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Academic Qualification

- **Ph.D in Zoology (2011)**
Title - Diversity and ecology of ciliated protozoa from select biotopes, and a recombinant cell line of *Tetrahymena thermophila* as potential model for toxicological assays.
Department of Zoology, University of Delhi, Delhi, India.
- **Master of Science (2003-2005)**
Microbiology: **Thesis title -** Characterization of thermophilic *Streptomyces* BN7 based on polyphasic approach. Department of Zoology, University of Delhi, Delhi (last six months of M.Sc.).
- **Bachelor of Science (2000-2003)**
Zoology, Botany, Chemistry; University of Delhi, Delhi, India.
- **Certificate in German (2006-07)**
University of Delhi, Delhi, India.
College: SGTB Khalsa College, University of Delhi, Delhi, India.

Research experience

- **Scientist-D** (April 2017-Present) at the Zoological Survey of India, Prani Vigyan Bhawan, M-Block, New Alipore, Kolkata-700 053, India.
- **Research Professor** (Jan 2016–Apr 2017) at the Department of Biological Sciences, University of Ulsan, Ulsan, 44610, South Korea.
- **Post-doctoral Researcher** (Aug 2014–Oct 2015) at the FB Organismische Biologie, Universität Salzburg, Hellbrunnerstr. 34, A-5020 Salzburg, Austria.
- **Post-doctoral Researcher** (Mar 2013–Jun 2014) at the Dept. of Environmental and Natural Sciences, Operative Unit: Animal and Molecular Ecology, University of Camerino, Via Gentile III da Varano, 62032 Camerino (MC), Italy.
- **Post-doctoral Researcher** (Nov 2012–Feb 2013) at the FB Organismische Biologie, Universität Salzburg, Hellbrunnerstr. 34, A-5020 Salzburg, Austria.
- **Post-doctoral Researcher** (Jun 2011–Nov 2012) at the Dept. of Environmental and Natural Sciences, Operative Unit: Animal and Molecular Ecology, University of Camerino, Via Gentile III da Varano, 62032, Camerino (MC), Italy.

- **Pre-doctoral Researcher** (Jul 2009–Jul 2010) at the Dept. of Environmental and Natural Sciences, Operative Unit: Animal and Molecular Ecology, University of Camerino, Via Gentile III da Varano, 62032, Camerino (MC), Italy.
- **Senior Research Fellow** (Apr 2009–Jun 2009) in the Department of Biotechnology, Government of India, project at the University of Delhi, India.
- **Senior Research Fellow** (Dec 2007–Mar 2009) in the Department of Science and Technology, Government of India, project at the University of Delhi, India.
- **Junior Research Fellow** (Dec 2005–Nov 2007) in the Department of Science and Technology, Government of India, project at the University of Delhi, India.

Student's supervised/co-supervised/interns

Co-Supervisor for Ph.D.

- Ph.D. Co-Supervisor of Mr. Subhadeep Ghosh, who is registered for Ph.D. at the University of Calcutta and currently pursuing his course work.

Post-Doctoral Fellow (PDF)

- **Dr. Daizy Bharti** working as Post-Doctoral Fellow - **PDF ZSI** under my supervision on the assignment 'Faunal diversity of Ramsar wetlands' and internal programs of ZSI on free living ciliates, flagellates, gastrotrichs, and platyhelminthes. (July 2018 – till present).

Junior Research Fellows (JRFs) in external funded project

- **Mr. Arnab Ghosh**, (University of Calcutta) working as **CSIR-JRF** under my supervision on the topic 'Diversity of eukaryotic microbes from agricultural field using integrative approach'. (March 2021 onwards).
- **Mr. Subhadeep Ghosh**, (University of Calcutta) working as **JRF** under my supervision in a DST project '*Barcoding free living protozoan ciliates from the conserved aquatic ecosystems of Himachal Pradesh, India*'. (Feb 2020 onwards). **NET qualified.**

Dissertations

- **Ms. Shubhashree Chakraborty**, University of Madras, for her Master Dissertation entitled '*Diversity and distribution of free living protozoans (testate amoebae and ciliates) in India: A GIS based approach*'. (Supervisor - 2017).
- **Mr. Marco Simonetti**, University of Camerino, Italy on '*Tetrahymena thermophile: a model organism for the development of molecular ecotoxicity tests*'. (Co-tutor – 2010).
- **Mr. Brijveer Singh, Ms. Leena Jain, Ms. Nitya Tandon, Ms. Sapna Nimesh, and Ms. Shikha Singh** – Graduate students - Sharda University, Noida, UP, on '*Biodiversity of ciliates in a freshwater Lake in Kolkata*'. (May 2021).

Internship to Master students –

- **Indrani Das**, University of Calcutta on '*Identification of free living protozoan ciliates from water samples and their detailed biometric characterization*'. (2019).
- **Anish Ganguly**, University of Calcutta on '*Review emphasizing the use of ciliates as model organisms for ecotoxicological studies*'. (2020).

Research Interests

- Cataloguing, description of new taxa and redescription of poorly know ciliated protozoa.
- Development of *Tetrahymena*-based assay; “prognostic” assay (i.e., able to detect sub-lethal toxicant effects through exploitation of stress gene activation responses), ciliates as potential model for a valid substitute to animal tests in ecotoxicology.
- Heavy metals/nanoparticles response in the resting cyst and vegetative cells of soil/water ciliates.
- Use of ciliated protozoa as bio-indicators of soil/water quality; in agriculture fields under different farming practices, industrial polluted sites and extreme habitats.
- Study of protozoan community and their adaptation to high sulphur tolerance, Photo-sensitivity, feeding behaviour, and cytotoxic compounds.
- Molecular phylogeny and evolution of protozoan ciliates, employing ribosomal (SSU) and mitochondria (COI) genes.

Research Projects

1. DST core research grant. “*Barcoding free living protozoan ciliates from the conserved aquatic ecosystems of Himachal Pradesh, India*”. (Ongoing Jan 2020-Jan 2023; Principal Investigator). (Rs. 30.83 lakh).
2. Project under the AICOPTAX Scheme. “*Diversity of free living protozoan ciliates from the high altitude wetlands of Jammu and Kashmir, India*”. (Accepted for funding; Principal Investigator). (Rs. 65.68 lakh)
3. Project under the AICOPTAX Scheme. “*Diversity and distribution of free living and parasitic protozoans from the Gangetic plains, India*”. (Accepted for funding; Co-principal Investigator). (Rs. 60.43 lakh).

ZSI - In-house projects (ongoing and completed):

4. *Bio-indicative value of protozoan ciliates, amoeba, and mites to assess health of agricultural, natural, and anthropogenically disturbed soils of India*. (2021-2024; Ongoing, ZSI Annual program of Research; Principal Investigator).
5. *Fauna of Deccan peninsula – ciliates and Gastrotrichs*. (2020-2023; Ongoing, ZSI Annual program of Research; Co-principal Investigator).
6. *Studies on the ciliates and bacterial communities associated with corals based on morphology and molecular tools*. (2019-2022; Ongoing, ZSI Annual program of Research; Principal Investigator).
7. *Diversity and ecology of protozoan ciliates based on morphology and molecular analysis from the Ganga (Hooghly) River*. (2018-2022; Ongoing, ZSI Annual program of Research; Principal Investigator).
8. *Fauna of Buxa Tiger Reserve, Mahananda Wildlife Sanctuary, Gorumara and Chapramari Wildlife Sanctuary – Free living ciliated protozoans*. (Completed: 2017-2020; ZSI Annual program of Research; Co-Principal Investigator).
9. *Fauna of tropical rain forests, Western Ghats, Kerala – Free living ciliated protozoans*. (Completed: 2016-2019; ZSI Annual program of Research; Co-principal Investigator).

List of publications:
Peer reviewed SCI journals

1. Bharti D., **Kumar S.**, La Terza A. and Chandra K. 2020. Dispersal of ciliated protist cysts: mutualism and phoresy on mites. *Ecology*. 101 (9), e03075. (*SCI impact factor*: 4.7).
2. Kabir A.S., Bharti D., **Kumar S.**, Shazib S.U.A. and Shin M.K. 2020. Redescription of *Rigidohymena inquieta* (Stokes, 1887) Berger, 2011 as *Metahymena inquieta* gen. nov., comb. nov. (Ciliophora, Hypotricha) based on morphology, morphogenesis, and molecular phylogeny. *Journal of Eukaryotic Microbiology*. 67 (5): 541-554. (*SCI impact factor*: 2.1).
3. Bharti D., Brusa F., **Kumar S.** and Chandra, K. 2020. First record of *Stenostomum sphagnetorum* (Platyhelminthes, Catenulida) from India. *Zootaxa* 4816 (3): 392–396. (*SCI impact factor*: 0.9).
4. Bharti D., **Kumar S.** and La Terza A., Chandra K. 2019. Morphology and ontogeny of *Tetmemena indica* n. ssp. from the Thane Creek, Mumbai, India. *European Journal of Protistology*. 71:125629. (*SCI impact factor*: 2.4).
5. Bharti D., **Kumar S.**, Varatharajan G.R., Kamra K. and La Terza A. 2018. Shedding light on the polyphyletic behavior of the genus *Sterkiella*: the importance of ontogenetic and molecular phylogenetic approaches. *PLoS ONE*, **13(11):e0207688** (*SCI impact factor*: 2.77).
6. **Kumar S.**, Bharti D., Kabir A. S., Hong J. S. and Shin M. K. 2018. *Rubrioxxytricha guamense* nov. spec. (Ciliophora, Spirotricha), a novel hypotrich ciliate from Guam (United States), Micronesia. *Journal of Eukaryotic Microbiology* 65, 392–399. (*SCI impact factor*: 2.1).
7. Bharti D., **Kumar S.** and La Terza A. 2017. Description and molecular phylogeny of a novel hypotrich ciliate from the soil of Marche Region, Italy; including notes on the MOSYSS Project. *Journal of Eukaryotic Microbiology* 64, 678–690. (*SCI impact factor*: 2.1).
8. **Kumar S.**, Bharti D., Shazib S.U.A., and Shin M. K. 2017. Discovery of a new hypotrich ciliate from petroleum contaminated soil. *PLoS ONE* 12(6):e0178657. (*SCI impact factor*: 2.80).
9. Geisan et al. 2017. Soil protistology rebooted: 30 fundamental questions to start with. *Soil Biology & Biochemistry*, 111:94e103. (*SCI impact factor*: 4.85).
10. **Kumar S.** and Foissner W. 2017. Morphology and ontogenesis of *Stylonychia (Metastylonychia) nodulinucleata* nov. subgen. (Ciliophora, Hypotricha) from Australia. *European Journal of Protistology* 57, 61–72. (*SCI impact factor*: 2.4).
11. **Kumar S.**, Bharti D., Quintela-Alonso P., Shin M. K. and La Terza A. 2016. Fine-tune investigation on three Stylonychid (Ciliophora, Hypotrichida) ciliates. *European Journal of Protistology* 56, 200–218. (*SCI impact factor*: 2.4).
12. Bharti D., **Kumar S.** and La Terza A. 2016. *Rigidosticha italiensis* n. gen., n. sp. (Ciliophora, Spirotricha), a novel large hypotrich ciliate from the soil of Lombardia, Italy. *European Journal of Protistology* 56, 112–118. (*SCI impact factor*: 2.48).
13. **Kumar S.** and Foissner W. 2016. High cryptic soil ciliate (Ciliophora, Hypotrichida) diversity in Australia. *European Journal of Protistology*, 53, 61–95. (*SCI impact factor*: 2.4).

14. Ceriaco et al. (2016). Photography-based taxonomy is inadequate, unnecessary, and potentially harmful for biological sciences. **Zootaxa** 4196 (3): 435–445. (*SCI impact factor: 0.9*).
15. Bharti D., **Kumar S.** and La Terza A. 2015. Two gonostomatid ciliates from the soil of Lombardia, Italy; including note on the Soil Mapping Project. **Journal of Eukaryotic Microbiology** 62, 762–772. (*SCI impact factor: 2.1; *selected for cover image of the journal*).
16. **Kumar S.** and Foissner W. 2015. Biogeographic specializations of two large hypotrich ciliates: *Australocirrus shii* and *A. australis* and proposed synonymy of *Australocirrus* and *Cyrtohymenides*. **European Journal of Protistology**, 51, 210–228. (*SCI impact factor: 2.4*).
17. **Kumar S.**, Kamra K., Bharti D., La Terza A., Sehgal N, Warren A, and Sapra GR. 2015. Morphology, morphogenesis and molecular phylogeny of *Sterkiella tetracirrata* n. sp. (Ciliophora, Oxytrichidae), from Silent Valley National Park, India. **European Journal of Protistology**, 51, 86–97. (*SCI impact factor: 2.4*).
18. **Kumar S.**, Bharti D., Marinsalti S., Insom E. and La Terza A. 2014. Morphology, morphogenesis and molecular phylogeny of *Paraparentocirrus sibillinensis* n. gen., n. sp., a “Stylonychine Oxytrichidae” (Ciliophora, Hypotrichida) without transverse cirri. **Journal of Eukaryotic Microbiology**, 61, 247–259. (*SCI impact factor: 2.1*).
19. Bharti D., **Kumar S.** and La Terza A. 2014. Morphology, morphogenesis and molecular phylogeny of a novel soil ciliate, *Pseudouroleptus plestiensis* n. sp. (Ciliophora, Oxytrichidae), from the uplands of Colfiorito, Italy. **International Journal of Systematic and Evolutionary Microbiology**, 64, 2625–2636. (*SCI impact factor: 2.13*).
20. Foissner W., Wolf K., **Kumar S.**, Xu K. and Quintela-Alonso P. 2014. Five New Spathidiids (Ciliophora: Haptorida) from Caribbean Tank Bromeliads. **Acta Protozoologica**, 53: 159–194. (*SCI impact factor: 1.48*).
21. Buonanno F., Anesi A., Guella G, **Kumar S.**, Bharti D., La Terza A., Quassinti L., Bramucci M. and Ortenzi C. 2014. Functional and chemical characterization of toxicysts content in a freshwater ciliate, *Coleps hirtus*. **Journal of Eukaryotic microbiology**, 61, 293–304. (*SCI impact factor: 2.1*).
22. **Kumar S.**, Kamra K. and Sapra GR. 2010. Ciliate fauna of the Silent Valley National Park, India: Urostyloid Hypotrichs of the region with a note on the habitat, **Acta Protozoologica**, 49, 339–364. (*SCI impact factor: 1.48*).
23. Kamra K. and Kumar S. 2010. *Notohymena saprai* sp nov, a new oxytrichid ciliate (Protozoa, Ciliophora) from the Valley of Flowers, a Himalayan Bioreserve region; description and morphogenesis of the new species. **Indian Journal of Microbiology**, 50:33–45. (*SCI impact factor: 1.29*).
24. Kamra K., **Kumar S.** and Sapra GR. 2008. Species of *Gonostomum* and *Paragonostomum* (Ciliophora, Hypotrichida, Oxytrichidae) from the Valley of Flowers, India, with descriptions of *Gonostomum singhii* sp nov, *Paragonostomum ghangriai* sp nov and *Paragonostomum minuta* sp nov. **Indian Journal of Microbiology** 48:372–388. (*SCI impact factor: 1.29*).

Non-SCI

1. Kumar S., Bharti D., La Terza A., Suman D.S. and Chandra, K. Eco-friendly bacterivorous ciliate based device for sustainable management of water cleaning and sanitation. The Patent Office Journal No. 10/2021 dated 05/03/2021.

2. Bharti D., Kumar S. and La Terza A. 2020. Photomicrograph of ciliated protist (*Sterkiella tricirrata*) isolated from an Italian agricultural soils (pp. 39). In AO, ITPS, GSBI, SCBD, and EC. 2020. State of knowledge of soil biodiversity - Status, challenges and potentialities, Report 2020. Rome, FAO.
3. Bharti D. and Kumar S. 2019. Ten new records of protozoan ciliates (Protozoa: Ciliophora) from India. Rec. zool. Surv. India. 119 (2) 111-119.
4. Bharti D. and Kumar, S. 2019. First record of *Lepidochaetus zelinkai* (Gastrotricha, Chaetonotida) from India. Rec. zool. Surv. India. 119 (4) 474-479.
5. Bharti D. and Kumar, S. 2019. Two freshwater flagellates from the Mahananda Wildlife Sanctuary, West Bengal. Rec. zool. Surv. India. 119 (4) 451-455.

Book

1. Chandra K., Bharti D., **Kumar S.**, Raghunathan C., Devanshu G., Alfred J.R.B. and Chowdhury B.R. 2021. *Faunal diversity in Ramsar wetlands of India*. Pp. 354 (Jointly published by the Director, Zoological Survey of India and Wetland Division, Ministry of Environment, Forest and climate Change, Government of India).

Book chapters/Technical reports

1. Bharti D., Ghosh S. and **Kumar S.** 2021. Protozoan ciliates. In: Fauna of Himachal Pradesh, State fauna series. (Accepted).
2. Longjam R.K.S., Bharti D., Gupta D. and **Kumar, S.** 2021. Protozoa. In: Faunal diversity of semiarid zones of India. (Accepted).
3. Bharti D. and **Kumar S.** 2021. Protozoa. In: Desert biographic zones of India. (Accepted).
4. Mohan S., Bharti D., Ghosh S., Puroshothaman J. and **Kumar S.** 2021. Protozoan ciliates: An overview from Indian oceanic waters. In faunal diversity of Indian Ocean. (Accepted).
5. Bindu L., **Kumar S.**, Purushothaman J., Bharti D. and Kumar R. Fauna of North east India - Protozoa. 2021. (Accepted).
6. Bharti D., **Kumar S.** and Chandra K. Protozoan ciliates. 2021. In: Faunal Diversity of East Kolkata Wetlands. 48-53. (Published by the Director, Zool. Surv. India, Kolkata).
7. Bharti D. and **Kumar S.** 2019. Protozoa: Ciliates. In: Manual on collection, preservation and identification of soil fauna. 13-18. (Published by the Director, Zool. Surv. India, Kolkata).
8. Bharti D., **Kumar S.** and Chandra K. 2020. Protozoa: Ciliata (Free-living). In: Faunal diversity of biogeographic zone: Coast of India. 13-30. (Published by the Director, Zool. Surv. India, Kolkata).
9. Bharti D. and **Kumar S.** 2018. Protozoa (ciliata). In: Faunal diversity of biogeographic zones: Islands of India. 9-13. (Published by the Director, Zool. Surv. India, Kolkata).
10. Bindu L., Jasmine P., Das A.K., Nandi N.C. and **Kumar S.** 2018. Protozoa (Free-Living). In, Faunal Diversity of Indian Himalaya. 45-57 (Published by the Director, Zool. Surv. India, Kolkata).
11. La Terza A., Bharti D., **Kumar S.**, Marinsalti S., Molina G. and Insom E. 2015. Struttura delle comunità dei protozoa ciliate. In Beone G.M., Cenci R.M., Guidotti L., Sena F. & Umlauf G. (Eds.), Progetto di Monitoraggio Ambientale su tutto il Territorio della Regione Lombardia (Progetto Soil). European Commission, Joint Research Center (JRC) Technical Reports.

Reports, conference paper, corrigendum, extended abstracts, lectures

1. Lecture delivered on 'Freshwater faunal communities' to the PG diploma course on animal taxonomy students at the Zoological Survey of India on 16th Feb 2021.
2. Lecture delivered on 'Ramsar Convention' to the PG diploma course on animal taxonomy students at the Zoological Survey of India on 12th March 2021.
3. La Terza A., Bharti D. and Kumar S. 2020. Ciliated protists as indicators of soil health: Three case studies from Italy. Global Symposium on Soil Biodiversity. 10-12 March 2020, Rome, Italy. (Extended abstracts).
4. La Terza A., Marinsalti S., Bharti D., Kumar S., Alessandro A.D. and Insom E. 2020. Global Symposium on Soil Biodiversity. 10-12 March 2020, Rome, Italy. (Extended abstracts).
5. Bharti D., Kumar S. and La Terza A. 2020. Photomicrograph of ciliated protist (*Sterkiella tricirrata*) isolated from an Italian agricultural soils (pp. 39). In AO, ITPS, GSBI, SCBD, and EC. 2020. State of knowledge of soil biodiversity - Status, challenges and potentialities, Report 2020. Rome, FAO.
6. Lecture - 16th Jan 2018 on "Protozoan ciliates as bio-indicators for water quality assessment" for the participants of the Telangana State Pollution Control Board Under the Training Program on Bio-monitoring of Rivers and Water bodies at ZSI HQ, Kolkata from 16th to 19th January 2018.
7. Lecture - hands on training on "DNA Barcoding in Assessment of faunal diversity" organized Held on 5-9th March 2018 at the Zoological Survey of India, Kolkata.
8. Kumar S., Bharti D., Marinsalti S., Insom E. and La Terza A. 2017. Morphology, morphogenesis and molecular phylogeny of *Paraparentocirrus sibillinensis* n. gen., n. sp., a "Stylonychine Oxytrichidae" (Ciliophora, Hypotrichida) without transverse cirri (Corrigendum). Journal of Eukaryotic Microbiology, 64, 906.
9. Lecture and practical class on the "Importance of Taxonomy in Environmental Studies" on 17.11.2017 for Green Skill Development Program students, course for the advance level.
10. Bharti D., Kumar S. and La Terza A. 2017. Two gonostomatid ciliates from the soil of Lombardia, Italy; including note on the Soil Mapping Project. (Corrigendum). Journal of Eukaryotic Microbiology, 64, 907.
11. Kumar S., Bharti D., Kaur H., Kashyap K. and Kamra K. 2016. Western Ghats: a biodiversity hotspot for ciliated protists. Lakes 2016: Conference on Conservation and Sustainable Management of Ecologically Sensitive Regions in Western Ghats. December 2016. (Extended abstract).
12. Kumar S., Bharti D., Kashyap K., Kaur H., Kamra K. and La Terza A. 2016. *Tetrahymena thermophila*: A whole cell biosensor for toxicity assessment of Mercury. Lakes 2016: Conference on Conservation and Sustainable Management of Ecologically Sensitive Regions in Western Ghats. December 2016. (Extended abstract).
13. La Terza A., Bharti D., Kumar S., Marinsalti S. and Insom E. 2014. Ciliated Protozoa and Microarthropod Communities as Indicators of Soil Quality in Long-term Organically Managed Vineyards: A Case Study in the Verdicchio *Terroir* of Matelica (Marche, Italy) X CONVEGNO NAZIONALE SULLA BIODIVERSITA' 3-5 September 2014, Consiglio Nazionale delle Ricerche, Roma, Italy. (Conference paper).

Patent

Kumar S., Bharti D., La Terza A, Suman D.S. and Chandra K. Based on ciliate and bacterial interaction. Complete patent submitted March 2021.

National and International conferences/symposium

1. Bharti D., Kumar S. and La Terza A. 2020. Photomicrographs of ciliated protists isolated from agricultural soils after protargol impregnation. In “The State of Knowledge of soil biodiversity”. (Accepted).
2. La Terza A., Bharti D. and Kumar S. 2020. Ciliated protists as indicators of soil health: Three case studies from Italy. Global Symposium on Soil Biodiversity. 10-12 March 2020, Rome, Italy. (Extended abstracts) (Accepted).
3. La Terza A., S. Marinsalti, Bharti D., Kumar S. Alessandro A.D. and E. Insom. 2020. Global Symposium on Soil Biodiversity. 10-12 March 2020, Rome, Italy. (Extended abstracts) Accepted.
4. La Terza A., Bharti D., Varatharajan G.R., and Kumar S. Ciliated protists as indicators of ecosystem health: Opportunities, challenges, and case studies in Italy. International Symposium on Ciliate Biology on April 04-06, 2018 at the India Habitat Centre, New Delhi.
5. Bharti D., Kumar S., Varatharajan G.R., Kamra K., and La Terza A. Morphology, ontogenetic, and molecular phylogenetic studies on species of the genera *Sterkiella* and *Fragmospina*. International Symposium on Ciliate Biology on April 04-06, 2018 at the India Habitat Centre, New Delhi.
6. Kumar S. Diversity of protozoan ciliates from the Thane Creek, Mumbai, India. International Symposium on Ciliate Biology on April 04-06, 2018 at the India Habitat Centre, New Delhi.
7. Kumar S. Bharti D. and La Terza A. Morphology and morphogenesis of a novel stylonychid ciliate from India. International Symposium on Ciliate Biology on April 04-06, 2018 at the India Habitat Centre, New Delhi.
8. La Terza A., Bharti D., and Kumar S. Soil ciliated protest communities from Agroecosystems and natural sites of Region Marche (Italy). 15th International Congress of Protistology, Prague, Czech Republic, July-August, 2017.
9. Varatharajan G.R., Kumar S., Bharti D. and La Terza A. Cytotoxicity of single and bimetallic mixtures of heavy metals and antioxidant defenses in the soil ciliated protest *Rigidohymena tetracirrata*. 15th International Congress of Protistology, Prague, Czech Republic, July-August, 2017.
10. Varatharajan G.R., Kumar S., Bharti D. and La Terza A. Heavy metals and antioxidant responses in the soil ciliate *Cyrtomyxa tetracirrata*: a preliminary analysis. Ciliate Molecular Biology, University of Camerino, Italy, July 10–16, 2015.
11. Kumar S., Bharti D., Buonanno F., Montanari A., Ortenzi C., Kamra K., and La Terza A. 2015. Ciliates diversity and behavioural observations from the chemoautotrophic cave ecosystem of Frasassi, (Marche region, Italy). Ciliate Molecular Biology, University of Camerino, Italy, July 10–16.
12. Kumar S., Bharti D., Pablo Quintela-Alonso and La Terza A. Description of an Italian population of *Stylonychia harbinensis* (Ciliophora, Oxytrichidae) based on morphology and SSU rDNA. DGP 2015, Magdeburg, Germany, March 3-6, 2015.
13. Kumar S. and La Terza A. Ciliate biodiversity studies in Italy. Integrating the 3 Dimensions of Biodiversity: New Standards for Documenting Biodiversity of Ciliates and Strategies for Accessing and Sharing Data. Workshop Presented by the International Research Coordination Network for Biodiversity of Ciliates and the British Society for Protist Biology. Royal Holloway University of London, Egham, UK, September 1–3, 2014.
14. Bharti D., Kumar S., Marinsalti S., Insom E. and La Terza A. 2014. Diversity and bio-indicative value of soil ciliate communities: an investigation on agricultural and natural soil habitats from region marche (Italy). Italian society of Protistology, Rome, Italy.
15. Kumar S., Bharti D., Buonanno F., Ortenzi C. and La Terza A. Ciliate biodiversity and preliminary behavioral observations from the chemoautotrophic cave ecosystem of Frasassi, Italy. Italian society of Protistology, 3-7 Oct, 2012.
16. Bharti D., Kumar S., Marinsalti S., Molina M.G., Tiberi M., Ciabocco G., Bernacconi C., Insom E. and La Terza A. Ciliate community structures correlates with environmental variables: investigation on soils of agricultural and natural sites. Italian society of Protistology, 3-7 Oct, 2012.
17. Kumar S., Bharti D. and La Terza A., 2012. Protozoan ciliates from the sulphidic sediments of *Pozzo dei Cristalli* (Frassasi caves, Italy). 4th International Congress of ECSSS (European Confederation of Soil Science Societies), Soil Science for the Benefit of Mankind and Environment, Fiera del Levante, Bari, Italy, 2-6 July.
18. Menta C., Bharti D., Conti F. D., Kumar S., Marinsalti S., Insom E. and La Terza A., 2012. Microarthropod and ciliates soil communities in six central Italian beech forests. 4th International Congress of ECSSS

- (European Confederation of Soil Science Societies), Soil Science for the Benefit of Mankind and Environment, Fiera del Levante, Bari, Italy, 2-6 July.
19. Bharti D., Kumar S., Marinsalti S., Tiberi M., Ciabocco G., Insom E., and La Terza A., 2012. Ciliate communities as a tool to assess soil quality in agroecosystem: investigation on agricultural soils under organic farming. 4th International Congress of ECSSS (European Confederation of Soil Science Societies), Soil Science for the Benefit of Mankind and Environment, Fiera del Levante, Bari, Italy, 2-6 July.
 20. Marinsalti S., Kumar S., Bharti D., Insom E., and La Terza A., 2012. Soil quality in longterm organically managed vineyards: a study by mean of ciliated protozoa and microarthropod communities analysis. 4th International Congress of ECSSS (European Confederation of Soil Science Societies), Soil Science for the Benefit of Mankind and Environment, Fiera del Levante, Bari, Italy, 2-6 July.
 21. La Terza A., Bharti D., Kumar S., Marinsalti S., and Insom E., 2012. Ciliates as bioindicators of soil quality: from biomarker to community structure analysis Protozoan ciliates: “all purpose” eukaryotic microbes for the assessment of soil quality. 4th International Congress of ECSSS (European Confederation of Soil Science Societies), Soil Science for the Benefit of Mankind and Environment, Fiera del Levante, Bari, Italy, 2-6 July.
 22. Kumar S., La Terza A., Bharti D., Kamra K. and Luporini P., 2011. DNA barcoding employing *cox-1* gene: An approach to understand phylogeny in Protozoan ciliates. Evolutionary Perspective in Modern Biological Teaching and Research, Academic Research Centre, University of Delhi, May 9-10.
 23. Kumar S., Kamra K. and Sapra GR., 2011. *Sterkiella* n sp (Protozoa, Ciliophora) from the Silent Valley National Park, India: presence of a third undulating membrane - an adaptation for more efficient bacteria grazing?, Recent trends in developing bioremediation strategies for Hexachlorocyclohexane (HCH) & other chlorinated contaminants, University of Delhi, 9-11 Feb.
 24. La Terza A., Bharti D., Kumar S., Marinsalti S., Tiberi M., Ciabocco G. and Insom E., 2011. Ciliate communities as a tool to assess soil quality in agroecosystem: investigation on agricultural soils under organic farming. SETAC Europe 21st Annual Meeting, Milan.
 25. Marinsalti S., La Terza A., Insom E., Kumar S., Bharti D., Salomone P., 2010. Primi dati sulla valutazione della qualità biologica (QBS-ar) nei suoli agricoli a conduzione biologica. XX Congresso Società Italiana di Ecologia (SITE) 2010, Rome, Italy. September 27-30.
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 27. La Terza A., Insom E., Marinsalti S., Salomone P., Kumar S. and Bharti D., 2010. “Biodiversità, Agricoltura e Benessere Umano, la ricchezza dell’agricoltura biologica: salute, ambiente, turismo, economia. Palazzo degli Studi della Provincia di Macerata, Italy. May 11.
 28. Kumar S., Chandramohan B., Buonanno F., Bharti D., Campagnoli A., Ortenzi C. and La Terza A., 2010. Ciliates biodiversity from the Frasassi Caves: the sulfidic microhabitats of “*Pozzo dei Cristalli*”. XXVIII Congresso Nazionale della Società Italiana di Protistologia (SIP), Pisa, Italy. September 2-4.
 29. Buonanno F., Kumar S., Chandramohan B., Bharti D., La Terza A., Ortenzi C., 2010. Cytotoxic compounds of *Coleps hirtus* from Frasassi caves. XXVIII Congresso Nazionale della Società Italiana di Protistologia (SIP), Pisa, Italy. September 2-4.
 30. La Terza A., Bharti D., Kumar S., Barchetta S., Ballerini P., Yu T., Buonanno F. and Miceli C., 2010. Ciliates as bio-indicators of ecosystem quality: from biomarker to community structure analysis. XX Congresso Società Italiana di Ecologia (SITE) 2010, Rome, Italy. September 27-30.
 31. Buonanno F., Kumar S., Chandramohan B., Bharti D., Di Pretoro B., La Terza A. and Ortenzi C., 2009. The protozoan ciliates of the Frasassi caves: a potential source of bioactive molecules for biotechnological applications. Genga, AN, Italy. September 10-13.
 32. Kumar S., Kamra K. and Sapra GR., 2008. Ciliated Protozoa from the soils of Silent Valley National Park, a Biodiversity hotspot in the Western Ghats World Heritage site, Kerala, India. International Symposium on Microbial biotechnology: Diversity, Genomics and Metagenomics during 49th Annual Conference of Association of Microbiologist of India, Delhi, India.
 33. Kumar S., Kamra K., Joshi A. and Sapra GR., 2007. Biodiversity of free living soil ciliates from the sulphur springs, Dehradun, India. International Symposium on Ciliate Biology, Delhi, India.
 34. Kamra K, Kumar S, Joshi A and Sapra GR., 2007. Diversity of species of soil ciliates in a high altitude Himalayan meadow, the Valley of Flowers, India. International Symposium on Ciliate Biology, Delhi, India.
 35. Kumar S. and Kamra K., 2009. Molecular methods clarify phylogenetic relationships among ciliated protozoa. National Symposium on Biotech 2009: Present and Future Perspectives, Punjabi University, Patiala, India.

Awards

- **‘Young Indian Research Fellowship’** through the **Italian Minister of University and Research (MIUR)**, Italy.
- **Korean Research fellow**, under the **National Research Foundation of Korea (NRF)**, Ministry of Education, Ministry of Science, ICT and Future Planning, South Korea.
- Best oral presentation: DNA barcoding employing *cox-1* gene: An approach to understand phylogeny in protozoan ciliates. Evolutionary Perspective in Modern Biological Teaching and Research, Academic Research Centre, University of Delhi, May 9-10, 2011.

Others

- Editorial Board member for the journal - *Records Zoological Survey of India*.
- Coordinator for the ‘*Centre for wetland fauna*’ ZSI, HQ, Kolkata.
- Co-coordinator for the ZSI program ‘*Post Graduate Diploma in Integrated Animal Taxonomy*’.
- Addl. Officer-in-Charge, Technical Section, ZSI HQ
- Reviewed several articles for the SCI/NAAS rated journals – *Zoological Journal of the Linnean Society*, *Frontiers in Microbiology*, *European Journal of Protistology*, *Journal of Eukaryotic Microbiology*, *BMC Microbiology*, *Frontiers Marine Science*, *Journal of Natural History*, *International Journal of Systematic and evolutionary microbiology*, *Acta Protozoologica*, *Chinese Journal of Oceanology and Limnology*, *Mito-DNA part B*, *Journal of Ocean University of China*, *Records Zoological Survey of India*.

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