

Curriculum vitae



Corrent Position: **Professor**

Subject: **Life Sciences**

Area of specialization: **Environmental Sciences, Biotechnology, Bioinformatics, Molecular Entomology and Phylogeny, Chemical Ecology, Stress Physiology and Toxicology, Phytomedicine.**

(Part – A)

1. Personal Information (In capital letters):			
2.1 Name in Full	Dr. Gurusubramanian Guruswami		
2.2 Date of Birth(DD/MM/YYYY)	27/05/1964	Age (as on 31.03.2016)	51Y 10M 3D
2.3 Gender(Male/Female/Transgender)	Male	Marital Status	Married
2.4 Nationality	Indian	Religion	Hindu
2.5 Category (SC/ST/OBC/General/PWD – HH, OH, VH /Minority). Please attach self-attested copy of the certificate (if applicable)	General		
2.6 Father / Spouse Name	Mr. Guruswami Meenakshi Sundaram		
2.7 Particulars of Physical Disability, if applicable	Not applicable		
2. Address (In capital letters):			
Mailing Address		Permanent Address	
Prof. G.Gurusubramanian Head Department of Zoology Mizoram University Tanhiril, Aizawl-796004 Mizoram PIN CODE : 796004		Prof. G.Gurusubramanian Head Department of Zoology Mizoram University Tanhiril, Aizawl-796004 Mizoram PIN CODE : 796004	
Email ID:	gurus64@yahoo.com , guruumakrupa@gmail.com		
Phone No:	+91 389 2330554	Fax No.	+91 389 2330644
Mobile No:	9862399411		

3. Educational Qualifications(Matriculation onwards)					Subjects	Specialization (if any)
Name of the Exam	University/ Institution/ Board	Year of Passing	Percentage of Marks	Division/ Class/CGPA		
X Std.	Secondary education, Tamil Nadu	April, 1979	74.6%	I Class	Tamil,English, Maths,Science History and Geography	
XII Std.	Higher Secondary education, Tamil	April, 1981	70.1%	I Class	Tamil,English, Physics,Chemistry,	

	Nadu				Botany and Zoology	
B.Sc., Double Major Chemistry & Zoology	Madurai Kamaraj University	July, 1984	Chemistry-70.4% Zoology-80.0%	I Class	Tamil,English, Chemistry and Zoology	Entomology and Poultry
M.Sc.	Madurai Kamaraj University	April, 1986	72.1%	I Class	Zoology	Entomology
Ph.D Interdisciplinary	University of Madras	Nov, 1991	Highly Commended	Highly Commended	Zoology	Entomology
Post M.Sc.Diploma in Field Oriented Entomology	University of Madras	March, 1990	Highly commended	Highly commended	Zoology	Entomology
PG Diploma Tea in culture Microbiology & Entomology	DSIR, New Delhi	Jan, 1998	Highly Commended	Highly Commended	Tea Culture, Microbiology & Entomology	Microbiology & Entomology
Diploma in Computer Applications	WEBEL Informatics, Jalpaiguri, Kolkata	June, 1997	A grade	A grade	PC operation, Microsoft office, DOS, Lotus	
Whether Qualified UGC/CSIR /NET/SLET/SET Exam:	YES	[]	NO	[√]		
Ph.D.(Mark √ in appropriate box)	Degree Awarded	[√]	Thesis Submitted	[]		
If Ph.D. awarded, whether Ph.D. degree is in accordance with UGC regulations, 2009 or not? If yes please submit the proof of evidence.						

4. Title of Thesis/Dissertation (If published, give details on a separate sheet)	
Ph.D.	Bioecological studies of some anthophilous thrips and their pollination potential (Insecta: Thysanoptera)
Post MSc Diploma	Chemical ecology in Thrips – Host plant interactions
PG Diploma	Development and augmentation of an improved technology for the mass production of biopesticides and vermiculture for sustainable productivity in tea.
Master	Impact of BHC and Monocrotophos on the respiratory physiology of <i>Oreochromis mossambicus</i> (Peters).
Papers published – Post MSc Diploma and Ph.D –	
1. Gurusubramanian, G. (1989) Bioecology and Pollination Potential of <i>Haplothrips nigricornis</i> (Bagnall) (Thysanoptera : Phlaeothripidae) Infesting the Flowers of <i>Borreria hispida</i> (K.Sch.) (Rubiaceae). Proceedings of Indian National Science Academy , B55 (3): 139-148. Proof – RP1	
2. Gurusubramanian,G., Ananthakrishnan, T.N., and Gopichandran, R. (1992) Influence of Chemical Profiles of Host Plant on Infestation Diversity of <i>Retithrips syriacus</i> . Journal of Biosciences 17 (4): 483-489. Proof – RP3	
3. Gopichandran,R., Gurusubramanian,G., and Ananthakrishnan, T.N. (1992) Influence of Chemical and Physical Factors on the Varietal Preference of <i>Retithrips syriacus</i> (Mayet) (Panchaetothripinae : Thysanoptera) on Different Cultivars of Cotton . Phytophaga , 4: 1-2. Proof – RP4	
4. Gurusubramanian,G., Gopichandran,R., and Ananthakrishnan, T.N. (1993) Biochemical Correlates of Host Specificity of <i>Caliothrips indicus</i> (Bagnall) Relating to Colonization Patterns in a Crop-Weed Ecosystem. Proceedings of Indian National Science Academy , B59 (5): 471-476. Proof – RP5	

5. Gurusubramanian, G., and Ananthakrishnan, T.N. (1993) Biochemical Implications of Host Preference in *Frankliniella schultzei*, a Polyphagous Anthophilous Thrips. ***Phytophaga***, 5 (2): 77-95. **Proof – RP6**

6. Gurusubramanian, G., and Ananthakrishnan, T.N.(1994) The Pollen Vector Potential of Anthophilous Thrips, ***Journal of Advanced Zoology***, 15 (1) : 6-17. **Proof – RP7**

5.1 No. of publications:						
Refereed Journal only	Published	127	Accepted	1	Book Chapters	18
Books (only with ISBN or similar identification mark)			6	Conference Proceedings (full papers only)		41
Patents			4			

5. Academic Distinctions (Award/Scholarship/Rank, etc.)
Humboldt fellowship Biologische Bundesanstalt für Land & Forstwirtschaft, Institut für biologischen Pflanzenschutz, Germany- 1992 – 1994.
Visiting Scientist Exchange Program - Institut für Biologischen Pflanzenschutz, Julius Kühn-Institut (JKI) Bundesforschungsinstitut für Kulturpflanzen, Darmstadt, Germany, November-April 1995-1996, 1996-1997, 1997-1998
Business Excellence Award by International Business Council – 28 th November, 1998.
Visiting Scientist - Tea Research Institute of Sri Lanka, Sri Lanka - March-May 2005
INSA visiting fellow – Three months training on mass production of biocontrol agents, Project Directorate of Biological Control, Bangalore (9 January – 31 March, 2006).
Visiting Scientist - Institute for Chemical Research, Kyoto University, Kyoto, Japan - April- June 2006
DBT Overseas Associateship Award – NER 2012, Natural History Museum, London [D.O. No. BT/20/NE/2011 dt 13.01.2012]

7. Membership/Fellowship of learned/accredited bodies (Give details)
FISEC - Received Fellowship from International Society of Ecological Communication, India.
Life Member : Indian Science Congress Association

8. Present Position:							
Designation	University/Institution	From Date	Basic Pay(BP)	Pay Scale (PS)/Pay Band (PB)(Rs.)	Gross Pay/ Total Salary P.M.(Rs.)	Next Increment Date	Nature of duties
Professor and Head	Mizoram University	21-03-2013 to till date	Rs. 56500/-	37400-67000, GP:10000	133160/-	July 2016	Teaching, research and administrative works

9.Experience (Enclose additional sheet, if required, in the same format):

Post Held, Basic Pay&Pay band with Grade Pay/ Academic Grade Pay	University/ Institution	Period		No. of years/ months	Nature of work	Reason for Leaving
		From	To			
Professor and Head Rs. 56500/- 37400-67000, GP:10000	Mizoram university	21-03-2013	31-10-2015	2 Y 7 M	Administration, infrastructure development, Teaching and Research for M.Sc., M.Phil. & PhD students.	
Associate Professor , 47930, 15600-39100, AGP 8000.	Mizoram university	15Mar 2010	20 March 2013	3 Y	Administration, infrastructure development, Teaching and Research for M.Sc., M.Phil. & PhD students.	Promotion
Reader , 47930, 15600-39100, AGP 8000,	Mizoram university	15Mar 2007	14 Mar 2010	3 Y	Administration, infrastructure development, Teaching and Research for M.Sc., M.Phil. & PhD students.	Promotion
Scientist & Head Department of Entomology & Plant Protection Division, 15100, 14200 – 420 - 18500	Tocklai Experimental Station, Tea Research Association, Jorhat, Assam	1 Nov 2003	14 Mar 2007	4 Y 2 M	Administration, conducting classes for post MSc diploma students, management of research projects on IPM, biopesticides, insecticide resistance and bioorganic farming, pesticide testing & certification, pesticide residue analysis and remedial measures to tea estates.	Job betterment
Senior Lecturer & Head , Department of Microbiology & Biotechnology, 12000, 12000 – 4560 – 900- 20000	K.S. Rangasamy College of Arts & Science, Tiruchengode, Tamilnadu.	01 June 1999	31 Oct 2003	4 Y 5 M	Administration, infrastructure development, Teaching and Research for B.Sc., M.Sc., M.Phil. & PhD Microbiology & Biotechnology students.	Job betterment
Senior Lecturer & Head , Dept of Microbiology, 10000, 8000 – 4560- 1000 – 15000	Kongu College of Arts & Science, Vennaimalai, Karur 639006 Tamilnadu.	01July 1998	30 May 1999	11 M	Administration, infrastructure development, Teaching for B.Sc., Microbiology students and research.	Job betterment
Senior Research Officer , R & D Centre, Division of Biotechnology, 22,250, 19250-3000- 22250.	Goodricke Group Ltd., Kolkata, W.B.	13Nov 1994	30 June 1998	4 Y 6 M	Acted as a Manager (R&D) and Head and looked after the international affairs of the tea estates in Kenya, Germany, Zambia and India in relation to bio-organic farming with respect to control of tea pests, degradation of wastes and soil enrichment in tea ecosystems.	Job betterment

PDF, Humboldt Fellow, 1200 Dutsch Mark	Biologische Bundesanstalt fur land & Forstwirtschaft, Institut fur biologischen pflanzenschutz, Germany	18 June 1992	12 Nov 1994	2 Y 5 M	Evaluation of biopesticides, azadirachtin and their products against different insect pests and their natural enemies.	Job betterment
PDF-RA, CSIR & Colgate Palmolive US Project, Rs. 3800/- (consolidated)	Entomology Research Institute, Loyola College, Chennai – 33.	01 April 1991	10 June 1992	1 Y 2 M	Taking classes and conducting practicals for M.Sc., and M.Phil students. CSIR Project: Impact of Non-host Plant Volatiles on the Growth, Development and Reproductive Potential of some Lepidopterous and Hemipterous Insects of Economic Importance. Colgate Palmolive US Project: Repellency studies of MNDA/DEET on some oriental vectors, household and stored products insects.	Job betterment

9.1. Total Experience (excluding M.Phil. / Ph.D. Research Degree period)	Teaching	UG	5 Y 4M	PG	13 Y 11 M	Mphil /Ph.D.	13 Y 11 M
	Research (Postdoc)	23 Y 10 M – Total Research Experience [PDF- 3 Y 7 M, Scientist – 8 Y 8 M]					

10. Research Guidance (enclose proof of evidence)	Guide / Co-Guide	Enrolled	Submitted	Awarded
M.Phil. Degree	Supervisor	1	-	6
	Joint supervisor	-	-	2
Ph.D. Degree	Supervisor	6	2	6
	Joint supervisor	3	1	3

11. **Research Projects Undertaken** (other than that for research degree)

Title of Project	Date of Commencement	Date of completion	Emoluments Drawn	Under whose Auspices
Impact of biofertilizer (SPIC Cytozyme) on plant growth and oil content in seeds of ground nut, sun flower, Sesamum, and Cotton and their impact on pest species.	01 Oct 1986	31 March 1989	Rs. 1500/-	JRF , SPIC Cytozyme Research Project, Entomology Research Institute, Loyola College, Chennai – 33.
Survey and evaluation of various potential predators and parasites from monoculture and polyculture forest litter habitats and their uses in pest suppression.	01 April 1989	31 Mar 1990	Rs.2700/-	SRF , DoEn Research project, Entomology Research Institute, Loyola College, Chennai – 33.
Insect mass rearing technology using synthetic and semi-synthetic diet,	01 April 1990	31 Mar 1991	Rs. 2700/-	SRF , DBT Research project, Entomology

Host-plant resistance studies, characterization and quantification of allelochemicals, tritrophic interactions and plant phenolic metabolic enzymes of plant origin against herbivorous of economic importance.				Research Institute, Loyola College, Chennai – 33.
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12. Experience in Other activities like:

University Administration – Proof UA1

Contribution to corporate life in MZU university through meetings, subject related events:

- Head, Department of Zoology, MZU
- Dean in-charge – School of Life Sciences, MZU
- Chairman BOS in Zoology and BOS member in Botany, Biotechnology.
- School Board member in Zoology, Botany, Biotechnology, Home Science, Optometry, MLT
- Subject expert in college affiliation inspection team and Screening cum Evaluation committee
- Member – MZU Annual Journal , State Biotech Hub ,Application Screening committee
- Institutional Governance responsibilities
- HoD – Incharge Biotechnology, MZU
- Chairman & Member – Dept. Purchase Committee
- Chairman & Member – Interview Selection committee
- Chairman & Member - admission committee of MSc and PhD programmes
- Chairman & Member – Animal ethics committee, Departmental Research Committee,
- Member – MZU Development of Biodiversity Research Centre
- Member – Academic Council, University Court
- Member – Editorial Board – Two and a Bud, Science and Technology
- Member – Design of Curriculum – PG Microbiology and Biotechnology and M.Phil and Ph.D – Periyar University PG and UG - Zoology – MZU, Mizoram.
- Member of Indian Science Congress, Pesticide Science Society, Plantation Crop Society, Indian Entomological Society, Indian Agricultural crop and Research, Entomological Research, Green Farming, Ecological Communication Society
- Established the Central instrumentation facility, Animal house and cell line facilities at the K.S.R. College of Arts and Science, Tiruchencode and State Biotech Hub, MZU.
- Established a Centre for Biological Sciences for Research and Development at the K.S.R. College of Arts and Science, Tiruchencode.
- Acted as a Department ISO and NAAC co-ordinator at the K.S.R. College of Arts and Science, Tiruchencode.
- Acted as a Manager (R&D) and Head in a) the Biotechnology Division, R&D Centre, Goodricke Group Ltd., Kolkata and looked after the international affairs of the tea estates in Kenya, Germany, Zambia and India in relation to plant protection b) in the Department of Microbiology and Biotechnology at the K.S.R. College of Arts and Science, Tiruchencode c) Head, Department of Entomology and Plant Protection Division, Tea Research Association, Tocklai Experimental Station, Jorhat, Assam.
- Member Board of undergraduate and Postgraduate studies, School Board, MZU and other universities.
- Organizing Workshops, short term course, Guest lectures, Seminars, Symposia, and Awareness Campaign .
- Counseling students for their career in academic and non-academic activities.
- Acting as an Examiner (Internal & External) both in Practical and Theory papers.
- Delivering Guest Lectures in other reputed Universities and Research institutions.
- Acted as a Department ISO and NAAC co-ordinator at the K.S.R. College of Arts and Science, Tiruchencode and currently acting as a departmental NAAC coordinator.

Extra-Curricular activities of students

- Specially trained in **Student Personnel Services and Career Counselling** (student's 7rganize, student's services, psychological tests and inventories & career organized), **Design and Delivery Systems for Biological Sciences Faculty** (Instructional Planning, Instructional methods & Communication, Motivation and Communication & Evaluation of students) and **Guidance and Counselling** [Educational Guidance, Career Guidance & Counselling, Personal & Social Guidance, Establishing & managing guidance and organized centre] under quality improvement programme by Technical Teachers's Training Institute, Ministry of human Resource Development, Government of India, Chennai .
- Organised a Career Guidance workshop cum exhibition about higher studies in foreign universities for school and college students.
- Bioinformatics and Biotechnology hands on practical training to class IX, X, XI and XII school students of Mizoram under the aegis of BIF and State Biotech Hub, DBT, New Delhi.
- To cultivate scientific temper among students through scientific activities via PG students club and Research Scholars' Association.
- Awareness campaigns to human diseases- Cancer and Life style disorders.

Residential life of students

- Field studies and sample collection (Saturday/holidays) – Collection of animal specimens & periodical survey in and around Mizoram.
- To Arrange/placement for training programmes and research fellowships at various research institutions/Universities.
- Assist the students to publish research papers in scientific journals.
- Motivate the students in participation of seminars, workshops and conferences.
- Assist in student's research program in relation to design of study, hypothesis writing, synopsis preparation and project proposals writing.
- Celebration of important International and National events - Biodiversity Week, Environment Day, Life style disorders week etc., at MZU by State Biodiversity Board, Environment and Forest Department in collaboration with the School of Life Sciences and Earth Sciences & Natural Resources Management, MZU.

If any other

EXPERIENCE OF INDUSTRY/NGOS OR PROFESSIONAL FIELD WHICH SHOULD INCLUDE INNOVATIONS AND/OR RESEARCH DEVELOPMENT:

- The concept of organic farming was introduced and implemented successively at grass root level in tea plantations of North East India with the help of international collaboration.
- Setting up of Biofertilizers and Biopesticides commercial plant at Danguajhar, West Bengal with the help of DSIR, New Delhi and FRI, Germany in association with Goodricke Group Limited, Kolkata.
- IPM Package was established in Tea industry and recommended to Tea Advisory Council for successful implementation at tea estates.
- Insecticide resistance incidence was identified in tea pests and remedial measures were established by extensive field studies (Insecticide resistance management).
- Compatibility of insecticides with herbicides, fertilizers and enhancers was studied and recommended the results for better management of pests and delaying insecticide resistant.
- Insecticide resistance mechanisms were studied at molecular level in collaboration with Forest Research Institute, Germany.

- Having deciphered the regulation and expression of the major genes for flavour and aroma in Darjeeling tea, we can implement the knowledge in further processing and exploiting the pathway mechanisms for new nutraceuticals and for producing a unique type of quality in tea.

DETAILS OF SIGNIFICANT CONTRIBUTION TO KNOWLEDGE :

- DNA barcoding method was standardized and established a consortium approach for DNA barcoding of life. Nucleotide sequences were sequenced and submitted to NCBI: 290 nucleotide sequences of Bt, snakes and insects-butterflies, moths, beetles, dragon flies etc.
- Biodiversity and molecular phylogeny of wildsilk moths in Mizoram on mitochondrial gene markers were established.
- Extensive work on natural isolates of *Bacillus thuringiensis* in Mizoram was done in relation to Distribution, Molecular Characterization, and Activity against mosquito vectors and lepidopterous pests. Potent Bt isolates were identified for mosquito management.
- Screening for Insecticidal susceptibility and molecular characterization of *Anopheles species* using RAPD-PCR, DNA barcoding and RT-PCR were done and established a molecular tool for ten *Anopheles* vector species identification using ITS-2 marker.
- Extensive evaluation of *Anopheles* mosquito breeding habitats and the prevalence of Malaria in Mizoram were studied and the findings were forwarded to the Directorate of Health Services, Mizoram for recommendation.

INDUSTRIAL SERVICES

- Consultation service to tea estates regarding pest management, pesticide residue limit and contamination in black and instant tea samples.
- Pesticide Testing against different pests at different seasons and Certification
- Pesticide residue analysis in tea samples and certification.
- Commercial production of biofertilizer and biopesticides production and supply to tea estates of Darjeeling, West Bengal and Assam.
- Biopesticides testing against notorious pests of different economically important crops.
- Cultivation of different species of mushroom from Agrowastes.
- Vermiculture and Vermicompost for soil enrichment.
- Quality Evaluation of different phytopesticides, chemical pesticides and biocides.
- Preparation of Bio –Compost using microbial consortia from different waste products.
- Effluent treatment and Assessment of quality of water.
- Screening of spoilage organisms in different food products.

PATENTS

SN	Title	Indian Patent No. & category	Inventors
1	A Process for preparing a novel Biofertiliser strains of nitrogen fixer and phosphate solubiliser to promote soil health in particular for growth of tea plants.	Patent No. 205846 Indian patent application No. 84/CAL/2000; PG Journal No. 51/2007; Grant Date: 13 Apr 2007; Publication Date: 13 Apr 2007; Date of Filing: 17 Feb 2000; Name of Patentee: Goodricke Group Ltd; PCT International Application No. C12N15/74	Tamuli, A.K. and Gurusubramanian, G.
2	Biodegradation of plant biomass and enrichment thro' microbial consortium	Under Approval	Tamuli, A.K. and Gurusubramanian, G.
3	A Process for preparing a microbial insecticide for the control of sucking and chewing pests of tea	Patent No. 244590 Indian patent application No. 84/CAL/2000; PG Journal No. 51/2010; Grant Date: 13 Dec 2010; Publication Date: 17	Tamuli, A.K. and Gurusubramanian, G.

	plants	Dec 2010; Date of Filing: 17 Feb 2000; Name of Patentee: Goodricke Group Ltd; PCT International Application No. A01N63/00	
4	A Process for preparing a biocide used for black rot disease in tea plant.	Patent No. 208121 Indian patent application No. 0083/CAL/2000; PG Journal No. 28/2007; Grant Date: 13 Jul 2007; Publication Date: 12 Jul 2007; Date of Filing: 17 Feb 2000; Name of Patentee: Goodricke Group Ltd; PCT International Application No. C12N1/16	Tamuli, A.K. and Gurusubramanian, G.
5	Gene expression dynamics in thrips & Jassids infested Darjeeling tea leaves with increase in volatiles which is responsible for enhancing the quality of Darjeeling tea, specially the flavour and aroma of the infusion.	B157, AV2 & Sungmal. Under Process	Hazarika, M., Sudripto Das, Gurusubramanian, G. and Sakata, K.

CONTRIBUTION TO DESIGN OF CURRICULUM – PROOF DC1

- Introduced New areas of discipline: Bioinformatics and Biostatistics, Molecular entomology, Molecular phylogenetics, Laboratory Tools and Techniques for Biologists (Vocational program).

Design of Curriculum	PG Microbiology and Biotechnology and M.Phil and Ph.D – Periyar University PG and UG - Zoology – MZU, Mizoram.
Teaching methods/in Remedial teaching/Students Counseling	Acted as a Student counselor. Established a career guidance information cell for higher studies. Use of audiovisual Aids. Organizing Guest lectures, Seminars, Symposia, & Awareness Campaign. Arranged summer training programmes for students. Arranged students – teacher interaction day. E-post for biological sciences.
Laboratory Experiments	Students were trained in different laboratories for hands on Training and Prepared a laboratory manual.
Evaluation methods	Weekly and terminal tests Conducting subject Quiz Students-Teacher self appraisal Refresher course Audiovisual aids teaching Revision of the PG syllabus Using of soft wares for bioinformatics and biostatistics Standardization of practical work
Preparation of resources Material including books, Reading materials Laboratory manual etc.	Prepared e-notes material for theory and practical papers for PG and research students

Workshops Organized as Organizing secretary/member of organizing committee

Name of seminar/conference/workshop	Institute/place
ICRO – UNESCO – EMBO international training course on Biotechnological tools in plant improvement (2003) Sep. 7-20, 2003	K.S.R. Educational Charitable Trust, Tiruchencode and ICRO/EMBO/UNESCO
34 th Tocklai Conference – Strategies for Quality, 28-30 November, 2005.	Tocklai Experimental Station, Tea Research association, Jorhat, Assam, India.
Training course on Bioinformatics- General Concepts and applications, [26-27 March, 2009]	Bioinformatics infrastructure facility and State Biotech Hub, Dept. of Biotechnology, MZU, Aizawl, Mizoram and Department of Biotechnology, New Delhi
Bioinformatics Current Approaches And Applications [27 Nov. 2009]	
Basics of Bioinformatics – An Over view [29 – 30 March 2010]	
Workshop on Molecular Phylogenetics and Evolution [Nov, 22-24, 2010]	
Workshop on Random Amplified Polymorphic DNA (RAPD) Marker and its Applications [March 20-21, 2011]	
Training course on Bioinformatics- Structure and determination of macromolecules. March 28-29, 2011	
Training course on “An introduction to Bioinformatics”, 12 March, 2011	

13. Competence in Computer Application:

- Having diploma in computer applications.
- Undergone special training programmes in Bioinformatics.
- Published practical manual Students companion Book on bioinformatics.
- Developed bioinformatics tools in collaboration with Biotechnology department - PROT-PROP: A Java-application to predict the sub cellular location of a protein based on physiochemical properties - www.mzu.edu.in/schools/biotechnology.html.
- GC-Graphing: A Java-application to plot GC contents of Intergenic and Intragenic regions of genome - www.mzu.edu.in/schools/biotechnology.html
- Proficient in on-line bioinformatics tools and softwares.
- Homology modelling and molecular modelling.

14. Have undertaken any foreign travel for academic purposes? If yes, give details

Duration & Year	Country visited	Financial support (Personal / Private / University/UGC)	Sponsoring Institution / University / Agency	Purpose of Visit
Two years, June, 1992- November, 1994	Darmstadt, Germany	Humboldt fellowship	Indo-German Research Exchange programme under Industry partnership Biologische Bundesanstalt fur land & Forstwirtschaft, Institut fur biologischen pf lanzenschutz, Germany	Research Scientist Integrated pest management of forest pests by biopesticides and biocontrol agents

Six months November-April 1995,1996, 1997	Darmstadt, Germany	Goodricke Group Ltd., U.K. and Tea Board, India, National Tea Research Foundation, Kolkata and Tea Research Association, Kolkata, India	Institut für Biologischen Pflanzenschutz, Julius Kühn-Institut (JKI) Bundesforschungsinstitu t für Kulturpflanzen, Darmstadt, Germany	Exchange Research Program Integrated Tea pests management through novel methods – Semiochemicals, biocontrol agents, biopesticides and biocides
Three months March- May 2005	Sri Lanka	Tea Research Association, Kolkata, India	Tea Research Institute of Sri Lanka, Sri Lanka	Visiting Scientist program. Termite pest control by microbial biocides
Three months April- June 2006	Kyoto, Japan	Indo-Japan Project under Tea Board & DBT, New Delhi	Institute for Chemical Research, Kyoto University, Kyoto, Japan	Visiting Scientist, The work encompasses the identification of the genes/ transcriptomes responsible for the typical flavour of Darjeeling tea, besides understanding the role of jassids and thrips in particular, in producing the best cup character and quality.
Three months Oct – Dec, 2013	London, UK	DBT Overseas Associateship Award – NER 2012	Natural History Museum, London	Overseas Associateship, Training on Next Generation Sequencing Platforms and their applications in Biological research

15. Name and Complete postal address of three referees(In capital letters):		
Reference 1	Reference 2	Reference 3
Prof.R. Lalthantluanga, Vice Chancellor, Mizoram University, Aizawl-796004 Mizoram.	PROF. R.K. BHOLA, Dean, School of Life Sciences & Head, Department of Zoology Gauhati University, Guwahati- 781014, India.	Prof.Devashish Kar Dean, School of Life Sciences & Department of Life Science, Assam (Central) University, Silchar – 788011, Assam.
Email: Tluanga10@gmail.com	Email: bhola_zoology@yahoo.co.in	Email:devashishkar@yahoo.com
Phone: 0389-2330650/651 (O) 0389-2330384 (R)	Phone: +91-3612700294 (O) +91-361-2670342 (R)	Phone No:
Mobile No: 09436104165	Mobile No: 09435144534	Mobile No:09435070519
Fax: : +91-389-2330834/2330644	Fax: +91-361-2700294	Fax:03842-236706 (PP)

Google scholar	
Citations	700
H index	12
i₁₀ index	16
Impact Factor	54.874
API score	3485
Teaching experience	UG- 5 Y 4 M; PG – 13 Y 11 M; M.Phil & PhD – 13 Y 11 M
Research Experience	24 Y PDF- 3 Y 7 M, Scientist – 8 Y 8 M
Projects: completed on-going	26 4
No. Publications:	
Journals	127 [National- 58; international- 69]
Books	06
Book chapters	18
Conference Proceedings	41

Research Guidance: M.Phil PhD	Completed: 8 Completed: 11 Submitted: 2
Training Courses attended	32
Workshops conducted	26
Papers presented	74
Invited lectures	54
Evaluation of theses	15
Patents	4 Biocompost: Patent No. 205846 Microbial Biocide: Patent No. 244590 Black rot : Patent No. 208121
Awards	Humboldt fellow and visiting scientist Fellow of International Society of Ecological Communication, India Business Excellence Award UGC visiting fellow DBT Overseas Associateship

(Part-B)
Academic Performance Indicators(APIs)

A) CATEGORY- III: RESEARCH AND ACADEMIC CONTRIBUTION

B) Published papers in journals

Sl. No	Title with page nos.	Name of the Journal ISSN/ISBN No Whether peer reviewed? Impact Factor, if any
1	Gurusubramanian, G. (1989) Bioecology and Pollination Potential of <i>Haplothrips nigricornis</i> (Bagnall) (Thysanoptera : Phlaeothripidae) Infesting the Flowers of <i>Borreria hispida</i> (K.Sch.) (Rubiaceae). <i>Proceedings of Indian National Science Academy</i> , B55 (3): 139-148.	Proceedings of the Indian National Science Academy ISSN: 2250-1762
2	Gurusubramanian, G., Babu, A., Venkatesan, S., and Karnan, P. (1991) Improvement of Growth Rate, Adult Emergence and Reproductive Potential of <i>Heliothis armigera</i> (Hubner) (Insecta:Lepidoptera:Noctuidae) : An Evaluation of Natural and Semisynthetic Diets. <i>Phytophaga</i> , 3(2):121-138.	Phytophaga ISSN: 0393-8131 Peer reviewed, Indexed
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B) (ii) Full Papers in conference Proceedings:

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2	Gurusubramanian, G. Tamuli, A.K. and Bezbaruah, B. (1997) Assessment of Plant Growth Promotion and Biocontrol Efficacy of Two PGPR Formulations : Pest Management and Productivity in Tea (<i>Camellia sinensis</i> (L) O. Kuntz), 1997, pp 13-15.	In A. Ogoshi, K. Kobayashi, Y. Homma, F. Kodama, N. Kondo, and S. Akino (ed.) Plant growth-promoting rhizobacteria present status and future prospects ; proceedings of the Fourth International Workshop on Plant Growth-Promoting Rhizobacteria ; Japan-OECD Joint Workshop ; Sapporo, Japan, October 5 - 10, 1997. Organisation for economic co-operation and development, Paris. ISBN 978-92-64-03259-0
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7	Saravanan, E., Gurusubramanian, G. and Rajendran, N.R. (2002) Immunological assessment of infertility by estimation of antisperm antibodies in infertile couples, 2002, pp. 375-382.	
8	Winston Umakanth, Vijayalakshmi, B., Gurusubramanian, G. and Rajendran, N.R. (2002) Primary Monolayer Cell Culture of human Chorion Cells and Its Cytopathic Response to Vaginal Carriage of Group B Streptococcus in Pregnant Women, 2002, pp.10-18.	National level Third Intercollegiate Students Seminar on Current Trends & Future Direction in Life Science, 4th & 5th January 2002. PG & Research

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11	Rahman, A., Sarmah, M., Phukan, A., Roy, S., Sannigrahi, S., Borthakur, M. and Gurusubramanian, G. (2005) Approaches for the management of tea mosquito bug, <i>Helopeltis theivora</i> waterhouse (Miridae : Heteroptera), 2005, pp- 146-161.	34th Tocklai Conference – Strategies for Quality, 28-30 November, 2005, organized by Tocklai Experimental Station, Tea Research association, Jorhat, Assam, India. Assam Printing Works Private Limited, Jorhat, Assam, India. ISSN: 0496-6201
12	Borthakur, M., Sarmah, M., Rahman, A., Phukan, A., and Gurusubramanian, G. (2005) Seasonal population fluctuation of <i>Stethorus gilvifrons</i> , the common predator of red spider mite in tea in Northeast India and effects of some herbal extracts on its survival and feeding potential, 2005, pp- 332-339.	
13	Roy, S., Talukdar, T., Saha, A.B., Banerjee, D.K., Sannigrahi, S. and Gurusubramanian, G. (2005) Species richness and seasonal abundance of spider and ladybird fauna in tea ecosystem of North Bengal, pp-347-351.	
14	Sarmah, M., Rahman, A. and Gurusubramanian, G. (2006) Distribution pattern and population density of <i>Meloidogyne</i> species in nursery tea soils of Assam, Arunachal Pradesh and Nagaland and their management. pp.1-19	Proceedings of the National level Seminar on Current trends in crop disease management for improving productivity, 19-20 January 2006. RRL, Jorhat and Indian Phytopathological Society, New Delhi.
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21	Biological databases – searching and data retrieval, pp. 31-44	Bioinformatics Training Course. 26-27 February 2009. Santanu Banik (Ed.), Published by Department of Biotechnology, Ministry of Science and Technology and Bioinformatics infrastructural facility centre, College of Veterinary Sciences and Animal Husbandry, Central Agricultural University, Aizawl, Mizoram. Linkman Publications, Mizoram., ISBN 81-85129-25-1
22	Gurusubramanian, G. and Tamuli, A.K. (2009) Performance of biorational package approaches for the management of tea pests: A rewarding exercise, pp.107-136.	Recent Trends in Life Science Researches vis-à-vis Natural Resource Management, Sustainable Development and Human Welfare, International Society of Ecological Communication, Hazaribag, Jharkand, India on June 27 – 29, 2009. NOVA publishers, ISBN: 1-5903-3645-3

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29	Zothansangi, Catherine, V., Ruati, L., Issac Laldikbera, Gurusubramanian, G. and Senthilkumar, N. (2011) Butterfly Diversity in Mizoram University Campus, Aizawl, India and Their Global Distributions. <i>Advances in Environmental Chemistry</i> , 11 (3), 249-252.	Proceedings of the International conference on Advances in Environmental Chemistry, November 16-18, 2011, organised by Department of Chemistry, Mizoram University, Aizawl, Mizoram. ISBN: 93-81361-53-3
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32	Esther, L., Gurusubramanian, G. and Senthilkumar, N. (2011) Diversity of Wild Silk Moths in Mizoram, Northeast India. (2011) <i>Advances in Environmental Chemistry</i> , 11 (3), 301-302.	
33	Gurusubramanian, G. and Senthilkumar, N. (2011) Genomic medicine-genomic and personalized medicine, pp-1-4.	National training manual on bioinformatics-An introduction, March 12, 2011. Published by DBT, Ministry of Science and Technology and Bioinformatics Infrastructure Facility (BIF), Department of Biotechnology, MZU, Mizoram. Linkman Publications, Mizoram. ISBN 81-85129-25-1.
34	Ruth Lalfelpuii, Lalmangaihzuoli Ralte, Esther Lalhmingliani, Senthil Kumar, N. and Gurusubramanian G.(2012) Geomorphometric variations in a wild morph of <i>Antheraea assamensis</i> (Lepidoptera: Saturniidae: Saturnii) from Mizoram. pp-104-109. May 3-4, 2012.	Proceedings of the National seminar on Recent Trends in Research and Development in MUGA culture- Ideas and action. Central MUGA and ERI research training institute, Guwahati, S.S. Graphics, Guwahati
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37	Diversity and vertical distributions of Heliconiinae butterflies in Mizoram, 2013, pp.229-235.	
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39	Gurusubramanian, G. and Senthilkumar, N. (2013) Proteins and proteomics – principles and challenges. pp. 4-25.	Proceedings of the National level seminar on Applications of Biology to Human Welfare, Sri Ganesh College of Arts and Science, Salem, 10 January, 2013.
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41	Esther Lalhmingliani, Gurusubramanian, G., Lalremsanga, H. T., Lalrinchhana, C., Lalronunga, S. (2014) Wild silk moths (Lepidoptera: Saturniidae) of Hmuifang community forest, Aizawl Mizoram: Conservation concerns. pp.261-267.	Proceedings of the National level workshop on Issues and Trends of Wildlife Conservation in Northeast India. ISBN 978-81-924321-7-5

B) (iii) Books published as single author or as editor:

Sl.	Title with page nos.	Type of Book/ Authorship (with ISSN/ISBN)
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No		
1	Plant Protection in Tea, (2005) 5 chapters	(Eds.) Dutta, A., Gurusubramanian, G. and Barthakur, B.K. Tocklai Experimental Station, TRA Publications, Assam Printing Works Private Limited, Jorhat, Assam, India. ISSN-0375-3077
2	Diversity and abundance of mosquito in Mizoram, North East India. (2014) pp.1-153. 9 chapters	Vanlalhruaia, K., Gurusubramanian, G. and Senthilkumar, N. Lambert Academic Publishing, Germany ISBN:978-3- 659-54011-0
3	Homology modeling of dipteran specific Cry proteins of <i>Bacillus thuringiensis</i> . (2014) pp.1-67. 10 chapters	Gurusubramanian, G., Vikas Kumar Roy and Lalrempuii. Lambert Academic Publishing, Germany ISBN:978-3- 659-57051-3
4	Practical Microbiology: A Laboratory Manual, (2015) pp. 1-190. 18 chapters	(Eds.) Senthilkumar, B., Zothansanga, Senbagam, D., Senthilkumar, N. and Gurusubramanian, G. Panima publishing corporation, New Delhi. ISBN-81-86535-72-1
5	Bioinformatics - A Student's Companion (2016) pp.1-300. 20 Chapters	Ibrahim, K.S., Gurusubramanian, G., Ravi Prakash Yadav, Zothansanga, SenthilKumar, N., Borah, P., Karutha Pandian, S. Springer India

B) Ongoing and Completed Research Projects and Consultancies:

C) (i&ii) Ongoing Projects/Consultancies:

Sl. No	Title	Funding Agency	Period	Amount (Rs.in Lakhs)
1	PI: Influence of Tuibur on testicular toxicity, steroidogenesis, apoptosis and antioxidant status in mice and testicular cell lines. BT/509/NE/TBP/2013 dt. 11/08/2014	DBT, New Delhi	2014-2017	Rs.78 lakhs
2	Co-PI: Functional characterization of clinically significant mutations in h-BRCA1 gene among the Mizoram population. No. BT/513/NE/TBP/2013 dated 16/04/2014	DBT, New Delhi	2014-2017	Rs.65 lakhs
3	Co-PI: DNA barcoding to study the honey biodiversity in Mizoram BT/423/NE/TBP/2013 dt. 14/08/2014	DBT, New Delhi	2014-2017	Rs.83 lakhs

C) (iii&iv) Completed Projects/ Consultancies:

Sl. No	Title	Agency	Period (with Grant amount (Rs. In lakhs)
1	PI: Assessment of Phytotoxic and Organoleptic Effects Of Neem Oil on Tea.	Goodricke Group Limited, Kolkata and Forest Research Institute, Germany, TU/IV-	June 1992 -November 1994 Rs. 50 lakhs
2	PI: Biodelignification of Spent Leaf of Instant Tea and Pruning Litter by Fungal Associations,	RD/1690/92-94	June 1992 -November 1994 Rs. 63 Lakhs
3	PI: Mass Culture of Mutant <i>Trichoderma viride</i> -	Goodricke Group Limited,	January 1996 -

	Protocol for Enhancement of Production of Antagonist Biocontrol Agent using spent tea waste.	Kolkata and Forest Research Institute, Germany, TU/IV-RD/1874/95-98	December 1998 Rs. 8 Lakhs
4	PI: Effect of Certain Phytopesticides and Microbial Insecticides on the Growth and Development of Sucking and Chewing Pests of Tea, FRI, Germany		January 1995 - Dec 1997 Rs. 75 Lakhs
5	PI: Evaluation of Certain Microbial Insecticides as an Indigenous – An Approach to Termite Management Strategy	ICFRE – World Bank FREE project No.37-2/96-ICFRE (R) dt 10/12/96	July 1997- June 2000 Rs. 12 Lakhs
6	PI: Assessment of poly hexamethylene bioguanide (PHMB) antimicrobial finishes on deodorant fabrics.	S.S.M. Institute of Textile Technology, Salem. Project/DJ/2000 dt 08/11/2000	January 2000 -April 2001 Rs.10000
7	PI: Standardisation of Single Cell Protein Production of Selected <i>Spirulina</i> Strains.	Tamil Nadu State Council for Science and Technology , Chennai. TNSCST/SPS/RP/2000-2001 dt. 30 October, 2000-021-AS021	April 2000 - March 2001 Rs.5000
8	PI: Immunological Assessment of Infertility by Estimation of Antisperm Antibodies in Infertile Couples. 177-MS-06	Tamil nadu State Council for Science and Technology , Chennai. TNSCST/SPS/RP/2001-2002 dt. 11 February, 2002	April 2001 - March 2002 Rs.5000
9	PI: Solid Waste Management- Plastics. 163-ES-17		April 2001 - March 2002 Rs.5000
10	PI: Integrated management of <i>Helopeltis theivora</i> .	Tea Board, Tea Research Association, Kolkata and Forest Research Institute, Germany.	June 2004 – May 2007 RS. 3.5Lakhs
11	PI: Insecticide resistance in tea mosquito bug , <i>H. theivora</i> in N.E. India.	NTRF/TB/81(32)/2004-2007	June 2004 - May 2006 Rs. 131 Lakhs
12	PI: Joint toxicity of insecticides and acaricides against tea mosquito and red spider.		June 2004 – May 2007 Rs. 1.49 Lakhs
13	Integrated management of Red spider mite in tea.	Tea Board, Tea Research Association, Kolkata and Forest Research Institute, Germany.	June 2004 – May 2007 Rs. 2.01 Lakhs
14	PI: Integrated Management of Termite pests of tea.	NTRF/TB/111(12)/2005-2009	June 2004 – May 2007 Rs. 65 Lakhs
15	PI: Evaluation of different classes of pesticides against different pests and sample preparation for residue analysis.		March 2004 – October 2009 Rs. 3.81 Lakhs
16	PI: Biorational management of tea mosquito bug and red spider mite : Phytopesticides approach.		March 2005 – Feb 2009 Rs. 12.08 Lakhs
17	PI: Utilization and implementation of native microbial bioagents for control of termite pests in tea plantations of North East India.	National Tea Research Foundation, Kolkata (DIR/010158/1333 of 28 October 2004)	Oct 2004 – Sept - 2007 Rs. 5.46 Lakhs

18	PI: Susceptibility change in tea mosquito bug in Northeast India.	National Tea Research Foundation, Kolkata (NTRF:17(93)/2005/2387 dated 23 February 2006)	Feb 2006 – Jan - 2007 Rs. 2.29 Lakhs
19	PI: Characterization and enhancement of volatile flavour components and gene expression profiling in darjeeling black tea infested by green fly and thrips and to develop a new brand of black tea.	Tea Board, Kolkata –Kyoto University, Japan, Indo-Japan collaborative project	June 2006 – May 2008 Rs. 25 Lakhs
20	PI: Development and Production of Neem Products as Environment Friendly Pesticides. Production and promotion of neem based pesticides as environment friendly, biodegradable alternatives to POPs pesticides- Development of Phase II UNIDO Project IND/97/958/2004-2007/phaseII/DCP/MCF/New Delhi dt 17 April 2004	Department of chemicals and petrochemicals, Ministry of chemicals & fertilizers, GOI, New Delhi, United Nations Development Programme (UNDP) and United Nations Industrial development Organization (UNIDO).	Apr 2004 – March 2007 Rs. 73.61Lakhs
21	PI: Natural isolates of <i>Bacillus thuringiensis</i> in Mizoram: Distribution, Molecular Characterization, and Activity against Insect Pests. F.No.34-452/2008 (SR) dt 30 December, 2008	UGC Major Research Project, New Delhi.	February 2009 – January 2012 Rs. 7.728 Lakhs
22	Co-PI: Screening for Insecticidal susceptibility and molecular characterization of <i>Anopheles species</i> using RAPD-PCR No.37(1362)/09/EMR-II dt 3/3/09	CSIR, New Delhi	March 2009 – February 2012 Rs. 15 lakhs
23	Co-PI: Evaluation of Anopheles mosquito breeding habitats and the prevalence of Malaria in Mizoram. No.D.12030/1/2003-DHS(M)/21 dt.6 March, 2009	Directorate of Health Services, Govt. of Mizoram	April 2009 – March 2012 Rs. 4 lakhs
24	PI : Biodiversity and molecular phylogeny of wildsilk moths in Mizoram on mitochondrial gene markers (16S rRNA and COI) No.CSB-31/2 (Project)/2010-11-RCS dt. 16/09/2011	Central Silk Board, Bangalore	Oct 2011-Sept 2013 Rs. 22.772 lakhs
25	PI : Determining the border line between Indian and Indochinese subregions through comparative phytogeography of butterflies of North Eastern India. No.BT/24/NE/TBP/2010 dt 14/03/2011	DBT, New Delhi	April 2011 – March 2014 Rs. 44 lakhs
26	Co-PI: Analysis of mitochondrial and nuclear genes from cancer patients of Mizoram and West Bengal No.BT/360/NE/TBP/2012 dt 25/03/2013	DBT, New Delhi	2012-2015 Rs. 40 lakhs

C) (iii&iv) Completed Consultancies:

Consultancies: Tea Research Association Approval of pesticides and certification from Plant Protection Division, Tocklai Experimental Station: 2003 – 2007:

Sl. No.	Title	Funding Agency	Period (with Grant amount (Rs. In lakhs)
1	Ethion 50 EC	Ankar Industries (P) Ltd., Kolkata	2003- 2004
2	Sulphur – Sultaf	Rallis India Ltd., New Delhi	Rs. 35 lakhs

3	Sulphur-Thiovit	Syngenta India Ltd., Mumbai	
4	Oxydemeton methyl	Bayer (India) Ltd., Mumbai	
5	Endosulfan – Thiodan 35 EC	Aventis Crop ScienceLtd., Mumbai	
6	Profenophos-Curacron 50 EC	Syngenta India Ltd., Mumbai	2004-2005 Rs.72 lakhs
7	Cypermethrin-Simper 10EC	Syngenta India Ltd., Mumbai	
8	Deltamethrin-Decis 2.8 EC	Aventis Crop Science Ltd.,Mumbai	
9	Acephate-Asataf 75% SP	Rallis India Ltd., New Delhi	
10	Neem –Pestoneem 0.03%	Amit Biotech, Kolkata	
11	Neem-Nimbicidin	T. Stane & Co, Coimbatore	
12	Cartap Hydrochloride- Caldan 50 SP	Dhanuka Industries Ltd., New Delhi	
13	Fenpropathrin - Meothrin	Sumitomo ChemicalsLtd., Mumbai	
14	Fenazaquin 10% EC – Magister	E.I. DuPont Ltd., Mumbai	
15	Propargite 57 EC Simba	P.I. Industries Ltd., New Delhi	
16	Propargite 57 EC Allmite	EID Parry India Ltd., Chennai	2005-2006 Rs.58 lakhs
17	Diflubenzuron 25 WP Dimilin 25% WP	Northern Minerals Ltd., Mumbai	
18	Brigade 8 SC Bifenthrin 8 % S.C.	FMC India Private LTD, Bangalore	
19	MILBEKNOCK Milbemectin 1%EC	Bayer Crop Science(India) Ltd., Mumbai	
20	Clothianidin 50 WDG (Dantop 50 WDG)	Jardine Distribution, Inc.	
21	Thiamethoxam 25% WG Actara	Syngenta India Ltd., Mumbai	
22	Hexythiazox 5.45% EC (Maiden)	Biostadt India Limited, New DELhi	2006-2007 87 lakhs
23	Hydrocarbon oil	IOCL, Faridabad	
24	Alphamethrin 5 EC Alter	Jardine Distribution, Inc., New Delhi	
25	λ -Cyhalothrin – Kungfu	Syngenta India Ltd., Mumbai	
26	β -cyfluthrin – Cruiser	Syngenta India Ltd., Mumbai	
27	Imidacloprid- Confidor 200 SC	Bayer Crop Science(India) Ltd., Mumbai	
28	Fenpyroximate 5% SC	Rallis India Ltd., New Delhi	

D) Research Guidance:

Title	Number Enrolled	Thesis Submitted	Degree awarded	Supervisor/Jt. Supervisor
M.Phil or equivalent	1	-	6	Supervisor
	-	-	2	Jt. Supervisor
Ph.D or equivalent	6	2	6	Supervisor
	3	1	3	Jt. Supervisor

Degree	University/ Institution	Awarded* & Year	Title of the thesis	Name of the candidate
PhD	North Bengal University	112/PhD/Bot/108 9R/ Sept, 2002	Evaluation of <i>Metarhizium anisopliae</i> (Metsch.) Sorokin and <i>Beauveria bassiana</i> (Bals.) Vuill. As Microbial Insecticides for Management of Termites in agro forest eco-systems. supervisor	Rajeeb Kumar Ghosh
PhD	Periyar University	PU/COE/AR/PhD /332-37/2006	Molecular Characterization, Cytopathology and immunopotential studies on <i>Salmonella enteritidis</i> from retail chicken samples	Maripandi, A.
PhD	Periyar University	PU/COE/C10/Ph D/17178/2008	Study on the emergence and diagnosis of Blue Tongue Virus in Western Tamil Nadu, South India. supervisor	Sekar, P
PhD	North Bengal University	168/PhD/Zoo/128 64R/2009	Evaluation of the levels of insecticide susceptibility of <i>Helopeltis theivora</i> Waterhouse (Heteroptera:Miridae) and development of an efficacious strategy for Management of the pest in Dooars tea plantation of	Somnath Roy

			North Bengal supervisor	
PhD	Mizoram University	2012 MZU/PhD/222 28.11.2008	Isolation and identification of Cry protein producing species of Bacillus and Characterization of their insecticidal properties. Joint supervisor	Zothansanga Ralte
PhD	Mizoram University	2012	Evaluation of insecticidal susceptibility and molecular characterization of Anopheles species of Mizoram using RAPD-PCR. Joint supervisor	Rita Zomuanpuii
PhD	Mizoram University	2012, MZU/PhD/228 28.11.2008	Pesticidal action of certain plant extracts against mosquito vectors (Culicidae: Diptera). supervisor	Lalrotluanga
PhD	Mizoram University	2013, MZU/PhD/336 29.11.2010	Characterization and expression profiles of Glutathione-S-transferase (GSTs) gene in <i>Anopheles</i> mosquito vector complex supervisor	Vanlalhruaia
PhD	Mizoram University	MZU/PhD/375 30.05.2011	Comparative phylogeny of few Nymphalid butterfly species distributed across North East India using mitochondrial and nuclear marker genes. Joint supervisor	Catherine Vanlalruati
PhD	Mizoram University	MZU/PhD/499 10.05.2012	Genetic divergence and phylogenetic relationship of Honey bee population in Mizoram. Joint supervisor	Liansangmawii Chhakchhuak
PhD	Mizoram University	2015 MZU/PhD/332 29.11.2010	Diversity and molecular phylogeny in Heliconiinae butterflies (Nymphalidae: Lepidoptera) in NorthEast India. supervisor	Zothansangi
PhD	Mizoram University	2015MZU /PhD/360 30.05.2011	Biodiversity and molecular phylogeny of wild silk moths in Mizoram based on 16S rRNA and COI gene markers.	Esther Lalhmingliani
PhD thesis enrolled				
PhD	Mizoram University	MZU/PhD/460 29.03.2011	Cytochrome P450 enzyme from insecticide resistant mosquito vectors in Mizoram: Isolation, characterization and modeling using in-silico analysis.	Sang Zuala Sailo
PhD	Mizoram University	MZU/PhD/376 30.05.2011	Characterization and molecular modeling of the cytotoxic protein pierisin from pierid butterflies Joint supervisor	Tejmala Hijam
PhD	Mizoram University	2013, MZU/PhD/598 31.10.2013	Biochemical and molecular analysis of Bombyx mori L. strains associated with their host plants. Joint supervisor	Ruth Lalfelpuii
PhD	Mizoram University	MZU/PhD/597 31.10.2013	Antioxidant potential of few selected medicinal plants of Mizoram and their antiulcer activity in induced albino rats Joint supervisor	H. Lallawmawma
PhD	Mizoram University	MZU/PhD/635 23.05.2014	Mutational analysis of mitochondrial and Glutathione S-transferase genes associated with breast cancer risk among mizo population. Supervisor	Lalhmachhuani
PhD	Mizoram University	MZU/PhD/647 23.05.2014	Influence of tuibur on testicular toxicity, steroidogenesis, apoptosis and antioxidant status in mice. Supervisor	S. Thangrimawii
PhD	Mizoram University	MZU/PhD/697 30.10.2014	Efficacy of L-carnitine supplementation on the Tuibur (Tobacco smoke infused water) induced testicular toxicity in mice. Supervisor	Maibam Sunita Devi
PhD	Mizoram University	MZU/PhD/726 22.05.2015	Role of diosgenin on spermatogenesis and steroidogenesis in Swiss albino mice Supervisor	Khushboo Maurya

PhD	Mizoram University	MZU/PhD/728 22.05.2015	Evaluation of diosgenin on ovarian function in mice Supervisor	Sanasam Sanjeev
M.Phil thesis completed				
M.Phil	Mizoram University	2013, MZU/M.Phil/100 10.05.2012	Analysis of phylogenetic relationship among species of Danainae butterflies (Lepidoptera:Nymphalidae) using nuclear and mitochondrial gene markers. Joint supervisor	Lahlimpuia Pachuau
		2013, MZU/ M.Phil /101 10.05.2012	Molecular phylogenetic analysis of wild silk moth species of Mizoram as revealed by mitochondrial and nuclear gene markers. Joint supervisor	Ruth Lalfelpuii
M.Phil	Periyar University	February, 2003.	Ethanopharmacological Properties of Medicinal Plants Used in Folkloric Medicines against <i>Aeromonas</i> – An Emerging Pathogen	Lakshmi , D.
			Antileptospiral activity of selected medicinal plants by novel biotechnological approaches.	Selvanayaki,K
			Biodegradation of Dyes – Evaluation through Artificial Neural Network	Vasanthi, M.
			Screening of Leptospiral activity among Rice mill workers by RAPD analysis.	Saravanan, S.
	Periyar University	February, 2004.	Rhizosphere microbiology of tea	Veena, K.
Periyar University	February, 2004.	Diversity of <i>Bacillus thuringiensis</i>	Komathi, N.	

E) (i) Training courses, Teaching- Learning- Evaluation, Technology Programme, Faculty Development Programme (not less than one week's duration):

Sl. No	Programme	Duration	Organised by
1	National Workshop on Insect-Plant interactions.	22 January – 7 February, 1990	Department of Science and Technology, New delhi and Entomology Research Institute, Loyola College, Chennai.
2	National Workshop on Biotechnological Approaches to the Biological Control of Insects.	20 – 27 January, 1992	Department of Science and Technology, New delhi and Entomology Research Institute, Loyola College, Chennai.
3	Short Term Training Course on “Plant Tissue Culture”.	October 1-7, 2000	Centre for Biodiversity and Biotechnology, St. Xavier's College, Tirunelveli, Tamilnadu
4	Instructional Design and Delivery Systems” for Biological Sciences Faculty.	20-22, June 2002	Technical Teachers Training Institute, Ministry of human Resource Development, Government of India, Chennai
5	Short Term Training Course on “Student Personnel Services and Career Counseling” for Biological Sciences Faculty.	19-23 August 2002	Technical Teachers Training Institute, Ministry of human Resource Development, Government of India, Chennai
6	ICRO – UNESCO – EMBO international training course on Biotechnological tools in plant improvement (2003)	Sep. 7-20, 2003	K.S.R. Educational Charitable Trust, Tiruchencode and ICRO/EMBO/UNESCO
7	Guidance and Counselling	20-22 October, 2003	Technical Teachers Training Institute,

			Ministry of Human Resource Development, Government of India, Chennai
8	Three months Training programme under INSA visiting fellowship on "Biological control of insect pests" at Project Directorate of Biological Control, Bangalore.	9 January – 31 March, 2006	Indian National Science Academy, New Delhi
9	Work shop On Inferring Biological Relationship: a Bioinformatics approach	November 27 – December 01, 2007	Department of Bioinformatics Centre , NEHU, Shillong, Meghalaya in association with DBT, Ministry of Science and Technology, Delhi
10	UGC Visiting fellow - Taking classes and conducting practicals for Fourth semester PG students in three special papers of entomology – L.Sc.Z.401: Insect morphology, Taxonomy, Physiology and Biochemistry, L.Sc. Z. 402 : Ecology, Molecular biology and Pest management and L.Sc-Z 403 : Economic entomology.	15 May -13 June, 2008	UGC, New Delhi and Department of Life Sciences, Dibrugarh University, Dibrugarh, Assam.
11	National level seminar cum workshop on "Advances in Bioinformatics tools in molecular research".	19-23 January, 2009	AICTE and DBT, KSR college of Technology, Tiruchengode, Tamilnadu.
12	Training course on Bioinformatics – General concepts and applications.	March 26-27, 2009	Bioinformatics infrastructure facility centre, Dept. of Biotechnology, MZU, Aizawl, Mizoram and DBT, New Delhi
13	UGC Visiting fellow - Taking classes and conducting practicals for Fourth semester PG students in three special papers of entomology – L.Sc.Z.401: Insect morphology, Taxonomy, Physiology and Biochemistry, L.Sc. Z. 402 : Ecology, Molecular biology and Pest management and L.Sc-Z 403 : Economic entomology.	20 April -19May, 2009	UGC, New Delhi and Department of Life Sciences, Dibrugarh University, Dibrugarh, Assam.
14	National Workshop on Molecular Biological Techniques	September 7-19, 2009	DBT, New Delhi and Molecular Biology and Genetics Laboratory, Department of Zoology, University of Burdwan, Burdwan, West Bengal
15	Training course on Bioinformatics – Current approaches and applications.	November 27, 2009	Bioinformatics infrastructure facility centre, Dept. of Biotechnology, MZU, Aizawl, Mizoram and DBT, New Delhi
16	Training course on Basics of Bioinformatics – An Overview.	March 29-30, 2010	Bioinformatics infrastructure facility centre, Dept. of Biotechnology, MZU, Aizawl, Mizoram and DBT, New Delhi
17	UGC Visiting fellow - Taking classes and conducting practicals for Fourth semester PG students in three special papers of entomology – Insect Morphology & Insect Ecology (Z-401), Insect Physiology (Z-402) and Economic Entomology and Pest Control	18-27 May, 2010	UGC, New Delhi and Department of Zoology, Guwahati University, Guwahati, Assam.

	(Z-403).		
18	National Workshop on Advances in Biotechnology	November 8-13, 2010)	TERI and DST, New Delhi
19	National Training Programme for Scientists And Technologists on Biodiversity conservation with focus on ecological monitoring.	September 5-9, 2011	Department of Science and Technology, New Delhi and Wildlife Institute of India Campus, Chandrabani, Dehradun, Uttarakhand.
20	International workshop on Geometrics morphometrics	March 20-30, 2012	Ministry of Environment and Forests, GOI and Centre for Environmental Management of Degraded Ecosystems, University of Delhi.
21	One day Orientation Workshop on NAAC Assessment and Accreditation.	11 August, 2012	IQAC, Mizoram University, Aizawl, Mizoram.
22	Workshop on modelling biological systems II	21-25 August, 2012	PAMU, Indian Statistical Institute, Kolkata and Department of Physics, Mizoram University, Aizawl.
23	DBT Overseas Associateship-Training on Next Generation sequencing platforms and their applications	Oct – Dec 2013	Natural History Museum, South Kensington, London, UK.
24	National Workshop on Molecular modeling and Docking analysis	22 and 29 March 2014	DBT Bioinformatics Infrastructural facility, Department of Biotechnology, Mizoram University, Aizawl, Mizoram.
25	National Conference on Advances in Cancer Genomics	30-31 May 2014	Department of Biotechnology, Mizoram University, Aizawl, Mizoram and sponsored by DBT, New Delhi and IIT, Guwahati, Assam
26	National Workshop on Molecular Docking and Virtual Screening	2-4 October 2014	BIF Facility, Department of Biotechnology, Mizoram University, Aizawl, Mizoram and Schrodinger, India.
Total score - Training courses Training courses			

E) (ii) Papers presented in Conferences, Seminars, Workshops, Symposia:

Sl. No	Title of the Paper	Conference/ Seminar (Whether International/ national/state/regional/college or university level	Organised by
1	Impact of BHC and monocrotophos on the respiratory physiology of <i>Oreochromis mossambicus</i> (Peters), pp.34-39.	III Conference on Role of Pesticides in Aquatic Biology, International	Pushpam Poondi College, Thanjavur, Tamilnadu, 12-15, November, 1986.
2	Food utilization in insects	UGC Instructional Seminar on "Insect - Plant Interactions" National	UGC, ERI, Chennai , February, 1986
3	Thrips taxonomy and their agricultural importance	National Seminar on "Biosystematics and their role in Agriculture" National	UGC, ERI, Chennai , February, 1988
4	Reproductive biology of thrips (Thysanoptera)	National Seminar on Reproductive biology of insects National	DST, ERI, Chennai , February, 1988
5	Chemical ecology of thrips	National Symposium on "Insect –	DST, ERI, Chennai ,

		“Plant Interactions : A Chemical Basis National	February, 1989
6	Pollination potential of thrips	National Seminar on “Behavioural Diversity And Adaptive Strategies Of Phytophagous Insects” National	DST, ERI, Chennai , July, 1989
7	Biopesticides and IPM	National Seminar on “Entomological Research In 20th Century :Thrust Areas For The Future National	DST, ERI, Chennai , October, 1990
8	GC analysis of anal exudates of thrips	Seminar on Advancements in the field of Gas chromatography and Mass spectrophotometer National	Blue Star Ltd., and Hewlett-Packard, USA in Chennai on February 1993.
9	Chemical ecology of <i>Probergrothius sanguiolens</i> (Lygaeidae:Heteroptera)	Symposium on Chemical Ecology of Phtophagous Insects- The Changing scenario” National	DBT, ERI, Loyola College, Chennai in September 1993.
10	Tea pests and their management	Third Agriculture Committee Meeting on Tea Management, Jorhat, Assam. National	Goodricke Group Ltd., Kolkata. 15 th Dec 1994, Jorhat, Assam.
11	Tea mosquito bug and their management	32 nd Tocklai Conference on Towards Sustainable Productivity And Quality, National	Tea Research Association, Tocklai Experimental Station, 16-18 December 1994, Jorhat, Assam.
12	Tea sucking pests and their control	Workshop on “Identification And Control Of Tea Pests And Mites” on 29 th January 1996. Regional	Danguajhar Tea Garden, West Bengal, Goodricke Group Ltd., Kolkata
13	Tea and IPM	Agriculture Seminar on “Tea Nursery, Pest And Nutrition Management” on 18 th June 1996, Regional	Leesh River Tea Garden, West Bengal, Goodricke Group Ltd., Kolkata .
14	An Integrated Approach Towards Low Energy Inputs Sustainable Agriculture (LEISA) : A Management Tool in Tea Culture, pp. 45-47.	National Symposium on Tropical crop research and their improvement, September 9-12, 1996,Trichur, Kerala, India. National	International Society of Tropical Crop Research and Development , Trichur.
15	Efficacy of Melia azedarach (Meliaceae) Formulation and Neem Oil for the Control of Sucking Pests of Tea, 1996, pp. 101-107.	V International Neem Conference , 1996, Brisbane , Australia. International	University of Brisbane, Australia
16	Pest Management in Tea by Use of Neem Oil Formulations, 1996, pp. 211-217.	V International Neem Conference , 1996, Brisbane , Australia. International	University of Brisbane, Australia
17	Evaluation of Neem Products Against the Efficiency of Certain Biocontrol Agents and Lignocellulolytic Activators, 1996, pp. 81-87.	V International Neem Conference , 1996, Brisbane , Australia. International	University of Brisbane, Australia

18	a) Utility of Certain Phytopesticides in the Management of Red Slug Caterpillar, <i>Eterusia magnifica</i> Butl. Infesting <i>Camellia sinensis</i> (L), pp. 78-82.	National Symposium on “Integrated pest management for sustainable crop production, December 2-4, 1997 National	IARI, New Delhi.
	b) Exploratory Evaluation of Nuclear Polyhedrosis Virus on Tea for the Control of <i>Eterusia magnifica</i> Butl. in N. E . India.		
19	Tamuli, A.K., Gurusubramanian, G. and Ghosh, R.K. (1998) Phytotoxicity of Neem oil on Tea.	Management Development Program on “Organic farming, Vermiculture and Environment. October 24-25, 1998 National	Darjeeling Tea Research and Management Association, Siliguri, West Bengal and Department of Entomology and Agricultural Zoology, Institute of Agricultural Sciences, Banaras Hindu University.
20	Gurusubramanian, G., Tamuli, A.K. and Ghosh, R.K. (1998) Evaluation of entomopathogenicity of <i>Metarhizium anisopliae</i> and <i>Beauveria bassiana</i> against <i>Helopeltis theivora</i> and <i>Oligonychous coffeae</i> .		
21	Gurusubramanian, G., Tamuli, A.K. and Ghosh, R.K. (1998) Entomopathogenicity of <i>Metarhizium anisopliae</i> (Metsch) Sorokin and <i>Beauveria bassiana</i> (Bals) Vuill. - probit analysis of dosage and time mortality against <i>Odontotermes obesus</i> (Termitidae: Isoptera)		
22	Performance of biorational package approach to tea pest management: a rewarding exercise.	National Symposium on “ Biopesticides and insect pest management”, February 26-27, 1998. National	Entomology Research Institute, Loyola College, Chennai
23	AIDS prevalence in Tamil Nadu	Workshop cum seminar on AIDS, 22 -23 August, 2000 Regional	Rotary Club, Salem, Tamil Nadu
24	DNA markers and its applications	Seminar cum workshop on recent trends in microbial technology and environmental biotechnology, 29-30 Septmber, 2000	Centre for Environmental Studies, Kalieswari College, Sivakasi & FLORA Regional
25	Winston Umakanth , B., Lalitha Srinivasan ,Gurusubramanian, G.,and Rajendran , N.R. (2001) A Diagnostic Study for Proper Chemotherapy of <i>Escherichia coli</i> Infections.	International Symposium on Recent Advances in Biological Sciences , PROBE 2001, October 11-12 ,2001, International	DBT , Ministry of Science and Technology, Govt. of India and KSR Educational and Charitable Trust, Tiruchengode , India
26	Saravanan, E., Krishna, B.M., Gurusubramanian, G., and Rajendran, N.R. (2001) Production of Xanthan Gum by <i>Xanthomonas campestris</i> .		
27	Significance of bacteria and fungi to single cell protein production. Abstract No.9, P.6	Intercollegiate students Seminar on “ Modern Approaches In Life Science “on January 6, 2001. National	FLORA, People of Biology (127/99)
28	Standardization of single cell protein from the production of Spirulina strain		
29	Spoilage organisms in alcoholic beverages. Abstract No.21, P.26		
30	Prospect and retrospect of in vitro mass		

	propagation of medicinal plants. Abstract No.25, P.13.		
31	The importance and prospects of oyster mushroom cultivation in India		
32	Databases and life sciences	International symposium on “Bioinformatics And Genomics” International	Confederation of Indian Industries, Bangalore, Jan 14-17, 2001.
33	RFLP-PCR and its applications in biopesticides production, 2001, p.45.	National Seminar on “Recombinant DNA Technology”, May 15-16, 2001. National	DBT,DST and Department of Family Welfare, GOI, organised by School of Biotechnology , Dr.G.R.D. College of Science, Coimbatore.
34	Biocidal infectivity of <i>Bacillus thuringiensis</i> var. <i>kurstaki</i> and changes in haemodynamics of <i>Euproctis fraterna</i> (Lymantriidae: Lepidoptera).	National Seminar on “Microbial Technology”, June 1-2, 2001. National	Dr.G.R.Damodaran College of Science, Coimbatore and UGC, New Delhi.
35	Oyster mushroom cultivation -a cost effective approach		
36	Standardization and clonal multiplication through in vitro shoot and root proliferation of <i>Acorus calamus</i>		
37	Assessment of polyhexamethylene bioguanide (PHMB) antimicrobial finishes on deodorant fabrics		
38	Primary Monolayer Cell Culture of human Chorion Cells and Its Cytopathic Response to Vaginal Carriage of Group B Streptococcus in Pregnant Women	National level Third Intercollegiate students seminar on Current Trends & Future Direction in Life Science, 4th & 5th January 2002 . National	PG & Research department of Biological sciences, Muthayammal College of Arts & Science, Rasipuram & FLORA
39	Colonization and invasion by group B Streptococci in different cell lines – in vitro study		
40	Immunological assessment of infertility by estimation of antisperm antibodies in infertile couples		
41	In vitro propagation of <i>Piper longum</i> and genetic variation among <i>Piper</i> species		
42	Micropropagation and genetic variation in <i>Gymnema sylvestris</i> (Family: Asclepiadeceae)		
43	Pesticide residues in black tea samples from Northeast India.	Workshop on “Working group on IGG on tea for fixation of MRL by the tea producing countries”, 30 September and 1 October, 2005 International	Tea Board, India and Food and Agriculture Organization (FAO)
44	Ovicidal, Acaricidal and antifeedant activity of crude extracts of <i>Polygonum hydropiper</i> against red spider mite and bunch caterpillar and its effect on <i>Stethorus gilvifrons</i> Mulsant	National symposium on Advances in Indian Entomology: Productivity and Health, October 2-4, 2005. National	Uttar Pradesh Zoological Society, Muzaffarnagar, India.
45	Varietal preference and chemical control strategies for management of <i>Helopeltis theivora</i> Waterhouse.		

46	Distribution pattern and population density of <i>Meloidogyne</i> species in nursery tea soils of Assam, Arunachal Pradesh and Nagaland and their management.	National seminar on current trends in crop disease management for improving productivity, 19-20 January 2006. National	RRL, Jorhat and Indian Phytopathological Society, New Delhi
47	Use of native botanicals for the management of tea pests.	National seminar on Value addition to bioresources of N.E.India, 19- 21 May, 2006. National	Department of Botany and Zoology, Gauhati University, Guwahati, Assam.
48	Agroforestry systems effect on the ecology and management of insect pests and natural enemy populations in tea plantations.	National workshop on “Forestry – Extension”, 14 – 15 July, 2006. National	Rain Forest Research Institute, ICFRE, Jorhat, Assam
49	Improving the abundance and efficiency of biocontrol agents through novel approaches.	Seminar on Recent trends in biological control of insect pests and diseases of forestry importance, 18-19 September 2006. National	Rain Forest Research Institute , ICFRE, Jorhat, Assam and DST, New Delhi
50	Pesticide usage pattern in tea ecosystem, their retrospects and remedies	National symposium on Man and Health, 22 – 23 September 2006 National	Jorhat college, Jorhat and UGC, New Delhi.
51	Relative toxicity of some commonly used insecticides against tea looper caterpillar, <i>Buzura suppressaria</i> guen (Geometridae : Lepidoptera) and its effect on food consumption and utilization”.		
52	Insecticidal resistance to tea mosquito bug, <i>Helopeltis theivora</i> (Miridae:Heteroptera) in NE India.	International Congress of Environmental Research, 28-30 December, 2007	Govt. Gitanjali’s Girls PG College, Bhopal
53	Entomopathogenicity of white muscardine fungus, <i>Beauveria bassiana</i> (Bals.) Vuill. (Deuteromycotina : Hyphomycetes) against <i>Odontotermes obesus</i> (Rambur) (Isoptera : Termitidae)”.	National symposium on Advances in Zoology: Faunal Diversity and Ecophysiology, 13-14 March, 2008 National	Department of Zoology, North Eastern Hill University, Shillong, DSA(UGC-SAP) and CSIR, New Delhi.
54	Research methodology for biologists and evaluation of impact factor journals	ICMR workshop on Research Project and paper writing. Regional April 4 – 5, 2008	Regional Medical Research Centre, NorthEast, Dibrugarh (ICMR) in collaboration with NEIGRIHMS, Shillong.
55	Incidence and management of <i>Scirtothrips dorsalis</i> Hood and <i>Empoasca flavescens</i> Fabr. Sucking pest of tea in North Bengal.	National symposium on IPM Strategies to Combat Emerging Pests in the Current Scenario of Climate Change, 28-30 January, 2009. National	College of Horticulture and Forestry, Central Agricultural University, Pasighat, Arunachal Pradesh.
56	Characterization of natural isolates of <i>Bacillus thuringiensis</i> and <i>B. sphaericus</i> from the soils of Aizawl, Mizoram, India	National Conference on Natural Resources Management during March 24-25, 2009. National	School of Earth Sciences & Natural Resources management, Mizoram University, Aizawl
57	Performance of biorational package	International conference on	Vinobha Bhawe

	approaches for the management of tea pests: A rewarding exercise	recent trends in Life science Researches vis-A-vis Natural Resource Management, Sustainable Development and Human Welfare, 27-29 October, 2009	University, Hazaribag, Jharkhand.
58	Characterization of natural isolates of <i>Bacillus thuringiensis</i> Berliner from different crops rhizospheric soil from Tamil Nadu, India	Second National Conference on “Current Scenario in Microbial Biotechnology” March 10 & 11th, 2010 National	Department of Biotechnology, K.S.Rangasamy College of Technology, Tiruchengode – 637 215, Namakkal Tamil Nadu.
59	Molecular modeling of antiulcerogenic phytochemicals and their medical importance	Training course on Bioinformatics- Structure and determination of macromolecules. March 28-29, 2011 National	Bioinformatics infrastructure facility and State Biotech Hub, Dept. of Biotechnology, Mizoram, Aizawl, Mizoram and Department of Biotechnology, New Delhi
60	Structure and infectivity of HIV and complications of AIDS	Orientation on HIV/AIDS for Mizoram Faculty 12 August, 2011 Regional	SAKSHAM, the Global Fund Round-7, Counselling component, Mizoram University and Mizoram State AIDS Control Society, Mizoram.
61	Proteomics and protein structure prediction National	National training course on Bioinformatics- Protein and their structure prediction. November 23-24, 2011	Dept. of Biotechnology, Mizoram, Aizawl, Mizoram and DBT, New Delhi
62	How the barcode of life can help science, 2011, 11(4):S61	National Seminar on Emerging Trends in Biosciences and Future Prospects, 29th – 30th November, 2011, ISBN 0975-6175 National	Department of Zoology, Pachhunga University College, Aizawl, Mizoram and UGC, Mizoram, DST, New Delhi
63	Diversity and habitat characteristics of mosquitoes in Mizoram, 2011, 11(4):S74.		
64	Insecticidal properties of <i>Diospyros variegata</i> (Ebenaceae) extracts against <i>Aedes albopictus</i> , <i>Anopheles barbirostris</i> and <i>Culex quinquefasciatus</i> (Diptera: Culicidae), 2011, 11(4): S101		
65	Phylogenetic relationships between nonmulberry and mulberry silk moths based on mitochondrial DNA sequences, 2011, 11(2011, 4):S105.		
66	Molecular modeling and drug design	National Workshop on Bioinformatics and molecular modeling in drug design. January 18-20, 2012 National	Dr.B.R. Ambedkar Center for Biomedical Research, University of Delhi, Delhi.

67	Habitats and species composition of mosquitoes in Mizoram, India	Environment, Biodiversity, Veda and Traditional Systems, 10th – 12th April, 2012 National	Department of Zoology, MZU, MANU – International Council for Man and Nature, Asia Chapter, and Action for Sustainable, Efficacious Development and Awareness (ASEA), Rishikesh, Uttarakhand
68	DNA barcoding of <i>Danaus chrysipus</i> and <i>Tirumala septentrionis</i> (Nymphalidae: Danainae) and Comparative evolutionary analysis of butterfly species using cytochrome oxidase I		
69	Homology modeling of dipteran specific Cry proteins.		
70	Morphometric analysis and comparison of mt genomes of wild silk moths.		
71	Influence of botanicals on the growth, development and economic parameters of mulberry silkworm. EBVT-PP-20.		
72	Morphological and molecular studies of Heliconiinae butterflies in Mizoram through RAPD-PCR techniques. EBVT-PP-21	Environment, Biodiversity, Veda and Traditional Systems, 10th – 12th April, 2012 National	Department of Zoology, MZU, MANU – International Council for Man and Nature, Asia Chapter, and Action for Sustainable, Efficacious Development and Awareness (ASEA), Rishikesh, Uttarakhand
73	Evolutionary pattern in the mitochondrial cytochrome oxidase I gene in butterflies.	National Workshop on Molecular Phylogenetics and Evolution 26-28 November, 2012 National	DBT, New Delhi & DBT-BIF Centre, Department of Biotechnology, Mizoram University, Aizawl, Mizoram
74	Molecular modeling studies of non-azadirachtin limonoids against ecdysone receptor of <i>Helicoverpa armigera</i> (Hubner) (Lepidoptera: Noctuidae).	National Workshop on Structure Determination of Macromolecules 26-28 March, 2013 National	DBT, New Delhi & DBT-BIF Centre, Department of Biotechnology, Mizoram University, Aizawl, Mizoram

E) (iii) Invited Lectures and chairpersonships at National or International conference/seminar, etc.

Sl. No	Title of Lecture/ Academic Session	Title of Conference/ Seminar (Whether international/ national regional/ local)	Organised by
1	Improving the abundance and efficiency of biocontrol agents through novel approaches.	Seminar on Recent trends in biological control of insect pests and diseases of forestry importance, 18-19 September	Rain Forest Research Institute, ICFRE, Jorhat, Assam and DST, New

		2006. National	Delhi
2	Current Scenario of tea pests in NE India and their management	Plantation Crops Symposium 2006 Placrosym XVII, 5-8 December, 2006 National	Spices Board, Kochi
3	Biological databases	DBT funded training course on Bioinformatics – concepts and application, 26-27 February, 2009. National	Department of Animal Breeding and Genetics, CVSc & AH, Central Agricultural University, Selesih, Aizawl, Mizoram.
4	Basic Concepts of systematics and their applications	Training course on Bioinformatics- General Concepts and applications, 26-27 March, 2009 National	BTIS centre, Department of Biotechnology, Mizoram University, Aizawl, Mizoram.
5	Bioinformatics tools	National seminar on state inclusive growth in NE India with reference to the emerging national pattern [26-27 October 2009] National	Margherita College, Tinsukia, Assam
6	Biopesticides and their utility	UGC-Orientation course, School of Earth, Forestry and Environmental Sciences and Life Sciences on 5-30, October 2009. National	Mizoram University
7	Sequencing to database and database analysis	Bioinformatics Current Approaches And Applications (27 Nov. 2009] National	BTIS centre, Department of Biotechnology, Mizoram University, Aizawl, Mizoram.
8	Hands on session on sequencing to database and database analysis		
9	Chairperson- National seminar (10 March 2010)	Remote Sensing, GIS and GPS application in natural resource management (10 March 2010) National	Department of Botany, Mizoram University, Mizoram
10	Basics in bioinformatics	Basics of Bioinformatics – An Over view [29 - 30 March 2010] National	BTIS centre, Department of Biotechnology, Mizoram University, Aizawl, Mizoram.
11	Understanding and use of databases		
12	Use of online tools	An Introduction to Bioinformatics workshop on Bioinformatics- A Computational approach to Biological information, 27 — 29 July, 2010 National	DBT, New Delhi and St. Edmund's College, BIF, Shillong
13	Bioinformatics Tools in Genome Research		
14	Bioterrorism	Refresher course in Physical Sciences and Engineering Technology, 18 August – 9 September, 2010. National	Department of Physics, UGC Academic Staff College, Mizoram University, Aizawl, Mizoram
15	Phylogenetic analysis	Refresher Course in Life Science, 9 September – 1 October, 2010 National	Department of Zoology, UGC Academic Staff College, Mizoram University, Aizawl, Mizoram
16	Demonstration of Phylogenetic analysis		
17	Bioinformatics tools- practicals		
18	Biopesticides and their commercial		

	utility		
19	Use of Biostatistics softwares		
20	Prediction of Protein structure	Training course on “An introduction to Bioinformatics”, 12 March, 2011 National	Bioinformatics infrastructure facility and State Biotech Hub, Dept. of Biotechnology, MizU, Aizawl, Mizoram and DBT, New Delhi
21	Homology modeling		
22	Ramachandran plot and Protein structure prediction	National Workshop on Bioinformatics - Structure & Determination of Macromolecules 28-29 March, 2011	DBT, New Delhi & DBT-BIF Centre, Department of Biotechnology, Mizoram University, Aizawl, Mizoram
23	Hydrophobicity and their significance in protein structure prediction	National Workshop on Bioinformatics - Proteins and their structure prediction 23-24 November, 2011	DBT, New Delhi & DBT-BIF Centre, Department of Biotechnology, Mizoram University, Aizawl, Mizoram
24	Isolation of plant genomic DNA & PCR amplification	Recent Advances in Medicinal and Aromatic Plants, 11-25 April 2011 National	Department of Horticulture, Aromatic Medicinal Plants, CSIR, NABARD and MizU
25	PCR amplification & Agarose gel electrophoresis (practical session)		
26	How the Barcode of Life Can Help Science	National Seminar on Emerging Trends in Biosciences and Future Prospects, 29th – 30th November, 2011 National	Department of Zoology, Pachhunga University College, Aizawl, Mizoram, UGC and NEC, Shillong.
27	DNA barcoding 8/2/2012	Refresher Course in Life Science, 8-28 February, 2012 National	Department of Zoology, Academic Staff College, Mizoram University, Aizawl, Mizoram
28	Molecular modelling and protein structure prediction 9/2/2012		
29	Modeling of HSG and protein by using Autodock 11/2/2012		
30	Bioinformatics practicals 22/2/2012		
31	Chair person – National Seminar – Biodiversity and conservation session. 11/04/2012	Environment, Biodiversity, Veda and Traditional Systems, 10th – 12th April, 2012 National	Department of Zoology, MizU, MANU – International Council for Man and Nature, Asia Chapter, and Action for Sustainable, Efficacious Development and Awareness (ASEA), Rishikesh, Uttarakhand and DBT, New Delhi
32	Geomorphometric variations in a wild morph of <i>Antheraea assamensis</i> (Lepidoptera: Saturniidae: Saturnii) from Mizoram 03/05/2012	National seminar on Recent Trends in Research and Development in MUGA culture- Ideas and action. National	Central MUGA and ERI Research & Training Institute, Jorhat & Muga Silkworm Seed Organization, Guwahati, May 3-4, 2012.
33	Proteins – structure, properties and their separation by SDS-PAGE gel electrophoresis	Short term course on instrumentation in Science National	UGC-Academic Staff college, MizU, 6-10 August, 2012

	07/08/2012		
34	Hands on session on SDS-PAGE 08/08/2012		
35	Protein and proteomics – principles and challenges 10/01/2013	National level seminar on Applications of Biology to Human Welfare National	Sri Ganesh College of Arts and Science, Salem, 10 January, 2013
36	Bt toxins and their potential in insect management 30/01/2013	Special Lecture series- PUMIC- Periyar University Microbiology Club National	Periyar University Microbiology Club, Dept. of Microbiology, Periyar University, Salem, 30 January, 2013.
37	Basics and Applications of DNA barcoding of Life 15/02/2013	National conference on Innovative Approaches in Biosciences- MICROMEET 2013 National	Department of Microbiology, Sree Narayana Guru College, Coimbatore, 15 February, 2013
38	Proteins and Proteomics - Principles and Challenges 28/03/2013	Refresher Course in Life Sciences (26 March – 15 April, 2013) National	Departments of Forestry, Botany and Zoology, UGC Academic Staff College, Miizoram University, Aizawl, Mizoram
39	Sequence alignment 12/04/2013		
40	BLAST, FASTA & MSA 12/04/2013		
41	Hands on session on BLAST, FASTA & MSA 12/04/2013		
42	Maintenance of albino Swiss mice and albino Wistar rats	One day seminar on Animal welfare and ethics 6 th June 2013 Regional	RIPANS, Aizawl and CPCSEA, New Delhi
43	Sequence to database and database to sequence 8 June 2013	A primer in bioinformatics and biotechnology to school students, 8 June 2013 National	Bioinformatics infrastructure facility and State Biotech Hub, Dept. of Biotechnology, MZU, Aizawl, Mizoram and DBT, New Delhi
44	Next generation sequencing-An overview 31.01.2014	National Workshop on Recent trends in Microbiology and Biotechnology, 31 Jan 2014 National	Selvam Arts and Science College, Namakkal, Tamilnadu
45	Molecular modeling of drugs	Refresher course in Physical Sciences held from 11 March to 31 March 2014 National	UGC Academic Staff College, MZU and School of Physical Sciences,MZU
46	SDS-PAGE & 2D-gel electrophoresis		
47	Basics of Proteomics		
48	Proteomics: Basic principles and overview 05/04/2014	Refresher course in Life Sciences held from 26 March to 15 April 2014 National	UGC Academic Staff College, MZU and Department of Forestry, Mizoram University, Aizawl, Mizoram
49	Next generation sequencing: Principles and Challenges 12/04/2014		
50	Biological disaster-I	Disaster management held from 18 th July to 7 th August, 2014 National	UGC Academic Staff College, MZU
51	Biological disaster-II		
52	Molecular modeling and drug	Popular Lectures in Applied Life	Department of Zoology,

	design 09/10/2014	Sciences, 9 th October 2014 National	PUC, Aizawl, Mizoram
53	Bioterrorism and management	UGC-Orientation course, held from 26 March to 15 March 2016 National	UGC Human Resource Development Centre, Mizoram University, Aizawl, Mizoram.
54	Diabetes mellitus and its complications	Refresher Course on Emerging Trends in Science and Technology, 1 st March to 21 st March 2016. National	UGC Human Resource Development Centre, Mizoram University, Aizawl, Mizoram.