



## Dr. Syed Nazrin Ruhina Rahman

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### Career Objective

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To obtain a meaningful and challenging position, which not only enables me to work for the benefit and the interest of the organization but also offers me opportunities for the advancement of my skills and raising my performance levels.

### Skills

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- Formulation development using a Quality-by-Design approach
- Experience in handling various laboratory-scale equipment
- Project management

### Professional Experience

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- Currently working as a **Scientific Officer** at **Suria Eye Product Pvt. Ltd.**, Bio-NEST, National Institute of Pharmaceutical Education and Research Guwahati (NIPER G), Assam, India (from March 2023 to Present)
- Worked as a **Junior Research Fellow (JRF)** at **National Institute of Pharmaceutical Education and Research Guwahati (NIPER G)**, Assam, India (from December 2018 to October 2020)
- Act as a **Quality Assurance Executive** in **Sun Pharma Laboratories Ltd. Sikkim Unit II**, Ranipool, Sikkim, India (from January 2018 to November 2018)
- Successfully completed 3 months of on-job training on **Quality Control and Quality Assurance** from **Sun Pharma's Technical Training Academy**, Maharaja Sayajirao University, Baroda, Gujarat, India (from October 2017 to December 2017)
- Done **Industrial Training** from **Caplet India Private Limited**, Kolkata, India (from 2<sup>nd</sup> June 2014 to 30<sup>th</sup> June 2014)

### Achievements

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- Qualified **NIPER JEE-2020** for Ph.D., **All India Rank-25**
- Qualified **Graduate Pharmacy Aptitude Test (GPAT-2019)**, **All India Rank-781**
- Star Performer for the month of March 2018, **Sun Pharma Laboratory Ltd**, Unit II, Sikkim, India

## Education

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Exam passed	Examination Board/University	Year of Passing	Percentage/CGPA
Ph.D. (Pharmaceutics)	NIPER Guwahati, Assam	2023	9.86 (CGPA; Ph.D. course work)
M. Pharm (Pharmaceutics)	Dibrugarh University, Assam	2017	7.94 (CGPA)
B. Pharm	Assam University Silchar, Assam	2015	8.09 (CGPA)
Higher Secondary	Jawahar Navodaya Vidyalaya (CBSE), Karimganj, Assam	2010	78 %
Matriculation		2008	72 %

## Seminars/Workshops Attended

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- Participated & presented an oral research presentation entitled "**Reconstituted emulsion eyedrops containing cyclosporin A: a technology for enhancing product stability**" at an International conference on recent trends and future opportunities in pharmaceuticals organized by NIPER, SAS Nagar, Punjab, held on 10<sup>th</sup> to 12<sup>th</sup> November 2022
- Participated & presented a poster entitled "**Application of design of experiments<sup>®</sup> approach-driven artificial intelligence and machine learning for systematic optimization of reverse phase high performance liquid chromatography method to analyze simultaneously two drugs (cyclosporin a and etodolac) in solution, human plasma, nanocapsules, and emulsions**" at NIPER research symposium-trends in Pharmaceutical research organized by NIPER, Kolkata, held on 15<sup>th</sup> February 2022
- Participated & presented a short talk entitled "**Formula optimization via the design of experiments (DOE)-driven artificial intelligence (AI) and machine learning (ML) approach to prepare nanocapsules**" at 3<sup>rd</sup> student IPS symposium organized by the Department of chemistry, IIT Bombay, held on 31<sup>st</sup> March to 1<sup>st</sup> April 2022
- Participated & presented a poster entitled "**Dual drug (cyclosporin A & etodolac)-loaded oil-and/or polymer-based nano-dispersions: comparative *in vitro* drug release studies**" in 19<sup>th</sup> international e-symposium on advances in technology and business potential of new drug delivery systems organized by Controlled Release Society Indian Local Chapter on 25<sup>th</sup> to 27<sup>th</sup> February 2021
- Attended an international workshop entitled "**Tools and techniques to perform molecular modelling and computer-aided drug design**" MMTT-2021, organized by the Department of Medicinal Chemistry, NIPER, Guwahati, held on 11<sup>th</sup> to 17<sup>th</sup> 2021
- Participated & presented a poster entitled "**Studies on *in vitro* drug release behavior of non-phospholipid-based topical ophthalmic emulsions containing 0.05 or 0.1 % w/w cyclosporin A (CsA)**" at Virtual Dissolution Discussion Group India meeting 2020 held on 15<sup>th</sup> to 16<sup>th</sup> October 2020
- Participated & presented an oral research presentation entitled "***In vitro* drug release behavior of non-phospholipid-based topical ophthalmic emulsions containing 0.05 or 0.1 % w/w cyclosporin A (CsA) for dry-eye syndrome management**" at Disso research presentations, India 2020-online, organized by Society for

Pharmaceutical Dissolution Science (SPDS) presents in collaboration with Association of Pharmaceutical Teachers of India (APTI) held on 4<sup>th</sup> June 2020

- Participated & presented a short oral talk on “**Lyophilized reconstitutable solid dry powder: a strategy to enhance the shelf-life of liquid retentive, non-phospholipid based oil-in-water nanosized emulsions containing cyclosporine A**” at 6<sup>th</sup> International Conference on Advanced Nanomaterial and Nanotechnology (ICANN2019) organized by Centre for Nanotechnology at the Indian Institute of Technology Guwahati, India on 18<sup>th</sup> to 21<sup>st</sup> December 2019
- Participated & presented a poster on “***In vitro* evaluation of antibacterial activity volatile oil the plant Zanthoxylum acanthopodium DC. from Meghalaya**” at the National Seminar on Recent Advances And Scope in Herbal Technology: Challenges and Prospect organized by Assam University Silchar on 10<sup>th</sup> September 2016

## **Publications**

(Research articles-13, review articles-07, book chapters-04, book- 01)

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- Rahman, S.N.R., Goswami, A., Jala, A., Venuganti, A., Deka, A., Borkar, R.M., Singh, V., Das, D., & Shunmugaperumal, T. (2024). Studies on cationic ocular emulsions containing bipartitioned oil droplets to codeliver cyclosporin A and etodolac. Nanomedicine, In press.
- Pawde, D. M., Puppala, E. R., Rajdev, B., Jala, A., **Rahman, S. N. R.**, Goswami, A., & Shunmugaperumal, T. (2023). From co-delivery to synergistic anti-inflammatory effect: Studies on chitosan-stabilized Janus emulsions having chloroquine phosphate and flavopiridol in Complete Freund's Adjuvant induced arthritis rat model. International Journal of Biological Macromolecules, 128776.
- Goswami, A., **Rahman, S. N. R.**, Sree, A., & Tamilvanan, S. (2023). Solubility of cinnarizine in natural deep eutectic solvent (camphor+ menthol) and correlation with different solubility models. Fluid Phase Equilibria, 114008.
- **Rahman, S. N. R.**, & Shunmugaperumal, T. (2023). Ocular dispersions for dry eye syndrome management (pp. 1-209). LAP LAMBERT Academic Publishing, London, United Kingdom. ISBN: 978-620-6-75452-7
- Putta, C. L., **Rahman, S. N. R.**, Chakraborty, P., & Shunmugaperumal, T. (2023). Development, systematic optimization and biofilm disruption activity of eugenol-based nanosized emulsions stabilized with Tween 80. Journal of Microencapsulation, 1-17.
- Juneja, P., **Rahman, S. N. R.**, Jakhar, D., Mourya, A. K., Tripathi, D. M., Kaur, I. & Kaur, S. (2023). Recombinant VEGF-C (Cys156Ser) improves mesenteric lymphatic drainage and gut immune surveillance in experimental cirrhosis. JHEP Reports, 100816.
- Jariwala, N., Putta, C. L., Gatade, K., Umarji, M., **Rahman, S. N. R.**, Pawde, D. M., & Shunmugaperumal, T. (2023). Intriguing of pharmaceutical product development processes with the help of artificial intelligence and deep/machine learning or artificial neural network. Journal of Drug Delivery Science and Technology, 87, 104751.
- Goswami, A., **Rahman, S. N. R.**, Pawde, D. M., & Shunmugaperumal, T. (2023). Analytical quality by design-driven RP-HPLC method conditions to concomitantly determine cinnarizine and morin hydrate in combined drug solution and dual drug-loaded formulations. Journal of AOAC International, 106(5), 1154-1164.

- Pawar, B. M., Goswami, A., **Rahman, S. N. R.**, Sree, A., & Shunmugaperumal, T. (2023). On the use of linear model-based optimization to obtain optimum solubility permeability balance (OSPB) in cinnarizine-hydrotropic blends. *Journal of Molecular Liquids*, 381, 121817.
- **Rahman, S.N.R.**, Agarwal, N., Goswami, A., Sree, A., Jala, A., Venuganti, A., Deka, A., Borkar, R.M., Singh, V., Das, D., & Shunmugaperumal, T. (2023). Studies on spray dried topical ophthalmic emulsions containing cyclosporin A (0.05% w/w): systematic optimization, in vitro preclinical toxicity and in vivo assessments. *Drug Delivery and Translational Research*, 13, 1654-1674.
- **Rahman, S.N.R.**, Goswami, A., Sree, A., Jala, A., Borkar, R.M., & Shunmugaperumal, T. (2022). Dual delivery of cyclosporin a and etodolac using polymeric nanocapsules in a rabbit eye model: ocular biodistribution and pharmacokinetic study. *Journal of Ocular Pharmacology and Therapeutics*, 38(10), 734-744.
- Pawde, D.M., **Rahman, S.N.R.**, Ponneganti, S., Goswami, A., Borkar, R. M., & Shunmugaperumal, T. (2022). Analytical Quality-by-Design-Based Systematic Optimization of RP-HPLC Method Conditions to Analyze Simultaneously Chloroquine Phosphate and Flavopiridol in Stress-Induced Combined Drug Solution and Pharmaceutical Emulsions. *Journal of Chromatographic Science*, 61(7), 665-677.
- **Rahman, S.N.R.**, Katari, O., Pawde, D.M., Boddeda, G.S.B., Goswami, A., Mutheneni, S. R., & Shunmugaperumal, T. (2021). Application of Design of Experiments® approach-driven Artificial Intelligence and Machine Learning for systematic optimization of reverse phase high performance liquid chromatography method to analyze simultaneously two drugs (cyclosporin A and etodolac) in solution, human plasma, nanocapsules, and emulsions. *AAPS PharmSciTech*, 22(4), 155-162.
- Thenrajan, R. S., Katari, O., **Rahman, S.N.R.**, Pawde, D.M., Goswami, A., Chandira, R.M., & Shunmugaperumal, T. (2021). Neoteric solvents for the pharmaceutical industry: an update. *Drug Discovery Today*, 26(7), 1702-1711.
- Pawar, B.M., **Rahman, S.N.R.**, Pawde, D.M., Goswami, A., & Shunmugaperumal, T. (2021). Orally Administered Drug Solubility-Enhancing Formulations: Lesson Learnt from Optimum Solubility-Permeability Balance. *AAPS PharmSciTech*, 22(2), 63-72.
- Goswami, A., Pawde, D.M., **Rahman, S.N.R.**, Sekharan, T. R., Shunmugaperumal, T., and Murty, U.S.N. (2021). Neoteric Solvents: A Paradigm Shift in Pharmaceutical Industrial Processes. *Pharma Focus Asia*. Available at <https://www.pharmafocusasia.com/articles/neoteric-solvents-a-paradigm-shift-in-pharmaceutical-industrial-processes>
- **Rahman, S.N.R.**, & Shunmugaperumal, T. (2020). In Tamilvanan Shunmugaperumal (Ed.). Case study 2 fish oil-based nanosized emulsions. Oil-in-Water nanosized emulsions for drug delivery and targeting (389-422). John Wiley & Sons, Inc., River Street, NJ, USA.
- Katari, O., **Rahman, S.N.R.**, & Shunmugaperumal, T. (2020). In Tamilvanan Shunmugaperumal (Ed.). Biofate of nanosized emulsions. Oil-in-water nanosized emulsions for drug delivery and targeting (pp. 225-258). John Wiley & Sons, Inc., River Street, NJ, USA.
- **Rahman, S.N.R.**, & Shunmugaperumal, T. (2020). In Tamilvanan Shunmugaperumal (Ed.). Characterization and safety assessment of oil-in-water nanosized emulsions. Oil-in-Water nanosized emulsions for drug delivery and targeting (pp. 69-168). John Wiley & Sons, Inc., River Street, NJ, USA.

- **Rahman, S.N.R.**, & Shunmugaperumal, T. (2020). In Tamilvanan Shunmugaperumal (Ed.). Formulation development of oil-in-water nanosized emulsions. Oil-in-Water nanosized emulsions for Drug Delivery and Targeting (pp.19-68). John Wiley & Sons, Inc., River Street, NJ, USA.
- **Rahman, S.N.R.**, Pawde, D.M., Katari, O., Hmingthansanga, V., Shunmugaperumal, T. (2020). Systematic optimization, in vitro drug release, and preliminary nonclinical toxicity assessment of nonphospholipid-based topical ophthalmic emulsions containing 0.05 or 0.1% w/w cyclosporin A for dry-eye syndrome management. AAPS PharmSci Tech, 21, 36,
- Famta, P., Famta, M., Kaur, J., Khursheed, R., Kaur, A., Khatik, G. L., Pawde, D.M., **Rahman, S.N.R.**, Shunmugaperumal, T. (2020). Protecting the normal physiological functions of articular and periarticular structures by aurum nanoparticle-based formulations: an up-to-date insight. AAPS PharmSciTech, 21(3), 95-102.
- Tamilvanan, S., Gill, S., Kaur I., **Rahman, S.N.R.**, Pawde, D.M., Katari, O., Hmingthansanga, V., Sekharan, T.R. (2019). Candidiasis management: current status of allopathic drugs and utility of coriander-based oil-less emulsions, Letters in applied NanoBioScience, 8 (3), 586-590.
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- Sharma, H.K., **Rahman, S.N.R.**, Biswas, N.R.G. (2017). Role and Utility of Superdisintegrants in Solid Dosage Forms: A Conceptual Review In Pharma Times, 49 (12), 9-11

## Personal Information

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Address	: Khadiman (Vill), Badarpur (P.O), Karimganj (Dist), Assam, India
Date of birth	: 5 <sup>th</sup> May 1992
Languages known	: Assamese, Bengali, English, Hindi
Marital status	: Married
Nationality	: Indian
Hobbies	: Community involvement, Cooking, Playing Volleyball

## Declaration

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I hereby declare that the above-mentioned facts and information are authentic and true to the best of my knowledge.

**Place:** Guwahati, Assam

**Syed Nazrin Ruhina Rahman**