

- 1. Name** : **DR. SANGEETA RANI**
2. Designation : Professor
3. Institutional Address : Department of Zoology, University of Lucknow,
Lucknow – 226 007, India
4. Date of Birth : 12 June 1962
5. Academic qualifications: Ph.D. (Lucknow University)

6. Accomplishments including awards and honors

a) As faculty

- 2001: SERC (DST) Visiting Fellowship Award
- Co-Investigator and In-charge, DST-IRHPA Center for Excellence
- Max-Planck (short-term) Fellowship Awards
- 2003, 2004: Visiting Fellow (short-term), Texas A&M University
- 2002-2010: Faculty in DST-SERC Chronobiology Schools
- 2006: Swiss National Science Foundation Fellowship
- 2008: Coordinator, SERC School in Chronobiology
- 2007, 2009: Faculty in SERC School in Neurosciences
- 2009: Organizing Secretary, Symposium on “Functional Biology: Comparative Aspects”
- 2010-2011: Treasurer, Indian Society for Chronobiology
- 2011-2016: Member, National Planning Committee for SERC School in Chronobiology
- 2011: Fellow of Reproductive Society of Endocrinology (FRE)
- 2011: Special invitee Interface meeting of DST on Avian Biology
- Project Reviewer for grant applications submitted to DST
- Co-PI Indo-US Joint Center for Biological Timekeeping
- 2017-2019: Editor, SAMAY, Indian Society for Chronobiology
- 2018: National Fellowship Award by Indian Society of Chronomedicine
- 2019: Travel Award for V World Congress for Chronobiology, Suzhou, China
- 2019-2021: Executive Member, Indian Society for Chronobiology

b) As student

- UGC-CSIR NET Fellowship (JRF)
- Ram Ji Lal Gold medal for the best student in M. Sc.
- Awarded National Scholarship from Govt. of India
- Panna Lal Gold medal for the best student in B. Sc.

c) As Ph.D. supervisor

- Ms. Puja Budki worked as JRF/ SRF, awarded Ph. D., was selected for poster presentation in the 25th International Ornithological meeting, and got travel award from DST and CSIR and best oral presentation award in National Symposium on Chronobiology 2011
- Mr. Ashutosh Rastogi, worked as JRF/ SRF and awarded Ph.D., now working as Post Doctoral associate in New York University Campus, Abu Dhabi, got best student presentation award in National Symposium on Chronobiology 2011.
- Ms. Yatinesh Kumari worked as JRF/ SRF and awarded Ph.D., bagged best poster award in the EUCLOCK meeting (is an Integrated Project funded by the European Commission) 2010 at Bangalore, got second prize in poster presentation in National Symposium on Chronobiology 2011 and now working as lecturer at Monash University, Malaysia.
- Mr. Malik Zahid, awarded Ph. D., working as lecturer, Govt. Inter College, Kashmir
- Ms. Swati Srivastava, awarded Ph. D.
- Ms. Neerja Trivedi, awarded Ph. D.

- Ms. Neha Agarwal, Assistant professor at Ramabai Ambedkar Government Degree College, Gajraula, Armoha.
- Mr. Jayant Kumar, Assistant professor at Government Degree College, Todapur, Hardoi.
- Mr. Rajkumar, Assistant professor at Government girls Degree College. Fatehpur.
- Ms. Arjita Yadav, awarded Ph. D., working as guest faculty, genetics and genomics University of Lucknow from October 2020 till date
- Ms. Ruchi Komal, awarded Ph. D., now working as post-doctoral fellow, National Institute of Mental Health, USA,
- Ms. Anupama Yadav, BSR Fellow, was awarded III best oral presentation award at NSAB, 2018
- Ms. Anshu Dwivedi Awarded ICMR SRF Fellowship
- Mr. Abhishek Kumar selected under Medical and Health services, U.P
- Mr. Vaibhav Vaish bagged II Position in Oral Presentation in International Virtual Conference on Recent Trends in Animal Sciences, BHU, India (2022) and best poster award in V World Congress for Chronobiology at Suzhou, China (2019)

7. Teaching experience: ~26 years (since January 1994)

8. Research Experience: ~29 years (since January 1991)

9. Area of Current research: Physiology (Chronobiology), Endocrinology, and Reproductive Biology (Seasonal Breeding)

10. Research Publications

Research papers: 86, Book chapters: 10

11. Research guidance: Working: 06; Awarded: 11

12. Research Projects:

Principal Investigator:

- 2020 – 2022 Indo-US Center in Chronobiology funded by IUSSTF, New Delhi. (~Rs. 36 lakhs)
- 2020-2023: Mechanism of seasonal phenotypic plasticity in latitudinal songbird migrants; funded by SERB, New Delhi. (~Rs. 54 lakhs)
- 2016-2019: Effect of climate change on breeding strategy of songbirds, Twinning Grant from Department of Biotechnology, New Delhi (F. No. BT/PR16671/NER/95/241/2015; Rs. 62.01 Lac)
- 2014 – 2018 Indo-US Center for Biological Timing, funded by IUSSTF, New Delhi.
- 2013-2018: Anticipation in genes: Molecular, physiological and behavioral correlates of response of circa-annual clocks to seasons in night-migratory song birds, Department of Biotechnology, New Delhi (F. No. BT/PR4984/MED/30/752/2012; Rs. 1.13 Crore)
- 2008-2011: Intraspecific diversity in the spiny eel: A physiological and molecular study, DST, New Delhi (~ Rs. 40 Lacs)
- 2008-2011: Regulation of circadian and seasonal responses: role of social cues, UGC, New Delhi (~ Rs. 9 Lacs)
- 2004-2007: Role of food in regulation of circadian and seasonal responses in birds, DST, New Delhi (~ Rs. 25 Lacs)

Co-Investigator:

- 2007-2013: DST-IRHPA Center for Excellence on Biological Rhythm Research (~ Rs. 3.09 crores)

13. Research training and expertise:

- Standard techniques used for activity rhythm recordings
- Laparotomy and other approaches (castration, ovariectomy, thyroidectomy, pinealectomy, implantation of hormone capsules etc.)

- Radioimmunoassay and HPLC measurements of melatonin hormone
- In situ hybridization and immunocytochemical techniques
- Breeding and Hand Raising of the small birds
- Stereotaxy and neuroanatomy of small birds

14. Peer review duties:

- Reviewer of grant applications
- Research papers

15. Membership of scientific societies:

- *Life member, Indian Society for Chronobiology*
- Life member, Indian Pineal Study Group (IPSG)
- Life member, Society for Reproductive Biology and Comparative Endocrinology

16. Participation in the scientific meetings/ conferences/ symposia:

- *International: 24; National:32*

Lectures Delivered

International

- 2021:** Public Communication of Science and Technology 2020+1, University of Aberdeen, Scotland, UK (virtual)
- 2021** International Colloquium on Regulatory Mechanisms underlying Behavior, Physiology, and Development, Delhi (virtual)
- 2020** Annual Seasonality Symposium, University of Glasgow, UK (virtual)
- 2019** V World congress in Chronobiology, Suzhou, China
- 2019** JBR-SAGE symposium on Chronobiology, Suzhou, China
- 2018** 27th International Ornithological Congress, Vancouver, Canada
- 2018** 3rd Asian Chronobiology Forum and Sapporo symposium, Sapporo, Japan
- 2016** International conference on Chronobiology, China
- 2015** Cold Spring Harbor Asia Symposium on Biological Rhythms, China
- 2015** EBRS/ WCC Chronobiology conference, Manchester, UK
- 2015** Neuropeptides & Neurotransmitters: Role of Physiology & Pathophysiol, Bhubaneswar
- 2014** International Congress on Chronobiology, Romania
- 2012** International Symposium on Avian Endocrinology, Japan
- 2010** 25th International Ornithological Congress, Brazil
- 2008** International Symposium on Avian Endocrinology, Leuven, Belgium
- 2008** 4th International Conference for Comparative Physiology & Biochemistry, Kenya
- 2008** IV Intl, Conference in Africa for Comparative Physiology & Biochemistry, Kenya
- 2006** International Ornithological Congress, Hamburg, Germany
- 2006** Psychological Clinic BASEL Switzerland.
- 2004** International Symposium of Avian Endocrinology, Arizona, USA, June.
- 2006** 24th International Ornithological Congress, Hamburg, Germany
- 2006** Psychiatric University Clinics, Basel, Switzerland
- 2006** University of Fribourg, Switzerland

INDIA

- 2019** 2nd National symposium on Avian Biology, Tirupati
- 2013** International conference on Comparative Endocrinology, Nagpur
- 2011** International Congress of Indian Ornithology, SACON, Coimbatore
- 2011** National Symposium on Chronobiology, Kurukshetra
- 2011** International Symposium on Current Trends in Endocrine and Reproductive Health, Mysore
- 2011** UGC-SAP Meeting at Department of Zoology, Lucknow University, Lucknow
- 2010** International Symposium on Endocrinology and Reproduction & 28th Meeting of the Society for Reproductive Biology and Comparative Endocrinology, New Delhi

- 2010 National Symposium on Chronobiology, Jamshedpur
 2008 Indian Society for Chronobiology, Raipur
 2008 Thematic workshop in Avian Biology
 2008 Thematic Workshop on Avian Biology, Haridwar,
 2007 XIXth National Symposium on Chronobiology, Madurai,
 2006 Trends and Techniques in Molecular Neuroendocrinology, Hyderabad
 2006 Recent Advances in Applied Zoology, CCS University, Meerut
 2006 Trends and techniques in Molecular Endocrinology, Hyderabad
 2006 Invited lecture in Symposium of Indian Society for Chronobiology, Shillong.
 2006 Recent Advance in Appl. Zoology, CCS University, Meerut, (Plenary lecture).
 2005 XXII National Symposium of the SEBCE; Santiniketan.
 2005 National Symposium on Comparative Endocrinology and Reproductive Physiology: Retrospect and prospect, Delhi,
 2005 National Symposium on Chronobiology, Varanasi,
 2005 XXII National Symposium of the Society for Reproductive Biology and Comparative Endocrinology, Santiniketan,
 2004 Frontiers in Molecular Biology, University of Hyderabad, Hyderabad
 2004 XVI National Symposium on Chronobiology & Annual Meeting of Indian Society of Chronobiology, Annamalai University, Annamalainagar
 2004 International Conference on Bird & Environment, Haridwar
 2003 XV National Symposium on Chronobiology & Annual Meeting of Indian Society of Chronobiology, Raipur
 2004 National Symposium on Chronobiology; Chidambaram.
 2002- 2010 DST-SERC Schools in Chronobiology
 2002 Natl Sem. on Environmental Biology and Fish Biology, Vishwa Bharti, Santiniketan.
 2001 National Symposium on Chronobiology & Annual Meeting of Indian Society of Chronobiology, Faizabad-Ayodhya
 2000 International Symposium on Avian Endocrinology, Varanasi
 2000 XIX Natl. Symposium of Soc. for Reprod. Biology and Comp. Endocrinology; Baroda.
 2000 National Symposium on Chronobiology; Gulbarga.
 1999 National Symposium on Recent Advances in Pineal Research; Raipur.

17. Participation in Training, UGC Orientation/ Refresher Course, Workshops:

- Hands-on training in techniques in Molecular Biology, Hyderabad, 2005
- UGC Refresher Course in Zoology, Lucknow, 2001, 2002
- Workshop on Remote Sensing and its Application at Lucknow, April 2001
- Workshop on Radiation Chem. and Application of Radioisotopes at Pantnagar, 2000
- Diploma from Erasmus School of Chronobiology, Ferrara, Italy, 1999
- Orientation Course sponsored by the University Grants Commission, 1994

18. Administrative responsibility:

- Chief Provost, Lucknow University Halls, University of Lucknow
- Vice Chairman, Delegacy, University of Lucknow
- Teacher in-charge, Departmental Library
- Teacher Coordinator of Students' Zoological Society in the Department
- Co-curricular and extra-curricular activities at the level of Post-graduate students
- Executed responsibilities in the department as and when asked by Head of the Department

Research publications of Prof. Sangeeta Rani

1. Yadav A, Kumar R, Tiwari J, Vaish V, **Malik S** and Rani S. (2022). Effect of artificial light at night on sleep and metabolism in weaver birds. Environmental Science and Pollution Research. <https://doi.org/10.1007/s11356-022-20875-x>. ISSN: 1614-7499, **IF 4.223**
2. Gupta P, Sinha A, Malik S and **Rani S**. (2022). Dawn and dusk chorus as a potential zeitgeber. Biological Rhythm Research. doi/full/10.1080/09291016.2022.2069646. ISSN: 0929-1016. **IF 1.219**
3. Kumar J, Malik S, Bhardwaj SK and **Rani S**. (2021). Impact of light at night is phase dependent: A study on migratory redheaded bunting (*Emberiza bruniceps*). Frontiers in Ecology and Evolution. ISSN: 2296-701X. **IF 4.171**
4. Dwivedi A, Malik S and **Rani S**. (2021). The Unlock Consequences: Changes in Daily behaviors and mental health in Indian population during the second wave of COVID-19. Sleep Science. ISSN: 1984-0659. **IF 1.615**
5. Yadav A, Tiwari J, Vaish V, Malik S and **Rani S**. (2021). Migration gives sleepless nights to the birds: a study on Palaearctic-Indian migrant, *Emberiza bruniceps*. Journal of Ornithology. 162, 77-87. ISSN: 0021-8375. **IF: 1.75**
6. Sharma A, Das S, Sur S, Tewari J, Chaturvedi K, Agarwal N, Malik S, **Rani S** and Kumar V. (2021). Photoperiodically driven transcriptome-wide changes in blood and hypothalamus reveal transcriptional differences between crucial life-history states in migratory songbirds. Scientific Reports. ISSN: 2045-2322. **IF 3.998**
7. Yadav A, Kumar R, Verma P, Malik S and **Rani S**. (2020). Avian sleep and its resemblance with mammals. Journal of Scientific and Technical Research. 10(1&2), 24-29. ISSN: 2278-3350
8. Singh O, Agarwal N, Yadav A, Basu S, Malik S, **Rani S**, Kumar V and Singru PS. (2020). Concurrent changes in photoperiod-induced seasonal phenotypes and hypothalamic CART peptide-containing systems in night-migratory redheaded buntings. Brain Structure and Function. 225(9), 2775-2798. doi: 10.1007/s00429-020-02154-y. ISSN: 1863-2653. **IF: 3.27**
9. Sharma A, Subhajit D, Komal R, Malik S, **Rani S** and Kumar V. (2020). Seasonal reproductive state determines gene expression in the hypothalamus of a latitudinal migratory songbird during the spring and autumn migration. Molecular and Cellular Endocrinology 508:110794. ISSN: 0303-7207
10. Agarwal N, Komal R, Kumari Y, Malik S, **Rani S** and Kumar V. (2019). Development of vernal migration in redheaded buntings: Concurrent behavioral, physiological and neural changes under stimulatory photoperiods. Photochemical and Photobiological Sciences, DOI: 10.1039/C9PP00273A.
11. Sharma A, Singh D, Malik S, Gupta NJ, **Rani S** and Kumar V. (2018). Difference in control between spring and autumn migration in birds: insight from seasonal changes in hypothalamic gene expression in captive buntings. Proceedings of the Royal Society B 285(1885). ISSN: 0962-8452. **(9/85 in Biology)**
12. Mishra I, Agarwal N, **Rani S** and Kumar V (2018) Scotostimulation of reproductive neural pathways and gonadal maturation are not correlated with hypothalamic expression of deiodinases in subtropical spotted munia. Journal of Neuroendocrinology. doi: 10.1111/jne.12627.
13. Kumar J, Malik S, Bhardwaj SK and **Rani S**. (2018). Bright light at night alters the perception of daylength in Indian weaver bird (*Ploceus philippinus*). Journal of Experimental Zoology A 329(8-9): 488-496 ISSN: 2471-5646. **(69/167 in Zoology)**

14. Agarwal N, Mishra I, **Rani S** and Kumar V (2017) Temporal expression of clock genes in central and peripheral tissues of spotted munia under varying light conditions: evidence for circadian regulation of daily physiology in a non-photoperiodic circannual songbird species. Chronobiology International 35(5):1-16.
15. Komal R, Khushboo, Dwivedi A, Vaish V and **Rani S** (2017) Conquering the night: understanding nocturnal migration in birds. Biological Rhythm Research 48:747-755. (The Netherlands)
16. Yadav A, Rajkumar, Tiwari J, Kumar V and **Rani S** (2017) Sleep in birds: lying on the continuum of activity and rest. Biological Rhythm Research 48:805-814. (The Netherlands)
17. Agarwal N, Mishra I, Komal R, **Rani S** and Kumar V (2017) Circannual testis and moult cycles persist under photoperiods that disrupt circadian activity and clock gene cycles in spotted munia. Journal of Experimental Biology 15:4162-4168.
18. Yadav A, **Rani S** and Singh S (2016) Working 'Out-of-Phase' with reference to chronotype compromises sleep quality in police personnel. Chronobiology International 33:151-160.
19. Agarwal N, Singh S, Malik S, Yadav G and **Rani S**. (2016). Patterns and diversity in locomotor activity in spotted munia (*Lonchura punctulata*). Biological Rhythm Research 48:13-21. ISSN: 0929-1016.
20. Singh D, Trivedi N, Malik S, **Rani S** and Kumar V. (2016). Timed food availability affects circadian behavior but not the neuropeptide Y expression in Indian weaverbirds exposed to a typical light environment. Physiology and Behaviour 161: 81-89. ISSN: 0031-9384.
21. Rajkumar, Singh D, **Rani S** and Malik S. (2016). Seasonal trend in movement directions at dawn and dusk: a study on crow and white herons. Biological Rhythm Research 47(4):553-559. ISSN: 0929- 1016.
22. Surbhi, Rastogi A, Malik S, **Rani S** and Kumar V. (2016). Changes in brain peptides associated with reproduction and energy homeostasis in photosensitive and photorefractory migratory redheaded buntings. General and Comparative Endocrinology 230-231:67-75. ISSN: 0016-6480.
23. Surbhi, Rastogi A, Malik S, **Rani S** and Kumar V. (2016). Seasonal neuronal plasticity in song-control and auditory forebrain areas in subtropical non-migratory and Palearctic-Indian migratory male songbirds. The Journal of Comparative Neurology 524:2914-2929. ISSN: 0021-9967. (6/167 in Zoology; 103/261 in Neuroscience)
24. Trivedi A, Malik S, **Rani S** and Kumar V. (2016). Pinealectomy interferes with circadian clock gene oscillations in the brain and liver but not retina in migratory redheaded bunting. Physiology and Behaviour 156: 156-163.
25. Yadav A, **Rani S** and Singh S. (2016) Neend bhi jaruri hai. Vigyaan Pragati 6(4): 28-23 [ISSN: 0042-6075].
26. Rastogi A, Thakur S, Malik S, **Rani S** and Kumar V. (2016). Annual life-history dependent seasonal differences in neural activity of the olfactory system between non-migratory and migratory songbirds. Behavioural Brain Research 296: 233-239.
27. Singh D, Trivedi AK, **Rani S**, Panda S and Kumar V (2015) Circadian timing in central and peripheral tissues in a migratory songbird: Dependence on annual life-history states. The FASEB Journal 29(10):4248-4255.
28. Surbhi, Rastogi A., **Rani S**. and Kumar V. (2015) Seasonal plasticity in the peptide neuronal systems: Potential roles of GnRH, GnIH, NPY and VIP in regulation of reproductive axis in subtropical Indian weaver birds. Journal of Neuroendocrinology 27(5):357-69.

29. Agarwal N, Srivastava S, Malik S, **Rani S**, Kumar V. (2015). Altered light conditions during spring: Effects on timing of migration and reproduction in migratory redheaded bunting (*Emberiza bruniceps*). Biological Rhythm Research 46(5): 647-657.
30. Malik S, Singh J, Trivedi AK, Singh S, **Rani S** and Kumar V (2015). Nocturnal melatonin levels decode daily light environment and reflect seasonal states in night-migratory blackheaded bunting (*Emberiza melanocephala*). Photochemical and Photobiological Sciences, 14: 963-971.
31. Trivedi AK, Malik S, **Rani S** and Kumar V (2015). Adaptation of oxidative phosphorylation to photoperiod-induced seasonal metabolic states in migratory songbirds. Comparative Biochemistry and Physiology A, 184: 34-40.
32. Srivastava A, Malik S, Yadav G and **Rani S**. (2015). Intermittent food absence motivates reallocation of locomotion and feeding in spotted munia (*Lonchura punctulata*). Journal of Circadian Rhythms, 13(5): 1-7, DOI: <http://dx.doi.org/10.5334/jcr.af>. ISSN: 1740-3391.
33. Yadav G, Malik S, **Rani S** and Kumar V (2015). Role of light wavelengths in synchronization of circadian physiology in songbirds. Physiology and Behaviour, 140: 164-171.
34. Majumdar G, **Rani S** and Kumar V (2015) Hypothalamic gene switches control transitions between seasonal life history states in a night-migratory photoperiodic songbird. Molecular and Cellular Endocrinology 399: 110-121.
35. Srivastava A, Trivedi N, Malik S, **Rani S** and Kumar V (2015). Molecular basis of photoperiodic control of reproductive cycle in a subtropical songbird, the Indian weaver bird (*Ploceus philippinus*). General and Comparative Endocrinology. 220: 41-45.
36. Malik S, Singh S, **Rani S** and Kumar V (2014). Life at a different pace: Annual itineraries are conserved in seasonal song birds. Journal of Biosciences, 39(3): 485-491.
37. Budki P, Malik S, **Rani S** and Kumar V (2014) Circadian rhythms are not involved in the regulation of circannual reproductive cycles in a sub-tropical bird, the spotted munia. Journal of Experimental Biology, 217: 2569-2579.
38. Malik S, Yadav G, **Rani S** and Kumar V (2014) Light wavelength dependent circadian and seasonal responses in blackheaded bunting. Indian Journal of Experimental Biology, 52(5): 448-459.
39. Malik Z, Malik S, Kumar V and **Rani S** (2014) Photoperiodic effects on activity behaviour in the spiny eel (*Macrogathus pancalus*). Indian Journal of Experimental Biology, 52(5): 521-526.
40. Malik Z, Malik S and **Rani S** (2014). Neuropeptide Y (NPY) distribution in the forebrain of adult spiny eel, *Macrogathus pancalus*. Journal of Endocrinology and Reproduction, 18(1): 75-86.
41. Malik S, Budki P, **Rani S** and Kumar V (2014) Optimization of circadian adaptation to physical enrichment: effects on activity behaviour in a subtropical songbird. Journal of Ornithology, 155(1): 283-290.
42. Trivedi AK, Kumar J, **Rani S** and Kumar V (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 29:332-345.
43. Surbhi, Kumari Y, **Rani S**, Tsutsui K and Kumar V. (2014) Duration of melatonin regulates seasonal plasticity in subtropical Indian weaver bird, *Ploceus philippinus*. General and Comparative Endocrinology DOI: 10.1016/j.ygcen.2014.06.004.

44. Srivastava S, **Rani S** and Kumar V (2014) Photoperiodic induction of pre-migratory phenotype in a migratory songbird: Identification of metabolic proteins in flight muscles. Journal of Comparative Physiology B. 10.1007/s00360-014-0827-y.
45. Majumdar G, Yadav G, **Rani S** and Kumar V (2014). A photoperiodic molecular response in migratory redheaded bunting exposed to a single long day. General and Comparative Endocrinology 204:104-113.
46. Trivedi AK, **Rani S** and Kumar V (2014) Circadian adaptation to seasons: Effects on activity behavior in subtropical house sparrow, *Passer domesticus*, Biological Rhythm Research 45: 465-475.
47. **Rani S** and Kumar V (2014) Photoperiodic regulation of seasonal reproduction in higher vertebrates. Indian Journal of Experimental Biology 52: 413-419.
48. **Yadav A**, Rani S and Singh S.)2014(Waqt ki har shai gulam. Vigyan Pragati 6 3(11): 46 - 48 [ISSN: 0042-6075].
49. **Rani S** and Kumar V (2013). Avian circannual systems: persistence and sex differences. General and Comparative Endocrinology 190:61-67.
50. Rastogi A, Kumari Y, **Rani S**, Kumar V (2013) Neural correlates of migration: activation of hypothalamic clock(s) in and out of migratory state in the blackheaded bunting (*Emberiza melanocephala*). PLOS One 8: e70065
51. Singh D, Kumari Y, Rastogi A, **Rani S** and Kumar V (2013) Neuropeptide Y mRNA and peptide in the night-migratory redheaded bunting brain. Cell Tissue Research, PMID: 23797336
52. Kumari Y, Budki P, Singh S, Malik S and **Rani S**. (2013) Goraiya: Prajnan ka ek prayas. Vigyan Pragati, special issue on Childrens' day, pp 21-23.
53. Singh D, **Rani S** and Kumar V (2013) Daily Expression of Six Clock Genes in Central and Peripheral Tissues of a Night-Migratory Songbird: Evidence for Tissue Specific Circadian Timing. Chronobiology International, PMID: 23971885
54. Budki P, **Rani S** and Kumar V (2012) Persistence of circannual rhythms under constant periodic and aperiodic light conditions: sex differences and relationship with the external environment. Journal of Experimental Biology 215: 3774-3785
55. Singh J, **Rani S** and Kumar V (2012) Functional similarity in relation to the external environment between circadian behavioral and melatonin rhythms in the subtropical Indian weaver bird. Hormones and Behaviour 61: 527-34
56. Singh A, Rastogi, **Rani S** and Kumar V (2012) Food availability affects circadian clock controlled activity and zugunruhe in night migratory male blackheaded bunting (*Emberiza melanocephala*). Chronobiology International 29:15-25
57. Singh J, Budki P, **Rani S** and Kumar V (2012) Temperature alters the photoperiodically controlled phenologies linked with migration and reproduction in a night-migratory songbird. Proceedings of Royal Society, London B 279: 509-515
58. Rastogi A, Kumari Y, **Rani S** and Kumar V (2011). Phase inversion of neural activity in the olfactory and visual systems of a night-migratory bird during migration. European Journal of Neuroscience 34:99-109.

60. Malik S, Singh J, Trivedi AK, Singh S, **Rani S** and Kumar V (2011) Clock and migration: a perspective from laboratory studies on migratory buntings. Proceedings of the first International Conference on Indian Ornithology (ICIO), pp 103-105.
61. Singh J, **Rani S**, and Kumar V (2010) Presence of a conspecific renders survival advantages in the migratory redheaded bunting: test through the effects of restricted feeding on activity pattern and survivorship. Chronobiology International 27:111-127.
62. Kumar V, Wingfield JC, Dawson A, Ramenofsky M, **Rani S** and Bartell P (2010). Biological Clocks and Regulation of Seasonal Reproduction and Migration in Birds. Physiological and Biochemical Zoology (USA). 83:827-35
63. **Rani S**, Singh S, Malik S, Singh J, and Kumar V (2009) Synchronization of Indian weaverbird circadian rhythms to food and light zeitgebers: Role of pineal. Chronobiology International 26: 653- 665.
64. Budki B, **Rani S**, and Kumar V (2009) Food deprivation during photosensitive and photorefractory life history stages affects reproductive cycle in the migratory redheaded bunting (*Emberiza bruniceps*). Journal of Experimental Biology 212:225-230.
65. Kumar V, **Rani S**, Malik S, Trivedi AK, Schwabl I, Helm B and Gwinner E (2007) Daytime light intensity affects seasonal timing via changes in nocturnal melatonin levels. Naturwissenschaften 94:693-696 (Germany).
66. **Rani S**, Singh S and Kumar V (2007) Photoperiodism, pineal clock and seasonal reproduction in the Indian weaver bird (*Ploceus philippinus*). Journal of Ornithology (24th International Ornithological Congress Proceeding) 148: S610-621 (Germany).
67. Trivedi AK, **Rani S** and Kumar V (2006) Control of annual reproductive cycle in the subtropical house sparrow (*Passer domesticus*): Evidence for conservation of photoperiodic control mechanisms in birds. BMC: Frontiers in Zoology 3:12
68. **Rani S**, Malik S, Trivedi AK, Singh S and Kumar V (2006) A circadian clock regulates migratory restlessness in the blackheaded bunting *Emberiza melanocephala*. Current Science 91:1093-1096 (India).
69. Trivedi AK, **Rani S** and Kumar V (2006) Natural daylight restricted to twilights delays 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 (USA).
70. Kumar V, **Rani S** and Singh BP (2006) Biological clocks help reduce the physiological conflicts in avian migrants. Journal of Ornithology 147:281-286 (Germany).
71. **Rani S**, Singh S and Kumar V (2005) The pineal clock affects behavioural circadian rhythms but not photoperiodic induction in the Indian weaver bird (*Ploceus philippinus*). Journal of Ornithology 146:355-364 (Germany).
72. Trivedi AK, **Rani S** and Kumar V (2005) Differential responses of the photoperiodic clock in two passerine birds possessing a strongly self-sustained circadian system. Chronobiology International 22: 801-806 (USA).
73. **Rani S**, Singh S, Misra M, Malik S, Singh BP and Kumar V (2005) Daily light regulates seasonal responses in the migratory male redheaded bunting (*Emberiza bruniceps*). Journal of Experimental Zoology 303A: 541-550 (USA).
74. Trivedi AK, **S. Rani** and V. Kumar (2004) Melatonin blocks inhibitory effects of prolactin on photoperiodic induction of gain in body mass, testicular growth and feather regeneration in the

migratory male redheaded bunting (*Emberiza bruniceps*) Reproductive Biology and Endocrinology (online BioMed Central) 2: 79 (USA).

75. Misra M, **Rani S**, Singh S and Kumar V (2004) Regulation of seasonality in the migratory male blackheaded bunting (*Emberiza melanocephala*). Reproduction Nutrition & Development 44: 341-352 (France).
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