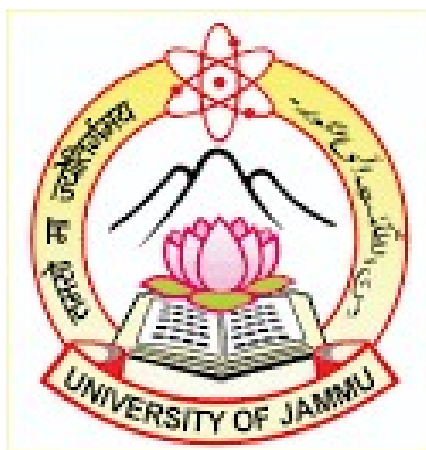


**DEPARTMENT OF ZOOLOGY**  
**UNIVERSITY OF JAMMU**



**Yearly Project Report for Utilization of DST-FIST Support**

**Date and Ref. No. of DST Sanction Letter: No. SR/FST/LS-1/2018/141(C)**  
**Dated: 27/12/2019**

**Submitted to the Department of Science and Technology**  
**(Government of India)**

Coordinator  
Prof. Seema Langer

Co- Coordinator  
Dr. Rakesh Kumar

**Post Graduate Department of Zoology**  
**University of Jammu**  
**B.R. Ambedkar Road, Jammu- 180006**

## 1. Details of the Grants

Budget Heads	Amount Sanctioned with Date	Amount Received with Date
Equipment	60 lakhs Dated: 27/12/2019	60 lakhs Dated: 12/02/2020
Networking	5 lakhs Dated 27/12/2019	5 lakhs Dated 12/02/2020
Maintenance	-	-
<b>Total</b>	65 lakhs Dated 27/12/2019	65 lakhs Dated 12/02/2020

### **FY 2019-2020:**

After receiving the sanction letter 27/12/2019, the project working was initiated at the earliest. The following developments took place during the short financial year financial Year **27-12-2019** to **31- 03-2020 (3months)**:

1. The beginning of the equipment procurement, including the selection of the equipment types in accordance with the specifications required.
2. Survey of aquatic and terrestrial habitats.
3. Collection of the specimens belonging to various faunal groups.
4. Water quality assessment of water bodies.

### **ARTICLES PUBLISHED:**

1. Nidhi Slathia, Seema Langer, Palaq and Rakesh Katoch (2019). Morphological and morphometric characterization of *Haemonchus contortus* found in Jammu region of J&K state. International Journal of Research and Analytical Reviews. 6(2): 269-274. UGC listed/Scopus.
2. Raman Jasrotia and Seema Langer (2019). Comparative account of DNA extraction

protocols in some freshwater prawns of genus *Macrobrachium* (Bate, 1868) Family Palaemonidae) from Jammu waters for PCR Based applications. Biomedical and Pharmacology Journal. 12 (3): 1201-1206. h-index :14; Impact factor: 0.46 <https://dx.doi.org/10.13005/bpj/1749> UGC listed/Scopus.

3. Arti Sharma and Meenu Sharma (2019). Zooplanktonic diversity in relation to physicochemical parameters in subtropical pond of Jammu, Jammu and Kashmir, India. Bioscience's biotechnology research asia. 16(2): 425- 439. UGC-Care listed/Scopus/Web of Science.
4. Singh A, Chibber P, Kolimi P, Malik TA, Kapoor N, Kumar A, Kumar N, Gandhi SG, Singh S, Abdullah ST, Vishwakarma R. Rohitukine inhibits NF- $\kappa$ B activation induced by LPS and other inflammatory agents. International Immunopharmacology. 2019; 69:34-49.
5. Gopal RN, Kumar P, Lal B (2019) Localization, distribution and expression of growth hormone in the brain of Asian Catfish, *Clarias batrachus*. Brain Struct Funct. Jul;224(6):2143-2151. IF=3.1 Springer.
6. Arti Sharma, Bandhana, Radhika Singh and Rashmi Sangotra (2019). Dietary replacement of artificial feed with bioflocs cultured from aquaculture waste water and its beneficial effect on the growth of fingerlings of *Cirrhinus mrigala*. International research journal of Biological Sciences. 8(7): 1-8. UGC listed/Scopus.
7. Arti Sharma, Ritika Anthal and K.K. Sharma (2019). Long term assessment of water quality changes in Lake Mansar, a Ramsar site (J&K, India). International journal of environment, ecology, family and urban studies. 9(3): 137-148. UGC listed/Scopus.
8. Kumar, V., Parihar, R. D., Sharma, A., Bakshi, P., Sidhu, G. P. S., Bali, A. S., ... & Rodrigo-Comino, J. (2019). Global evaluation of heavy metal content in surface water bodies: A meta-analysis using heavy metal pollution indices and multivariate statistical analyses. Chemosphere, 236, 124364. IF=8.8 Elsevier.
9. Sharma, P., Gupta, N., Kaur, S., Kaur, S., Ohri, P., Parihar, R. D., ... & Kumar, M. (2019). Imaging of lysosomal activity using naphthalimide- benzimidazole based fluorescent probe in living cells. Sensors and Actuators B: Chemical, 286, 451-459. IF=8.4 Elsevier.
10. Arti Sharma and Ritika Anthal (2019). Assessment of alarming decline in the malacofauna of Mansar Ramsar site Lake site, Lower Himalayas. Journal of environment and biosciences. 33(1): 103-110. UGC listed/Scopus.

11. Sarbjeet Kour and Supriya Sharma (2019). Rotifer diversity of a perennial community pond in J&K. International Journal of Research and Analytical Reviews. Vol 6(1): 1-5. UGC listed/Scopus.
12. Shiwali Gupta, Sarbjeet Kour and Sushma Devi (2019). Oscillatoria sps. inhabited the cladoceran population at lentic site of Devika stream, J&K. International Journal of Research and Analytical Reviews. Vol 6(2), 43-44. UGC listed/Scopus.
13. Shiwali Gupta, Sarbjeet Kour and Sushma Devi (2019). Abiotic factors influencing the diversity and abundance of protozoans at two different stations of Devika stream in Udhampur distric, J&K, India. International Research Journal of Biological Sciences. Vol 8(9): 32-38. UGC listed/Scopus.
14. Arti Sharma, Neha Badyal and Radhika Singh (2019). Water quality assessment of river Basantar based on Comprehensive Pollution Index. International journal of Research and Analytical reviews. 6(2): 934-943. UGC listed/Scopus.
15. Apurva Sharma, Seema Langer and Palaq (2019). Types and periodical chromatophore distribution patterns as a breeding dress modification in Himalayan freshwater prawn *Macrobrachium dayanum*. International Journal of Research and Analytical Reviews. 6(2): 107-110. UGC listed/Scopus.
16. Harmeen Kour, Seema Langer and Santanu Mitra (2019). Survey status and morphometric characterization of two species of freshwater crabs from Jammu division (J&K) state. International Journal of Research and Analytical Reviews. 6(2): 278-285. UGC listed/Scopus.

**SPONSORED RESEARCH PROJECT IN OPERATION DURING THE PERIOD:**

<b>S.No.</b>	<b>Name of the PI/Co-PI</b>	<b>Title of the project approved</b>	<b>Amount Sanctioned (INR)</b>	<b>Funding Agency</b>	<b>Start Date</b>
<b>1.</b>	Prof. Seema Langer	Diversity and Taxonomy of Terrestrial isopods	4,50,000	RUSA, University of Jammu	14-11-2019

		from Jammu Division (J&K)			
2.	Dr. Arti Sharma	Ecobiology of thermalsprings of Jammu	55,000	UGC through theUniversity of Jammu	05-11-2019
3.	Dr. Sarbjeet Kour	Biochemical estimationof rotifers of family Brachionidae	100000	(RUSA)	05-11-2019
4.	PI: Prof. Seema Langer Co-PI: Dr. Rakesh Kumar	Human pulmonary paragonimiasis in crab-eating communities and smear-negative suspected TB cases from some states of India	1,70,99,075	Indian Council for Medical Research, New Delhi	16-10-2018
5.	Dr. Sarbjeet Kour	Estimation of Fluoridelevels and its effect on biota in Jammu region	50000	University of Jammu	05-03-2018

**SUCCESS OF STUDENTS AT NATIONAL LEVEL TESTS:**

<b>S.No.</b>	<b>Name of the Student</b>	<b>Year of Enrolment</b>	<b>Type of Scholarship/fellowship</b>	<b>Granting Agency</b>
1.	Charul	2019	INSPIRE fellowship	DST-INSPIRE
2.	Supreet Kour	2019	CSIR-NET-JRF	CSIR
3.	Rajan Verma	2019	URF, JU	University of Jammu
4.	Jyoti Chandan	2019	CSIR-NET-JRF	CSIR-NET-JRF
5.	Nipoon Sharma	2019	PURSE Phase II fellowship	PURSE
6.	Ayushi Dogra	2019	CSIR-NET-JRF	CSIR
7.	Shehnaz Tabassum	2019	CSIR-NET-JRF	CSIR
8.	Mandeep	2019	URF, JU	University of Jammu
9.	Harmeen Kour	2018	ICMR Project Fellowship	ICMR
10.	Sukanya Rajput	2018	ICMR Project Fellowship	ICMR
11.	Meenakshi Dhar	2019	ICMR Project Fellowship	ICMR

12.	Ravi Sharma	2019	ICMR Project	ICMR
13.	Mandeep	2019	URF, JU	University of Jammu
14.	Isha Devi	2019	UGC NET JRF	UGC
15.	Shash Pal	2019	URF, JU	University of Jammu
16.	Poonam Choudhary	2019	CSIR-NET-JRF	CSIR
17.	Supreet Kour	2019	CSIR-NET-JRF	CSIR
18.	Dipti Bains	2019	CSIR-NET-JRF	CSIR
19.	Pooja Devi	2019	CSIR-NET-JRF	CSIR
20.	Dheeraj Sharma	2019	URF, JU	University of Jammu

### **FY 2020-2021:**

The following developments took place during the financial Year 01-04-2020 to 31- 03-2021:

1. Equipment ordered/purchased/installed:

<b>Name (with Model &amp; Make)</b>	<b>Order Date</b>	<b>Installation date</b>	<b>Cost in INR</b>
<b>Electrophoretic Unit (01 nos)</b>	JU/ZOOL/21/573 DATE: 1-3-21	10/08/2021	<b>3,99,000.00</b>
<b>Deep Freezer (01 nos)</b>	JU/ZOOL/21/574 DATE: 1-3-21	15/12/2021	<b>6,98,250.00</b>
<b>Gel Documentation</b>	JU/ZOOL/21/580 DATE: 2-3-21	23/06/2021	<b>4,15,800.00</b>

<b>Water Purification System (01)</b>	JU/ZOOL/21/507 DATE: 26-2-2021	16/04/2021	<b>7,98,000.00</b>
<b>High-Speed Centrifuge (02 nos)</b>	JU/ZOOL/637 DATE: 18/03/2021	26/03/2021	<b>12,99,375.00</b>
<b>Biosafety Cabinet (01)</b>	JU/ZOOL/21/573 DATE: 1/03/2021	26-03-2021	<b>2,99,985.00</b>
<b>Stereomicroscope (01)</b>	JU/ZOOL/2/578 DATE: 1/03/2021	07-08-2023	<b>4,98,750.00</b>
<b>Networking Lab (09 Computers and UPS)</b>	DATE: 11/12/2020	01/02/2021	<b>4,23,809.00</b>
<b>UPS (02)</b>	DATE: 13/10/2020 DATE: 04/12/2020	11/11/2020 15/12/2020	<b>2,25,000.00</b> <b>55,000.00</b>

2. The equipment procured were installed in the Central Facility Laboratory of the Department of Zoology, University of Jammu.
3. The central facility laboratory has been upgraded and renovated under RUSA grant allocated to the Department of Zoology, University of Jammu.
4. Computer and networking laboratory has been set up in the computer laboratory of the Department of Zoology. A total of 09 computers with networking and internet connections have been set up.





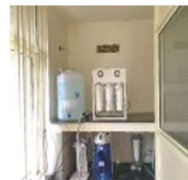
### Computer Networking Lab., Department of Zoology, University of Jammu



Biosafety Unit



Thermocycler



Water Purification Unit



Deep Freezer



Stereomicroscope



Gel Documentation



Centrifuge



Central facility lab

### Equipment installed in the Central Facility Laboratory of the Department of Zoology, University of Jammu.

5. Continuous survey of aquatic and terrestrial habitats.
6. Extensive collection of the specimens belonging to various faunal groups.
7. Morpho-taxonomy of the collected taxa.
8. Water quality assessment of water bodies.
9. DNA extraction from specimens.
10. Genetic diversity of various faunal groups was initiated.

## Site of Crab collection



Site: Gho-Manhasan Stream, Jammu



Site: Chakrali Stream, Jammu



## Site of Prawn Collection



Site: Gho-Manhasan Stream, Jammu

## Site of Fish Collection



Site:Tawi, Jammu

## Site of Isopods Collection



Site: University of Jammu



Manser, Jammu

## Insect Collection



Site: Jammu



## Site for Zooplankton Collection



Site: Gharana Wetland



Site: Sohan Jahan Pond

### ARTICLES PUBLISHED:

1. Sarbjeet Kour, Vipin Kumar, Rajan Verma, Nidhi Sharma and Supreet Kour (2020). Inventorization of Zooplanktonic Diversity inhabiting Lentic Waters of Billawar, Jammu and Kashmir. *International Journal of Scientific and Technology Research*. Vol 9(3): 6852-6856. Impact Factor 0.43. UGC listed.
2. Abhishek Kamboj, Aanchal Jain, Tanya Singh, Ajam Shaikh, Amit Gupta\*. Beta Glucan: Immune boosting potential and antioxidant candidate. *International Journal of Research in Pharmaceutical Sciences* 2020; 11(1): 491-496. Scopus.
3. Sarbjeet Kour and Rajan Verma (2020). Plankton diversity of Artificial Pond in Lower Shiwaliks. *Indian Journal of Ecology*. Vol 47(2): 532-528. Impact Factor 0.54. UGC-Care/Scopus/Web of Science.
4. Vrinda Bansal, Shubham Tyagi, Karishma Ghosh, Amit Gupta\*. Extraction of protein from Mushroom and determining its Antioxidant and Anti-Inflammatory Potential. *Research Journal of Pharmacy and Technology* 2020; 13(12): 6017-6021. Scopus.
5. Karishma Ghosh, Shreyoshi Tarapdar, Megha Duggal, Shubham Tyagi, Vijay Kumar, Amit Gupta\*. Overview on Virus Like Particles from Plants Used as Vaccine Antigen. *International Journal of Current Research and Review* 2020; 12(21): S1-S9. Peer-reviewed

6. Radhika Tyagi, Shubham Tyagi and Amit Gupta\*. Endophytes: A Novel Source of Biologically Active Secondary Metabolites. Research Journal of Pharmacy and Technology 2020; 13(9):4479-4483. Scopus.
7. Arti Sharma and Rashmi Sangotra (2020). Growth, proximate composition and condition coefficient of *Labeo rohita* fingerlings reared in insitu and ex situ biofloc system. Indian Journal of Ecology. 47(4): 1025-1028. NAAS rating 5.38 UGC-Care/Scopus/Web of Science.
8. Jyotdeep Kour Raina, Roopali Fotra, Parvinder Kumar and Rakesh Kumar Panjaliya. (2020) Methylenetetrahydrofolate Reductase Gene Polymorphisms and Risk of Myocardial Infarction. Biosc. Biotech. Res. Comm Web of Science/ Scopus.
9. Palaq, Seema Langer and Fayaz Ahmad (2020). Taxonomic and Ecological Studies on Trematode Parasite *Euclinostomum heterostomum* (Clinostomidae: Euclinostominae) from Freshwater Fishes of River Tawi of Jammu Region (J & K). Indian Journal of Ecology. 47(4): 1111-1117. h- index 7, Impact factor: 0.54, NAAS Rating: 5.79 UGC-Care/Scopus/Web of Science.
10. Gurpreet Singh, Shubham Tyagi, Aashrika Gupta, Abhishekh Tripathi, Karishma Ghosh, Amit Gupta\*. Exploring its immunogenicity and antioxidant potential of protein from *Mangifera indica* and *Syzygium cumini*. International Journal of Research in Pharmaceutical Sciences 2020; 11(3):1-6. Scopus.
11. Priyanka Kumari, Moin Khan, Amit Gupta\*. Medicinal plants as an alternative therapeutic source against salmonella. International Journal of Research in Pharmaceutical Sciences 2020; 11(2):2315-2319.Scopus.
12. Jyotdeep Kour Raina, Minakashee Sharma, Rakesh Kumar Panjaliya, Vikas Dogra, Ashok Bakaya and Parvinder Kumar (2020). Association of ESR1 (rs2234693 and rs9340799), CETP (rs708272), MTHFR (rs1801133 and rs2274976) and MS (rs185087) polymorphisms with coronary artery disease (CAD). BMC Cardiovascular Disorders. Web of Science/ Scopus.
13. Sharma, A., Kumar, V., Shahzad, B., Ramakrishnan, M., Singh Sidhu, G. P., Bali, A. S., Parihar, R. D. & Zheng, B. (2020). Photosynthetic response of plants under different abiotic stresses: a review. Journal of Plant Growth Regulation, 39, 509-531. IF=4.8 Elsevier.
14. Karishma Ghosh, Shubham Tyagi and Amit Gupta\*. Analytical and

Immunopharmacological Studies of Flavonoids: *Mangifera Indica* and *Syzygium Cumini*. Biomedical & Pharmacology Journal 2020; 13(2): 899-906.UGC listed; Scopus.

15. Shahnaz Tabassum, Santanu Mitra and Seema Langer (2020). An annotated checklist of terrestrial isopod fauna (Crustacea: Isopoda) of India. Ecology, Environment and Conservation. 26(4): 1826-1833. h-index: 11 UGC-Care/Scopus/Web of Science.
16. Raman Jasrotia, B.R. Kundal, Sushma Devi, Rakesh K. Panjaliya and Parvinder Kumar (2020). Trigger Factors Associated with Migraine: Recognition and Prevalence in the North Indian Populace of Jammu and Kashmir. Ethno Med. Web of Science/UGC.
17. Chibber P, Kumar C, Singh A, Haq SA, Ahmed I, Kumar A, Singh S, Vishwakarma R, Singh. G. Anti-inflammatory and analgesic potential of OA-DHZ; a novel semisynthetic derivative of dehydrozingerone. International Immunopharmacology. 2020 Jun 1; 83:106469. <https://doi.org/10.1016/j.intimp.2020.106469> IF- 5.6 Elsevier.
18. Chibber P, Haq SA, Ahmed I, Andrabi NI, Singh G. Advances in the possible treatment of COVID-19: A review. European journal of pharmacology. 2020 Sep 15; 883:173372. <https://doi.org/10.1016/j.ejphar.2020.173372> IF- 5.0 Elsevier.
19. Sristi Joshi\*, Chinmoyee Maharana\* and Anurag Rathore (2020) An application of Nano Differential Scanning Fluorimetry for Higher Order Structure assessment between mAb originator and biosimilars: Transtuzumab and Rituximab as case studies. Journal of Pharmaceutical and Biomedical Analysis, 186, 113270 (IF=3.571) Elsevier.

**SPONSORED RESEARCH PROJECT IN OPERATION DURING THE PERIOD:**

S.No.	Name of the PI/Co-PI	Title of the project approved	Amount Sanctioned (INR)	Funding Agency	Start Date
1.	Dr Arti Sharma	Ecobiology of Tattapanithermal spring of Paddar, Kishtwar (J&K).	1,00,000	RUSA 2.0 through the University of Jammu	2020

2.	Dr. Parvinder Kumar	Molecular Genetic Analysis of Congenital Cataracts.	1,00,000	RUSA 2.0 through the University of Jammu	08.12.2020
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#### SUCCESS OF STUDENTS AT NATIONAL LEVEL TESTS:

S.No.	Name of the Student	Year of Enrolment	Type of Scholarship /fellowship	Granting Agency
1.	Bandhana	2020	URF, JU	University of Jammu
2.	Shahnaz Tabassum	2020	National Fellowship & Scholarship for Higher Education of ST students	National Fellowship & Scholarship for Higher Education
3.	Ragni Gupta	2020	PH. D	IIIM, JAMMU
4.	Tusharika Kotra	2020	PH. D	IIIM, JAMMU
5.	Rupali Choudhary	2020	PH. D	IIIM, JAMMU
6.	Diksha Kumari	2020	PH. D	IIIM, JAMMU
7.	Sobia Anjum	2020	PH. D	IIIM, JAMMU
8.	Neha Badyal	2020	URF, JU	University of Jammu



9.	Pallvi	2020	PH. D	GNDU, Amritsar, Punjab
10.	Simran Sharma	2020	PH. D	GNDU, Amritsar, Punjab
11.	Navishi Sharma	2020	PH. D	GNDU, Amritsar, Punjab
12.	Ananya Danwal	2021	PH. D	BITS PILANI

## **FY 2021-2022:**

The following developments took place during the financial Year 01-04-2021 to 31- 03-2022:

1. Equipment ordered/purchased/installed:

<b>Name (with Model &amp; Make)</b>	<b>Order Date</b>	<b>Installation date</b>	<b>Cost in INR</b>
<b>Thermocycler (2 nos)</b>	J/ZOOL/21/729	8/09/2021	<b>1,99,800.00</b>
	DATE: 6-4-21		<b>9,99,600.00</b>
<b>Ice Flaking Machine</b>	DATE: 9/12/2021	01/03/2023	<b>1,84,921.00</b>

2. Classical taxonomy and molecular characterization of Prawn from Jammu, Kashmir, Himachal Pradesh, and Punjab.
3. DNA extraction from specimens.
4. Morpho-taxonomy of the collected taxa.
5. Molecular characterization of Crabs and Isopods from Jammu and Kashmir.
6. DNA barcoding and molecular characterization of Thrips from Jammu and Kashmir.

7. Molecular characterization of Hymenoptera and Coleoptera from Jammu region.
8. DNA barcoding of Pisces from Jammu and Kashmir.
9. Molecular Genetic studies on PCOD, Cancer (including prostate cancer and leukaemia), Rare Genetic Disorders and Chromosomal disorders.
10. Genetic diversity assessment was continued.
11. Nutritional profiling of edible organisms was started.
12. Setting up of the culture.

### **Site of Crab Collection**



Site: Sai Stream, R S Pura



Site: Chadwal Stream, Kathua

## Site of Prawn Collection



Site: Chadwal Stream, Kathua

## Site of fish Collection



Site: Nowabad fish farm, Jammu



Site: Nagri



## Site of Isopod Collection



Site: Jammu

## Site of Insect Collection



Site: Udhampur, Jammu

## Site of Zooplankton Collection



Site: Gho Manasa, Jammu

### ARTICLES PUBLISHED:

1. Nidhi Slathia, Seema Langer and K.V. Jayachandran (2021). Multivariate morphometric variability in freshwater prawn populations of *Macrobrachium dayanum* (Hendersen, 1893) from Himalayan River system, India. *Zoologischer Anzeiger*. 295: 67-72 <https://doi.org/10.1016/j.jcz.2021.09.010>. h-index: 41, Impact Factor: 1.601 Elsevier.
2. Dakshita Snud Sharma, Sandip J Sutariya, Harmanpreet Kaur, Hitendra A Somani, Amit Gupta\*. Technological advancement: In vitro fertilization (IVF). *Research Journal of Pharmacy and Technology* 2021; 14(12); 6721-6724.Scopus.
3. Menakshi Dhar and Seema Langer (2021). Detailed analysis of nutritional value, reproductive biology and fecundity of freshwater crabs of India. *Advances in BioResearch* 12(6):244-250. DOI: 10.15515/abr.0976-4585.12.6b.244250 UGC-Care/ Web of Science.
4. Amit Gupta\*, Ashfaq A Shah, Vijay Kumar. Immunomodulation via phytoactive Compounds: A promising therapy for future medical system. *Journal of Medical, Pharmaceutical and Allied Sciences* 2021; 10(2): 126-133. Peer-reviewed.
5. Raman Jasrotia, Parvinder Kumar, Seema Langer and Bodh Raj Kundal (2021). Candidate gene polymorphisms associated with migraine susceptibility: An overview of current

- understanding In book: Horizons In Neuroscience Research Chapter:3. Publisher: Nova Science Publishers, Inc., New York, USA Scopus and Web of Science indexed.
6. Sukanya Rajput and Seema Langer (2021). Prevalence of Monogenean Parasites in some Freshwater fishes of Jammu region, India. *Indian Journal of Ecology* 48(5): 1579- 1582 h-index 7, Impact factor: 0.54. UGC-Care/Scopus/Web of Science.
  7. Abhishekh Tripathi, Shubham Tyagi, Gurpreet Singh, Karishma Ghosh, Amit Gupta\*. Exploration its Antioxidant and Immunogenic potential of protein: *Calendula officinalis* and *Dianthus chinensis*. *Research Journal of Pharmacy and Technology* 2021; 14 (6): 266-272.Scopus.
  8. Amit Gupta\*, Karishma Ghosh,Dakshita Snud Sharma, Shubham Tyagi. In vitro evaluation of antimicrobial activity and measuring its antigenic specific immune response in mice model studies: *Allium cepa*. *Research Journal of Pharmacy and Technology* 2021; 14(5):2563-2568.Scopus.
  9. Raman Jasrotia, Parvinder Kumar, Bodh Raj Kundal and Seema Langer (2021). Insights into the role of epigenetic mechanisms in migraine: the future perspective of disease management *The Nucleus*. h-index:9.0 Impact Factor:1.8.  
<https://doi.org/10.1007/s13237-021-00366-z> UGC-Care/Scopus/Web of Science
  10. Pisa Beni, Madhu Yashpa, Pankaj Kumar, Bechan Lal (2021) *Putranjiva roxburghii* Wall. and *Diplocyclos palmatus* (L.) C. Jeffrey as the potential sources of future drugs for infertility: a review. *Journal of Bioresources* 8 (2): 10–18.
  11. Menakshi Dhar and Seema Langer (2021). Optimization of Cytogenetic Protocol for Chromosome Preparation in Freshwater Crabs. *Biosciences Biotechnology Research Communications*.14(3). <http://dx.doi.org/10.21786/bbrc/14.3.51> UGC- Care/Scopus/Web of Science.
  12. Pisa Beni, Hage Konya, Suman Kumar, Madhu Yashpal, Pankaj Kumar, Bechan Lal (2021). Characterization of the methanolic seed extract of two medicinal plants, *Putranjiva roxburghii* and *Diplocyclos palmatus* and its effects on gonads of Albino Mice. *Journal of Bioresources* 8 (2): 25–35.
  13. Suneha Uttam and Seema Langer (2021). Distribution and identification key for freshwater leech Genus: *Erpobdella* Blainville, 1818 (Hirudinida: Arhynchobdellida: Erpobdelliformes: Erpobdellidae) *Ecology, Environment and Conservation*. 27(4):1925-

1936 h-index:15.0 NAAS rating:5.41. UGC-Care/Scopus/Web of Science.

14. Ashfaq Ahmad Shah, Amit Gupta. Antioxidants in Health and Disease With their Capability to Defend Pathogens That Attack Apple Species of Kashmir. Reference Series in Phytochemistry. Plant Antioxidants and Health 2021; 2511-8358; 411-435.
15. Arti Sharma and Radhika Singh (2021). Temporal changes in physico chemical parameters of water of Gharana Wetland Reserve (J&K) and assessment of its pollution status using comprehensive pollution index. Indian Journal of Ecology. 48 (5), 1284- 1289. NAAS rating 5.38. UGC-Care/Scopus/Web of Science.
16. Rhythm Basson, Shweta Singh and Parvinder Kumar (2021) Urinary Tract infections (UTI): Epidemiology, Type, Mechanism of infection and Treatment - A Review. Science, Technology and Development. UGC-Care/Scopus/Web of Science.
17. Ashfaq Ahmad Shah, Amit Gupta\*. Encapsulation of Flavonoids in Nanocarriers: A Novel Strategy to Enhance Their Bioefficacy and Oral Bioavailability. Innovative Approaches for Nanobiotechnology in Healthcare Systems 2021, IGI Global, PUBLISHER of TIMELY KNOWLEDGE, Hershey, Pennsylvania 17033-1240, USA.
18. Arti Sharma, Isha Devi and Radhika Singh (2021). A review on role of Molluscan shells in the removal of pollutants from aquatic water bodies. Ecology, Environment and Conservation. 27(2): 615-621. UGC-Care/Scopus/Web of Science.
19. Anurag S Rathore, James G Stevenson, Hemlata Chhabra and Chinmoyee Maharana (2021) The Global Landscape on Interchangeability of Biosimilars. Expert Opinion on Biological Therapy 22, 133-148. (IF = 4.6) Taylor and Francis/Web of Science/UGC Care listed.
20. Sushma Devi, Avinash Kumar, Parvinder Kumar, Viniyendra Pamecha and Anish Gupta (2021) Hepatitis B Infection Leading To Sub-Acute Liver Transplant: A Case Study. European Journal of Molecular & Clinical Medicine. Web of Science/ Scopus.
21. Han Jihoon, Heejin Park, Chinmoyee Maharana, A-Ryeong Gwon, Jinsu Park, Seung Hyun Baek, Han-Gyu Bae et al. (2021) "Alzheimer's disease-causing presenilin-1 mutations have deleterious effects on mitochondrial function." Theranostics 11, 8855. (IF=11.556) Elsevier.
22. Suneha Uttam and Seema Langer (2021). Taxonomic Studies and Seasonal Variations in Density of Fresh Water Leech (Nesemann, 2007) Inhabiting *Erpobdella bhatiai* Torrential

- Hill Stream in Greater Himalayas. Indian Journal of Ecology 48(4): 1203-1208. h- index 7, Impact factor: 0.54, NAAS Rating: 5.79 UGC-Care/Scopus/Web of Science.
23. Raman Jasrotia, Seema Langer and Menakshi Dhar (2021). Endocrine Disrupting Chemicals in Aquatic system: an emerging threat to wildlife and human health. Proceedings of Zoological Society. 74:634-647 <https://doi.org/10.1007/s12595-021-00410-5>. UGC-Care/Scopus/Web of Science.
  24. Sarbjeet Kour, Nidhi Sharma, Rajan Verma, Supreet Kour and Vipran Kumar (2021). Analysis of correlation among zooplankton in two nearby ponds of Jammu region. Ecology, Environment and Conservation. Vol 27(1): 201-208. UGC-Care/Scopus/Web of Science.
  25. Nidhi Sharma and Sarbjeet Kour (2021). First report of three species of the genus *Diaphanosoma* (Crustacea: Caldocera: Sididae) from Jammu waters (J&K), India. JoTT. Vol 13(9): 19324-19337. UGC-Care/Scopus/Web of Science.
  26. Ashfaq Ahmad Shah, Amit Gupta. Phytochemicals and Novel Nanotherapeutic Approaches in the Management of Rheumatic Diseases. Innovative Approaches for Nanobiotechnology in Healthcare Systems 2021, IGI Global, PUBLISHER of TIMELY KNOWLEDGE, Hershey, Pennsylvania 17033-1240, USA.
  27. Menakshi Dhar, Seema Langer and Raman Jasrotia (2021). Karyotypic Analysis of Freshwater Crab, *Maydelliathelphusa masoniana* (Henderson, 1893) from Jammu Region of J&K. Indian Journal of Ecology 48(3): 766-771. h- index 7, Impact factor: 0.54, NAAS Rating: 5.79 UGC-Care/Scopus/Web of Science.
  28. Chandan G, Kumar C, Chibber P, Kumar A, Singh G, Satti NK, Gulilat H, Saini AK, Bishayee A, Saini RV. Evaluation of analgesic and anti-inflammatory activities and molecular docking analysis of steroidal lactones from *Datura stramonium* L. Phytomedicine. 2021 Aug 1; 89:153621. <https://doi.org/10.1016/j.phymed.2021.153621> IF- 7.9. Elsevier.
  29. Chibber P, Haq SA, Kumar A, Kumar C, Gupta D, Wazir P, Singh S, Abdullah ST, Singh G. Antiarthritic activity of OA-DHZ; a gastroprotective NF- $\kappa$ B/MAPK/COX inhibitor. Cytokine. 2021 Dec 1; 148:155688. <https://doi.org/10.1016/j.cyto.2021.155688> IF- 3.8 Elsevier.
  30. Raman Jasrotia and Seema Langer (2021). Karyotypic Analysis and Chromosome Banding



in Freshwater Prawn *Macrobrachium dayanum* from Jammu and Kashmir, India. Biosciences Biotechnology Research Communications. 14(1):172-177. Impact Factor: 0.34 Web of Science (WoS USA) Thomson Reuters, h-index: 13 DOI: <http://dx.doi.org/10.21786/bbrc/14.1/24>.

31. 120. Ashfaq Ahmad Shah, Aqueel Ur-Rehman, Sumaira Qayoom, Amit Gupta. Role of Polyherbal Formulations of Medicinal Plants from Himalayan Regions in the Management of Diabetes. Innovative Approaches for Nanobiotechnology in Healthcare Systems 2021, IGI Global, Publisher of Timely Knowledge, Hershey, Pennsylvania 17033-1240, USA.
32. Ashfaq Ahmad Shah, Navin Kumar, Vijay Kumar and Amit Gupta\*. An overview of immunological response, anti-viral therapy and vaccine development against severe acute respiratory syndrome coronavirus (SARS-CoV)-2. International Journal of Current Research and Review 2021; 13(6): 74-80. Peer-reviewed.
33. 122. Apurva Sharma, Seema Langer and Palaq (2021). Description of Embryonic Development of Prawn *Macrobrachium dayanum* Henderson, 1893 (Decapoda, Palaemonidae) based on the Staging Method. Indian Journal of Ecology 48(1): 154-158. h-index 7, Impact factor: 0.54, NAAS Rating: 5.79 UGC-Care/Scopus/Web of Science.
34. 123. Gupta M, Wani A, Ahsan AU, Ali M, Chibber P, Singh S, Digra SK, Datt M, Bharate SB, Vishwakarma RA, Singh G. Safranin inhibits NLRP3 inflammasome activation by preventing ASC oligomerization. Toxicology and Applied Pharmacology. 2021 Jul 15; 423:115582. <https://doi.org/10.1016/j.taap.2021.115582> IF- 3.8. Eslevier.

**SPONSORED RESEARCH PROJECT IN OPERATION DURING THE PERIOD:**

S.No.	Name of the PI/Co-PI	Title of the project approved	Amount Sanctioned (INR)	Funding Agency	Start Date
1.	Dr Parvinder Kumar	Molecular genetics of Kidney Stone (Nephrolithiasis)	8,90,000	J&K State Science and Technology and	10. 11.2021

		in Jammu Region of J&K UT		Innovative Council	
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**SUCCESS OF STUDENTS AT NATIONAL LEVEL TESTS:**

<b>S.No.</b>	<b>Name of the Student</b>	<b>Year of Enrolment</b>	<b>Type of Scholarship/ fellowship</b>	<b>Granting Agency</b>
1.	Supriya Sharma	2021	URF, JU	University of Jammu
2.	Charul	2021	INSPIRE-DST-SRF	INSPIRE-DST
3.	Suneha Uttam	2021	UGC-SRF	UGC
4.	Nimrita Singh	2021	UGC-NET-JRF	UGC
5.	Indu Bharti	2021	URF. JU	University of Jammu
6.	Fatima Bano	2021	Post Matric Schl. For ST Ladakh	PMS
7.	Rasmeet Kour	2021	Post Matric Schl. minority	PMS

## **FY 2022-2023:**

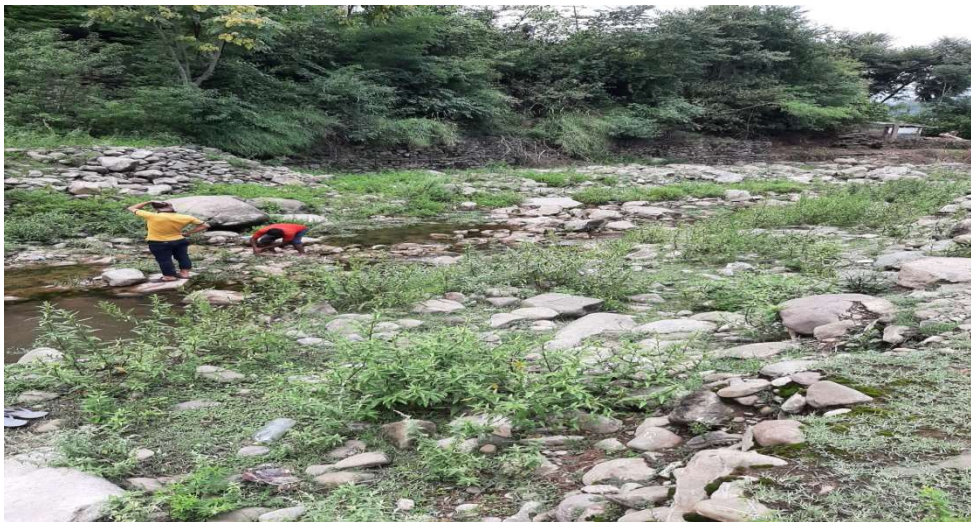
The following developments took place during the financial Year 01-04-2022 to 31- 03-2023:

1. Previous work initiated was continued.
2. Installation of Stereomicroscope and Ice Flaking Machine.
3. Morpho-taxonomy of the collected taxa to continue.
4. Genetic Diversity of various faunal groups studied.
5. DNA barcoding of important faunal groups.
6. Organization of the training programme.
7. Nutritional profiling of edible organisms was done.

### **Site of Crab Collection**



Site: Jhajjar, Jammu



Site: Poonch



## Site of Prawn Collection



Site: Pindi stream, Jammu

## Site of fish Collection



Site: Fish farm, Jammu

## Site of Isopod Collection



Site: Ladakh

## Site of Insect Collection



Site: Kathua, Jammu



## Site of Zooplankton Collection



Site: Chadwal, Kathua

Site: Kuntla

### ARTICLES PUBLISHED:

1. Menakshi Dhar, Seema Langer and Chakshu Gupta (2022). Insights into the Habitat Choice for the Culture of *Himalayapotamon emphysetum* under Laboratory Conditions. *Biosciences Biotechnology Research Asia*. 19(4): 1019-1024. <http://dx.doi.org/10.13005/bbra/3051> UGC- Care/ Web of Science/Scopus.
2. Rakesh Pant, Amit Gupta\*, Gaurav Pant, Chaubey Kundan Kumar, Kumar Gaurav, Nirmal Patrick. Second-generation biofuels: Facts and future. *Relationship between Microbes and the Environment for Sustainable Ecosystem Services: Microbial Tools for Sustainable Ecosystem Services 2022*; 3(3): 97-115.Scopus.
3. Arti Sharma and Ritika Anthal (2022). Fulvic acid isolation and characterisation from water of a Ramsar Lake Mansar, J&K, India. *Applied Water Science*. 2(1): 1-7. <https://doi.org/10.1007/s13201-021-01536-9>. Impact factor 5.5.
4. Neha Jamwal, Sanjay Bhatia and Arti Sharma (2022). Biodiversity of Some Economically Significant Stored Grain Pests in Jammu, Jammu and Kashmir. *Bioscience Biotechnology Research Asia*. 19(1): 281-292. 10.13005/bbra/2984. UGC-Care/ Web of Science/Scopus.
5. Seema Langer and Ruchika Bhutyal (2022). Fish species distribution and diversity indices of Kishtwar waterbodies- J&K, India. *Uttar Pradesh Journal of Zoology*. 43(20): 20-26. DOI: 10.56557/upjoz/2022/v43i203192 UGC-Care/ Web of Science/Scopus.
6. Ashfaq Ahmad Shah, Khan Samarah, Kashyap Khushi, Rawat Aman, Kumar Vijay, Gupta Amit. Comparative Assessment of Phytochemical Content and Antioxidant activity of *Mentha arvensis*. *Journal of Medical, Pharmaceutical and Allied Sciences 2022*; 11(4):

5075-5085. Peer-reviewed.

7. Apurva Sharma, Seema Langer, Sukanya and Menakshi Dhar (2022) Effect of stocking density on the growth performance of freshwater prawn, *Macrobrachium dayanum* from Jammu. *Advances in Bioresearch*. 13(3):42-47 Peer-reviewed DOI: 10.15515/abr.0976-4585.13.3.4247 UGC-Care/ Web of Science.
8. Raman Jasrotia, Seema Langer and Menakshi Dhar (2022). Molecular genetic diversity of a cultivable freshwater prawn *Macrobrachium dayanum* (Henderson, 1893) from Outer Himalayas, India *Proceedings of Indian National Science Academy* 88(1): 472–481. Impact Factor 0.95. Springer <https://doi.org/10.1007/s43538-022-00105-1> Peer- Reviewed Journal.
9. Suneha Uttam, Seema Langer, Chakshu Gupta and Menakshi Dhar (2022). Multivariate analysis showing impact of different environmental factors on species richness and species density of freshwater mollusc communities inhabiting waters of North-West Himalayas. *Pollution Research*. 41 (1): 353-361. h-index:23 NAAS rating:5.41 <http://doi.org/10.53550/PR.2022.v41i01.052> UGC-Care/ Web of Science/Scopus.
10. Menakshi Dhar, Seema Langer and Sukanya Rajput (2022). Studies on freshwater crab population as influenced by physico-chemical attributes in Gho-Manhasan stream, a tributary of river Chenab. *Ecology, Environment & Conservation*. 28 (1): 140-146. DOI: <http://doi.org/10.53550/EEC.2022.v28i01.019> h-index: 15.0 NAAS rating: 5.41. UGC-Care/ Web of Science/Scopus.
11. Kumar A, Kour G, Chibber P, Saroch D, Kumar C, Ahmed Z. Novel alantolactone derivative AL-04 exhibits potential anti-inflammatory activity via modulation of iNOS, COX-2 and NF- $\kappa$ B. *Cytokine*. 2022 Oct 1; 158:155978. <https://doi.org/10.1016/j.cyto.2022.155978> IF- 3.8.
12. Ashfaq Ahmad Shah, Syed Khursheed, Aadil Rashid, Amit Gupta\*. Isolation, Identification, Speciation, and AntibioGram of Enterococcus species by conventional methods and Assessment of the Prevalence of vana genotype among VRE. *Journal of Medical, Pharmaceutical and Allied Sciences* 2022; 11(4): 5037-5044. Peer-reviewed
13. Amrit sudershan, Agar Chander Pushap, Mohd Younis, Srishty Sudershan, Sheetal Bhagat, Hardeep Kumar, Rakesh K. Panjalyia and Parvinder Kumar (2022). Neuroepidemiology study of headache in the region of Jammu of north Indian population: A cross-sectional

study. *Frontiers in Neurology*. PubMed.

14. Gupta Amit\*, Sutariya Sandip, Shah Sumesh Sunil, Palekar Shrikant S, Somani Hitendra, Kumar Vijay. Anti-inflammatory and anti-bacterial activity of *Gymnosporia montana* (ROTH) Benth. *Journal of Medical, Pharmaceutical and Allied Sciences* 2022; 11(3):4970-4977. Peer-reviewed.
15. Pal, S., Kumar, V., Panjaliya, R. K., & Tyagi, K. (2022). A new genus and species of subfamily Dendrothripinae (Thysanoptera: Thripidae) from India. *Zootaxa*, 5175(3), 383-388.
16. Amrit Sudershan, Mohd Younis, Srishty Sudershan and Parvinder Kumar (2022) Migraine as an inflammatory disorder with microglial activation as a prime candidate. *Neurological Research*.
17. Gupta Amit\*, Kamboj Vaishali, Kamboj Abhilasha, Kumar Vijay. Exploring the antioxidant and anti-inflammatory potential of *Cucumis sativus* and citrus senescence. *Journal of Medical, Pharmaceutical and Allied Sciences* 2022; 11(3): 4947-4950; Peer- reviewed.
18. Jyotdeep Kour Raina, Rakesh Kumar Panjaliya, Vikas Dogra, Sushil Sharma, Anupriya and Parvinder Kumar (2022) Association of MTHFR and MS/MTR gene polymorphisms with congenital heart defects in North Indian population (Jammu and Kashmir): a case-control study encompassing meta-analysis and trial sequential analysis. *BMC Pediatrics*. Web of Science/ Scopus.
19. Amrit Sudershan, Kanak Mahajan, Kuljeet Singh, Manoj K. Dhar, Parvinder Kumar (2022). complexities of migraine: A debate among migraine researchers: A review. *Clinical Neurology and Neurosurgery*.
20. Sukanya Rajput and Seema Langer (2022). Digenetic trematode parasites in two freshwater fishes *Ophiocephalus puctatus* and *Xenentodon cancila* from North west Himalayas. *Journal of Parasitic Diseases (Springer)*. DOI: 10.1007/s12639-022-01473-7 UGC-Care/ Web of Science/Scopus.
21. Kumari Rashmi, Mehak Gupta, Shreyoshi Tarapdar, Megha Duggal, Shubham Tyagi, Harmanpreet Kaur, Priyank Vyas, Amit Gupta\*. Influence of Dietary Molecules on Human Health: Whey Proteins. *Research Journal of Pharmacy and Technology* 2022; 15(4): 1910-1914; Scopus.
22. Sarbjeet Kour, Supreet Kour, Nidhi Sharma and Deepanjali Slathia (2022). Zooplankton



Diversity and Water Quality Assessment of Lentic Waters of Jammu, India. Indian Journal of Ecology. Vol 49(1): 187-194. UGC-Care/ Web of Science/Scopus.

23. Sawan Kumar, Jyotdeep Kour Raina, Amrit Sudershan, Kanak Mahajan, Raman Jasrotia, Chinmoyee Maharana, Rakesh K Panjalía and Parvinder Kumar (2022) An association study of ESR1–XbaI and PvuII gene polymorphism in migraine susceptibility in the Jammu region. European Neurology 86, 55-62. (IF = 2.4).
24. Sarbjeet Kour, Deepanjali Slathia, Nidhi Sharma, Supreet Kour and Rajan Verma (2022). Zooplankton as bioindicators of trophic status of a lentic water source, Jammu (J&K) with remarks on first reports. Proceedings of the National Academy of Sciences India Section B. Vol 92: 393-404. Impact Factor 0.95. Springer.
26. Sarbjeet Kour, Dipti Bains, Nidhi Sharma, Supreet Kour and Deepanjali Slathia (2022). Seasonality of micro inhabitants and abiotic parameters of perennial pond of Jammu. Indian Journal of Ecology. Vol 49(5):1800-1804. UGC-Care/ Web of Science/Scopus.
27. Pant Rakesh, Kukreti Samiksha, Kaur Harmanpreet, Rawat Mansi, Kumar Vijay, Gupta Amit\*. Qualitative and quantitative enumeration of coliform bacteria in song river water in rural area of Dehradun. Journal of Medical, Pharmaceutical and Allied Sciences 2022; 11(2): 4534-4538. Peer-reviewed.
28. Supreet Kour, Deepanjali Slathia and Sarbjeet Kour (2022). Studies on the epibiotic association between rotifer *Brachionus rubens* and cladocerans from water bodies of Jammu and Kashmir, India. Symbiosis. Vol 88: 11-19. Impact Factor 3. 109. Springer
29. Parihar, R. D., Dhiman, U., Bhushan, A., Gupta, P. K., & Gupta, P. (2022). *Heterorhabditis* and *Photorhabdus* symbiosis: a natural mine of bioactive compounds. Frontiers in microbiology, 13, 790339. IF=5.2.
30. Sunali Bandral, Charul, Vikas Dogra, Mahender Singh, Mohd Feroz and Rakesh K. Panjaliya (2022). Molecular Identification and Phylogenetic Analysis of Some Common Beetles (Coleoptera) of Jammu Region, India Using DNA Barcoding. Ecology, Environment & Conservation. UGC-Care/ Web of Science/Scopus.
31. Sanchita Kapoor, Harmanpreet Kaur, Aqueel Ur Rehman, Vijay Kumar, Amit Gupta\*. Infectious Bursal Disease: Overview. Journal of Medical, Pharmaceutical and Allied Sciences 2022; 11(2): 4661-4665. Peer-reviewed.
32. Sawan Kumar, Jyotdeep Kour Raina, Amrit Sudershan, Kanak Mahajan, raman Jasrotia,

- Chinmoyee Maharana, Rakesh K. Panjaliya and Parvinder Kumar (2022). An Association Study of ESR1-Xbal and PvuII Gene Polymorphism in Migraine Susceptibility in the Jammu Region. European Neurology Web of Science.
33. Agar Chander Pushap, Amrit Sudershan, Srishty Sudershan, Anita Sharma, Mohd Younis, Sheetal Bhagat, Rakesh K Panjalialia, and Parvinder Kumar (2022). Stress Among College Students is Linked to Headache, PCOS, Hypertension, and Depression: A Cross-Sectional Study. Psychol Behav Sci Int J.
  34. Sawan Kumar, Jyotdeep Kour Raina, Amrit Sudershan, Kanak Mahajan, Raman Jasrotia, Chinmoyee Maharana, Rakesh K. Panjaliya (2022). An Association Study of ESR1-Xbal and PvuII Gene Polymorphism in Migraine Susceptibility in the Jammu Region. European Neurology.
  35. Sushma Devi, Amrit Sudershan, Mohd Younis, Ankush Bala, Kanak Mahajan, Rakesh K Panjayalia and Parvinder Kumar (2022). factors of pediatric acute lymphoblastic leukemia: A review. International Journal of Clinical Biology and Biochemistry. Web of Science.
  36. Amrit Sudershan, Kanak Mahajan, Rakesh K. Panjaliya, Manoj K. Dhar & Parvinder Kumar (2022). Algorithm for sample availability prediction in a hospital-based epidemiological study spreadsheet-based sample availability calculator. Scientific Reports. Web of Science/ Scopus
  37. Nidhi Slathia and Seema Langer (2022). Study of Freshwater Prawn Diversity from Different Rivers of Jammu, India. Indian Journal of Ecology. 49(1): 183-186 DOI: <https://doi.org/10.55362/IJE/2022/3500> h- index 7, Impact factor: 0.54. UGC- Care/ Web of Science/Scopus
  38. Harmeen Kour, Seema Langer and Nipoon Sharma (2022). Population Dynamics of *Maydelliathelphusa masoniana* Henderson 1893 from Freshwater Bodies of Jammu region (Jammu & Kashmir, India) Ecology, Environment and Conservation. 28 (February Suppl. Issue): (S425-S435) h-index: 15.0 NAAS rating: 5.41 DOI: 10.53550/EEC. 2022.v28i02s.066. UGC-Care/ Web of Science/Scopus
  39. Konya H and Kumar P (2022). Role of Kisspeptin, Gonadotropin Inhibitory Hormone, Dynorphin, Neurokinin B and Nitric Oxide in Anxiety- and Depression-like Behaviour in Rats and Mice: A Review. International Research and Reviews Journal. 9(3).
  40. Hage Konya, Madhu Yashpal, Pankaj Kumar, Bechan Lal (2022). Nitric oxide as a

- modulator of stress and reproductive axis: a review. *Journal of Bioresources* 9 (2): 07-13.
41. Minerva Lollen, Madhu Yashpal, and Pankaj Kumar (2022). Hallucinogens and the neuroendocrine system in relation to anxiety and depression: A review. *Journal of Bioresources* 9 (1): 35–38.
42. Raman Jasrotia and Seema Langer (2022). First report on chromosomal analysis of freshwater prawn, *Macrobrachium kistnense* (Decapoda: Palaemonidae) from Jammu region of Outer Himalayas, India. *Natl. Acad. Sci. Lett.* Impact Factor:1.1. <https://doi.org/10.1007/s40009-021-01097-0>. UGC-Care/ Web of Science

**SPONSORED RESEARCH PROJECT IN OPERATION DURING THE PERIOD:**

<b>S.No.</b>	<b>Name of the PI/Co-PI</b>	<b>Title of the project approved</b>	<b>Amount Sanctioned (INR)</b>	<b>Funding Agency</b>	<b>Start Date</b>
1.	Dr. Rakesh Kumar	Micro RNAs expression profiling for exploring their potential use as diagnostic biomarkers in human prostate cancer	8,80,000	J&K State Science and Technology and Innovative Council	11-10-2022

### SUCCESS OF STUDENTS AT NATIONAL LEVEL TESTS:

S.No	Name of the Student	Year of Enrolment	Type of Scholarship/fellowship	Granting Agency
1.	Shash Pal	2022	URF, JU	University of Jammu
2.	Sneha Uttam	2022	CSIR SRF	CSIR SRF
3.	Mukul Adotra	2022	URF, JU	University of Jammu
4.	Shash Pal	2022	CSIR-JRF, DBT-JRF	CSIR, DBT
5.	Monika Pandita	2022	Project Fellow	JK ST&IC
6.	Shrishty Sudershan	2022	Project Fellow	JK ST&IC
7.	Palvi Sharma	2022	NET	UGC

### **FY 2023-2024:**

The following developments took place during the financial Year 01-04-2023 to 31- 03-2024.

1. Work initiated in previous years was continued.
2. Maintenance of stock of economically important species.
3. DNA barcoding of selected taxa was continued.
4. Results of water quality assessment was compiled.
5. Validation of nutritional profiling results.

6. Execution of marketing strategies.
7. Filling the gaps in data collection and validation
8. Stock maintenance was carried out.
9. Drafting of the report.
10. Compilation of the final data and submission of project completion report.

### **Site of Crab Collection**



Site: Ravi river, Kathua

### **Site of Prawn Collection**





Site: Chakrali, Samba

### **Site of fish Collection**



Site: Chadwal



## Site of Isopod Collection



Site: Kashmir

## Site of Insect Collection



Site: Kishtwar, Doda

## ARTICLES PUBLISHED:

1. Harmeen Kour, Seema Langer, Nipoon Sharma, Rekha Devi, Kanwar Narain (2024). A new species of freshwater crab of the genus *Himalayapotamon* Pretzmann 1966 (Decapoda: Brachyura: Potamidae) from Jammu and Kashmir, Northern India. Proceedings of Indian National Science Academy. DOI: 10.1007/s43538-024-00261-6.

Impact Factor: 0.9. Springer

2. Deepanjali Slathia, Supreet Kour and Sarbjeet Kour (2024). First report of *Macrochaetus sericus* Thorpe, 1893 and *Lecane tenuisetata* Harring, 1914 (Rotifera: Monogononta) from Jammu waters (J&K), India. JoTT. Vol 16(3): 24923-24929. Impact Factor 0.54 SCI; UGC- CARE, WEB OF SCIENCE
3. Raman Jasrotia, Seema Langer, Menakshi Dhar, (2024). Fish Waste and By-Product Utilization: A Circular Economy. In: Maqsood, S., Naseer, M.N., Benjakul, S., Zaidi, A.A. (eds) Fish Waste to Valuable Products. Sustainable Materials and Technology. Springer, Singapore. [https://doi.org/10.1007/978-981-99-8593-7\\_22](https://doi.org/10.1007/978-981-99-8593-7_22).
4. Arti Sharma and Neha Jamwal (2024). Hydrobiological heterogeneity and its impact on the Pragwal Wetland Ecosystem. International Journal of Ecology and Environmental Science. 50: 415-429. <https://doi.org/10.55863/ijeec.2024.3279>. NAAS rating 4.74 SCI; UGC-CARE; WEB OF SCIENCE
5. Arti Sharma and Isha Devi (2024). Biosorption of heavy metal ions from aqueous effluents utilising snail shell dust as biomaterial. Environment Development and Sustainability. <https://doi.org/10.1007/s10668-024-04777-1>. Impact factor 4.9
6. Sharma K, Gupta A\*, Thapliyal A, Pandey N. Formulation of Fruit Seed-based Bioactive Compounds from *Zanthoxylum armatum* for Determining their Antioxidant and Antimicrobial Activity. Journal of Pure and Applied Microbiology 2024; 18(1): 584-592. UGC-Care; Web of Science; Scopus
7. Menakshi Dhar, Raman Jasrotia, Seema Langer (2024). Using Fish Waste and By-Products for Manufacturing Organic Fertilizers and Manures. In: Maqsood, S., Naseer, M.N., Benjakul, S., Zaidi, A.A. (eds) Fish Waste to Valuable Products. Sustainable Materials and Technology. Springer, Singapore. [https://doi.org/10.1007/978-981-99-8593-7\\_16](https://doi.org/10.1007/978-981-99-8593-7_16).
8. Pal, S., Ghosh, A., Kumar, V., & Tyagi, K. (2024). Discovery of the genera *Bolothrips* Priesner, 1926 and *Cephalothrips* Uzel, 1895 (Thysanoptera: Phlaeothripidae) from the Oriental region. Journal of Insect Biodiversity and Systematics, 10(2), 339-346. SCI; UGC- CARE; WEB OF SCIENCE
9. Raman Jasrotia, Seema Langer, Menakshi Dhar (2024). Pesticides in the Environment, Elsevier, Chapter 9 - Pesticide impacts on humans. 203-222, <https://doi.org/10.1016/B978->



0-323-99427-9.00008-2.

10. Rakesh Pant, Amit Gupta\*, Simran Srivastava, Arsh Singh, Nirmal Patrick. Association of Algae to Water Pollution and Waste Water Treatment. *Microbial Technology for Sustainable E-waste Management 2023*; ISBN 978-3-031-25678-3; Page no. 213-230.
11. Hage Konya, Madhu Yashpal, Pankaj Kumar, Bechan Lal (2023). Embryonic disruption of neuronal nitric oxide synthase alters hypothalamus and gonadal development in mice. *Journal of Bioresources* 10 (2): 23–29.
12. Jaikumar, M., Ramadoss, D., Sreekanth, G. B., Smrithi, K., & Parihar, R. D. (2023). Regional impacts of COVID-19 pandemic on aquaculture and small-scale fisheries: Insights and recovery strategies in India. *Aquaculture*, 570, 739403. IF=4.5 Elsevier
13. Rakesh Pant, Harmanpreet Kaur, Khushi Tiwari, Arsh Singh, Simran Srivastava, Nirmal Patrick, Amit Gupta\*. Isolation, Characterization of *B. subtilis* from Song River Shore and their Application to Wastewater Treatment. *Journal of Pure and Applied Microbiology* 2023; 17(1): 597-608 UGC-Care; Web of Science; Scopus
14. Ashfaq Ahmad Shah, Amit Gupta\*, Aqueel-Ur-Rehman, Sanchita Kapoor, Harmanpreet Kaur, Bharat Rohilla, Kumari Rashmi and AB Bajpai. GC-MS Analysis of Phytoactive Compounds, Antioxidant and Antibacterial Activity of *Citrullus lanatus* Seeds. *Biomedical & Pharmacology Journal* 2023; 16(1):73-86. UGC listed;Scopus
15. Rakesh Pant, Samiksha Kukreti, Harmanpreet Kaur, Nancy Dhyani, Bharat Rohilla, Nirmal Patrick, Amit Gupta\*. Microbiological and Physico-Chemical Quality Assessment of Drinking Water in Dehradun. *Research Journal of Pharmacy and Technology* 2023; 16(1): 266-272. Scopus
16. Singh A, Lal B, Kumar P, Parhar IS, Millar RP (2023). Role of Neurokinin B in gametogenesis and steroidogenesis of freshwater catfish, *Clarias batrachus*. *Cell Tissue Res.* 2023 Aug;393(2):377-391. IF=3.6 Springer
17. Arti Sharma and Isha Devi (2023). A sustainable biosorption technique for treatment of industrial wastewater using snail shell dust (*Bellamya bengalensis*). *Environment monitoring and Assessment.* 195: 1-14. <https://doi.org/10.1007/s10661-023-10968-6> Impact factor 3. Springer
18. Ashfaq Ahmad Shah, Amit Gupta\*. *Venturia inaequalis* post-infection enhancement of secondary metabolites in the peels of delicious apple variety. *Materials Today: Proceedings*

2023; 73(1): 151-162; Scopus

19. Menakshi Dhar, Raman Jasrotia, Seema Langer, Nurul Suwartiningsih (2023). Impact of Microplastics on Reproductive and Physiological Aspects of Aquatic Inhabitants. In: Rather, M.A., Amin, A., Hajam, Y.A., Jamwal, A., Ahmad, I. (eds) Xenobiotics in Aquatic Animals. Springer, Singapore. 165-179. [https://doi.org/10.1007/978-981-99-1214-8\\_6](https://doi.org/10.1007/978-981-99-1214-8_6).
20. Nidhi Slathia, Seema Langer, Raman Jasrotia (2023). Assessment of water quality and its effect on the prawn abundance in three tributaries of Shiwalik rivers-Chenab, Ravi of Jammu, India: A case study. Applied Water Science. Springer Impact Factor: 5.5; UGC-CARE JOURNAL 13 (77) <https://doi.org/10.1007/s13201-023-01882-w>
21. Nati Taba, Madhu Yashpal, Pankaj Kumar (2023) Role of Areca catechu L. on reproductive physiology in Mice: a review. Journal of Bioresources 10 (1): 01–06.
22. Patidar, A., Pal, S., Singha, D., Kumar, V., & Tyagi, K. (2023). New distributional records of fungus feeder Thrips (Thysanoptera) from Odisha, India. Records of the Zoological Survey of India. 179-183. UGC-Care/ Web of Science
23. Patidar, A., Pal, S., Sarma, M., Kumar, V. & Tyagi, K. (2023). New Records of the family Thripidae (Thysanoptera, Terebrantia) from India. Journal of Insect Biodiversity and Systematics, 9 (4), 695–702.
24. Sandip Sutariya, Ashfaq Ahmad Shah, AB Bajpai, Rajesh J Sharma, Chandrashekhar P. Pandhurnekar, Amit Gupta\*. Fourier transform infrared spectroscopy (FTIR) analysis, antioxidant and anti-inflammatory activities of leaf and fruit extracts of *Gymnosporia Montana*. Materials Today: Proceedings 2023; 73(1): 134-141. Scopus
25. Pal, S., Singha, D., Kumar, V., Panjaliya, R. K., & Tyagi, K. (2023). New Distributional Records of Thrips from Jammu & Kashmir, India. Halteres, 14, xx-xx, 2023. (pre-print available).
26. Amit Gupta\*, Simran Srivastava, Arsh Singh, AB Bajpai, V. Kumar. Total phenolic, flavonoid content and anti-oxidant potential of *Phaseolus vulgaris*. Journal of Medical, Pharmaceutical and Allied Sciences 2023; 12(3): 5780-5784
27. Sandha KK, Behera C, Chibber P, Kumar R, Kumar A, Mondhe DM, Singh G, Gupta PN. Antifibrotic agent mediated tumor microenvironment modulation and improved nanomedicine delivery in solid tumor. Molecular Pharmaceutics. 2023 May 17;20(6):2927 <https://doi.org/10.1021/acs.molpharmaceut.2c01081> IF- 4.9 Elsevier

28. Amrit Sudershan, Srishty Sudershan, Mohd Younis, Meenakshi Bhagat, Agar Chander Pushap, Hardeep Kumar and Parvinder Kumar (2023) Enlightening the association between TNF $\alpha$  -308 G > A and migraine: a meta-analysis with meta-regression and trial sequential analysis., BMC Neurology (2023) 23:15. Science Citation Index Expanded (SciSearch)UGC-CARE List (India).
29. Kumar C, Chibber P, Painuli R, Haq SA, Vishwakarma RA, Singh G, Satti NK, Phatake RS. Scoparone chemical modification into semi-synthetic analogues featuring 3-substitution for their anti-inflammatory activity. Molecular Diversity. 2023 Jul 19:1-2. <https://doi.org/10.1007/s11030-023-10687-7> IF- 3.36. Elsevier
30. Pant, R, Rohilla B, Singh M, Patrick N, Gupta Amit\*. Physicochemical and Environmental Bacteria Screening of River Suswa with Relation to Human Health. International Journal of Pharmaceutical Sciences and Nanotechnology 2023; 16(5):6958-6965. Scopus
31. Sourabh Sharma, Rahul Gupta, Jyotdeep Kour Raina, Ravi Sharma, Parvinder Kumar, and Rakesh K Panjaliya (2023). Association of Non-genetic risk factors with prostate cancer in the population of the Jammu region of J&K, India. Biosci Biotech Res Asia. Web of Science
32. Pal, S., Patidar, A., Kumar, V., Panjaliya, R. K., & Tyagi, K. (2023). *Frankliniella* species from India (Thysanoptera: Thripidae), with a new generic synonym and an unusual new species. Zootaxa, 5360(1), 44-56.
33. Rashmi Kumari, Gupta Amit\*, Kaniska, Vyas P, Bajpai, A.B. Qualitative Chemical Plant Characterization and Evaluation of the Antioxidant and Antimicrobial potential of Rhododendron, a high Attitudinal Medicinal Plant in Uttarakhand, India. Research Journal of Pharmacy and Technology 2023; 16(12): 5765-5769; Scopus
34. Rakesh Pant, Amit Gupta\*, Arsh Singh, Simran Srivastava, Nirmal Patrick. A Summary of the Role of Microorganisms in Waste Management. Microbial Technology for Sustainable E-waste Management 2023; ISBN 978-3-031-25678-3; Page no. 337-352.
35. Chibber, C., Pal, S., Kumar, H., & Kumar, A. (2023). Oriental Darter *Anhinga melanogaster* and Scalybreasted Wren Babbler *Pnoepyga albiventer* from the Union Territory of Jammu and Kashmir, India. Indian Birds, 19(3), 91-92.
36. Charul, Sunali Bandral, Shivalika, Vikas Dogra, Mohd. Feroz, Umer Bin Farook and Rakesh K Panjaliya (2023). Phylogenetic Analysis of the economically important

hymenopterans using cytochrome oxidase 1 enzyme sequences. Bioscience Biotechnology Research Asia. UGC-Care/ Web of Science/Scopus

37. Shah A.A, Singh S, Saini S, Saxena K, Gupta Amit\*. A Perusal of Phenolics Within Polar Peel Fractions of *Malus domestica* var Maharaji via Hyphenated Techniques Cum Anti-microbial with REMA and Tyrosinase Inhibitory Potential thereof. Journal of Pure and Applied Microbiology 2023; 17(4): 2215-2231; UGC-Care; Web of Science; Scopus
38. Chakshu Gupta, Seema Langer, Menakshi Dhar (2023). Variations in water quality parameters and their correlation with fish catch per unit effort of Bhini Stream, a tributary of River Ravi, Jammu and Kashmir, India. Ecology, Environment and Conservation 28(4):1967-1975. <http://doi.org/10.53550/EEC.2022.v28i04.046> UGC-CARE JOURNAL, SCOPUS - H Index15. NAAS Rating - 5.41
39. Shah, A.A, Gupta Amit\*, Rawat A, Pandey N, Kumar, V. Relative phenolic profile, ROS scavenging, and anti-haemolytic potential of polarity-driven peel bioactive compounds of distinct *malus* species indigenous to Kashmir. Journal of Medical Pharmaceutical and Allied Sciences 2023; 12 (4): 5911-5920.
40. Raman Jasrotia, Menakshi Dhar, Neha Jamwal, Seema Langer (2023). Climate Change and Global Insect Dynamics. In book: Global Agricultural Production: Resilience to Climate Change. Publisher: Springer. DOI: 10.1007/978-3-031-14973-3\_12.
41. Ashfaq Ahmad Shah, Ananya Dhiman, Kushal Saxena, Amit Gupta\*. An overview of severe acute respiratory syndrome Coronavirus-2 (SARS-CoV-2): Pathophysiology, diagnosis, and management tactics. Advances in Health and Disease. NOVA publishers 2023; volume 67, page no. 45-70.
42. Charul, Raina, J. K., Sharma, S., Pal, S., Dogra, V., Kumar, P., & Panjaliya, R. K. (2023). COVID and depression among stratified population groups: a narrative review. European Journal of Medical Research. 28(1): 265.
43. Raman Jasrotia, Menakshi Dhar, Seema Langer (2023). Climate Change Impacts on Animal Production. In book: Global Agricultural Production: Resilience to Climate Change. Publisher: Springer. DOI: 10.1007/978-3-031-14973-3\_11
44. Samar Nissar, Yahya Bakhtiyar, Mohammad Yasir Arafat, Saima Andrabi, Zahoor Ahmed Mir, Niyaz Ali Khan, Seema Langer (2023) The evolution of integrated multi-trophic aquaculture in context of its design and components paving way to valorization via

optimization and diversification. *Aquaculture* (ELSEVIER) Impact Factor: 4.5  
<https://doi.org/10.1016/j.aquaculture.2022.739074>.

45. Sandip Sutariya, Vidhi Pansuriya, Malika Sharma, AB Bajpai, Amit Gupta\*. Antimicrobial, Antioxidant and Anti-inflammatory potential of flavonoid and terpenoid from *Gymnosporia montana*. *Research Journal of Pharmacy and Technology* 2023; 16(4): 1945- 1950; Scopus
46. Rakesh Pant, Amit Gupta\*, Bharat Rohilla, Arsh Singh, Priya Arya, Sunidhi Shreya, Nirmal Patrick, Vijay Kumar. Isolation and characterization of multidrug resistance bacterial pathogens from song and suswa river water in Dehradun. *Journal of Medical, Pharmaceutical and Allied Sciences* 2023; 12(4):5949-5954.
47. Pal, S., Patidar, A., Panjaliya, R. K., Kumar, V., & Tyagi, K. (2023). Species of the genus *Scirtothrips* from India (Thysanoptera, Thripidae). *Zootaxa*, 5306(3), 392-396.
48. Chibber, C., Pal, S., & Sharma, S.P. (2023). Tricoloured Munia *Lonchura malacca* from the Union Territory of Jammu and Kashmir, India. *Indian Birds*, 19(3), 91-92.

**SPONSORED RESEARCH PROJECT IN OPERATION DURING THE PERIOD:**

S.No.	Name of the PI/Co-PI	Title of the project approved	Amount Sanctioned (INR)	Funding Agency	Start Date
1.	Dr Chinmoyee Maharana	Discovery of candidates for molecular diagnostics in AD (as PI)	1,00,000	University of Jammu Research Fund	19-01-2023
2.	Dr Ripu Daman Parihar	Survey and identification of entomopathogenic nematodes from university campus and its adjoining areas.	1,00,000	Research and Seed grant under “Quality Assurance Fund (DIQA)” University of Jammu	23-01-2023

3.	Dr. Parvinder Kumar	Cytogenetic Study of Children borne with Genetic Disorder of Jammu region.	2,00,000	Research and Seed grant under “Quality Assurance Fund (DIQA)” University of Jammu	23.01.2023
4.	Dr Ripu Daman Parihar	यजुर्वेद में प्रतिपात विद आधुनिक जन्तु त स्वकालि आधारभूति वि त्व :एक वि दु वि ात्मक अध्ययिय (Co- PI)	5,00,000	Transdisciplinary Research Scheme, SIF, UoJ	06-12-2023
5.	Prof. Seema Langer	DBT-BUILDER University of Jammu Interdisciplinary Life Science Programme for Advanced Research and Education (Network Project of Life Sciences)	9,28,62,343	Department of Biotechnology, Ministry of Science and Technology, Govt. of India	18-09-2023
6.	Dr Arti Sharma	Biosorption: A sustainable approach in remediation of toxic heavy metals from industrial wastewater/synthetically	2,00,000	Seed Grant under DIQA through the University of Jammu	23-01-2023



		prepared solution using snail shell dust and fish scales			
7.	Dr. Rakesh Kumar	Role of MicroRNA and androgen signalling pathway gene polymorphisms in the Pathophysiology of prostate cancer.	2,00,000	Research and Seed grand under “Quality Assurance Fund (DIQA)” University of Jammu	23-01-2023
8.	Dr Ripu Daman Parihar	Study of Galleria mellonella and its mass rearing in the laboratory on artificial diet.	2,00,000	Seed Grant under DIQA through University of Jammu	19-01-2023
9.	Dr. Parvinder Kumar	Role of nesfatin-1 in the regulation of ovarian functions: a comparative study	3,00,000	University of Jammu Research Fund	14. 02 2023
10.	Dr Chinmoyee Maharana	Emerging Issues, Challenges and Prospective strategies for Adolescent’s Mental Health and Holistic wellbeing: A study of Jammu, JKUT (as Co-PI)	9,10,000	Transdisciplinary Research Scheme, SIF, UoJ	21-12-2023
11.	Dr.Sarbjeeet Kour	Polymorphism in zooplankton of Jammu waters	200000	Seed Grant under DIQA through University of Jammu	23-01-2023

12.	Dr. Chinmoyee Maharana	Investigation of Neurological Transformations through optimized exercise regimen on a cohort of Jammu region: A predictive Model for dynamic interplay of physical activity and brain adaptation (as PI)	6,40,000	Transdisciplinary Research Scheme, SIF, UoJ	21-12-2023
13.	Prof. Seema Langer	Morphology and molecular taxonomy of Terrestrial isopods from Jammu region J&K UT.	2,00,000	Research and Seed Grant under “Quality Assurance Fund (DIQA)” University of Jammu	23-01-2023
14.	Dr. Chinmoyee Maharana	Unravelling role of miRNAs in understanding AD (as PI)	2,00,000	Research and Seed Grant under “Quality Assurance Fund (DIQA)” University of Jammu	23-01-2023
15.	Dr. Chinmoyee Maharana	Investigation of circulatory miRs neurodegenerative diseases: Implications for biomarker discovery and therapeutics (as PI)	8,00,000	JKICDST	22-12-2023

16.	Prof. Seema Langer	Investigations on nutritional and clinical significance of freshwater crabs with special emphasis on the effect of frozen storage on their biochemical composition	6,50,000	Jammu Kashmir Science and Technology Innovation Council	22-12-2023
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### SUCCESS OF STUDENTS AT NATIONAL LEVEL TESTS:

S.No.	Name of the Student	Year of Enrolment	Type of Scholarship/fellowship	Granting Agency
1.	Tanishq Kour	2023	NET	UGC
2.	Sonali Sharma	2023	NET-JRF	UGC
3.	Akshita Sharma	2023	CSIR-JRF	CSIR
4.	Shivalika	2023	CSIR-NET-JRF	University of Jammu
5.	Tanishq Kour	2023	NET	UGC
6.	Sonali Sharma	2023	NET-JRF	UGC
7.	Akshita Sharma	2023	CSIR-JRF	CSIR
8.	Anjoo Dhar	2023	PH.D	University of Jammu
9.	Janvi Sharma	2023	PH.D	University of Jammu
10.	Janvi Sharma	2023	INSPIRE	DST

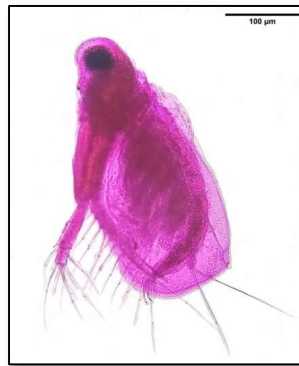
# Mapping of regional faunal diversity using classical and advanced taxonomical techniques under DST-FIST project

## Classical:

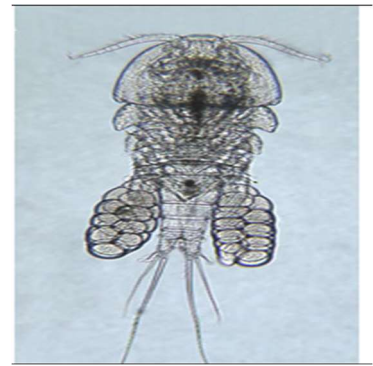
### ➤ Zooplankton (90 species)



*Brachionus durgae*



*Diaphanosoma sarsi*



*Ectocyclops phaleratus*

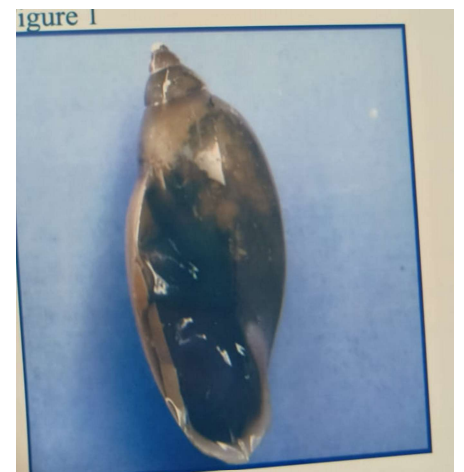
### ➤ Macrobenthos (71 species)



*Tubifex tubifex*



*Baetis sp.*



*Physa sp.*

➤ Insects (110 species)



*Tribolium castaneum*



*Oryzaephilus surinamensis*

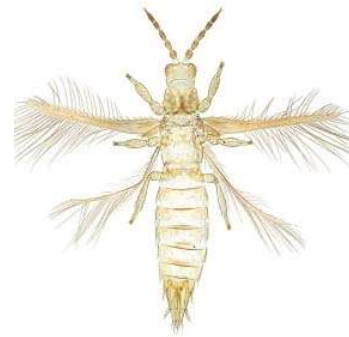


*Rhuzopertha dominica*

➤ Thrips (71)



*Frankliniella insolitum*



*Scirtothrips quercus*

➤ Isopods (4)



*Cubaris murina*



*Porcellionides pruinosus*



➤ Crabs (5)



*Himalayapotamon  
emphysetum*



*Sartoriana spinigera*



*Acanthopotamon martensi*

➤ Prawn (9)



*Macrobrachium dayanum*



*Macrobrachium lamarrei*



*Macrobrachium  
hendersodayanum*

➤ Fishes (105)



*Nemacheilus botia*



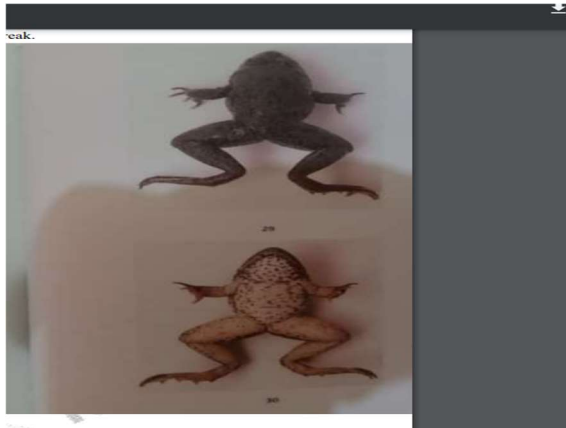
*Garra gotyla*



*Pterygoplichthys pardalis*



➤ Amphibians (17)



*Rana cyanophlyctis*

➤ Reptiles (63)

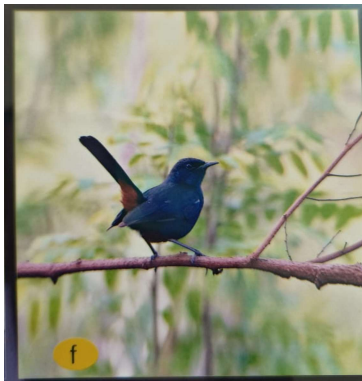


*Platyceps cf. rhodorachis*



*Calotes versicolor*

➤ Aves (158)



*Indian Robin*



*Paradise flycatcher*



*Indian Tailor bird*

➤ Mammals (25)



*Semnopithecus entellus*

# Faunal Discovery

## Genus new to science

S.No.	Class	Order	Family	Genus	Species
01.	Insecta	Thysanoptera	Thripidae	<i>Jammuthrips</i>	<i>paikulensis</i>

## Species new to science

S.No.	Class	Order	Family	Genus	Species
01.	Insecta	Thysanoptera	Thripidae	<i>Frankliniella</i>	<i>Insolitum</i>
02.	Insecta	Thysanoptera	Thripidae	<i>Scirtothrips</i>	<i>quercus</i>
03.	Malacostraca	Decapoda	Potamidae	<i>Himalayapotamon</i>	<i>jammuense</i>

## New Record to India

S.No.	Class	Order	Family	Genus	Species
01.	Insecta	Thysanoptera	Thripidae	<i>Thrips</i>	<i>alius</i>
02.	Insecta	Thysanoptera	Thripidae	<i>Hydatothrips</i>	<i>onari</i>
03.	Insecta	Thysanoptera	Phlaeothripidae	<i>Bolothrips</i>	<i>dentipes</i>
04.	Insecta	Thysanoptera	Phlaeothripidae	<i>Cephalothrips</i>	<i>monilicornis</i>
05.	Malacostraca	Isopoda	Philosiidae	<i>Burmoniscus</i>	<i>meeusei</i>
06.	Malacostraca	Isopoda	Cylistidae	<i>Cylisticus</i>	<i>convexus</i>

## New Record to Jammu and Kashmir

S.No.	Class	Order	Family	Genus	Species
01.	Insecta	Thysanoptera	Aeolothripidae	<i>Aeolothrips</i>	<i>intermedius</i>
02.	Insecta	Thysanoptera	Aeolothripidae	<i>Anaphothrips</i>	<i>sudanensis</i>
03.	Insecta	Thysanoptera	Thripidae	<i>Astrothrips</i>	<i>tumiceps</i>
04.	Insecta	Thysanoptera	Thripidae	<i>Bathrips</i>	<i>melanicornis</i>
05.	Insecta	Thysanoptera	Thripidae	<i>Ernothrips</i>	<i>lobatus</i>
06.	Insecta	Thysanoptera	Thripidae	<i>Neohydatothrips</i>	<i>samayunkur</i>
07.	Insecta	Thysanoptera	Thripidae	<i>Scirtothrips</i>	<i>oligochaetus</i>
08.	Insecta	Thysanoptera	Thripidae	<i>Stenchaetothrips</i>	<i>pteratus</i>
09.	Malacostraca	Decapoda	Gecarcinucidae	<i>Sartoriana</i>	<i>spinigera</i>

10.	Malacostraca	Decapoda	Potamidae	<i>Acanthopotamon</i>	<i>martensi</i>
11.	Malacostraca	Isopoda	Porcellionidae	<i>Porcellionides</i>	<i>Pruinosus</i>
12.	Malacostraca	Decapoda	Atyidae	<i>Caridina</i>	<i>gurneyi</i>
13.	Malacostraca	Decapoda	Atyidae	<i>Caridina</i>	<i>Shenoyi</i>
14.	Brachiopoda	Ctenopoda	Sididae	<i>Diaphanosoma</i>	<i>excisum</i>
15.	Brachiopoda	Ctenopoda	Sididae	<i>Diaphanosoma</i>	<i>senegal</i>
16.	Brachiopoda	Ctenopoda	Sididae	<i>Diaphanosoma</i>	<i>sarsi</i>
17.	Eurotatoria	Ploima	Trichotriidae	<i>Macrochaetus</i>	<i>sericus</i>
18.	Maxillopoda	Cyclopoida	Cyclopidae	<i>Ectocyclops</i>	<i>Phaleratus</i>

## Molecular:

### ➤ DNA Barcodes generated off different Faunal Groups:

S.No.	Group	Number of barcodes
1.	Insecta (Hymenoptera)	159
2.	Insecta (Coleoptera)	04
3.	Insecta (Thysanoptera)	147

4.	Crustacea (Crabs)	13
5.	Crustacea (Prawns)	12
6.	Fishes: 29	29

# CONSOLIDATED STATEMENT OF EXPENDITURE (SE)


(for the Year of Project Starting to Project Completion)


1. Sanction Order No. & Date :SR/FST/LS-I/2018/141(C) ; 27<sup>TH</sup> December, 2019
2. Total Sanctioned Project Cost (in Rs): 78,00,000.00
3. Date of Commencement of the Project : 27<sup>TH</sup> December, 2019
4. Grant Received in each year (in Rs): 65,00,000.00

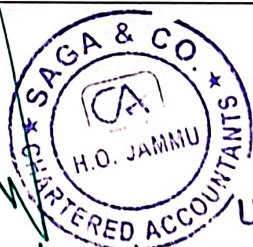
1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Interest, if any	Total
<b>65,00,000.00</b>	Nil	Nil	Nil	Nil	3,48,582.00	<b>68,48,582.00</b>

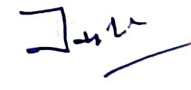
## 5. Statement of Expenditure

S. no.	Sanctioned Budget Heads	Allocation of Funds (in Rs)	Funds released by funding agency (in Rs)	Expenditure incurred (Financial year-wise)(in Rs)						Balance as on 1 <sup>st</sup> April, 20(in Rs)
				1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Total	
1.	Equipment (E)	60,00,000.00	<b>60,00,000.00</b>	1879360	3809400	184921	Nil	Nil	58,73,681.00	<b>1,26,319.00</b>
2.	Net Working & Computational Facilities (NW)	5,00,000.00	<b>5,00,000.00</b>	Nil	Nil	4,09396	14413	Nil	4,23,809.00	<b>76,191.00</b>
3.	Infrastructure Facilities (IF)	5,00,000.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
4.	Maintenance (M)	8,00,000.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
A.	<b>Total</b>	<b>78,00,000.00</b>	<b>65,00,000</b>	<b>1879360</b>	<b>3809400</b>	<b>594317</b>	<b>14413</b>	Nil	<b>62,97,490.00</b>	<b>2,02,510.00</b>
B.	Interest earned			28,360	1,91,821	92,028	20,649	15,724	<b>3,48,582.00</b>	<b>3,48,582.00</b>
C.	<b>Grand Total (A+B)</b>									<b>5,51,092.00</b>

  
Name & Signature  
of Head of Department  
Dept. of Zoology  
University of Jammu  
Coordinator

  
06/09/2024



  
**Finance Officer**  
University of Jammu  
Name & Signature of Competent  
Financial Authority  
Date: 22/4/24

**Note:**

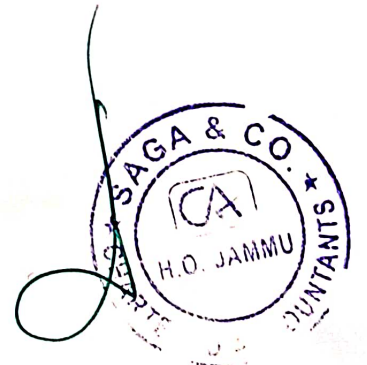
1. Expenditure under the sanctioned Heads, at any point of time should not exceed funds allocated under that Head, without prior approval of DST.
2. Utilization Certificate for each financial year ending 31<sup>st</sup> March has to be enclosed along with request for carry forward permission to next year.



**CONSOLIDATED UTILIZATION CERTIFICATE (UC)**  
**(for the Year of Project Starting to Project Completion)**


1. Name of the Department & Institute/ University : **Department of Zoology, University of Jammu**
2. Name of the Head of Department/ Project Coordinator: **Prof. Seema Langer, HOD, Department of Zoology, University of Jammu, J&K, 180006. Email: [hodzooluniversityofjammu@gmail.com](mailto:hodzooluniversityofjammu@gmail.com).**
3. Sanction Order No. & Date: **SR/FST/LS-I/2018/141(C) ; 27<sup>TH</sup> December, 2019**
4. Head of Account as given in original Sanction Order:  

**Demand No: 86 Department of Science and technology.  
3425 other Scientific Resaerch (Major Head)..**
5. Amount brought forward from the previous financial year: **Nil**
6. Amount received during the financial year: **SR/FST/LS-I/2018/141(C) ; 27<sup>TH</sup> -12- 2019**  
[Order No., Date, & Amount in Rs] **Rs 65,00,000.00**
7. Interest earned, if any : **Rs 3,48,582.00**
8. Total amount available for expenditure (excluding) **Rs 68,48,582.00**
9. Actual Expenditure (excluding commitments) incurred during  
Financial year (up to 31<sup>st</sup> March 2024): **Rs 62,97,490.00**
10. Balance amount available at the end of the financial year: **Rs 5,51092.00**
11. Unspent balance refunded if any (give details of Cheques/ Drafts etc): **Rs 5,51092.00**
12. Amount to be carried forward to the financial year (if applicable): **Rs Nil**




## Certificate

Certified that out of Rs **65,00,000.00** of grant-in-aid sanctioned during the year **2019** in favour of HOD, Department of Zoology, University of Jammu, J&K, 180006 under the Ministry/ Department Order No. **SR/FST/LS-I/2018/141(C)** ; Dated :- **27<sup>TH</sup> -12- 2019** and Rs Nil on account of unspent balance of previous year, a sum of Rs **62,97,490.00** has been utilized for the purpose of **Sterngthening the Post graduate teaching and research facilities in the Zoology department** for which it was sanctioned and the balance amount of Rs **2,02,510.00** remaining unutilized at the end of the year and with bank interest of Rs **3,48,582.00** will be surrendered to funding agency.

  
Signature of the Head of the Department of Zoology  
University of Jammu  
Coordinator

Date:

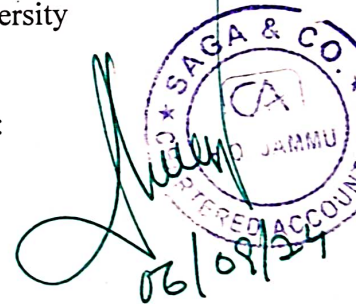
  
Finance Officer  
University of Jammu  
Signature of Accounts Officer

Date:

  
Registrar  
University of Jammu  
Signature of the Head of Institute/  
University

Date:

*(To be filled in at DST)*



Certified that I have satisfied myself that the conditions on which the grants-in-aids was sanctioned has been fulfilled/ are being fulfilled and I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned:-

Kinds of Checks exercised:

- 1.
- 2.
- 3.

Signature/ Designation/ Date