CURRICULUM VITAE

PERSONAL DETAILS

1. **Name** : Dr. Manjunath Basappa Channi
2. **Designation** : Assistant Professor
3. **Date of Birth** : 14/10/1992
4. **Place of Birth** : Hunagund, Bagalkot.
5. **Father Name** : Sri. Basappa Y. Channi
6. **Mother Name** : Smt. Mahadevi B. Channi
7. **Spouse Name** : Smt. Laxmi P. Neelagund
8. **Date of Appointment** : 20/09/2021
9. **Contact number** : 7760818607
10. **Email** : mbchanni@gmail.com
11. **Permanent Address** : S/o B. Y. Channi, Shri Mallikarjuna Nilaya 21st cross Vijayanagara Colony, Vidyagiri, Bagalkot, Karnataka - 587102.

EDUCATIONAL QUALIFICATIONS:

Qualification	Year
1. **M. Sc Zoology** (Karnatak University, Dharwad)	**2015**
2. **K-SLET** (Mysore University, Mysuru)	**2016**
3. **CSIR-UGC NET (AIR - 65)**	**2018**
4. **Ph. D**	**2025**

TEACHING EXPERIENCE:

Sl. No.	College/Institution	Designation	Year
1.	Aryabhata PU Science College, Dharwad	Lecturer	2015-2016
2.	C. V. Raman PU Science College, Dharwad	Lecturer	2016-2017
3.	Oriental PU Science College, Hubli	NEET Expert and HOD of Biology	2017-2019
4.	Impulse PU Science College, Hubli.	NEET Expert	2018-2019
5.	Arjuna PU Science College, Dharwad	NEET Tutor	2019-2020
6.	SGV Mahesh PU Science College, Belagavi.	Lecturer	2020-2021
7.	DRM Science College, Davanagere.	Asst. Professor	2021 – Present

ACADEMIC RESPONSIBILITIES (After Appointment):

Sl. No.	Position	Period
1.	**Placement Officer**	09/2021- Till Date
2.	**In-charge – Criterion – V: 'Student Support and Progression'**	09/2021- Till Date
3.	**Member of** Cultural Committee	09/2021-09/2024
4.	**Co-convenor** - Cultural Committee.	09/2024- Till Date
5.	**Member of IQAC**	09/2024- Till Date
6.	**Member of** 1 Tour Committee 2 Admission Committee 3 UUCMS 4 NSS 5 YRC 6 Student Welfare 7 Time-table Committee	09/2024- Till Date

RESEARCH PAPERS PUBLISHED

1. **Larvicidal efficacy of some plant extracts on *Culex quinquefasciatus* with characterization of their bioactive compounds.**

   DOI: https://doi.org/10.22271/23487941.2023.v10.i4a.685.

2. **A survey on diversity and distribution of mosquitoes in Dharwad district, Karnataka, India.**

   ISSN: 2455-4758 **Received:** 22-09-2023**, Accepted:** 09-10-2023**,**

   Published: 25-10-2023 Volume 8, Issue 10, 2023, Page No. 36-42

3. Krishna, B. B, Parimala, Harish Kumar T. S. & **Manjunath Basappa Channi,** (2024). **'Role of Nitrogen Source for L-Glutaminase Production from Fungal Strain using through Submerged Fermentation'**. *Journal Of Advanced Zoology.* 45. 130-136.

CONFERENCES / SEMINARS ATTENDED / PRESENTED

1. **8th International Conference** on **'Ecosystem Conservation and Sustainable Development'** organised by AET College, Bengaluru in association with SABS. **Dated:** 09 and 10/Aug/2024. (Presented paper)
2. One Day **International Seminar** on **'Transdisciplinary Strategies towards Bioprospecting and Conservation of Medicinal Plants'** organised by D. R. M. Science College, Davanagere. (Presented paper)
3. **National Conference** on **'Recent Advances in Chemical Biology and Material Engineering'** organised by Veerashaiva College, Ballari. (Presented paper).

4. **One Day** State Level Seminar on **"Frontier Lecture Series in Life-Science"** organized by Department of Zoology J. S. S. Banashankari Arts, Commerce and S. K. Gubbi Science College, Vidyagiri, Dharwad – 580004 held on 03rd March 2015.
5. **3rd International Conference on Bacteriophage Research and Antimicrobial Resistance (ICBRAR-2022),** conducted by Department of Applied Genetics, Karnatak University, Dharwad, Karnataka, India on 26th and 27th November 2022.
6. One Day National Conference **'THROUGH THE INSTRUMENTS'**, sponsored by **KSTA** organized by Shri Shivayogi Murugendra Swamiji Arts, Science and Commerce College, Athani on 22nd December 2022.
7. **National Seminar on Current Research in Development and Reproduction** organized by Department of Zoology, Karnatak University, Dharwad held on 26-27 of February 2020.
8. National Seminar on **'Science and Technology for Human Development'** jointly organized by Kristu Jayanti College, Bengaluru and The Indian Science Congress Association, Bangalore Chapter on 23-25 February 2015.
9. **National Seminar on Innovative Advancements in Zoology** jointly organized by Department of Zoology, Karnatak University, Dharwad and UGC-Centre with Potential for Excellence in Particular Area held on 28-29 April 2014.

WORKSHOPS ATTENDED

1. MKU-RUSA-Medical Entomology Lab's 1st Hands on Training Workshop on **"Mosquito rearing Techniques and Identification"**. **Dated:** 29-31/ May/2023
2. One Day State Level Workshop on **'SOFT-SKILLS'** organized by Human Resource Development Cell (HRDC) and Srisaila Jagadguru Vageesha Panditaradhya College and P. G. Centre, Harihar on 31st March 2023.

3. International Symposium and Workshop on **'Recent trends in Alternative to Animal Experiments: New Approach Methods (NAMs) to Human toxicity testing and drug discovery'** organised by Department of Zoology, University of Calicut under aegis of SAAE-India, 2022 **Dated:** 03-07/Dec/2022.
4. Workshop on **"Enhancing Article Writing Skills and Academic Footprints"** organized by Department of Library and Information Sciences, Karnatak University, Dharwad held on 22-23 December 2021.
5. One Day State Level Workshop on **'Society, Research and Development'** organized by Karnatak University Research Scholars Association, Dharwad held on 19th February 2018.

MEMBERSHIP OF PROFESSIONAL BODIES:

1 Life member of Environment and Society Development Association (ESDA), Delhi since Feb-2024 (Membership No. L-706)

FACULTY DEVELOPMENT PROGRAMME/ REFRESHER COURSE/ SHORT-TERM COURSE ATTENDED: 06

1. **Four weeks** Induction/ Orientation Programme for "Faculty in Universities/Colleges/ Institutes of Higher Education" organized by Teaching Learning Centre, Ramanujan College, University of Delhi in collaboration with Shaheed Sukhdev College of Business Studies (SSCBS) under the aegis of Ministry of Education, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching, from 19th October 2021 to 18th November 2021 and obtained **Grade A+**.
2. A training programme in **Computer Literacy Course** was completed with grade **'A'** at KEONICS Yuva.Com Centre, Davangere-577 002 from 25th November 2021 to 23rd February 2022. **Certificate No.: 418144.**

3. **Two weeks** Online Refresher Course in Zoology organized by Teaching Learning Centre Ramanujan College, University of Delhi in collaboration with University of Science and Technology Meghalaya under the aegis of Ministry of Education, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching, from 28 November to 12th December 2022 and obtained **Grade A+**.
4. **One-week** online Faculty Development Program/ Training Programme on **"Innovative Teaching and Learning Pedagogy"** organized by Research Foundation of India in association with SHODH and Bhagwan Parshuram Institute of Technology from 02 to 07 December 2024.
5. **Two-Days** Online Faculty Development Programme on **"The Role of Artificial Intelligence in Higher Education"** organized by IQAC, St. Joseph's College of Commerce (Autonomous) in collaboration with Xavier Board of Higher Education in India (XBHEI) on 20 and 21st February 2025.
6. **One Day** National Level Faculty Development Programme on **"Research Projects and Seminar Proposals Writing Skills"** organized by Research and Development Cell of KLE Society's Shri Shivayogi Murugendra Swamiji Arts, Science and Commerce College, Athani held on 9th November 2024.

CERTIFICATE / ADD-ON COURSES COMPLETED:

1. **'CERTIFICATE IN MEDICAL LAB TECHNICIAN COURSE'** is completed (Nov-2011) under **UGC** sponsored scheme of **Career Oriented Programme** conducted by JSS College, Dharwad in collaboration with **S. D. M. Medical College and Hospital Staff.**
2. **'DIPLOMA IN MEDICAL LAB TECHNICIAN COURSE'** is completed (Nov-2012) under **UGC** sponsored scheme of **Career Oriented Programme** conducted by

JSS College, Dharwad in collaboration with **S. D. M. Medical College and Hospital Staff.**

STUDENTS PROJECTS GUIDED:

1. "A PRELIMINARY STUDY ON DIFFERENT TYPES OF ANTS, SPIDERS AND TERMITES IN AND AROUND DAVANAGERE DISTRICT, KARNATAKA 2025"
2. "A STUDY ON DIFFERENT TYPES OF FISHES AND PHYSICO-CHEMICAL PARAMETERS OF HADADI AND ANAJI LAKES OF DAVANAGERE, KARNATAKA 2024".

STUDENTS EXHIBITIONS GUIDED:

1. SHIVAMOGA DIVISION LEVEL EXHIBITION COMPETITION ORGANIZED BY DEPARTMENT OF SCIENCE AND TECHNOLOGY, KARNATAKA. THEME: "SCIENCE, TECHNOLOGY AND INNOVATIONS FOR MANKIND". **(SELECTED FOR STATE LEVEL COMPETITION)**
2. STATE LEVEL EXHIBITION COMPETITION ORGANIZED BY DEPARTMENT OF SCIENCE AND TECHNOLOGY, KARNATAKA. THEME: "SCIENCE, TECHNOLOGY AND INNOVATIONS FOR MANKIND". **(BAGGED 3RD PRIZE).**

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Manjunath Basappa Channi
Department of Zoology,
Karnataka University Dharwad,
Karnataka, India

Pulikeshi M Biradar
Department of Zoology,
Karnataka University Dharwad,
Karnataka, India

Corresponding Author:
Pulikeshi M Biradar
Department of Zoology,
Karnatak University Dharwad,
Karnataka, India

Larvicidal efficacy of some plant extracts on *Culex quinquefasciatus* with characterization of their bioactive compounds

Manjunath Basappa Channi and Pulikeshi M Biradar

DOI: https://doi.org/10.22271/23487941.2023.v10.i4a.685

Abstract
Annually millions of people get affected by mosquito borne diseases worldwide. Lymphatic filariasis, West Nile Virus (WNV) and St. Louis encephalitis are major diseases transmitted by *Culex quinquefasciatus*. Three plants *Oxalis corniculata, Maytenus senegalensis,* and *Cassine glauca* were selected for biocontrol of Cx. quinquefasciatus and leaf extracts of the same plants in different solvents have shown good larvicidal activity on 4th instar larvae of Cx. quinquefasciatus. *Oxalis corniculata* extracts in Ethyl acetate, Chloroform, and Hexane were reported to have LC50 values of 33.23 ppm, 82.20 ppm, and 215.19 ppm against *C. quinquefasciatus,* LC50 values for *Maytenus senegalensis* extract in Ethyl acetate, Chloroform, and Hexane against *C. quinquefasciatus* were determined to be 87.87 ppm, 177.20 ppm, and 164.53 ppm and the LC50 values for *Oxalis corniculata* extract in Ethyl acetate, Chloroform, and Hexane against *C. quinquefasciatus* were 79.65 ppm, 177.20 ppm, and 133.80 ppm. The *M. senegalensis* ethyl acetate extracts showed greatest mortality rate and the *Cassine glauca* chloroform extract showed the least amount of activity (1%).

Keywords: Culex quinquefasciatus, bio-control, *oxalis corniculata*, *Maytenus senegalensis*, *Cassine glauca*

1. Introduction
More than 700 million individuals affected each year, by mosquito-transmitted illnesses continue to be a significant cause of death in humans worldwide [1]. Mosquito-borne illnesses have a negative influence on the economy, especially in nations with tropical and subtropical climates, and may also result in decreased labour and commercial outputs [2]. *Lymphatic filariasis* is a tropical illness that affects many individuals, affecting 120 million people globally and 44 million of them have a common chronic manifestation caused by *C. quinquefasciatus* [3].

Programs for controlling mosquitoes mostly rely on phytochemicals. By extracting the bioactive plant ingredient(s) using various polar and nonpolar solvents, such as benzene, petroleum ether, methanol, chloroform, acetone, absolute alcohol, etc., the complete plant or a particular part may be used [4]. Using botanicals that are easily biodegradable, nontoxic, and have wide range target specific action is one such option [5]. One strategy that offers a less expensive and more environmentally friendly means of controlling mosquito larvae is the use of phytochemicals found in the oils, leaves, and roots of plants [6].

The most efficient method of controlling this mosquito infestation is to use larvicides to inhibit mosquito reproduction. During the last 30 years in various countries, synthetic pesticides like organophosphates have been employed as larvicides [7]. The fact that these chemical pesticides are non-selective and may damage other creatures in the natural ecosystem, is a significant disadvantage to their usage [8]. The issue with toxicity and the rise in insect resistance serve as reminders of the need for efficient pesticides that are eco-friendly, target-specific, and biodegradable. The secondary metabolites of plants are considered as a potentially viable alternative approach against various life stages of different species of mosquitoes due to their excellent properties such as cheap availability, environmental safety, and the presence of a rich source of bioactive compounds [9-12]

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A survey on diversity and distribution of mosquitoes in Dharwad district, Karnataka, India

Manjunath Basappa Channi, Pulikeshi M Biradar*
Department of Zoology, Karnatak University, Dharwad, Karnataka, India

Abstract
Mosquitoes are vectors of etiological agents of several illnesses that affect human beings as well as other vertebrates. Mosquito-borne diseases like Japanese encephalitis, Malaria, Lymphatic filariasis, and Dengue are prevalent in Karnataka, India. The present study is aimed at surveying the diversity and distribution of mosquito vectors in the Dharwad district of Karnataka state, India from Oct, 2017 to Oct, 2022. Random sampling was done so as to collect mosquito samples from temporary/permanent, natural/artificial water bodies in five different regions (Rural, Semi-urban, Urban, Agricultural Land and Forest) in the Dharwad district. A total number of 2658 mosquitoes belonging to 4 genera namely *Culex, Anopheles, Aedes and Mansonia* were collected during the study period. The genera *Culex, Aedes* and *Anopheles* mosquito species are predominant in Dharwad district, which suggests the presence and occurrence of much more illness. The diversity indices like Shannon diversity index, Simpson's diversity index, Simpson's reciprocal index and Shannon evenness index have been calculated and the results clearly indicate that the species richness and abundance of mosquito species in the study areas. The knowledge of the breeding environments of mosquitoes will be useful for developing a mosquito vector control plan and increased efforts should be undertaken to raise public awareness and also by taking precautions against illnesses spread by these mosquito vectors.

Keywords: Diversity, distribution, Dharwad district, mosquito vector and survey

Introduction

Mosquitoes are a group of insects belong to the family Culicidae, Order-Diptera with a global distribution that live in both temperate and tropical climates and even up to the Arctic Circle [1, 2]. Along with the Neotropics, the Oriental section, which includes India is recognized as one of the richest biogeographic areas in the globe for mosquitoes [3]. Mosquitoes reproduce in a variety of environments, including marshes, drains, ponds, water containers, pools, ditches, including the tree holes with comparable water accumulations. Different mosquito genera have their own unique breeding preferences [4, 5]. Changes in the seasonal temperature, climate and density dependent patterns have a significant impact on mosquito diversity and abundance [6-8]. The risk of contracting vector-borne diseases (VBDs) may be affected by climate change and human activities, with or without corresponding changes on mosquito abundance and their diversity [9-13].

Besides the widespread distribution of mosquitoes, they are also notable for their diverse habitat. Now there are 3,540 identified mosquito species worldwide, which are split across two subfamilies and 112 genera [14]. *Anopheles stephensi*, the main mosquito species that transmits Malaria in urban areas of India, belongs to the same subgenus as *Anopheles gambiae*, which is the dominant mosquito vector, transmits Malaria in that continent [15]. Both Filariasis and Japanese Encephalitis (JE) are transmitted by *Culex species*. The genus *Aedes* mosquitoes, which were once common in sub-tropical and tropical areas, are now found worldwide, with the exception of Antarctica. Dengue, Zika, and Haemorrhagic fever are all spread by the species of the subgenus *Stegomyia*, as well as by *Aedes albopictus* and *Aedes aegypti* [16].

Studies on the diversity and distribution of mosquitoes may be very helpful in understanding the intricate relationship among the environment and risks to human health. The variety of mosquito species in the Pushpagiri Wildlife Sanctuary was studied by Krishna (2021) from June, 2018 to May, 2019. Surveys on mosquito variation were conducted throughout the post-monsoon (Oct to Jan), monsoon (June to Sept), and summer (Feb to May) seasons. With the use of a dipper, mosquito adults and larvae were removed from a variety of water sources at more than twenty different locations across the wildlife refuge. A total of 25 mosquito spp. from six genera were identified, out of these, *Culex* were dominant with ten species followed by *Anopheles* seven species, *Aedes* four species, *Ochlerotatus* three species as well as *Uranotaenia* one species were recorded [17]. Chatterjee et al., (1988) reported that *Culex* and *Aedes* mosquitoes mostly favoured rainwater for reproduction during winter and post-winter [18]. A knowledge, attitude, and practice (KAP) study were conducted by Kumar and Gururaj (2006) in a rural and urban areas of Karnataka, India with the aim to investigate the level of knowledge of mosquitoes and the perceived risk of infectious diseases that are spread by mosquitoes among the community. The primary illness that mosquitoes spread was formerly known to be only Malaria. Now, more than 75% of people were taking personal precautions against mosquito bites [19].

In Karnataka, mosquito-borne illnesses are frequent and are dominant over other diseases. According to the "National Institute of Malaria Research", the three principal mosquito species present in the Dharwad district of Karnataka are *Culex quinquefasciatus, Anopheles stephensi and Aedes aegypti*. Many cases of Dengue, Lymphatic filariasis, Malaria, and Chikungunya are often recorded from this region. Therefore, it is necessary to survey such mosquito vectors, which are detrimental to humans and their domestic animals. Hence, the present study is aimed to understand the variety and distribution of mosquito vector species in the Dharwad district of Karnataka state, India.

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Role of Nitrogen Source for L-Glutaminase Production from Fungal Strain using through Submerged Fermentation

Krishna[1*]., Parimala B[2]., Harish Kumar T. S[3]. and Manjunath Basappa Channi[4]

*[*1]Department of Biotechnology, University College of Science, Tumkur University, Tumakuru, Karnataka, India*

[2]Department of Zoology, University College of Science, Tumkur University, Tumakuru, Karnataka, India

[3]Department of Zoology, D.R.M. Science College, Davangere, Karnataka, India

[4]Department of Zoology, D.R.M. Science College, Davangere, Karnataka, India

****Corresponding Author:** Dr. Krishna*

**Assistant Professor, Department of Biotechnology, University College of Science, Tumkur University, Tumakuru, Karnataka, India*

Article History

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Abstract

L-glutaminase has attracted much attention due its wide range of applications in several fields. The L-glutaminase widely used in pharmaceutical and food industries. L-glutaminase is generally regarded as a key enzyme that controls the delicious taste of fermented foods such as soy sauce. L-glutaminase production was carried out by using supplementation of organic and inorganic nitrogen sources such as yeast extract, malt extract, peptone and urea at concentration ranging from 0.25% to 1.25% with increments of 0.25% and also different inorganic nitrogen sources like ammonium sulphate and ammonium chloride at concentration ranging from 0.025% to 0.125% with increments of 0.025%. The malt extract (1%) produced 399.9 IU, were best organic nitrogen source and ammonium sulphate (0.1%) appear to be good inorganic nitrogen source under submerged fermentation process and showed 546 IU. Current study is an exploring step to industrial sector to upscale their L-glutaminase production and it will useful strategy to commercial sector and alternative to old methods.

Keywords: L-glutaminase, Organic, Inorganic, Submerged fermentation, Enzyme, Pharmaceutical

1. Introduction

Enzymes as drugs have two important features that distinguish them from all other types of drugs. First, enzymes often bind and act on their targets with great affinity and specificity. Second, enzymes are catalytic and convert multiple target molecules to the desired products. These two features make enzymes specific and potent drugs that can accomplish therapeutic biochemistry in the body that small molecules cannot. These characteristics have resulted in the development of many enzyme drugs for a wide range of disorders [1, 2]. Development of medical applications for enzymes have been at least as extensive as those for industrial applications, reflecting the magnitude of the potential rewards: for example, pancreatic enzymes have been