Persuasive and Strategic Approaches for Preliminary Phytochemical Screening, Quantitative Analysis and Antioxidant Activity of Crude Plant Extracts from *Clematis napaulensis* DC Indigenous to Nagaland, India. *The Journal of Plant Science Research*, 38(2), 739-751.
- Kartik, S., Prakash, D., Kumar, R. R., Ramkumar, V., Vishista, K., **Rathore, H. S.**, ... & Senthilvelan, T. (2021). Betel leaf-derived carbon nano-sphere/renewable resourced polyurethane coatings for high-performance applications. *Polymer Bulletin*, 78, 3527-3541.
- **Rathore, H. S.**, Senthilvelan, T., Vasantharaja, R., Abraham, L. S., Prakash, D., Sivagnanam, U. T., & Gupta, S. (2019). Fabrication and characterization of chitosan film impregnated ciprofloxacin drug: A comparative study. *Biocatalysis and agricultural biotechnology*, 18, 101078.
- Thondawada, M., Wadhvani, A. D., S. Palanisamy, D., **Rathore, H. S.**, Gupta, R. C., Chintamaneni, P. K., ... & Gowthamarajan, K. (2018). An effective treatment approach of DPP-IV inhibitor encapsulated polymeric nanoparticles conjugated with anti-CD-4 mAb for type 1 diabetes. *Drug development and industrial pharmacy*, 44(7), 1120-1129.
- Kumar, S. S. D., Mahesh, A., Antoniraj, M. G., **Rathore, H. S.**, Houreld, N. N., & Kandasamy, R. (2018). Cellular imaging and folate receptor targeting delivery of gum kondagogu capped gold nanoparticles in cancer cells. *International journal of biological macromolecules*, 109, 220-230.
- Ramanathan, G., Singaravelu, S., Muthukumar, T., Thyagarajan, S., **Rathore, H. S.**, Sivagnanam, U. T., & Perumal, P. T. (2017). Fabrication of *Arothron stellatus* skin collagen film incorporated with *Coccinia grandis* as a durable wound

construct. *International Journal of Polymeric Materials and Polymeric Biomaterials*, 66(11), 558-568.

- Ghatak, S., Yadav, R. P., **Rathore, H. S.**, Thou, K., Jakha, F., Sumi, K. T., ... & Kumar, N. S. (2017). Mitochondrial control region and GSTP1 polymorphism associated with familial urinary bladder cancer in Karbi-Anglong tribe of Assam, Northeast India. *Egyptian Journal of Medical Human Genetics*, 18(1), 99-104.
- **Rathore, H. S.**, Sarubala, M., Ramanathan, G., Singaravelu, S., Raja, M. D., Gupta, S., & Sivagnanam, U. T. (2016). Fabrication of biomimetic porous novel sponge from gum kondagogu for wound dressing. *Materials Letters*, 177, 108-111.

## **BOOK/BOOK CHAPTER**

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- Biomedical Applications of Carbon-Based Nanomaterials (Book Chapter) Nanomaterials and their biomedical applications, Tuhin Subhra Santra, Springer, ISBN 978-981-33-6252-9 (2021)
- Research methodology and applied statistics, JSR publications, ISBN 978-93-5850-481-1 (2023)
- Machine learning using R, Scientific International Publishing House, ISBN 978-93-5757-646-8 (2023)
- A comprehensive textbook for Intellectual Property Rights: 2024, Scientific International Publishing House ISBN 978-93-5757-830-7 (2024)
- Essentials of bioinformatics for beginners, AG Publishing House, ISBN 978-81-19832-30-9 (2024)
- rDNA Technology, Scientific International Publishing House, ISBN 978-93-6132-096-5 (2024)
- Python Programming, Scientific International Publishing House, ISBN 978-93-6132-168-9 (2024)

## **PATENT**

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- Digital and Portable Automated Microbiology System, (Design no. 396061-001, 15/11/2023)
- Apparatus for Synthesis of Pharmaceutical Nanosuspension, (Design no. 398362-001 14/12/2023)
- Animal Tissue Storage Device for Laboratory Purpose (Design no. 398085-001 14/12/2023)
- Portable Device for The Diagnosis of Skin Cancer, (Design no. 6319795 25/10/2023)
- Ai Based Biosensor Device To Detect Breast Cancer, (Design no. 398936-001 04/01/2024)

## **INTERNATIONAL/NATIONAL CONFERENCES PRESENTED/PARTICIPATED**

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- Presented on the topic Hands on training on Dynamic Light Scattering (DLS) in the seminar on Biotechnology: An emerging future, organized by Department of Biotechnology, SET, Nagaland University, Dimapur on 28<sup>th</sup> March 2019
- **Oral presentation** during 12th Annual Convention of ABAP & **International Conference** on “Biodiversity, Environment and Human Health: Innovations and Emerging Trends” (BEHIET 2018) organized at school of life sciences, Mizoram University, Aizawl, Mizoram during 12 -14 November 2018
- **Oral presentation** during TEQIP-II sponsored **International Conference** on Trends and Innovations in Chemical & Pharmaceutical Technologies (TIPCT 2017), 2-4 February 2017, Anna University, BIT, Tiruchirappalli
- **Poster presentation** during TEQIP-II sponsored **International Conference** on Trends and Innovations in Chemical & Pharmaceutical Technologies (TIPCT 2017), 2-4 February 2017, Anna University, BIT, Tiruchirappalli
- **1<sup>st</sup> prize in a poster presentation** during 5<sup>th</sup> Annual **International Convention** of Association of pharmacy professionals held in Department of Pharmaceutical Technology, Anna University, Tamilnadu during 22<sup>nd</sup> -23<sup>rd</sup> Jan 2016
- **Poster presentation** during **Indo-Australian conference** on Biomaterials, Tissue Engineering, Drug delivery system & regenerative medicine (BiTERM-2015) organized by Department of Chemistry, Anna University, Chennai held from 5<sup>th</sup> to 7<sup>th</sup> February 2015.
- **Poster presentation** in 1<sup>st</sup> **International Symposium** on frontiers in pharmaceutical research and nanotechnology (Nanopharma 2011) during 5<sup>th</sup> and 6<sup>th</sup> March 2011.
- **Oral presentation** during **98<sup>th</sup> Indian Science Congress** quality education and excellence in scientific research in Indian Universities held at SRM University, Chennai during 3-7 Jan 2011
- **Poster Presentation** in the **national seminar** on "ADVANCES IN DRUG DISCOVERY AND DEVELOPMENT" organized by SLT Institute of pharmaceutical sciences, Guru Ghasidas University, Bilaspur on Jan.18<sup>th</sup>-19<sup>th</sup>, 2008

**INTERNATIONAL/NATIONAL CONFERENCES PARTICIPATED: 10**

**PROFESSIONAL TRAINING/WORKSHOPS/FDP: 20**

**PH.D SUPERVISION: 4 (Ongoing)**

## **PROFESSIONAL DEVELOPMENT**

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### Honors/Awards:

- June 2010-Feb 2011: Senior Research Fellow (**SRF**) from Central Leather Research Institute (**CSIR-CLRI**), Chennai
- June 2009-May 2010: GATE-Junior Research Fellow (**JRF**) from Central Leather Research Institute (**CSIR-CLRI**), Chennai
- **2007, 2008, 2009** Qualified in “Graduate Aptitude Test in Engineering” (**GATE**), conducted by IIT, Kanpur, Indian Institute of Science, Bangalore, IIT Roorkee respectively
- **All India 7<sup>th</sup> rank** in JNU-CEE 2007 for admission in M Tech Biotechnology
- Received 8000/- per month fellowship from **DBT, Delhi** during M Tech. Degree

I do hereby declare that the above-furnished details are true and correct to the best of my knowledge.

Hanumant Singh Rathore