

AMIT KUMAR TRIVEDI

Current Position: Assistant Professor Department of Zoology Mizoram University Aizawl-796004 Mizoram

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Ph.D. : 2005 (Zoology, University of Lucknow, Lucknow)

Area of Research: Animal physiology and Circadian biology

Research Training abroad:

Department of Biology, University of Kentucky, Lexington, KY, U.S.A. February 2009 – July 2011 Max-Planck Institute for Ornithology, Andechs, Germany 2002

Post Doctoral Research Experience: ~7 years

Ph.D. awarded: 02

M.Phil. awarded: 01

Professional experience, recognition, Awards received:

- Participant in the workshop on snakebite management. Department of Zoology, Mizoram University, Aizawl, Mizoram 27 June – 3 July 2016.
- Invited talk XXVI National Symposium on Chronobiology. Department of Studies in Zoology, Manasgangotri, Mysuru, University of Mysore, Mysuru. June 2nd and 3rd, 2016.
- Invited talk in International symposium on Integrative physiology and Comparative endocrinology (ISIPCE-2016). Department of Zoology, Banaras Hindu University. Feb 12 - 14, 2016.
- Faculty 3rd SERB School in Avian Biology. Department of Zoology, North Eastern Hill University, Shilong, September 27 - 11 October, 2015.
- Invited talk in XXV National Symposium on Chronobiology: Time in biology and medicine. March 27- 29, 2015. Pt. Ravishankar Shukla University, Raipur.
- Chairperson Scientific session XXV National Symposium on Chronobiology: Time in biology and medicine. March 27- 29, 2015. Pt. Ravishankar Shukla University, Raipur.
- Faculty in SERB School in Chronobiology. Department of Zoology, Mangalore University, Mangalore, December 22, 2014 - 04 January, 2015.
- Invited talk in National Workshop on Recent Advances in Nematode Taxonomy (RANT-2014). Department of Zoology, CCS University Meerut March 25-31, 2014.
- Faculty in SERB School in Chronobiology. Department of Zoology, North-Eastern Hill University, Shilong, June 20-03 July, 2012.
- Faculty SERC School in Chronobiology-III Clocks, Rhythms and behavior, Department of Zoology, Ch. Charan Singh University, Meerut, Oct 01-14, 2011

- Best Lab work Presentation in SERC School in Chronobiology II: Clocks, Rhythms and Behavior, Department of Zoology, University of Lucknow, Lucknow, Oct 12-25, 2008
- SERC School in Chronobiology II: Clocks, Rhythms and Behavior, Department of Zoology, University of Lucknow, Lucknow, Oct 12-25, 2008.
- Late Smt. Bhagawati Devi Memorial Prize For best presentation in XVII National symposium on Chronobiology, BHU, Varanasi, 2005.
- National Workshop on Critical Appraisal and Hands-on Training in Advanced Techniques in Endocrine Research, Dept. of Zoology, Aligarh Muslim University, Aligarh, January 16-30, 2005.
- Third School in Chronobiology; (DST-sponsored SERC School), Department of Zoology, Gulbarga University, Gulbarga, Dec. 29, 2004-08, Jan. 2005.
- First School in Chronobiology; (DST-sponsored SERC School), Department of Zoology, University of Lucknow, Lucknow, Oct 17-27, 2002.

Membership of Scientific Societies:

- Life Member, Indian Society for Chronobiology
- Executive committee member, Indian Society for Chronobiology
- Life Member, Association of Avian Biologists in India
- Treasurer cum Joint Secretary, Association of Avian Biologists in India
- Life Member, Academy of Environment

Conference attended:

- International conference on Chronobiology- ICC 2021-Time in the living world. 15–17 July 2021. Sleep quality among school students. (Invited Talk)
- Annual Seasonality symposium 2020. E conference hosted by Tyler Stevenson, Barbara Helm and Fran Eblin (UK). 2 October 2020. Clock and urbanization: Effect on daily and seasonal functions. (Invited Talk)
- National Symposium on Avian Biology in Conjunction with 2nd meeting of Association of Avian Biologists In India. 7-10 December 2019. IISER Tirupati. Clock and urbanization. (Invited Talk)
- V World Congress of Chronobiology. CAM-SU Genomic Resource Center, Soochow University, Suzhou, China April 25-28, 2019. Brain but not liver retains daily expression of clock-genes during hibernation in terai tree frog (*Polypedates teraiensis*)
- International Symposium on Biological Rhythms. March 11-13, 2019. Department of Zoology, CCS University, Meerut, India. Clock and Urbanization: Effect of urban light environment on daily clock of tree sparrow (*Passer montanus*).
- International conference on Biodiversity, Environment and Human health: Innovations and Emerging trends. School of Life Sciences, Mizoram University. 12-14 November, 2018. Effect of urban light environment on daily clock of tree sparrow (*Passer montanus*).
- International conference on Molecular and Clinical aspects of Melatonin. Chulabhorn Graduate Institute Bangkok, Thailand 30-31 August 2018. Melatonin blocks inhibitory effects of LPD induced suppression of metabolic genes in the liver of mice.
- National Conference on recent trends in Zoological research in North-East India. Department of Zoology. North Eastern Hill University, Shillong, 19-21- April 2018. (Topic: Photic and nonphotic regulation of growth, development and metamorphosis in giant tree frog (*Rhacophorus maximus*) tadpoles.

- Biological Timing and health issues in 21st Century. Department of Zoology, Delhi University. 21-24 February, 2017. Cardiovascular and activity rhythms in upper-intestinal cancer patients.
- XXVI National Symposium on Chronobiology. Department of Studies in Zoology, Manasagangotri, Mysuru, University of Mysore, Mysuru. June 2nd and 3rd, 2016. Insight into molecular regulation of seasonal physiology in migratory song birds.
- International symposium on Integrative physiology and Comparative endocrinology (ISIPCE-2016). Department of Zoology, Banaras Hindu University. Feb 12 - 14, 2016. Adaptation of oxidative phosphorylation to photoperiod-induced seasonal metabolic states in migratory songbirds
- XXV National Symposium on Chronobiology: Time in biology and medicine. Pt. Ravishankar Shukla University, Raipur. March 27- 29, 2015. Temperature alters the expression of genes known to be involved in avian reproduction.
- National symposium on Behavioural ecology: molecules to organisms. Department of Zoology, Banaras Hindu University. Nov 7-9, 2014. Annual Life History-Dependent Gene Expression in the Hypothalamus and Liver of a Migratory Songbird.
- International conference on Comparative Endocrinology and Physiology. 21-23 October, 2013, Department of Zoology, RTM University Nagpur, Nagpur, India. Life-history state dependent expression of genes in genes involved metabolism in migratory birds.
- International Congress on Chronobiology 2012, Department of Zoology, University of Delhi, Delhi, October 03-07. Modulation of clock genes by pineal circadian oscillator.
- International Conference On Indian Ornithology 2011, Salim Ali Centre for Ornithology and Natural History Coimbatore, Nov 19-23. Circadian and seasonal regulation of migration in redheaded bunting, *Emberiza bruniceps*.
- Blue Grass Society for Neuroscience (BGSFN), Lexington KY, USA. March 31, 2011
- Society for Research on Biological Rhythms (SRBR), Destin Florida, U.S.A. May 22-26, 2010
- Rhythms in South Eastern Region Vanderbilt University, Nashville, Tennessee, USA. May 16, 2009.
- Seminar on Fish and Its Degrading Environment, B.S.N.V.P.G. College, Lucknow, Jan. 14, 2006.
- XVII National Symposium on Chronobiology, BHU, Varanasi, Oct. 1-3, 2005. Differential responses of the photoperiodic clock in two passerine birds possessing strongly self-sustained circadian system
- International Conference on Birds and Environment, Haridwar, Nov. 21-24, 2004. Seasonality in house sparrow.
- XV National Symposium on Chronobiology; School of Life Sciences, Pt. Ravishankar Shukla University, Raipur, Oct. 20-21, 2003. Circadian and seasonal response of house sparrow (*Passer domesticus*).
- National Symposium on Catfish Physiology & Comparative Endocrinology Varanasi, 2002.
- National Symposium on Chronobiology & Annual Meeting of Indian Society of Chronobiology, Faizabad-Ayodhya, 27-28 December, 2001. Melatonin blocks inhibitory effects of prolactin on reproduction linked phenomenon in red headed buntings.

Research Publications

Full length papers:

1. **AK Trivedi**, S Prakash and A Tripathi (2022). *Dactylogyrus kolodynensis* sp. n. (Platyhelminthes: Monogenea) infecting gills of *Osteobrama cotio* (Hamilton, 1822) (Cypriniformes: Cyprinidae) from India. Journal of Parasitic Diseases.
2. **AK Trivedi**, E Vanlalmalsawmi, Z Renthlei and L Jongte (2022). Food, not the photoperiod, entrains the circadian rhythms in the liver of Wistar albino rats. 14(2): 559-565.
3. R Lalpekhui, Z Renthlei, and **AK Trivedi** (2022). Molecular Expression of Clock Genes in Central and Peripheral Tissues of white-rumped munia (*Lonchura striata*). Chronobiology International. 39(8):1058-1067.
4. B K Borah, Z Renthlei, A Tripathi and **AK Trivedi** (2022). Molecular and epigenetic regulation of seasonal reproduction in Terai tree frog (*Polypedates teraiensis*). Photochemical & Photobiological Sciences.
5. BK Borah, Z Renthlei, A Tripathi and **AK Trivedi** (2022). Role of photoperiod, temperature and food on development of *Polypedates teraiensis* (Dubois, 1987) tadpoles. Journal of Environmental Biology. 43:1-12.
6. M Lalremruati , C Lalmuansangi , M Zosangzuali , L Tochwawng , **AK Trivedi**, N Senthil Kumar and Z Siama. (2022). Mussaenda macrophylla Wall. Exhibit anticancer activity against Dalton's lymphoma ascites (DLA) bearing mice via alterations of redox-homeostasis and apoptotic genes expression. The Journal of Basic and Applied Zoology. 83:6.
7. L Jongte and **AK Trivedi** (2022). Chronotype, sleep quality and academic performances among Mizo students. Chronobiology International. 39(3):398-408.
8. A Tripathi, **AK Trivedi** Agarwal N (2021). Some aspects of seasonal dynamics of *Dactylogyroides tripathii* (Platyhelminths: Monogenoidea) parasitising pool barb *Puntius sophore* (Actinopteri: Cyprinidae) in India. Scientia Parasitologica. 22(2-3): 79-87.
9. Z Renthlei Z, BK Borah and **AK Trivedi**. (2021). Urban environment alter the timing of progression of testicular recrudescence in tree sparrow (*Passer montanus*). *Environ Sci Pollut Res*. 28(24):31097-31107 doi: 10.1007/s11356-021-12918-6. 0944-1344.
10. Z Renthlei, L Hmar and **AK Trivedi**. (2021). High temperature attenuates testicular responses in tree sparrow (*Passer montanus*). *General and Comparative Endocrinology*. 5;301:113654.
11. Tserne TA, Borisenkov MF, Popov SV, Bakutova LA, Jongte L, **Trivedi AK**, Pecherkina AA, Dorogina OI, Martinson EA, Vetosheva VI, Gubin DG, Solovieva SV, Danilova LA, Turovinina EF, Symaniuk EE. (2021). Food Addiction and Weight in Students with High Academic Performance. Public Health Nutr. 26:1-7.
12. L Jongte and **AK Trivedi** (2021). Alterations of the cardiovascular rhythms and sleep quality in esophageal cancer Patients. *Biological Rhythm Research*. 52(3): 484-494.
13. Z Renthlei, BK Borah, T Gurumayum and **AK Trivedi** (2020). Season dependent effects of urban environment on circadian clock of tree sparrow (*Passer montanus*). *Photochemical & Photobiological Sciences*. 19(12):1741-1749.
14. BK Borah, Z Renthlei and **AK Trivedi** (2020). Hypothalamus but not liver retains daily expression of clock genes during hibernation in terai tree frog (*Polypedates teraiensis*). Chronobiology International. 37(4):485-492.
15. Z Renthlei and **AK Trivedi** (2019). Effect of urban environment on pineal machinery and clock genes expression of tree sparrow (*Passer montanus*). Environ Pollut. 26;255(Pt 2):113278.

16. S Sur, A Sharma , **AK Trivedi**, SK Bhardwaj and V Kumar V. (2019). Temperature affects liver and muscle metabolism in photostimulated migratory redheaded buntings (*Emberiza bruniceps*). in migratory redheaded buntings. *Journal of Comparative Physiology B*. 189(5):623-635.
17. **AK Trivedi**, S Sur, A Sharma, NJ Gupta and Kumar V. (2019). Temperature alters the hypothalamic transcription of photoperiod responsive genes in induction of seasonal response in migratory redheaded buntings. *Molecular and Cellular Endocrinology*. 1;493:110454.
18. **AK Trivedi**, I Mishra I and V Kumar. (2019). Temporal expression of genes coding for arylalkamine-N-acetyltransferase and melatonin receptors in circadian clock tissues: Circadian rhythm dependent role of melatonin in seasonal responses. *Physiology and Behaviour*. 207:167-178.
19. Z Renthlei, T Gurumayum, BK Borah and **AK Trivedi**. (2019). Daily expression of clock genes in central and peripheral tissues of tree sparrow (*Passer montanus*). *Chronobiology International*. 36(1):110-121.
20. A Tripathi, L Wangchu and **AK Trivedi** (2019). Prevalence and intensity of *Cornudiscoides agarwali* (Monogenoidea) on the gills of Day's mystus (*Mystus bleekeri*) in relation to some ecological and biological factors from Arunachal Pradesh, India. *Helminthologia*, 56(2): 141 – 150.
21. BK Borah, Z Renthlei, and **A K Trivedi** (2019). Seasonality in terai tree frog (*Polypedates teraiensis*): Role of light and temperature in regulation of seasonal breeding. *Journal of Photochemistry & Photobiology, B: Biology* 191:44–51.
22. L Jongte and AK Trivedi (2018). Biological timing and human health: Clock prospective. *Sci. Tech*. 6(1)13-21.
23. B K Borah, L Hauzel, Z Renthlei, and **A K Trivedi** (2018). Photic and non-photic regulation of growth and development of *Rjacobophorus maximus* tadpole. *Biological Rhythm Research*. 49(6):955-967.
24. Z Renthlei, B K Borah and **A K Trivedi** (2017). Effect of urbanization on daily behavior and seasonal functions in vertebrates. *Biological Rhythm Research*. 48:5, 789-804.
25. Z Renthlei, B K Borah and **A K Trivedi** (2017). Photoperiod induce developmental effects on silkworm, *Bombyx mori*. *Biological Rhythm Research*. 48(1):121-128.
26. **A K Trivedi**, S Malik, S Rani and V Kumar (2016) Pinealectomy abolishes circadian behavior and interferes with circadian clock gene oscillations in brain and liver but not retina in a migratory songbird. *Physiology and Behaviour*. 156: 156-163.
27. D Singh, **AK Trivedi**, Rani S, S Panda and V Kumar (2015) Circadian time in central and peripheral tissues in a migratory song bird: dependence on annual life history states. *The FASEB Journal*. 29(10): 4248-4255.
28. G Majumdar, **AK Trivedi**, N J Gupta and V Kumar (2015) Circadian synchronization determines critical day length for seasonal responses. *Physiology and Behaviour*. 147: 282-290.

29. **AK Trivedi**, S Malik, S Rani and V Kumar (2015) Adaptation of oxidative phosphorylation to photoperiod-induced seasonal metabolic states in migratory songbirds. *Comparative Biochemistry and physiology Part A*. 184: 34-40.
30. S Malik, J Singh, **AK Trivedi**, S Singh, S Rani and V Kumar (2015): Nocturnal melatonin level decodes daily light environment and reflect seasonal states in night migratory blackheaded bunting (*Emberiza melanocephala*). *Photochemical and photobiological sciences*. 14(5): 963-971.
31. **AK Trivedi**, J Kumar, S Rani and V Kumar (2014) Annual Life History-Dependent Gene Expression in the Hypothalamus and Liver of a Migratory Songbird: Insights into the Molecular Regulation of Seasonal Metabolism. *Journal of Biological Rhythms*. 29(5): 332-345.
32. **AK Trivedi**, S Rani and V Kumar (2014): Circadian adaptation to seasons: Effects on activity behavior in subtropical House Sparrow, *Passer domesticus*. *Biological Rhythm Research*. 45(3); 465-475.
33. **AK Trivedi** and V Kumar (2014) Melatonin: A circadian and seasonal signal in vertebrates. *Indian Journal of Experimental Biology*. 52: 425-437.
34. I Mishra, **AK Trivedi** and V Kumar (2014): Color morphs dependent entrainment of circadian activity rhythms in zebra finch, *Taeniopygia guttata*. *Indian Journal of Experimental Biology*. 52: 516-520.
35. G. Wang, C E Harpole, **AK Trivedi** and V M Cassone (2012): Differential regulation of bird song, Bird call and Locomotor behavior by the circadian clock and Pineal Melatonin in the Zebra finch, *Taeniopygia guttata*. *J. Biological Rhythms*. 27(2):145-155.
36. V Kumar, S Rani, S Malik, **AK Trivedi**, I Shwabl, B Helm and E Gwinner (2007): Daytime light intensity affects seasonal timing via changes in the nocturnal melatonin levels. *Naturwissenschaften*. 94(8):693-696.
37. **AK Trivedi**, S Rani and V Kumar (2006): Control of annual reproductive cycle in the subtropical house sparrow (*Passer domesticus*): Evidence for conservation of photoperiodic control mechanism in birds. *Frontiers in Zoology*. 3:12.
38. **AK Trivedi**, S Rani and V Kumar (2006): Natural daylight restricted to twilights delay the timing of testicular regression but does not affect the timing of the daily activity rhythm of the house sparrow (*Passer domesticus*). *Journal of circadian Rhythms*, 4:5.
39. S Rani, S Malik, **AK Trivedi**, S Singh and V Kumar (2006): A circadian clock regulates migratory restlessness in the blackheaded bunting (*Emberiza melanocephala*). *Current Science*. 91(8):1093- 1096.
40. **AK Trivedi**, S Rani and V Kumar (2005): Differential responses of the photoperiodic clock in two passerine birds possessing strongly self-sustained circadian system. *Chronobiology International*. 22(5):801-806.
41. **AK Trivedi**, S Rani and V Kumar (2004): Melatonin blocks inhibitory effects of prolactin on photoperiodic induction of body fattening, testicular growth and feather regeneration in the migratory male redheaded bunting (*Emberiza bruniceps*). *Reproductive Biology and Endocrinology*. 26:2(1)79.

Conference Proceedings:

1. **A K Trivedi**, I Mishra, S Rani and V Kumar (2011): Circadian and Seasonal regulation of Migration in Redheaded Bunting *Emberiza bruniceps*. First International conference on Indian Ornithology (ICIO), SACON, Coimbatore, India. Pp 115 – 116.
2. S Malik, J Singh, **A K Trivedi**, S Singh, S Rani and V Kumar (2011): Clock and migration: A perspective from laboratory studies on migratory buntings. First International conference on Indian Ornithology (ICIO), SACON, Coimbatore, India. Pp 103 – 105.

Boob/Book Chapters:

1. **A K Trivedi**, D. Singh, A. S. Dixit, and V Kumar: Pineal gland, melatonin and timekeeping in non- mammalian vertebrates: Avian perspective. In: Biological Timekeeping: Clocks, Rhythms and Behaviour (Kumar V., ed.) 2017. Springer, India ISBN 978-81-322-3686-3
2. Zothanmawii Renthlei and **A K Trivedi** (2017): Regulation of seasonal reproduction in higher vertebrates. ISBN 81-83305-72-2
3. Seasonality in house sparrow (*Passer domesticus*) Lambert Academic press. 978-3-659-87650-9