Dr. Dip Kumar Gogoi
Scientist-D/Head
Biotechnology & CBT Division
Central Muga Eri Research & Training Institute
Central Silk Board, Lahdoigarh, Jorhat-785700, Assam
E-mail: gkdeep@rediffmail.com; gkdeep@gmail.com
Tel.: +91376-2335528 (O); (+91) 98540-50433; (+91) 9957034432

Educational Qualification : M.Sc. in Life Sciences (Microbiology)
Ph.D. in Life Sciences (Microbial Biotechnology)

Area of research interest:

- ✓ Silkworm and host plant microbiology/biotechnology
- ✓ Silkworm probiotics
- ✓ Integrated nutrition management

Professional experiences:

- ✓ Scientist-D at Biotechnology Section, CMER&TI, Central Silk Board, Govt. of India, Jorhat, Assam (January, 2020 to till date)
- ✓ Scientist-C at Biotechnology Section, CMER&TI, Central Silk Board, Govt. of India, Jorhat, Assam (2014-19)
- ✓ Scientist-B at Biotechnology Section, CMER&TI, Central Silk Board, Govt. of India, Jorhat, Assam (2011-14)
- ✓ Scientist-B at Regional Eri Research Station, Central Silk Board, Govt. of India, Mendipathar, East Garo Hills, Meghalaya (2009-11)
- ✓ Research Scholar at Tocklai Tea Research Station, TRA, Jorhat, Assam (2008-09)
- ✓ CSIR - Senior Research Fellow at Dept. of Biotechnology, NEIST (CSIR), Jorhat, Assam (2005-2008).
- ✓ DRDO – Junior Research Fellow at Biotechnology Division, Defence Research Laboratory (DRDO), Tezpur, Assam (2004-05)
- ✓ Project assistant at Dept. of Biotechnology, NEIST (CSIR), Jorhat, Assam (2001- 03)
- ✓ Post Graduate Teacher (PGT) in Biology at Jowahar Novoday Vidyalaya, Jorhat, Assam (2001)

Awards/honour/Fellowship (if any):

- ✓ Dr. S.N. Choudhury Memorial Award - Best Scientist category (2016).
- ✓ DST Fast Track Young Scientist Project during 2011-12.
- ✓ CSIR Senior Research Fellowship (SRF) in Life Sciences in 2007-08.
- ✓ DRDO Junior Research Fellowship (JRF) during 2004.
- ✓ Recognized Ph.D. Guide-ship under Dibrugarh University.
- ✓ Evaluator for projects under MSMEs (PRISM) scheme of DSIR, Govt. of India and ASTEC, Science & Technology Department, Govt. of Assam
- ✓ External examiner for PGDS course, CTR&TI, CSB, Ranchi.

Major project handled:

- ✓ Development of technology for enhancing egg laying in Vanya Silk moths by application of host plant volatiles. [Principal Investigator; Funding agency DBT, New Delhi; Duration 3 years]
- ✓ Development of decision support system for early warning of selected muga silkworm diseases/pest with geospatial techniques. [Principal Investigator; Funding agency CSB, Bangalore; Duration 3 years]
- ✓ "Molecular approaches in characterization and utilization of gut microflora from Muga Silkworm *Antheraea assamensis* for enhancing productivity of Muga culture in North Eastern India" [Principal Investigator; Funding agency DBT, New Delhi; Duration 3 years]
- ✓ "Screening of Microbial Flora (Potential Biofertilizer) of Castor Rhizosphere and Development of INM Package in Ericulture" [Principal Investigator; Funding agency DBT, New Delhi; Duration 3 years]
- ✓ "Molecular investigation into the lignocellulytic system of a few wild silk moths in Northeast India". [Co-Investigator; Funding agency DBT, New Delhi; Duration 3 years]

- ✓ "Adoption of improved technologies of Muga culture for sustainable elevation of cocoon production in the Tribel belt of Assam". [Co-Investigator; Funding agency DST, New Delhi; Duration 3 years]
- ✓ "Hardening of micro-propagated plantlets of muga host plant, *Persea bombycina* Kost." [Regular Programme, Co-Investigator; Funding agency CSB, Bangalore]
- ✓ "Development of Seed Preservation Technology for Muga Silkworm (*Antheraea assamensis* Helfer)." [Co Investigator; Funding agency CSB, Bangalore; Duration 3 years]
- ✓ "Whole genome sequencing and functional genomics of *Antheraea assamensis* Helfer". [Co Investigator; Funding agency CSB, Bangalore; Duration 3 years]
- ✓ "Assessment of phytochemical diversity in *Persea bombycina*, the primary host plant of *Antheraea assamensis* from northeast India." [Co Investigator; Funding agency CSB, Bangalore; Duration 3 years]
- ✓ "Role of hormesis in mitigating oxidative stress and its impact on growth and yield of Muga silkworm, *Antheraea assamensis* Helfer." [Co Investigator; Funding agency CSB, Bangalore; Duration 3 years]

Publications: Total – 30 nos.

i) Journal paper : 25	ii) Book/Book chapter : 3
iii) Seminar/Symposium paper: 30	iv) Reports : 5

Important recent publications:

- Sakshi Gandotra, Archna Kumar, Kailash Naga, Pinky Moni Bhuyan, **Dip K. Gogoi** , Kirti Sharma, Sabtharishi Subramanian (2018). Bacterial community structure and diversity in the gut of Muga silkworm, *Antheraea assamensis* (Lepidoptera: Saturniidae) from India. ***Insect Molecular Biology*. Vol: 27 (5). D.O.I.** 10.1111/imb.12495. **[Impact Factor: 2.492]**
- Pinky Moni Bhuyan, Sosanka Protim Sandilya, Pranab Kumar Nath, Sakshi Gandotra, Sabtharishi Subramanian, David Kardong, **Dip Kumar Gogoi*** (2018). Optimization and characterization of extracellular cellulase produced by Bacillus pumilus MGB05 isolated from midgut of muga silkworm (*Antheraea assamensis* Helfer) ***Journal of Asia Pacific Entomology***. Vol: 21(4):1171-1181. **[Impact Factor: 0.875]**
- S. P. Sandilya**,** P. M. Bhuyan, Vijay N., **D. K. Gogoi*** and D. Kardong (2017). Impact of *Pseudomonas aeruginosa* MAJ PIA03 affecting the growth and phytonutrients production of castor, a primary host plant of *Sami ricini*. ***Journal of Soil Science and Plant Nutrition.*** ISSN 0718-9516. **[Impact factor: 2.006]**
- S.P. Sandilya, P. Dutta, P.M. Bhuyan, R. Debnath, A. Changmai, K. Neog and **D.K. Gogoi*** (2017). *Aeromonas caviae* CSB04, a causal organism of bacterial flacherie in Muga silkworm (*Antheraea assamensis* Helfer). ***Current Science***. Vol. 112(1), pp. 32-34. **[Impact factor: 0.756]**
- S. P. Sandilya**,** P. M. Bhuyan, **D. K. Gogoi*** and D. Kardong (2016). P solubilization and plant growth promotion ability of rhizobacteria of *R. communis* L growing in Assam, India. ***Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci***. (DOI: 10.1007/s40011-016-0833-9) **[Impact factor: 0.40]**
- S. Gandotra, P. M. Bhuyan, **D. K. Gogoi**, A. Kumar, S. Subramanian (2016). Screening of nutritionally important gut bacteria from the Lepidopteran insects through qualitative enzyme assays. ***Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci.*** (DOI 10.1007/s40011-016-0762-7). **[Impact factor: 0.40]**
- B. Sailaja, P. Sudhakara Rao, **D.K. Gogoi**, Rajesh Kumar, K.M. Vijaya Kumari, S. Vidyunmala and R.K. Mishra (2019). Development of Muga silkworm, Antheraea assamensis (Helfer) egg preservation schedule based on embryonic growth studies. ***Sericologia.*** 59(2), pp. 94-100.
- **D.K Gogoi**, S.P. Sandilya, P.M. Bhuyan, P. Dutta, K. Neog, L.S.K. Singh and T.C. Bora (2016). Effect of submerged culture parameters on growth and antimicrobial activity of *Paenibacillus lautus* RRT AY-2, against some pathogens of *Antheraea assamensis* Helfer. ***Sericologia.*** 56(2), pp. 103-116.
- D. Chowdhury, B.K. Konwar, P. Baruah and **D.K. Gogoi** (2015). Chemical composition of the essential oil of Karphul (*Etlingera linguiformis*). ***Journal of Science and Environment Today.*** Vol. 1, pp. 1-5.
- S.P. Sandilya, A. Gogoi, P.M. Bhuyan and **D.K. Gogoi*** (2014). Phosphatase Activity of Microbial Populations in Different Milk Samples in Relation to Protein and Carbohydrate Content. ***Notulae Scientia Biologica***. Vol. 6(4), pp. 465-469.
- P.M. Bhuyan, S.P. Sandilya, **D.K. Gogoi**, K. Neog & S. Subramanian (2014). Isolation and characterization gut-bacteria of muga silkworm (*Antheraea assamensis* Helfer) collected from different localities of Assam. ***Sericologia.*** Vol. 54 (1): 28-35.
- S. P. Sandilya**,** P. M. Bhuyan and **D. K. Gogoi*** (2013) Seasonal variation of soil biological properties in Castor (*Ricinus communis* L.) cultivated soils: A possible index towards soil fertility. ***Research Journal of Agriculture and Forestry Sciences***. Vol. 1(9), pp. 1-7.

- P. M. Bhuyan, S. P. Sandilya and **D. K. Gogoi*** (2013) Phyllosphere Microflora of Muga Silkworm Host plant *Persea bombycina* Kost (Som) Leaves in Jorhat District of Assam, India. ***International Research Journal of Biological Sciences.*** Vol. 2(12), pp. 60-65.
- K. Neog, G.U. Ahmed, B.G. Unni, P. Dutta, **D.K. Gogoi** and K. Giridhar (2013) Variation in biochemical composition of different host plants of Muga silkworm, *Antheraea assamensis* Helfer. ***Sericologia***. Vol. 53(3), pp. 207-216.
- R. Saikia , **D.K. Gogoi**, S. Mazumder, A. Yadav, R.K. Sarma, T.C. Bora, B.K. Gogoi (2011). *Brevibacillus laterosporus* strain BPM3, a potential biocontrol agent isolated from a natural hot water spring of Assam, India. ***Microbiological Research.*** (Elsevier, UK). Vol. 166: 216-225. **[Impact factor: 2.561]**
- **D K Gogoi**, H P Deka Boruah, T C Bora & R Saikia (2008). Optimization of parameters for improved secondary metabolite production by a novel endophytic fungus *Fusarium* sp. DF2 isolated from *Taxus wallichiana* of North East India. ***World J of Microbiology & Biotechnology***. (Springer, Netherland) Vol. 24: 79-87. **[Impact factor: 1.98]**
- **D K Gogoi*,** S Mazumder, R Saikia and TC Bora (2008). Impact of submerged culture conditions on growth and bioactive metabolite produced by endophyte *Hypocrea* sp. NSF-08 isolated from *Dillenia indica*. Linn of North-East India. ***Journal de Mycology Medicine***. (Elsevier, Franch). Vol.18: 1-9. **[Impact factor: 2.851]**
- R Saikia, R Kumar, D K Arora, **D K Gogoi** & P Azad (2006); *Pseudomonas aeruginosa* inducing rice resistance against *Rhizoctonia solani*: production of salicylic and peroxidases. ***Folia Microbiol***. (Biomed, Czech Republic). 51 (5), 375-380. **[Impact factor: 1.448]**
- R Saikia, M Yadav, S Varghesh, B P Singh, **D K Gogoi**, R Kumar & D K Arora (2006); Role of Riboflavin in induced resistance against *Fusarium* wilt and charcoal rot disease of chickpea. ***The Plant Pathology Journal*** (Korea). Vol. 22 (4); pp 339-347. **[Impact factor: 1.02]**
- R Saikia, M Yadav, B P Singh, **D K Gogoi**, T Singh & D K Arora (2006); Induction of resistance in chickpea by cell wall protein of *Fusarium oxysporum* f. sp *Ciceri* and *Macrophomina phaseolina*. ***Current Science.*** (India) Vol. 91 (11), pp 1543-1546. **[Impact factor: 0.756]**
- H Deka, **D K Gogoi**, H K Gogoi & P J Handique (2006). *In vitro* evaluation of antimicrobial properties of two species of genus *Gomphostemma.* ***Journal of Cell & Tissue Research.*** (Society for Science & Environment) Vol. 6 (2) pp. 787-791.
- J. Baruwa, B. Kalita, N.C. Barua, J.C. Bora, S. Mazumder, D.Thakur, **D.K. Gogoi** and T.C. Bora (2004). "Synthesis, absolute stereochemistry and molecular design of the new antibacterial and antifungal antibiotic produced by *Streptomyces* sp.201" ***Bioorganic & Medicinal Chemistry Letters.*** (Elsevier, UK) **14**: 3571-3574. **[Impact factor: 2.448]**
- A. Kar, **D.K. Gogoi**, B. Rabha & H.K. Gogoi (2004). *In vitro* evaluation of antimicrobial property of the stem with leaf extract of *Curranga amara* against human pathogenic microorganisms. ***Asian J. of Mlcrobiol. Biotech. Env. Sc***. (Global Science, India) Vol. **7** (4): 759-762.

PhD Student:

PhD awarded : One (Dr. S. P. Sandilya)
PhD pursuing : Two

Book/booklets compiled:

"Vision Document" of CMER&TI, Lahdoigarh

Technology developed:

- INM package for sustainable castor cultivation.
- Probiotic (beneficial gut-bacterial) consortium for Muga silkworm.

Nucleotide sequences submitted:

Submitted 96 nos. of 16S rDNA sequences of Muga silkworm gut-bacteria and Castor rhizobacteria to NCBI