



# 16<sup>th</sup> International Conference of Medical Arthropodology

On

Emerging and Re-emerging Infectious Vector-borne & Zoonotic Diseases:

Impact of Climate Change and Global Warming 77

To achieve the objectives of



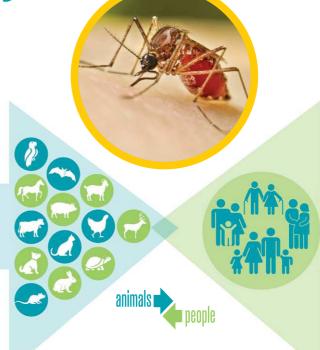


13-15 December, 2023

Organized by:

**Department of Zoology** 

University of Calicut, Malappuram, Kerala - 673635, India







Scan Hara

# Cordial Invitation

#### Dear Colleagues,

Medical Arthropodology is an incredibly exciting discipline which constitutes an integral part of public health, biomedical and bioengineering sciences. It includes various branches like medical entomology, medical acarology, medical myriapodology etc. Most of the arthropods are not harmful to humans and, in fact, many are highly beneficial organisms. Still, many isolated groups of spiders, scorpions, mites, ticks and, particularly, insects concern humans because of their harmful nature of causing injuries through their poisonous bites and/or stings, disturbing tranquillity of humans' living environment and, above all, playing a key role in transmitting a large number of deadly and/or debilitating diseases.

Many arthropod-borne infections have in recent past made a spectacular come back with devastating impact (e.g., chikungunya, Zika Virus), while some new infections, too, sprang up with an unseen complexity and novelty such as that of COVID-19 caused by SARS-CoV-2. Consequently, Emerging and re-emerging vector-borne and zoonotic diseases the world over have now assumed a greater degree of significance than ever before!

Among the numerous infectious agents reported globally, 60% of pathogens were found to have a history of zoonotic origin. During past couple of decades India has witnessed a plethora of towering outbreaks of emerging and re-emerging infectious arthropod-borne diseases which were all managed in the long run by a combined force of community participation and scientific agility and preparedness. Still many diseases such as, for example, Lyme disease, Rocky mountain spotted fever rickettsiosis, Ross fever, West Nile, dengue, Zika virus, chikungunya, malaria, WEE, EEE, Japanese encephalitis, Kyasanur Forest Disease, Scrub typhus, Powassan, human anaplasmosis, babesiosis etc. Several factors are responsible for the emergence and reemergence of these and other deadly infections, most important among which include geographic expansion of the vectors, anthropization and, above all, Climate Change and Global Warming. The situation is grim and need tackling it through consilience.

Solution to manage the future emerging and re-emerging infections lies in the scientific endeavours and implementation of necessary preventive and curative measures intelligently and diligently with the aid of efficient modern tools and strategies in an integrated manner.

The 16<sup>th</sup> SOMA International Conference of Medical Arthropodology on "Emerging and Reemerging Infectious Vector-borne & Zoonotic Diseases: Impact of Climate Change and Global Warming" will hopefully provide a unique opportunity to bring all the possible knowledge at one platform for extensive deliberation and solution-finding exercise.

With kindest regards, and looking forward to having your active participation in the 16th International Conference of Medical Arthropodology (SOMA), we remain,

Yours sincerely,

Prof. (Dr.) B.K. Tyagi & Prof. (Dr.) E. Pushpalatha

# The University

The University of Calicut established in 1968 is the largest in Kerala in terms of jurisdiction and students intake. The University is re-accredited with A+grade by NAAC in the fourth cycle of re-accreditation in 2022. The University currently has 35 teaching departments,



412 affiliated colleges, 12 Academic Chairs and 44 self-financing centres. The University is currently 69th in the University category in the National Institute of Ranking Framework and 92nd among the South Asian Institutions as per QS world rankings. The University lays emphasis on fostering quality human resource and promoting productive research that benefit both local communities and wider humanity. 'Nirmaya Karmana Sree' is the motto of the University.

# The Department of Zoology



The Department of Zoology, a pioneer institute in the field of entomology, was founded in 1963 as a centre of Kerala University which became a Department of Calicut University in 1968. Ever since its establishment, the department has been awarded various externally funded research projects from the different schemes of UGC,

DBT, DST, SERB, MoEF, KSCSTE etc. The Fund for Infrastructure in Science and Technology (FIST) of DST, the Selective Augmentation of Research and Development (SARD) scheme of KSCSTE and the Special Assistance Programme (SAP) and BSR-I of UGC are remarkable latest additions to strengthen the Department to the present modern state-of-the-art infrastructure. Recently, the Department has been elevated to the Centre of Potential Excellence Scheme (SPG) with funding from Kerala Govt. The department offers M. Sc., M. Phil. and Ph. D. programmes. The major research groups include Acarology, Biochemistry, Biopesticides, Biosphere Ecology, Biotechnology, Entomology, Endocrinology, Microbiology, Molecular Biology, Ornithology and Toxicology.

# Society of Medical Arthropodology

The society of Medical Arthropodology (SOMA; www.soma16.org), established in 2016 as a non-profit scientific society, is a unique scientific association devoted to the enhancement of knowledge about arthropods for their biomedical, pharmacological, bioengineering and nutrition significance – with an aim of serving Science and Society.

The Society works as "Family of Friends" comprising under one single umbrella all the public/veterinary health researchers from across the world. The society is interested in promoting Arthropodology through: (i) the encouragement of understanding, cooperation and friendship among medical arthropodologists throughout the world, (ii) encouragement of international collaboration in medico-arthropodological research activities and services, (iii) planning and organization of national/international symposia and regional meetings of medico-arthropodologists, and (iv) conservation of arthropods of pharmacological and nutritional importance, and their natural habitats through taxonomic and biodiversity explorations.

# The Calicut City

Kozhikode is among the most beautiful coastal cities of the Indian peninsula. Located in the northern part of Kerala state, Kozhikode is best known worldwide as a 'spices centre.' It is very close to the historic Kappad Beach, where the Portuguese explorer Vasco da Gama landed in 1498. The city is widely connected by sea port, airport and rail. Many parts of the district has been identified as highly attractive places famous for ecotourism; Places like Thusharagiri not only well known for the grandeur and pristine beauty of water-falls and adventurous water-sports, but are also blessed with lush greenery of rain forests of the famous Western Ghats and a most preferred trekking place for tourists. The central Kozhikode Beach, overlooked by an old lighthouse, is a popular spot for watching the sunset. The backwaters and the network of river systems add to the scenic beauty of the district. Rivers act as reliable source of water for agriculture and other human needs ensuring surplus food.



#### **International Conference on**

# "Emerging and Re-emerging Infectious Vector-borne & Zoonotic Diseases: Impact of Climate Change and Global Warming"

#### Thrust areas

- (I) Prognosis, Epidemiology, Diagnosis, Control and Management of emerging and re-emerging:
  - (a) Viral Diseases
  - (b) Fungal Diseases
  - (c) Bacterial Diseases
  - (d) Protozoan diseases
  - (e) Helminth diseases
  - (f) Zoonotic Diseases
- (ii) Medical Arthropodology (Medical/Veterinary/Forensic Entomology, Acarology, Myriapodology and Carcinology)
- (iii) Taxonomy and identification of Vectors.
- (iv) Vector Biology.
- (v) Vector Ecology.
- (vi) Control and Management of Vectors.
- (vii) Climate Change and its impact on emerging and re-emerging diseases.
- (viii) Evolution of Emerging Diseases.
- (ix) Use of Alin preventing outbreaks in future

#### **Abstract Submission**

The participants are requested to send a copy of the abstract for oral /poster presentation not exceeding 250 words (in WORD, 12 pt, single space, without References, Tables or Figures, through e-mail to: zoosoma2023@gmail.com (with a copy to: abktyagi@gmail.com) on or before 30th August, 2023.

Posters should be 4x5 ft in size. A Poster should be representative to a future manuscript; with structured details aided with appropriate Table(s) and Figure(s) as well as References.

Abstracts must be based on ORIGINAL research and should have a clear Title, which should be followed by Names of authors, and next by their affiliations. The Abstract should be prepared in a structured style as: Title, Summary, Background, Material & Methods, Observations & Results and Discussion.

If more than one author, the presenting Author's name should be underlined. His/Her Email must appear at the end of his/her affiliation.

# Registration

Registration fee for the seminar will be as follows:

Category	Early Registration	Spot Registration
Students	Rs. 800	Rs. 1500
Research Scholars	Rs. 1000	Rs. 1500
*SOMA LM	Rs. 1500	Rs. 2000
Faculty/Scientist	Rs. 2000	Rs. 2500
Accompanying person	Rs. 750	Rs. 1200

<sup>\*</sup> SOMA LM: Life Members of SOMA

Registration fee should be paid in favour of General Convener, Seminar/ Workshop, Department of Zoology by way of Bank Account e-Transfer or Demand Draft

N.B.: An Abstract will be considered only after Registration and Fee are duly made already, with bank proof for the letter.

#### **Account Details**

 $1. \ \ NAME\ of\ A/C\ holder:\ General\ Convener,\ Seminar/Workshop,\ Department\ of\ Zoology$ 

2. A/C No. of Pass Book: 67211112197

3. BANK NAME: State Bank of India

4. BANK BRANCH: Calicut University Branch

5. IFS Code: SBIN00702006. MICR CODE: 673002912

All registrants, except Accompanying Persons, will be entitled to conference portfolio with conference-related paraphernalia including Abstracts book, and, along with accomplices, to tea, snacks, lunch and any sponsored dinner during the conference.

#### Accommodation

Accommodation will be arranged in nearby hotels and the University guest houses/hostels on a payment basis. Please enquire in advance preferably before 30th August 2023

#### The Venue

The seminar will be held at the University of Calicut. The University campus is located 22 km south of the historical city of Kozhikode on NH 17; 13.5 km from Parappanangadi and Feroke Railway Station, and 10 km from Calicut International Airport.

# Climate

In Kerala, climate becomes very pleasant during November-December. The minimum temperature reaches to 20  $^{\circ}$ C. It is the best time to visit Kerala for sightseeing.

# Organizing Committee

#### **Chief Patrons**

Prof. (Dr) M.K. Jayaraj, Vice-Chancellor, University of Calicut

Prof. (Dr) B.K. Tyagi, President, Society of Medical Arthropodology (SOMA)

#### **Patrons**

**Prof. (Dr) A.P. Dash**, AIPH University, Vice Chancellor, Former Vice Chancellor Central University of Tamil Nadu

Prof. (Dr) M. Nasser, Pro Vice-Chancellor, University of Calicut

Prof. Devinder Singh, Pro Vice Chancellor, Chandigarh University, Punjab, India

Dr. M.K. Showkath Ali, Former Advisor, Ministry of Health & Family Welfare, Govt. of India

Prof. (Dr) E.K. Satheesh, Registrar, University of Calicut

#### General Convenor

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Pro. (Dr.) Mani Chellappan, Dean College of Agriculture, KAU, Thrissur

International Conference Coordinator

Prof. Dr B.K. Tyagi, President, SOMA

Organizing Secretary

Prof. (Dr) E. Pushpalatha, Department of Zoology, University of Calicut, Kerala

Joint Organizing Secretaries

Dr L. Divya, Associate Professor, Department of Zoology, University of Calicut

Dr E. M. Aneesh, Assistant Professor, Department of Zoology, University of Calicut

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Prof. (Dr.) C.D. Sebastian
Prof. (Dr.) K.C. Chitra
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Dr M. Zubair
Dr Binu Ramachandran

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Dr D. Samba Shiva Dr Rina Tilak

Dr Sajal Bhattacharya Dr Prabhakargowda K. Patil

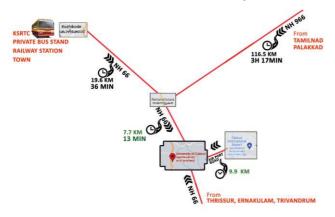
Mr. Santhoshkumar Dr Sreejith Kanholi

Ms Priya Mr. Shabeer

Mr. Jamal CUZA Secretary & Joint Secretary

#### How to Reach Calicut University

To reach the Conference venue, kindly follow the location map attached



# Important Dates to Remember

Conference Dates : 13 to 15 December, 2023

 $\begin{array}{lll} \mbox{Registration} & : & \mbox{On or before } 30^{\mbox{\tiny th}} \mbox{August, 2023} \\ \mbox{Abstract submission last date} & : & \mbox{On or before } 30^{\mbox{\tiny th}} \mbox{August, 2023} \\ \end{array}$ 

# LIST OF CONFIRMED INVITED SPEAKERS FOR 16<sup>th</sup> SOMA\_ICMA Calicut, Kerala on 13-15 December, 2023



Prof. B.K. Tyagi
Professor of Practice, Chandigarh University, Gharuan (Mohali), Punjab, India e-mail: abktyagi@gmail.com

Title: The GE (Genetically Engineered) mosquitoes: a new and effective member in the IVM family

**Prof. Devinder Singh** 

Pro Vice Chancellor, Chandigarh University, Gharuan (Mohali), Punjab, India e-mail: devinder.ss.61@gmail.com

Title: Forensic Entomology in India: past, present and future scope and challenges





Dr. Indra Vythilingam

Professor, Parasitology Department, University Malaya, Kuala Lumpur, Malaysia e-mail: indra.vythilingam@gmail.com

Title: Simian malaria, an emerging threat to malaria elimination in Southeast Asia

Prof. B. Reddya Naik

Sr. Professor, Department of Zoology, Osmania University, Hyderabad (Telangana State) India e-mail: brnaik@osmania.ac.in

Title: Attractive Toxic Sugar Baits (ATSBs) for Mosquito Control





Prof. S.N. Surendran

Professor of Zoology, Department of Zoology, Faculty of Science, University of Jaffna, Jaffna 40000, Sri Lanka. e-mail: noble@univ.jfn.ac.lk

Title: Range expansion of dengue vectors and challengers in dengue control in Sri Lanka

Dr. Vijay Veer

Ex-Director, DRDO-Defence Research Laboratory, Tezpur (Assam), India e-mail: vijayveer50@yahoo.com

Title: Black Flies (Diptera: Simuliidae): Vectors of human and animal diseases





Dr. Mohammad Nazrul Islam

Assistant Professor, Hamdard University Bangladesh, Gazaria, 1510. Bangladesh e-mail: dr\_sayemnazrul@yahoo.com

Title: Impact of climate change on emerging and re-emerging vector borne diseases in Bangladesh: A Scientific Analysis.



**Dr. Rina Tilak**Scientist 'G', Department of Preventive Medicine, Armed Forces Medical College, Pune (MS), India. e-mail: rinatilak@hotmail.com

Title: Lyme borreliosis in India: Current status and challenges

Prof. Menaka D. Hapugoda

Professor in Molecular Medicine, Molecular Medicine Unit, Faculty of Medicine, University of Kelaniya, Ragama, Sri Lanka. e-mail: menakaha@kln.ac.lk

Title: Development of Sterile Insect Technique (SIT) for integrated control of dengue vector mosquitoes





Dr. Kalpana Baruah

Formerly the Addl. Director & Scientist 'V' NCVNDC (Directorate General of Health Services, MH&FW, Govt. of India), 22-Sham Nath Marg, Delhi- 110054. India e-mail: drkalpanabaruah@gmail.com

Title: Emerging threat of Aedes borne diseases - are we prepared to meet the challenges?

**Dr. Roop Kumari** 

National Professional Officer - Malaria & VBD, World Health Organization Country Office for India, Delhi, India. e-mail: Kumarir@who.int

Title: Eliminating malaria by 2030: the countdown begins





Dr. R.S. Sharma

Ex-Addl. Director, National Centre for Diseases Control, 22, Sham Nath Marg, Delhi - 110054, India. e-mail: ranjandersharma@gmail.com

Title: Vector control challenges for malaria elimination in India

**Prof. Jagbir Singh Kirti** 

Ex-Department of Zoology & Environment Science, Punjabi University, Patiala (Pujab), India. e-mail: prjagbir2005@gmail.com

Title: Parlance of Mosquito Systematics: From Classical to Molecular -- the journey has been very long





**Prof. Theeraphap Chareonviriyaphap** 

Head, Department of Entomology, Faculty of Agriculture-Bangkok. Kasetsart University, Bangkok, Thailand 10900. e-mail: faasthc@ku.ac.th

Title: New vector control approaches to target outdoor malaria transmission in SE region



**Dr. Sajal Bhattacharya**Associate Professor, Postgraduate Department of Zoology, Asutosh College (University of Kolkata)

Title: Are we neglecting a medically important Aedes species? Time for a reality check in the context of Aedes-borne viral Diseases

Dr. M.K. Showkath Ali

Former Advisor, Ministry of Health and Family Welfare, Govt. of India, National Centre for Disease Control , Kozhikode, Kerala

Title: Covid Control in Lakshadweep: A success Story





**Dr. Madhavi**Professor & Head, Department of Zoology, Osmania University, Hyderabad, Telangana, India

Title: Green Nanotechnology for Dengue Vector Control and Management:
Current Measures and Future Prospects

Dr. Anuradha Medoju

Senior Regional Director & Chief of Airport Health Organisation for the State of Telangana and Andhra Pradesh

Title: Challenges Control and Interruption of transmission & Current strategies for control of Zoonotic infections





**Dr. R. Paramasivan**Scientist G, ICMR-CRME, Madurai

Title: Japanese Encephalitis in India: Present Status and Future Challenges

**Dr. Arun Zachariah**Chief Forest Veterinary Surgeon, Forest Department, Government of Kerala

Title: Human Wildlife Interface and Emergence of Zoonotic Diseases





**Dr. M.K. Sabu**Professor, Department of Computer Applications, Cochin University of Science and Technology, Cochin -22

Title: Machine Learning: An Efficient Approach to Predict Infectious Diseases

# Address for Communication

Dr E. Pushpalatha, M.Sc., Ph.D.

Professor

Department of Zoology, University of Calicut,

Malappuram, Kerala, India - 673 635

Phone: 8848494183

e-mail: zoosoma2023@gmail.com

CC to: Pushpalatha@uoc.ac.in and abktyagi@gmail.com

Website: https://zoology.uoc.ac.in

