

CURRICULUM VITAE

NAME : Lalit Mohan Goswami, Ph. D

Present Position: Assistant Professor (Stage III) and Head, Department of Zoology, Nowgong College (Autonomous)

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Education:

- 2003** B.Sc. First Class with **Distinction**, (Zoology Honours), Gauhati University, Assam.
- 2005** M.Sc. First Class (Zoology, Specialization in **Cell and Molecular Biology**), Gauhati University, Assam.
- 2012** **Ph.D. Zoology North Eastern Hill University, Shillong, Meghalaya:** “Studies on the status and molecular discrimination of Crustacea-borne zoonoses of trematode origin, with special reference to Paragonimiasis in suspected foci of Northeast India.” Supervisors: Prof. (Mrs.) Veena Tandon, Dept. of Zoology and Prof. Anupam Chatterjee, Dept. of Biotechnology and Bioinformatics.

Professional experience:

Research: Fourteen years of research experience in the field of Molecular Biology and Helminth Parasitology.

Teaching: Fourteen years of undergraduate, nine years of senior secondary and eight years of Postgraduate teaching.

Research project:

1. Status of Crustacea-borne parasitic infections in Nagaon and Morigaon districts of Assam, PI, funded by UGC, 4.5 lakhs. Completed. 2015-17
2. Wild Silk Moths: Genetic diversity based on Morpho-molecular markers in North-Eastern Region of India, as **Co PI**, funded by DST, 27 lakhs. Completed on 21.01.2016
3. Setting up and maintenance of aquariums in prominent places of Nowgong College, Nagaon, through NFDB assistance, 50 thousands. Completed. 2015

4. Screening for helminthes infection in locally available fish population in Nagaon District of Assam, India, DBT, 8.00 lakhs. Completed. 2018-19

Number of PG Dissertation guided so far: Eighteen

Number of Ph.D. Students enrolled: Four

Other Qualifications/ Awards:

- Nowgong College (Autonomous) Ph.D. Guideship (Zoology)
- Qualified State Level Eligibility Test for Lectureship (SLET) in Life Sciences for North Eastern States -2008
- Awarded Senior Research Fellowship (SRF) under subject code GENBIO-13 of CSIR w.e.f. 1st April 2009.
- Received **Prof. M.B. Mirza Gold Medal** for the best publications of research work done in India at 21th National Congress of Parasitology from 13-15th November, 2009.
- Awarded CSIR foreign Travel Grant to attend 8th International Conference on Bioinformatics, **Singapore**, 7-11th September 2009.

Publications:

1. **L. M. Goswami**, P. K. Prasad, V. Tandon and A. Chatterjee (2013) Crustacean-borne infections with microphallid metacercariae (Digenea: Microphallidae) from focal areas in Meghalaya, Northeast India. **Journal of Helminthology** 87 (2): 222-229.
2. **L. M. Goswami**, P. K. Prasad, V. Tandon and A. Chatterjee (2009) Molecular characterization of *Gastrodiscoides hominis* (Platyhelminthes: Trematoda: Digenea) inferred from ITS rDNA sequence analysis, **Parasitology Research**. 104:1354-1358.
3. P. K. Prasad, V. Tandon, D. K. Biswal, **L. M. Goswami** and A. Chatterjee (2008) Molecular identification of the Indian liver fluke, *Fasciola* (Trematoda: Fasciolidae) based on the ribosomal internal transcribed spacer regions. **Parasitology Research** 103:1247-1255.
4. P. K. Prasad, V. Tandon, D. K. Biswal, **L. M. Goswami** and A. Chatterjee (2009) Use of sequence motifs as barcodes and secondary structures of internal transcribed spacer 2 (ITS2, rDNA) for identification of the Indian liver fluke, *Fasciola* (Trematoda: Fasciolidae). **Bioinformation** 3: 314-320.
5. P. K. Prasad, V. Tandon, D. K. Biswal, **L. M. Goswami** and A. Chatterjee (2009) Phylogenetic reconstruction using secondary structures and sequence motifs of ITS2 rDNA of *Paragonimus Westermani* (Kerbert, 1878) Braun, 1899 (Digenea:

- paragonimidae) and related species. **BMC Genomics**. doi:10.1186/1471-2164-10-S3-S25
6. P. K. Prasad, **L. M. Goswami**, V. Tandon, and A. Chatterjee (2011) PCR-based molecular characterization and insilico analysis of food-borne trematode parasites *Paragonimus westermani*, *Fasciolopsis buski* and *Fasciola gigantica* from northeast India using ITS2 rDNA. **Bioinformatics** 6(2): 64-68.
 7. L. M. Goswami, V. Tandon, D. K. Biswal, P. K. Prasad and A. Chatterjee (2012) Molecular Characterization of Intestinal Fluke, *Artyfechinostomum sufrartyfex* (Trematoda: Echinostomatidae) using a combinatorial approach of molecular morphometrics and CBC Analysis in the internal transcribed spacer regions. **Delve**, 01(01): 1-19, ISSN, 2278-7402.
 8. B. C. Chutia, C. Nath, **L. M. Goswami**, B. Goswami, L. Gogoi and K. Neog. Life History of *Antheraea frithi* Moore, (Lepidoptera: Saturniidae) on *Terminalia arjuna* (Roxb.) W&A Syn. in North Eastern Region of India (2016). Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci. DOI 10.1007/s40011-014-0411-y
 9. C. Nath, B. C. Chutia, F. Yasmin, **L. M. Goswami** and L. N. Kakati (2016) Biodiversity exploration of Wild silkmoths host plants in Nagaland, NE India. *Sericologia*, 56(3): 191-200, ISSN 0250-3980.
 10. C. Nath, B. C. Chutia, **L. M. Goswami** and K. Neog (2017). Genetic variation within six different colour strains of *Samia ricini* Donovan from North East India. *NeBIO*, 8(1): 40-44.
 11. Bhuban Ch. Chutia, Chidananda Nath, **Lalit Mohan Goswami**, Sarat Borkataki Nirangkush Borah and Chandan Tamuly 2021. Morphophysical and Spectroscopic Characteristics of Wild Silkworm Cocoons in North-East India, ***Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*** <https://doi.org/10.1007/s40011-021-01329-9>
 12. Priyambada Chutia, Manas Das, Nirmalendu Saha, Lalit Mohan Goswami (2022)" Differential expression of aquaporin genes and the influence of environmental hypertonicity on their expression in juveniles of air-breathing stinging catfish (*Heteropneustes fossilis*)" *Comparative Biochemistry and Physiology, Part A*, 274/111314/ <https://doi.org/10.1016/j.cbpa.2022.111314>
 13. Bhuban Chandra Chutia, Manash Pratim Borah, Ujjal Bordoloi, **Lalit Mohan Goswami** ✉, Saswati Bharadwaj, Meghna Borthakur, Priyanki Sharma, Jyotismita Das, Sarat Borkataki (2024) Qualitative detection of formaldehyde in challani fish obtained from selected fish markets of Nagaon, Assam, India. *Discover Environment* (2024) 2:26 | <https://doi.org/10.1007/s44274-024-00056-y>
 14. Molecular characterization of *Microphallus* sp. (Digenea: Microphallidae) parasitic in freshwater crabs of Manipur, India, Voleentina Devi Athokpam, **Lalit Mohan**

Goswami, Veena Tandon (2024) Journal of Parasitic Diseases, <https://doi.org/10.1007/s12639-024-01694-y>

15. Jonmani Kalita, Lalit Mohan Goswami, Manisha Choudhury (2024) Parasitic infections from pork consumption in northeast India: A growing concern for public health. Down to earth, <https://www.downtoearth.org.in/food/parasitic-infections-from-pork-consumption-in-northeast-india-a-growing-concern-for-public-health>

16. Detection of Heavy Metal Accumulation and Potential Health Risk Assessment of Selected Fish Species from Kolong River, Assam, India (2024) Bhabana Das, Manash Pratim Borah, **Lalit Mohan Goswami** and Priyanki Sharma. Toxicology International, 31(4) : 657-667; 2024. DOI: 10.18311/ti/2024/v31i4/36466

17. Sequences submitted to Genbank and accession numbers received: (Total=36)

Helminth Parasite: EF027094, EF027095, EF027096, EF027097, EF027098, EF027099, EF027100, EF027101, EF027102, EF027103, EF027104, EU887293, EU887294, EU887295, FJ966109, FJ966110, FJ966111.

Sericigenus Insect: KU862863, KU705824, KU949602, KU949603, KU949604, KU949605, KU949606, KU949607, KU949608, KU949609, KU949610, KU949611, KU949612, KU949613, KU949733, KU949734, KU949735, KU949736.

Books:

1. Laboratory Manual for Undergraduate Students, Plant Physiology; By C. Bezbaruah, Dr. B. Kalita, Dr. M. Saikia, Dr. B. Sarma, Dr. L.M. Goswami, J.Boruah: ISBN987-81-923253-1-6, Publisher: Kaliabor College
2. Laboratory Manual: A comprehensive practical handbook for life science students Dr. B. Sarma, Dr. L.M. Goswami, By C. Bezbaruah, Dr. B. Kalita, Dr. M. Saikia, J.Boruah; ISBN: 978-81-923253-3-0, Publisher: Kaliabor College

Book Chapters:

1. P. Bordoloi and L. M. Goswami (2019) Spectrum of helminth parasites found in freshwater fishes of Demow Beel, Nagaon, Assam; A Foldscope based study. In B. C. Chutia, F. Yasmin (eds.) Bioresources for sustaining life and livelihoods in Northeast India. Gigabytes Press and Publication, 4-5 October 2018, pp 267-276. ISBN-978-93-85310-48-5.
2. L. M. Goswami (2018) An insight to water borne diseases in Indian context. In J. C. Kalita & P. P. Baruah (eds.) Recent Trends in Life Sciences. UGC-HRDC, Gauhati University, Purbayon Publication, pp 127-133. ISBN-978-93-87263-67-3.

3. L. M. Goswami and B. Sarma (2015) Awareness for food borne trematodiasis in Northeastern part of India. In K. K. Medhi and F. Yasmin (eds) Biological science education, Expansion and issues in Northeast India. Proceedings of National conference “Sustainable Quality of Biological Science Education, Surya Printing works, 9-10 December 2013, pp 175-193. ISBN-978-81-924066-1-9.
4. V. Tandon **L. M. Goswami**, P. K. Prasad, and A. Chatterjee (2009) Molecular characterization of intestinal fluke, *Artyfechinostomum sufrartyfex* (Trematoda: Echinostomatidae) using PCR amplification of rDNA ITS regions. In: V. Tandon, A. K. Yadav and B. Roy (eds) Current Trends in Parasitology, Proceedings of the 20th National Congress of Parasitology. Panima Publishing Corporation, New Delhi, 3-5 November 2008, pp 153-162. ISBN: 81-86535-69-1
5. **L. M. Goswami (2013)** Studies on the status and molecular discrimination of Crustacea-borne zoonoses of trematode origin, with special reference to Paragonimiasis in suspected foci of Northeast India. In: S. Barman and S. Das (eds) Summary of Doctoral Thesis, Vol. V, by Assam College Teachers Association, Destiny Printing Press, Guwahati, pp 468-473, ISBN: 978-81-920635-5-3.
6. Study on Analysis of Menstruation Pattern and Psycho-social Difficulties in Young Women in Assam (2024) **Lalit Mohan Goswami**, Priya Dubey, Barnali Sarma, Bhuvan Chandra Chutia, Tabu Kaishyap Borthakur. In Traditional Knowledge (Exploring Traditional Knowledge: Bridging Past and Future) Edited by Dr. Bhuvan Ch. Chutia, pp 475-487, ISBN : 978-81-19414-94-9

E content development:

Title	Organizing Institution	Activity	Year of development	Duration (in min)
Transport Across Membranes: Active and Passive Transport, Facilitated Transport	Zoological Society of Assam (ZSA)	Voice recorded presentation uploaded in ZSA-Youtube Channel	2020	33.33 Min https://www.youtube.com/watch?v=moPo8fvpu18&t=116s
Study of Human karyotype: Normal and abnormal				32.29 Min https://www.youtube.com/watch?v=a8tIPkeKuGg&t=283s

Technical skill:

- Image analyzing microscopy, Phase contrast microscopy, Scanning and Transmission electron microscopy
- Ultramicrotomy
- Allozyme markers
- Extraction of Nucleic Acids from Microbial and animal sources
- Plasmid isolation, Cloning and Vector construction
- Karyotyping
- Through Fluorescent In-Situ Hybridisation

- Different types of PCR methods: PCR-RFLP, Rep-PCR, ERIC-PCR, BOX-PCR, Multiplex PCR, PCR-SSCP, Inverse PCR, Genome walking PCR, Reverse transcription PCR, RACE-PCR, Real-Time PCR etc.
- Different Bioinformatics applications, Phylogeny analysis, Molecular taxonomy
- DNA barcoding
- DNA sequencing

Invited Speaker

- Celebration of International Science Centre and Science Museum day, “**Monsters inside us**” Invited speaker, 11th November, 2019, In Regional Science Centre (National Council of Science Museums) Ministry of Culture, Govt. of India, Jawaharnagar, Khanapara, Guwahati, Assam
- “**Foldscope: A prospective tool for Parasitological Research,**” Invited speaker, in one day symposium on “Research with Foldscope” 16th March 2019, In Assam Down Town University, Guwahati, Assam.
- “**Spectrum of helminth parasites found in freshwater fishes of Demow Beel, Nagaon, Assam; A Foldscope based study.**” National Seminar on Bioresources for sustaining life and livelihoods in Northeast India. Department of Zoology, Nowgong College, Assam, 4-5th October, 2018
- Mariam Ajmal College of Women, “Foldscope as a learning tool and Bioinformatics for beginners” 2 lectures, 15th October, 2018

Membership:

1. Life Member, Assam Science Society. LM No. 5483
2. Life Member, Zoological Society of Assam
3. Life Member, Assam Sahitya Sabha. LM No. 34246
4. Member, Assam College Teachers’ Association (ACTA)
5. Life Member, Ellora Bigyan Mancha

Recognition/ Administrative

1. Head. Department of Zoology, Nowgong College (A) wef 01/10/2021 till date.
2. Coordinator, Diploma in Forensic Science course, w.e.f. October, 2023
3. Co-PI, Advanced Institutional Level Biotech Hub, Nowgong College
4. President, NEHU Assam Students Association, Shillong.
5. Executive Member, Zoological Society of Assam & Secretary, ZSA Unit, Nowgong College.
6. Secretary, Alumni Association, Department of Zoology, Nowgong College(A)
