PROFILE

Centre of Research for Development &

P. G. Programme in Microbiology

University of Kashmir, Srinagar, J&K

Website: www.cord.uok.edu.in
Email: directorcord@kashmiruniversity.ac.in
Phone:0194-2420405 (Director)
Fax: 0194-2421357 (Office)

DEPARTMENT AT A GLANCE

PREFACE

It is with great pride and a sense of accomplishment that we present the profile book of our Centre of Research for Development (CORD). This publication encapsulates the journey, vision, and milestones of our Centre, which has grown from a humble initiative into a dynamic hub of research and innovation. CORD is one of the primary Research Centre of the University involved in quality interdisciplinary teaching, research, outreach and consultancy. Since its inception in 1978 the CORD has emerged as one of the best centre for multidisciplinary education and research enhancing knowledge and understanding dynamics in various fields of Science by identifying, planning and conducting research programmes on problems of regional, national and international importance.

The center is a dynamic hub of innovation and knowledge creation, dedicated to addressing complex challenges through interdisciplinary collaboration. Established with the vision of fostering cutting-edge research across diverse fields, the Centre serves as a bridge between disciplines, promoting holistic approaches to solving real-world problems.

Recognizing that the challenges of the modern world—ranging from climate change and public health to technological advancement and social equity—require integrated solutions, the Centre brings together experts from varied domains. Researchers in environmental science, microbiology, engineering, social sciences, biotechnology, and other disciplines work collaboratively, ensuring the convergence of ideas, methodologies, and perspectives.

CORD has transformed into budding repository of knowledge which enlightened professionalism and excellence. Our center is an attraction for career making to students who value the enabling and encouraging atmosphere for carving out the hidden potentials of human resources and to better place and position it for greater cause and service.

The Centre has been committed to strive for excellence in Teaching, Research & Extension and aims to create trained and quality human resources who master Knowledge, Skill and Leadership to understand and manage the various scientific and societal issues.

The Profile 2019-2024 highlights the achievements of the Centre over the years and provides an insight into the activities as a testimony to the fact that we are trying our level best to fulfill our responsibilities as Teachers, as Researchers and as custodians of the responsibilities given to us. We have no hesitation in acknowledging the fact that in spite of limited human and infrastructural resources, the center is doing exceptionally good. To support this statement, the center during the previous years of pandemic conditions has succeeded in publishing high impact factor journals, establishment of COSI Lab and signing of two MOUs one with the CSIR and another with DBT. This all has been possible because of the untiring efforts of the faculty and support staff.

Faculty Biographical Sketch

Prof. Bashir Ahmad Ganai

Prof. B. A. Ganai, a distinguished academician and researcher, currently serves as Professor and Dean of the School of Unani and Ayurvedic Medicine at the University of Kashmir, Srinagar. With an illustrious career spanning over 27 years in teaching and 24 years in research, Prof. Ganai has made significant contributions to the fields of protein biochemistry, enzymology, environmental biochemistry, toxicology, biotechnology, molecular biology, and medicinal plant research.

Born on February 4, 1966, in Kathair Gund Chadoora, District Budgam, J&K, Prof. Ganai completed his M.Sc. (1988), M.Phil., and Ph.D. in Biochemistry from the University of Kashmir. A recipient of the CSIR-UGC NET/JRF/SRF in 1989, he has held several prestigious positions, including former Director of North Campus, former Head of the Department of Environmental Science, and Professor at the Centre of Research for Development (CORD).

Prof. Ganai is an exceptional educator, renowned for his teaching excellence in protein biochemistry, molecular biology, analytical instrumentation, and enzymology. He has consistently received the "Best Teacher Award," with an outstanding feedback score of over 92% from his students. Over the years, he has guided 65 Ph.D. and 30 M.Phil. scholars, many of whom have achieved national recognition. Supervised 80 M.Sc. students in biochemistry and clinical biochemistry projects. Mentored eight postdoctoral fellows under schemes like Kothari, NPDF, and ICSSR.

Prof. Ganai is a prolific researcher with over 300 published research items in prestigious national and international journals. His work has garnered significant attention, with more than 6,288 citations, an h-index of 35, an i10-index of 123, and a cumulative impact factor exceeding 550. His publications in journals such as Scientific Reports, Gene, Chemosphere, Phytomedicine, and Microbial Pathogenesis are widely cited for their groundbreaking findings.

His research expertise includes, Isolation and characterization of enzymes and bioactive compounds. Validation of anti-diabetic, anticancer, anti-arthritic, antimicrobial, and other therapeutic activities of bioactive molecules. Studies on environmental toxicology and biochemistry.

Prof. Ganai has authored 12 books in accessible language to support students of biochemistry and related fields. He has also successfully completed and managed eight research projects funded by esteemed agencies.

Prof. Ganai has received numerous awards for his teaching and research excellence, including several honors from scientific organizations. His invited lectures at various academic and societal forums reflect his dedication to addressing real-world problems through science.

Based on student feedback from the Department of Biochemistry, Microbiology and Environmental Sciences, Prof. Ganai has consistently been awarded an outstanding rank score on multiple occasions. As an academician, he has contributed to the design of multidisciplinary core and elective courses of U. G and P. G. in Biochemistry, Environmental Science, and Microbiology, reflecting his versatile expertise and commitment to curriculum innovation. He actively mentors' students and researchers, fostering an environment of intellectual growth and innovation.

Prof. Ganai has played a pivotal role in academic governance, serving on numerous committees, including, Boards of Research Studies (BORS) and Boards of Studies (BOSE). Central Administrative Affairs Committee (CAAC) and various technical and purchase committees. Institutional Ethical Committees at SKIMS and GMC Baramulla. He is also a member of the Ecology and Environment Committee of J&K UT, where he contributes to policymaking and environmental conservation.

Prof. Ganai's career exemplifies excellence in academia and research. His commitment to bridging science with societal needs, through both teaching and impactful research, has left a lasting legacy in the fields of biochemistry and environmental science. As an inspiring educator, mentor, and leader, Prof. Ganai continues to shape the future of science and education in Jammu and Kashmir and beyond.

Prof. Mahammad Niamat Ali

Prof. Md. Niamat Ali is a renowned academician and researcher with an illustrious career spanning over 28 years in teaching and 34 years in research. He currently serves as a Professor at the Centre of Research for Development (CORD), University of Kashmir, where he has previously held leadership roles, including Director of the Centre and Officer-in-Charge of the Postgraduate Centre of Microbiology. Prof. Ali is celebrated for his groundbreaking contributions in Cytogenetics, Molecular Biology, Toxicogenomics, Human Genomics, and Environmental Microbiology.

An alumnus of Aligarh Muslim University, Prof. Ali earned his M.Phil. and Ph.D. in Zoology, specializing in Cytogenetics and Molecular Biology. His prolific academic output includes 106 research papers in high-impact journals, three books, and 12 book chapters, collectively amassing over 3025 citations with an h-index of 25 and an i10-index of 60. These metrics underscore the global significance and enduring impact of his work in the scientific community.

Prof. Ali's research bridges basic and applied sciences, addressing critical environmental and societal challenges. His major research areas include, DNA Barcoding and Molecular Profiling: Key contributions to biodiversity conservation and pest management, including a RUSA 2.0-funded project on morphological and molecular profiling of beneficial insect species. Toxicogenomic and Genetic Diversity: Investigations into molecular mechanisms of toxicity and genetic variations, advancing public health and environmental sustainability.

Prof. Ali also established the Conservation through Science and Innovation Laboratory (COSI Lab) at CORD, which integrates scientific innovation with community welfare. His consultancy work extends to ecosystem restoration and sustainable resource management in Jammu and Kashmir, with an emphasis on conserving fragile ecological zones.

He has designed multidisciplinary core and elective courses for undergraduate and postgraduate programs in Zoology, Environmental Science, and Microbiology. Developed Massive Open Online Courses (MOOCs) on Basic Human Genetics and Cytogenetics, hosted on the UGC SWAYAM platform, aligning with India's National Education Policy (NEP-2020).

As an academic mentor, Prof. Ali has guided 18 Ph.D. and 8 M.Phil. scholars, many of whom have earned national recognition for their research contributions. He frequently organizes national-level workshops and conferences, fostering intellectual growth and collaboration among students and researchers.

Prof. Ali's extensive publication record reflects his commitment to advancing science. His work has appeared in prestigious journals such as Environmental Chemistry Letters, Journal of Clinical Medicine, and Drug and Chemical Toxicology. His research spans a wide range of topics, including genetic diversity, molecular mechanisms of toxicity, and environmental sustainability. Prof. Ali has successfully led several high-impact research projects, including, Environmental impact assessments and biodiversity conservation initiatives.

Prof. Ali's contributions have been recognized with numerous accolades, including CSIR Research Fellowship for his academic excellence. Dr. Navin Chandra Award for his contributions to science and research. Life membership in prestigious organizations like the Indian Science Congress Association, highlighting his stature in the academic and scientific communities.

Beyond research and teaching, Prof. Ali actively participates in capacity-building workshops, enhancing his expertise in advanced fields such as stem cell biology and toxicogenomics. He is a sought-after resource person and evaluator for R&D proposals, shaping research directions at regional and national levels.

Based on student feedback from the Department of Zoology, Bioresources, and Environmental Sciences, Prof. Ali has consistently been awarded a 10:09 (Outstanding) rank score on multiple occasions. As an academician, he has contributed to the design of multidisciplinary core and elective courses of U. G and P. G. in Zoology, Environmental Science, and Microbiology, reflecting his versatile expertise and commitment to curriculum innovation.

Prof. Md. Niamat Ali's career exemplifies a commitment to integrating academic excellence with real-world applications. His multidisciplinary approach to tackling complex challenges in biodiversity conservation, public health, and environmental sustainability has earned him a reputation as a leading academician and researcher. Prof. Ali continues to inspire innovation and excellence, fostering a new generation of scientists dedicated to advancing knowledge and addressing societal needs.

Dr. Ruqeya Nazir

Dr. Ruqeya Nazir, a highly accomplished microbiologist, serves as an Associate Professor at the Centre of Research for Development (CORD), University of Kashmir, Srinagar, India. A pioneer in her field, she has achieved significant milestones in microbiology, environmental microbiology, virology, bacteriology, immunology, mycology, toxicology, and conservation biology. Her dedication and expertise have made her a leading figure in microbiological research and education, in the region.

Born on July 12, 1978, in Srinagar, India, Dr. Nazir completed her Ph.D. in Microbiology from the Vallabhbhai Patel Chest Institute, University of Delhi, in 2009. Her doctoral research, under the guidance of Prof. Madhu Khanna, where she conducted groundbreaking research on "Programmed cell deathand cytokine induction caused by influenza A virus in allergic asthma, using a murine model". She holds M.Sc. degree in Medical Elementology and Toxicology from Jamia Hamdard, New Delhi. She has explored, "The 9:22 translocation on Philadelphia chromosome on leukemia", during her postgraduation dissertation at AIIMS, New Delhi. Her academic credentials are further strengthened by her Junior Research Fellowship (CSIR) and GATE qualification in 2003.

Dr. Nazir's research focuses on several cutting-edge areas, including, Antimicrobial Resistance and Bacteriocins: Studying bacteriocins for combating drug resistance and their broad-spectrum antimicrobial applications. Environmental Microbiology and Bioremediation: Investigating microbial consortia, psychrophilic bacteria, biofilm applications for environmental cleanup, and the bioremediation of heavy metals. Conservation Biology: Utilizing microbial approaches for the conservation of the endangered Hangul deer (*Cervus hanglu hanglu*) in Kashmir. Microbial Diversity: Analyzing bacterial diversity in fish species and environmental samples from the unique Kashmir Valley ecosystem.

For her academic contributions, Dr. Nazir has played a pivotal role in developing microbiological education in Jammu and Kashmir. She is the founder of the Postgraduate Microbiology programme at CORD, which has been running successfully since 2017, significantly advancing microbial scientific education. As a faculty member, she teaches a broad range of subjects, including Virology, Medical Microbiology, Immunology, and has also taught Environmental Toxicology, Environmental microbiology & Environmental Biotechnology at the department of Environmental Science. She has been actively involved in academic administration as a member of several boards and committees, such as the PG and UG Boards of Studies for Microbiology and P.G in Environmental Science, and is serving as Nodal Officer for DIQA from last 13 years.

As a mentor, Dr. Nazir has supervised 40 M.Sc. P.G dissertations, 4 M.Phil., and 6 Ph.D. scholars, guiding them in innovative research. Highlights of her mentorship include, Ph.D. thesis on bioremediation, microbial profiling of fish species, and microbial tolerance to heavy metals etc. M.Phil. projects on phytoremediation, microbial diversity, and the antimicrobial potential of medicinal plants. Supervision of MSc dissertations exploring probiotics, bacteriocins, and microbial profiling of traditional Kashmiri foods. Currently, eight Ph.D. scholars are working under her guidance on topics such as bacteriocins, probiotics and bioremediation, waste valorization.

As an academician, she has contributed to the design of multidisciplinary core and elective courses of U. G and P. G. in Microbiology, and P.G in Environmental Science reflecting her versatile expertise and commitment to curriculum innovation. She actively mentors' students and researchers, fostering an environment of intellectual growth and innovation.

Dr. Nazir has received a number of honors for her contributions, including, Distinguished Microbiologist Award (2024) & recently she has been recognised as Best Women in Immunology by Indian Immunology Society (India), she is a receipent of multiple Best Paper and Best Poster awards at national and international conferences. She has also served as a judge and chaired technical sessions at various academic events and National Seminars.

She has also served as the President of the Jammu and Kashmir Chapter of the Microbiologists Society, India, and is a life member of several prestigious organizations, including the Indian Microbiological Association, Indian Immunology Society, and Influenza Foundation of India, etc.

For her contribution in getting research grants and projects, Dr. Nazir has successfully executed research projects funded by premier agencies, such as DBT funded project, Process optimization and up-scale production of lignocellulosic enzymes. She has mentored three

DST funded projects bioremediation of eutrophicated Dal Lake by Biofilms, bioremediation of heavy metals, parasites of Hangul deer and ICMR funded studying probiotics as detoxification tools.

Dr. Nazir has an extensive publication record in high-impact journals, with research area spanning on Probiotic potential for antiviral therapies. Biofilm applications for bioremediation of eutrophic waters. Heavy metal tolerance in soil fungi and bacteria. Microbial diversity in extreme environments, including glacial soils. Her work has been listed as a featured article in journals such as Environmental Science and Pollution Research, Probiotics, Scientific reports, Archives of Microbiology. She has also authored book chapters on microbiomes, green nanotechnology, and bioremediation in Elsevier and Springer published books.

Dr. Nazir is an active participant and organizer of academic events, including, hosting workshops, symposia, and training sessions on microbiology and environmental issues. She has delivered invited talks at number of national and international conferences, such as the Orthomyxo Virus Research Conference and Bharathidasan University, India etc. She has been continuously reviewing manuscripts for prestigious journals like Archives of Microbiology, World Journal of Microbiology and Biotechnology, Waste and Biomass Valorization & Frontiers in Microbiology.

Her impact and legacy of an illustrious career reflects her unwavering commitment to advancing microbiological research and education. Her pioneering work in microbiology, her role as an academic leader, and her dedication to environmental bioremediation have left an indelible mark on her field. Dr. Nazir continues to inspire future generations of microbiologists and scientists.

About the Centre of Research for Development

The centre of Research for Development (CORD) was established in 1979 when, Late Prof. Raies Ahmed, the then Vice Chancellor of the University of Kashmir, conceived the idea of establishing a Research Centre for encouraging Inter-institutional coordination in scientific research. The Centre, christened as Centre of Research for Development (CORD), came into existence in 1979 with financial assistance from the UGC. Right from its inception the Centre has been quite active in establishing a multi-disciplinary and inter-institutional research base and has made considerable progress in the research areas like Horticulture, Plant Pathology, Lake Conservation, Forest Ecology, Fisheries Development, Medicinal Plants and Wild life Conservation etc. Over the years, our Centre has not only contributed significantly to advancing knowledge but has also played a pivotal role in shaping academic and professional landscapes in various disciplines.

Founded with the mission to foster interdisciplinary research and address critical societal challenges, Centre of Research for Development (CORD) has remained steadfast in its pursuit of excellence. One of our early milestones was the establishment of the Department of Environmental Science, a programme that was initially incubated within the Centre. Today, this department stands as a full-fledged entity, producing high-quality research, fostering innovation, and contributing to sustainable development.

Building on this success, our Centre expanded its focus to Microbiology, a field that holds immense potential for breakthroughs in healthcare, agriculture, and environmental sustainability. The establishment of this emerging discipline marks another significant achievement in our journey, reflecting our commitment to diversifying research areas and addressing contemporary global challenges.

The recent introduction of the Microbiology course and research programme at our university marks a significant milestone in our commitment to advancing scientific education and addressing global challenges. As the world faces increasing threats from infectious diseases, antibiotic resistance, food insecurity, and climate change, the need for expertise in microbiology has never been greater.

Recognizing this demand, Centre has established a comprehensive programme aimed at fostering a deep understanding of microbial life and its applications. This initiative is not only a response to global trends but also a strategic step towards equipping our students with the knowledge and skills required to thrive in diverse scientific and industrial fields. Furthermore, the programme seeks to enhance research capabilities, enabling cutting-edge studies in areas such as health sciences, environmental sustainability, and industrial biotechnology.

By integrating this course and research programme into our academic framework, the Centre reaffirms its role as a hub for innovation, collaboration, and solutions-driven education. The launch of the Microbiology programme will serve as a platform for nurturing future scientists, addressing regional and global challenges, and contributing meaningfully to the advancement of science and society.

In addition to these accomplishments, Centre has consistently facilitated impactful projects, organized international conferences, and fostered collaborations with leading academic institutions, industries, and government organizations. The work produced here has led to numerous publications in reputed journals, and innovative solutions that resonate with both local and global needs. Listed journal of this University and has stuck to all the calendar of activities without compromising on the quality. Our achievements would not have been possible without the dedication of our researchers, the support of our stakeholders, and the collaborative spirit of our partners, our scientific staff, office staff, research scholars and students. Equipped with state-of-the-art facilities and a vibrant research ecosystem, we continue to push boundaries in fields such as list key focus areas, e.g., environmental sustainability, biotechnology, renewable energy, scientific research methodology, etc.

This profile book serves as a testament to the relentless efforts and groundbreaking contributions of our Research Centre. It is a celebration of our past successes and a roadmap for future endeavors. As you turn these pages, we invite you to explore the remarkable journey of our Research Centre—a journey fueled by passion, innovation, and an unwavering commitment to creating a better future for all.

VISION

- Our vision is to create healthy environment for enhanced research potency, providing high-quality trained professionals to serve society.
- We aim to create an environment where innovation meets impact, driven by curiosity that shapes the future, promotes collaborative synergy.

MISSION

- Progress through interdisciplinary research
- Engage in cutting-edge, globally relevant research that drives innovation and fosters academic excellence.
- Create an inspiring, student-centric environment that nurtures academic curiosity, professional growth, and holistic well-being.
- Cultivate a research culture focused on addressing real-world challenges, preparing researchers to lead in their chosen fields.

Establishment

- Late Prof. Raies Ahmed, the then Vice Chancellor of the University of Kashmir, conceived the idea of establishing a Research Centre in 1978 for encouraging Inter-institutional coordination in scientific research.
- The Center, christened as Centre of Research for Development (CORD), came into existence in 1979 with financial assistance from the University Grants Commission (UGC).

Core Values

- The Centre strives hard for sustaining the quality of work in all aspects of activities for ensuring excellence. The Centre inculcates the spirit of hard work, dedication and competition in students for their success in future life.
- Centre promotes the team work and development of linkage with various stakeholders, organizations, institutions etc. for generation of novel ideas and addressing the problems related to society for attainment of goals with honesty and dignity.
- Centre is the only NABET Accredited (QCI, New Delhi) Centre/ department in the state for carrying out EIA/EMP related consultancy projects of various Government, Semi government or private organizations. These projects help in the overall development of the region.

Major Objectives of the Centre

The major objective of Centre of Research for Development (CORD) is to encourage cooperation, coordination and team work across boundaries of departments and faculties of the University and laboratories of Central and State Government so as to:

- Interdisciplinary Research: To encourage the blending of diverse academic and professional disciplines, enabling innovative solutions to contemporary challenges.
- Sustainability and Innovation: To focus on sustainable practices and technologies that benefit society and the environment.
- Capacity Building: To nurture talent by providing state-of-the-art facilities, training opportunities, and a collaborative research environment.
- Community Engagement: To ensure the center's work is relevant and beneficial to society, emphasizing outreach and applied research.
- Infrastructure and Facilities: The center boasts state-of-the-art laboratories, advanced analytical tools, and collaborative spaces designed to facilitate high-quality research. From specialized equipment for environmental and microbiological studies to data-driven tools for social sciences and engineering innovations, the infrastructure supports diverse research activities.
- Identify various problems related to the overall development of the region;
- Try to suggest/ develop measures/ techniques for their mitigation and Develop new techniques
- To make improvements in the already existing techniques

Right from its inception the Centre has been quite active in establishing a multi-disciplinary and inter-institutional research base and has made considerable progress in the research areas like Horticulture, Plant Pathology, Lake Conservation, Forest Ecology, Fisheries Development, Medicinal Plants, Wild life Conservation, Micropropagation and Conservation of Plants, In recent years centre has also excelled in Microbiological and other molecular aspects like, Bioremidiation, Probiotics Research, Cancer Research, eDNA, gut microbiomes, Microbial Toxicology etc.

Goals Attained

- Regeneration and plantlet formation of several horticultural crops, forest trees and endangered medicinal plants attained through tissue culture.
- Management plans suggested for several degraded lakes, wetlands and other water bodies.
- Environmental Management Plan formulated for several developmental projects of the state.
- Establishment of Wildlife conservation through science and innovative laboratory" **(COSI-LAB).** This Lab.will be beneficial to biodiversity conservation in the region and society at large.In the long run we foresee successful closures of wildlife crime cases with a greater number of convictions. Time taken for sample analysis, report generation and submission will be reduced significantly as compared to sending samples to distantly located DNA labs. This Lab.will provide DNA-based baseline data on the volume of wildlife crime happening in these union territories. This Lab. will also be able to provide research platform for further improvements and refinements in existing DNA tools and development of new technologies for forensics, which increases the scope for publication of manuals, SOPs and publications in national and international journals.
- Introduction of Microbiology as a major focus area, fostering advancements in healthcare, agriculture, and ecological restoration.
- Publication of groundbreaking research in high-impact journals
- Successful organization of national and international conferences, workshops, and seminars fostering global collaborations.
- Partnerships with industries, governmental bodies, and global institutions to translate research into impactful applications.

Special contribution

- Conducts water analysis of various samples provided by State Government agencies like State Pollution Control Board, Lakes & Waterways Development Authority, Economic Reconstruction Agency, Public Health Engineering, NIT Srinagar etc.
- Imparts training to officials/ scientists of other State and Central Institutions like LAWDA, Fisheries Department, Central Silk Board, Pollution Control Board etc.
- Environmental Management plan formulated for several developmental projects of the state.
- Management plans for biodiversity board of Jammu and Kashmir.
- Students and research scholars are provided a platform to interact with the scientists of national and international repute through organization of special invited lectures. The syllabus has been formulated

as such so as to keep it in tune with the national standards so that the students find it easier to qualify national level examinations such as CSIR-UGC, NET, ICAR, GATE Etc.

- Research projects funded by the national agencies such as DBT, DST, CSIR, UGC etc. are routinely undertaken by the revered faculty members.
- The focus of the research in the department has always been in tune with the contemporary issues and challenge

Achievements: Awards and Certificate of Appreciation

- A MoU was signed between CORD, University of Kashmir and CSIR-CCMB, AIC-CCMB & IKP Knowledge Park on the theme," Wildlife conservation through science and innovative laboratory".
- A MoU was signed between CORD, University of Kashmir and DBT, Govt of India on the theme," Procees optimization and upscale production of lignocellulosic extremozymesfrom Himalayan microbes for biomass valorization/ depolymerization".
- A few projects successfully completed.
- Publications in reputed journals.
- Eighth batch of microbiology was successfully admitted in the centre.
- New projects submitted and implemented.
- New research collaborations made with different reputed institutes.
- Several MPhil and Ph.D.scholars were awarded their degrees.

Programmes Offeredp

1. M.Sc in Microbiology
2. Doctorate of Philosophy in Microbiology, Botany, Zoology, and Biochemistry

Thrust Areas of Research

Microbiology	Wildlife & Forest Ecology	Toxicogenomics
Aquatic Ecology	Soil & Food Microbiology	Immunology
Bioremidiation	Probiotics	eDNA
Fish and Fisheries	Microbial Ecology	Environmental Microbiology
Biochemistry	Protein Biochemistry	Medicinal Plant Research
Phytochemistry	Environmental Biochemistry	Conservation Biology
Plant Pathology	Human Genomics & Proteomics	Endophytes
Plant Tissue Culture	Cytogenetics	Biodiversity
Terrestrial Ecology	Molecular Biology	Environmental Biochemistry

Faculty Profile

S. No.	Name & designation of the faculty member	Qualification	Areas of Research
01.	 **Prof. BashirAhmad Ganai (Director CORD)**	M. Sc (Biochemistry), M.Phil, Ph. D (Biochemistry)	Protein Biochemistry, Enzymology, Environmental Biochemistry, Toxicology/Medicinal Plant Research, Biotechnology/ Biotechniques/ Molecular Biology
02.	 **Prof. Mahammad Niamat Ali**	M.Sc (Zoology), M. Phil, Ph. D (Zoology: Cytogenetics and Molecular Biology)	Cytogenetics and Molecular Biology, Toxicogenomics, Human Genetics
03.	 **Dr. Ruqeya Nazir Associate Professor**	M.Sc (Medical Elementology & Toxicology), Ph.D (Microbiology)	Microbiology, Microbial Toxicology, Virology, Immunology, Molecular Biology, Probiotics, Environmental Microbiology
04.	 **Dr. Tawqir Bashir INSPIRE Faculty**	M.Sc (Wildlife Science), Ph. D (Wildlife Science) **Till:2024**	Biodiversity monitoring, habitat assessment, high-altitude landscape ecology, population genetics, anthropogenic impacts on biodiversity and habitats, and community-based conservation.
05.	 **Dr. Burhan Hamid Assistant Professor Contractual**	M. Sc (Microbiology), Ph. D (Microbiology)	Specialization in Food & Industrial microbiology
06.	 **Dr. Zaffar Bashir Assistant Professor Contractual**	M. Sc (Microbiology), Ph. D (Microbiology)	Plant Rhizosphere: Microbial ecology and microbial characterization

07.	 **Dr. Parvaze Ahmad Wani** **Assistant Professor Contractual**	M. Sc (Microbiology), Ph. D (Microbiology)	Environmental microbiology
08.	 **Dr. Ulfat Nazir** **Assistant Professor Contractual**	M. Sc (Microbiology), Ph. D (Microbiology)	Agriculture Microbiology

Vacant Posts

	Name of post	Date from which post is vacant
01.	Associate Professor	31/05/2003
02.	Associate Professor	30/09/2011
03.	Associate Professor	30/09/2012
04	Associate Professor	30/05/2019

Scientific Technical Staff Profile

Name	Designation	Qualification	Specialization/ Expertize
 **Dr. Shazia Bashir**	Senior Scientist-Technical	M. Sc, M. Phil, Ph. D (Zoology)	Parasitology, Entomology
 **Dr. Sumira Tyub**	Senior Scientist-Technical	M.Sc, M. Phil, Ph. D (Botany)	Microbial Ecology Plant Tissue Culture Plant Ecology
 **Dr. Rubiya Dar**	Junior Scientist-Technical	M.Sc, M. Phil, Ph. D (Biochemistry)	Biochemistry Molecular Biology
 **Dr. Bilal A. Wani**	Junior Scientist-Technical	M.Sc, Ph.D (Botany)	Wood Anatomy, Wood Variation and its causes, Medicinal Plant Research
 **Mr. Javeed A. Javeed**	J. T. A	M.Sc (Chemistry)	Computer Application
 **Mrs Irfana**	J. T. A	M.Sc (Bioresources)	Bioresource

Vacant posts

	Name of Posts	Date from which post is vacant	
1.	Laboratory Assistant	01/07/2018	
2.	Junior Technical Assistant	01/05/2012	
3.	Junior Technical Assistant	01/06/2017	
4.	Junior Technical Assistant	05/06/2018	

Profile of Students Admitted:

Year of admission	Year wise Number of students admitted	Male	Female	Drop-out rate	Success rate
Ph.D Programme-					
2019	16	07	09	-	-
2020	07	04	03	-	-
2021	04	02	02	-	-
2022	04	04	-	-	-
2023	02	00	02	-	-
2024	11	03	08	-	-

M. Sc Programme (Microbiology)

Year of admission	Year wise Number of students admitted	Male	Female	Open merit	Reserved Category	Number of students admitted under payment seat	Drop-out rate	Success rate
2019	**13**	**05**	**08**	**08**	**02**	**03**	**-**	**100%**
2020	**15**	**04**	**11**	**08**	**04**	**03**	**-**	**100%**
2021	**15**	**05**	**10**	**08**	**04**	**03**	**-**	**100%**
2022	**15**	**05**	**10**	**08**	**04**	**03**	**-**	**100%**
2023	**14**	**04**	**10**	**07**	**04**	**03**	**-**	**100%**
2024	**12**	**00**	**12**	**08**	**02**	**02**		

Ph. D Degrees Awarded Since (2019-2024): 46

A. **In Centre of Research for Development:35**

B. **In collaboration with other Universities: 11**

S. No.	Name	Title of the Ph. D Thesis	Supervisor/ Co-supervisor	Year of award	Discipline
01.	Bushra Nissar Bhat	Association of polymorphisms and expression of XRCC1/XPD gene with Gastric cancer in Kashmir	Professor B.A. Ganai	25-04-2019	Biochemistry
02.	Jehangir Shafi Dar	Pathological, Immunological and Molecular Studies on Liver Flukes of Sheep	Prof. Bashir A. Ganai	15-05-2019	Zoology
03.	Humera Imtiaz	Ecology of Birds at Shallabough Wetland with special emphasis on Moorhen	Prof. Bashir A. Ganai	05-11-2019	Zoology
04.	Nuzhat Shaheen Khan	Evaluation of inflammatory biomarkers in the Etiopathogenesis of Coronary artery disease in Kashmiri population	Prof.Bashir A Ganai	09-03-2020	Biochemistry

05.	Nasreena Sajjad	Elucidating the Role of Artemisia amygdalina and Gentiana Kurroo extracts in Alzheimer's disease	Prof.Bashir A Ganai	22-06-2020	Biochemistry
06.	Mohammad Yaseen Mir	Role of elicitors for in vitro induction of secondary metabolites in suspension cultures of Artemisia amygdalina D	Prof.Azra N. Kamili/ Dr. Qazi Parvez	10-08-2020	Botany
07.	Anjum Afshan	Genotoxicity testing of commonly used phthalate as plasticizer (Di-n-butyl phthalate) in crucian carp (*Carassius carassius* L)	Prof. Md. Niamat Ali/ Dr. Farooz Ahmed Bhat	08-10-2020	Zoology
08.	Imran Khan	"Diversity and distribution of soil fungal flora along an altitudinal gradient in Gulmarg region of Kashmir Himalaya	Prof.Azra N. Kamili/ Dr. Irfan Rashid	23-10-2020	Environmental Sciences
09.	Uqab Ali Baba Wazir	"In Vitro sequestration potential of heavy metal tolerant microbial strains isolated from saffron soils in Kashmir"	Dr. Ruqeya Nazir/ Prof. Basir A. Ganai	11-11-2020	Environmental Sciences
10.	Naseer -u-Din Shah	Elucidation of KRAS and micro-RNA let-7 expression in non-small cell lung cancer in Kashmiri population	Prof. Md. Niamat Ali Prof. Bashir A Ganai	03-12-2020	Zoology
11.	Durdana Shah	In vitro mutagenesis with special reference to alteration of pmt and h6h genes of tropane alkaloid biosynthetic pathway in Hyoscyamus niger L	Prof.Azra N. Kamili/ Dr. Ajaz A. Wani	31-12-2020	Botany
12.	Suzana Bashir	Seasonal dynamics of macrophytes in relation to resident and migratory avifaunal habitability in Hokersar and Mirgund Wetlands of Kashmir Valley	Prof.Azra N. Kamili/ Prof. Manzoor A. Shah	22-01-2021	Botany
13.	Musharaf Rehman Bhat	Impact of Dredging and Deweeding on Zooplankton of Dal Lake Srinagar, Kashmir	Dr. A. R. Yousuf	10-02-2021	Zoology
14.	Aqib Rehman	Molecular Characterization of some Disease-Causing Pathogenic Fungi Associated with Cultured Fish Fauna of Kashmir Valley	Prof. Bashir A. Ganai/ Prof Fayaz Ahmad	01-03-2021	Zoology
15.	Gousia Jeelani	CDKN2A gene polymorphism in pancreatic Cancer patients and their socio-economic status	Prof. Bashir A. Ganai	29-09-2021	Zoology
16.	Saleem Farooq	Isolation and characterization of cold resistant bacteria from glacial soils in kashmir	Dr. Ruqeya Nazir/ Prof Bashir A Ganai	20-01-2022	Environmental Sciences
17.	Ishfaq Shafi Khan	Toxicological effect of food additives (Sodium benzoate and orange red) on antioxidant inflammatory and genetic parameters in male vistar rats	Prof. Md. Niamat Ali/ Dr. Showkat A. Ganie	15-02-2022	Zoology

18.	Naveed Gulzar	Molecular Studies on silicon induced modulation of host immunity in Lycopersicon esculentum Mill	Professor Azra N. Kamili/ Prof. Manzoor A. Shah	25-04-2022	Zoology
19.	Mohd. Murtaza	Epidemiological studies and molecular characterization of congenital anomalies in kargil population	Prof. Md. Niamat Ali/ Dr. Mahrukh Hameed Zargar	28-04-2022	Zoology
20.	Sheema Zaffar	Impact of Habitat variability on phytochemical profile of some select medicinal plants of Kashmir October 06, 2022 Annual Report 2022-23 University of Kashmir 29 Science Professor Irshad A. Nawchoo, Department of Botany, University of Kashmir, Srinagar Himalaya	Prof.Azra N. Kamili/ Prof. Irshad A. Nawchoo	06-10-2022	Environmental Sciences
21.	Kamran Nissar	Expressional analysis of Apolipoprotein E (APOE) and Angiotensin Converting Enzyme (ACE) in association with Alzheimer patients of Kashmir Valley	Prof. Bashir A. Ganai	28-04-2022	Biochemistry
22.	Ali Mohd Yatoo	Conservation of Aquatic Macrophytes invitro enriched vermicompost and its application in disease suppression of tomato plant	Prof. Md. Niamat Ali/ Dr. Zahoor Ahmed Baba	02-06-2022	Environmental Sciences
23.	Shahid Mehmood	Ichthyofaunal diversity in river Rajour, feeding ecology and breeding biology of some select fish species	Prof. Md. Niamat Ali/ Dr. Imtiaz Ahmed Khan	16-01-2022	Zoology
24.	Falkul Afshan	Comparative expression and methylation analysis of Vitamin D Receptor (VDR) gene in different grades of colorectal cancer in Kashmiri population	Prof. Bashir A. Ganai	16-06-2022	Biochemistry
25.	Birjees Hassan	Evaluation of Genotoxicity & Bacteriological Profiling of Hospital Wastes in Srinagar, Kashmir	Prof. Md. Niamat Ali/ Dr. Humaira Qadri	27-12-2022	Environmental Sciences
26.	Azra Bashir	Biochemical characterization of liver, muscle and ovary at different gonadal stages in rainbow trout [Onchoryhnchus mykiss]	Prof. Md. Niamat Ali/ Prof. Masood Ul Hassan Balki	14-02-2023	Zoology
27.	Parveena Firdous	Investigation of polymorphic and gene expression study of HNF4a, GCK and HNF1a genes in MODY (maturity onset diabetes of young) patients of Kashmir	Prof.Bashir A. Ganai	14-02-2023	Zoology
28.	Fahim Bashir	Screening of Cyanobacterial Bloom for their possible presence of Toxin gene/s in Dal Lake Kashmir	Prof. Bashir A. Ganai	17-02-2023	Environmental Sciences

29.	Shabeer Ahmad Dar	In vitro mutagenic plant of Kashmir Himalaya	Prof.Azra N. Kamili/ Prof. Irshad A. Nawchoo	20-03-2023	Botany
30.	Aadil Gulzar	Ecological Studies on Treeline Ecotone Vegetation along Elevational Gradients in Kashmir Himalaya	Prof.Azra N. Kamili/ Dr Anzar A Khuroo	27-03-2023	Environmental Sciences
31.	Toyeeba Hassan	Association of CYP1A2 and CYP3A4 Gene Expression of Acute Lymphocytic Leukemia (ALL) in relation to pesticides	Prof. Bashir A. Ganai	17-04-2023	Zoology
32.	Wasifa Noor	Expression analysis of som cold induced in Oryza sativa L.'' patients of Kashmir	Prof. Azra N Kamilli/ Prof. Amzad Hussain	25-04-2023	Botany
33.	Shafat Ali	Understanding role of cytokines in recurrent miscarriage among kashmiri female population	Prof. Md. Niamat Ali/ Prof Sabiya Majid	04-05-2023	Zoology
34.	Raees Raja	Studies on structure and distributional pattern of avian community of Gulmarg, Kashmir with particular emphasis on ecology of Monal pheasant *(Lophophorus impejanus*)	Prof. Md. Niamat Ali/ Dr. G.A. Bhat	14-06-2023	Zoology
35.	Sabeehah Rehman	Microbial profiling of oncorhynchus mykiss: Economically important trout fish of Kashmir valley	Dr. Ruqeya Nazir/ Dr. Farooz A. Bhat	27-06-2023	Zoology
36.	Uzma Shabir	Isolation and Characterization of antimicrobial peptides from fumgal infected mucuS of fishes in Kashmir Valley	Prof. Bashir A. Ganai/	14-07-2023	Zoology
37.	Masarat Nabi	Genetic Diversity and Anti-diabetic Potential of Skimmia anquetillis	Prof. Bashir A. Ganai/ Prof. Nahida Tabassum	12-07-2023	Environmental Sciences
38.	Sumira Rashid	Evaluation of Genetic diversity and antihyperlipidimic potential of Eremurus himalaicus	Prof. Bashir A. Ganai Dr. Adil Gani	30-03-2024	Environmental Sciences
39.	Najeebul Tarfeen	Expression Analysis and Promoter Methylation Status of VDR Gene in Diabetic Patients of Kashmir	Prof. Bashir A. Ganai	06-05-2024	Zoology
40.	Sabreen	Molecular diversity of Buckwheat germplasm and its invitro antihyperlipidemic activity	Prof. Bashir A. Ganai/ Dr Sajeed Majeed Zargar	26-06-2024	Environmental Sciences

41.	Yusra Ashraf	Analysis of tissues (liver, muscle and ovary) of schizothorax niger at different stages of gonadal development	Prof. Md. Niamat Ali/ Prof. Masood Ul H. Balki	22-07-2024	Zoology
42.	Ghulam Jeelani Dar	Diversity, characterization and toxigenicity of some fungal species from dry fruits of Kashmir valley	Dr. Ruqeya Nazir/ Prof. Shakeel A Wani	28-08-2024	Zoology
43.	Nazima Rashid	Macrophytes as a potential source for biofuel production and their role in carbon sequestration	Prof. Bashir A. Ganai/ Prof Mohd. Sultan Bhat	16-12-2024	Environmental Sciences
44.	Zulaikha	A prospective study using eDNA concept in conjunction with dating technique for evaluation of Azolla invasion and pollution chronology in Dal Lake	Prof. Bashir A. Ganai	07-01-2025	Environmental Sciences
45.	Kharul Nissa	Modulation of Cyp17A1 and UGT2B7 gene expression as a consequence of endocrine disrupting chemicals and polycystic ovarian syndrome interface: A case control study of Kashmiri population	Prof. Bashir A. Ganai/ Dr Shahnawaz A. Mir	08-01-2025	Environmental Sciences
46.	Shahid Hameed	Assessing genetic diversity and habitat suitability of the Kashmir grey langur with implications for its conservations	Prof. Md. Niamat Ali/ Dr Tawqir Bashir	09-01-2025	Environmental Sciences

M. Phil degrees awarded since 2019: 04

A. As supervisor-03

B. As co-supervisor-01

S. No.	Name	Title of M. Phil Dissertation	Supervisor/ Co-supervisor	Year of award	Discipline
01.	Masarat Jan	Malathion induced genotoxic studies using cyprinus carpio as model organism	Prof. Md. Niamat Ali	25-02-2020	Zoology
02.	Syeed Mudasir Mushtaq	Phytoremediation Potential and Proteomic Analysis of Brassica Rapa under Heavy Metal Stress	Prof. Bashir Ah. Ganai/Dr. Ruqeya Nazir	27-03-2023	Environmental Sciences
03.	Fayaz Ahmad Bhat	Biomass Production and Carbon Storage Potential of Conifers in Doodhpathri, Kashmir	Prof. Bashir Ahmad Ganai	27-03-2023	Environmental Sciences
04.	Bisma Zahoor	Microbial Diversity of Groundwater in Srinagar City	Dr. Ruqeya Nazir/ Prof. Ghulam Jeelani	25-08-2023	Environmental Sciences

Post Doctoral Fellows Joined the Centre since 2019:07

S.No.	Name of student	Title	Status	Earlier affiliation	Name of Mentor
01.	Dr. Kamran Nissar	Proteomic and Metabolomic approaches to identify biomarkers in Alzheimer patients:a case control study of kashmiri population	Ongoing	Clinical Biochemistry University of Kashmir.	Prof.Bashir A. Ganai
02.	Dr. Abid Hussain Mir	Climate envelope and ecological niche modelling, population structure and regeneration ecology of endemic and critically endangered plant species of Kashmir Himalaya	30-04-2022	Punjab University, Patiala	Prof.Azra N. Kamili
03.	Dr. Shagoon Tabin	Molecular and chemical profiling of different populations of Rheum sps.	31-05-2022	Punjab University, Patiala	Prof.Azra N. Kamili
04.	Dr. Rafiq Ahmad Lone	Phenolics as allelochemicals promoting spread and dominance of invasive Plant species and their role in carbon sequestering and restoration of degraded land	15-10-2020	Gwalior university, Gwalior	Prof.Azra N. Kamili
05.	Dr. Muslima	Buckwheat Metablome profiling and cloning of upstream regulatory genes involved in high rutin synthesis	19-03-2022	Jamia Hamdard, New Delhi	Prof.Bashir A. Ganai
06.	Dr. Moneesa Darvesh	Scientific and Socio-Psychological Interface as a tool for Restoration of Abondoned Wetlands of Western Himalayas with special Reference to Nowgam Wetland of Kashmir	Year of award 31-03-2024	SKUAST-K	Prof.Bashir Ahmad Ganai
07.	Dr. Shoaib Dar	Evaluating the impact of Myxozoan parasites on Fresh water fish of North west Himalaya to study their Taxonomic evaluation using 18 S Rdna as a molecular diagonastic tool	31-03-2020	Punjab University, Patiala	Prof.Bashir A. Ganai

Research Scholars Presently Working in Different Labs:29

S. No	Name of the scholar	Title of Research Topic	Date of joining	Supervisor/ Co-Supervisor
1.	Marofull Nisa	Isolation and characterization of bacteriocins produced by lactic acid bacteria from various sources and their broad antibacterial spectrum.	12-06-2017	Dr. Ruqeya Nazir/ Prof. Bashir Ahmad Fohmda
2.	Insha Amin	Characterization of Heavy metal resistant fungi for bioremediation of agriculture soils	27-07-2017	Dr. Ruqeya Nazir/ Dr. Mushtaq Ahmad Rather
3.	Raisa Zaffar	Characterization of bioflims and their role in bioremediation of eutrophicated waters.	27-07-2017	Dr. Ruqeya Nazir/ Dr. Mushtaq Ahmad Rather
4.	Sameer Ahmad Dar	Association of Vitamin D receptor gene variants with PCOS in Kashmiri Women.	27/11/2018	Prof. Md. Niamat Ali/ Dr. Sabir Majid
5.	Chamba Wangmo	Distribution and dietary preference of large carnivore in Nubra valley Ladakh	09/12/2018	Prof. Md. Niamat Ali/ Dr Tawqir Bashir
6.	Haneef Mohammad Bhat	Characterization and Probiotic Properties of Bacteriocin Producing Lactic Acid Bacteria Isolated from the GIT of a Broiler and Native Chicken of Kashmir	24-11-2018	Dr. Ruqeya Nazir/ Dr. Zahid Amin Kashoo
7.	Shabeer Ahmad Bhat	Toxicological effect of some commonly used pesticides on gut bacterial diversity: A study on wistar rat model	24-11-2018	Dr. Ruqeya Nazir
8.	Javeed Hameed Ganaie	Bacterial diversity and probiotic potential of lactic acid bacteria in the faeces of Kashmir stag (cervus hanglu hanglu) in Dachigam National Park	24-11-2018	Dr. Ruqeya Nazir
9.	Mohd Aamir Malik	Toxicogenomic Analysis of Difenoconazole, Tebuconazole on *E. fasciola*.	23-11-2020	Prof. Md. Niamat Ali/ Dr. Zahoor Ahmad Baba
10.	Junaid Bashir	Morpho-molecular identification of common Syrphids & predatory potential of syrphus ribesii against cabbage aphid Brevicoryne brassicae in Kashmir valley	24-11-2020	Prof. Md. Niamat Ali/ Prof. Zakir Hussain
11.	Tufail Ahmad Bhat	Expression analysis of micro-RNA 21-5-P and its association with vamp2 in type 2 diabeties mellitus patients	11-08-2020	Prof. Bashir Ahmad Ganai/ Prof Mohd Ashraf Ganai
12.	Humaira	Bioprospection of *Astragalus graharianus* Royle Ex. benth, a high valued medicinal shrub growing in Kashmir Himalaya	23-11-2020	Prof. Bashir Ahmad Ganai/ Dr Seema Singh

13.	Mudasir Ahmad Dar	Unravelling Sustainable Biprocessing: Maximizing the Potential of Microbial Extremozymes (Psychrozymes) for Plant Biomass conversion	13-10-2022	Dr. Ruqeya Nazir
14.	Syed Nasir Ahmad	Diversity of Microbiome in the soil sample of treeline species.	29-08-2022	Dr. Sumira Tyub
15.	Tanveer Ahmad Mir	Phenotypic & genotypic characterization of pathogens causing urinary tract infections and screening of plant bioactive compounds as potential antibiotics	29-08-2022	Prof. Bashir Ahmad Ganai/ Dr. Junaid Ahmad
16.	Talib Shareef	Unraveling Antibiotic Resistance in critical priority pathogens and identifying novel drug Targets through molecular docking Analysis	29-08-2022	Prof. Bashir Ahmad Ganai/ Dr. Junaid Ahmad
17.	Rizwana Ali	Combatting antimicrobial resistance with bacteriocin producing probiotic lactic acid bacteria: A study in human breast milk	13-09-2023	Dr. Ruqeya Nazir
18.	Irshad Ahmad Naik	Undergoing review of literature and preparing for course work	29-07-2024	Dr. Ruqeya Nazir
19.	Ishfaq Ahmad Malik	Undergoing review of literature and preparing for course work	29-07-2024	Dr. Ruqeya Nazir
20.	Umar Yusuf Bhat	Integrated Phytochemical and Nanotechnological approaches to combat Pathogenic Bacterial Strains in Fish	26-04-2024	Prof. Bashir Ahmad Ganai/ Prof. Fayaz Ahmad
21.	Tabia Jan	Breeding biology of Kashmiri nut hatch: A study on its conservation implications	26-06-2024	Prof. Md. Niamat Ali
22.	Aisha Shabir	Ecological study of habitat uses, dietary habits and helminth parasitism in porcupines of North Western Himlayas	01-07-2024	Prof. Md. Niamat Ali
23.	Humaira Mushtaq	Antihelminthic effect of medcinal plants (datura) on endoparasites of sheep (Hemonchus)	29-07-2024	Prof. Md. Niamat Ali
24.	Saima Jan	Comparative analysis of nutritional composition and length weight relationship between wild and farmed Fish in Kashmir	26-06-2024	Prof. Md. Niamat Ali
25.	Tabassum Shah	Human brown bear conflict in western Himalyas: A Socio-Ecological Assessment	14-08-2024	Prof. Md. Niamat Ali
26.	Safeera Akber	In vitro conservation and propagation of endangered medicinal plant species	29-07-2024	Dr. Sumira Tyub/ Prof. Anzar A. Khuroo
27.	Uzma Ali	Root Trait ecology of some herbs in Kashmir Himalayas	29-07-2024	Dr. Sumira Tyub/ Prof. Anzar A. Khuroo/ Dr Bilal A. Wani
28.	Sauliheen Fida	Undergoing review of literature and preparing for course work	29-07-2024	Prof Bashir. A. Ganai/ Dr Rubiya Dar
29.	Asif Ali	Fish nutrition	22-01-2025	Prof. Md. Niamat Ali

List of Research Projects/Consultancy projects completed/sanctioned/ongoing
Total number of Research Projects: 11
Number of Research Projects as PI/ Co-PI since 2019: 8
Number of Research Projects as Mentor since 2019: 03

S. no.	Name of the Principal Investigator	Duration of project	Name of the research project	Amount sanctioned (Rs.)	Name of the funding Agency	Year of sanction
1.	CORD	05 years	Conservation through Science and Innovation Laboratory" partnership agreement by and between A memorandum of understanding (MOU): **A**. Centre of Research for Development (CORD) **B.** The Council of Scientific and Industrial Research (CSIR): CSIR (CCBM) **C.** Atal Incubation Cantre (AIC)- Center for Cellular and Molecular Biology (CCMB): AIC-CCBM **D**. IKP Knowledge Park (IKP)	50,000,000.00 (Five crore only)	REC Foundation CSR implementation project	23. 12. 2021
2.	CORD	01 year	Consultancy project under Director CORD: Project proposal, terms of reference and financial quote for conducting EIA of "Relocation and Realignment of House boat at Doledem Dal Lake Srinagar"	15, 00, 000	Lake Division IST, J&K Lakes & Waterways Development Authority LDA Complex, Miskeen Bagh, Srinagar	31. 05. 2021
3.	Prof. Bashir A. Ganai	03 years	Expression analysis of GSTP1 and IDH1 genes in primary malignant brain tumor tissues of patients exposed to pesticides	33, 51, 954	ICMR, New Delhi India	28-02-2023
4.	Prof. Bashir A. Ganai	3 years	Forecasting distribution and connectivity of Asiatic black bears Ursus thibetanus under climate change and human impact through the lens of landscape genetics of Northwestern Himalaya	42, 61, 310	SERB, DST, New Delhi, Government of India	21-08-2023
5.	Prof. Bashir A. Ganai	02 years	Gut microbiota heterogeneity and its association with obesity and T2DM in Kashmir population	2, 95, 000	J K.DST, J & K Govt.	22.12.2023
6.	Prof. Md. Niamat Ali	3+1+1 years	Studies on morphological and molecular profiling through DNA barcoding of predominant species of Coccinellidae and Syrphidae; their potential in insect pest management in Kashmir, India	36, 00, 000	RUSA, Minitry of Human Resource Development; Deptt of Higher Education, Govt. of India	02-07-2020

7.	Dr. Ruqeya Nazir	03 years	Process optimization and up-scale production of lignocellulosic extremozymes from Himalayan microbes for biomass volarisation/ depolymerization	42, 84, 560	Ministry of Science and Technology, DBT, Govt. of India	21.03.2022
8.	Dr. Sumaira Tyub		Drivers of treeline shits within Kashmir Himalaya	33,66, 264	SERB, DST New Delhi, India	16.08.2023
9.	Ms. Mir Riasa Zaffar (Mentor: Dr Ruqeya Nazir)	3 years	Bioremediation of eutrophicated waters of Dal lake using Biofilms **(Completed**)	21,80,000	Ministry of Science and Technology, DST, Govt. of India	25.06.2019
10.	Ms. Naziya Khursheed Bhat (Mentor: Dr Ruqeya Nazir)	3 years	Morphological and molecular identification of GIT parasites of Hangul Deer (cervushangiuhanglu) in Dachigam National Park of Kashmir Valley **(Completed**)	28, 80, 400	Ministry of Science and Technology, DST, Govt. of India	11.10.2019
11.	Ms. Insha Amin (Mentor: Dr Ruqeya Nazir)	3 years	Bioremediation of heavy metals utilizing microsynthesized nanoparticles for sustainable agriculture**(Completed**)	24, 24, 560	Ministry of Science and TechnologyD ST, Govt. of India	22.08.2019
12.	CORD		Bursar project (**Completed)**	Rs. 3.66 Lakhs	J & K Govt	
Grand Total: Rs.=78,510,048/=						

Book Chapters Published by Faculty Members: 35

S. No	Authors	Book Details
01.	Bhat Mohd Skinder, Baba Uqab & **Bashir Ahmad Ganai**	Bioremediation: a sustainable and emerging tool for restoration of polluted aquatic ecosystem (2020) ISBN number 13.978-9811382796, Springer.
02.	Sumaira Rashid, Lone Rafiya Majeed, Bisma Nisar, Hina Nisar, Aftab Ahmad Bhat, **Bashir Ahmad Ganai**	Phytomedicines: Diversity, extraction, and conservation strategies (2021) ISBN number 13:978-3527315307, Academic Press.
03.	Lone Rafiya Majeed, Sumaira Rashid, Hina Nisar pahalvi, Bisma Nisar, **Bashir Ahmad Ganai**	Role of Microbiota in Composting." Microbiota and Biofertilizers: (2021), ISBN number 13:9783030487706, Springer.
04.	Bhat Mohd Skinder, **Bashir Ahmad Ganai,** Abdul Hameed Wani	Bioprospecting of endophytic fungi for antibacterial and antifungal activities (2021), ISBN number 13:978-3527315307, Academic Press
05.	Shauket Ahmed Pala, Dig Vijay Singh, Abdul Hamid Wani, Rouf Ahmad Bhat, **Bashir Ahmad Gana**i	Mushroom Cultivation Technology for Conversion of AgroIndustrial Wastes into Useful Products (2021)ISBN number, 13:987-8186623497, Apple Academic Press.

06.	**Bashir Ahmad Ganai,**Sajad Zargar, Sabreena Bhat, Rakeeb Ahmad Mir	Genetics and Genomics Resources of Millets: Availability, Advancements, and Applications (2021),ISBN number 13:9789811638756, Springer
07.	Shahnawaz Hassan, Sabreena , Muzaffar Zaman, Aarif Yaseen, **Bashir Ahmad Ganai**	Biochar and its potential use for bioremediation of contaminated soils (2022), ISBN number 13-978-032304520
08.	Bhat Mohd Skinder, Masarat Nabi, Bashir Ahmad Sheer Gojree, Gowhar Hamid Dar, **Bashir Ahmad Ganai**	Endophytic Microbes: Bioremediation of soil contaminants (2022),ISBN number 13-978-0323918930
09.	Sabreena Rafi, Azra Kamili, **Bashir Ahmad Ganai**	In Vitro Mutagenesis via EMS and Gamma Irradiations (2023), ISBN number 13:9789380386324, Apple Academic Press.
10.	Anjum Afshan, **Md. Niamat Ali,** Farooz A. Bhat	Environmental Phthalate Exposure in Relation to Reproduction Outcomes and Health Endpoints. (2020),ISBN number 13: 978-1522594529 IGI Global
11.	Birjees Hassan, Humaira Qadri, **Md. Niamat Ali**, Nissar Ahmad Khan & Ali Mohd Yatoo	Impact of climate change on freshwater ecosystem and its sustainable management. (2020),ISBN number 13:978-9811382765, Springer.
12.	Shafat Ali, Adil Farooq Wali, Ali Mohd Yatoo, Sabhiya Majid, Saiema Rasool, Rehan Khan, **Md Niamat Ali,** Javaid Ahmad Wani, Sanah Farooq, Shabhat Rasool, Hilal Ahmad Wani & Muneeb U. Rehman	Effect of pesticides on fish fauna: Threats, challenges, and possible remedies. (2020) ISBN number 978-3-030-35690-3, Springer.
13.	Ali Mohd Yatoo, Shafat Ali, Saima Hamid Baba, Birjees Hassan, Zarka Zaheen, **Md Niamat Ali,** Rukhsana Akhter, Insha Amin, Manzoor Mir, Shahzada Mudasir Rashid, Muneeb U. Rehman	Role of Soil Biota and Associated Threats. (2020) ISBN number 13978-3030486891, Springer.
14.	Shafat Ali, Sabhiya Majid, Ali Mohd Yatoo, **Md. Niamat Ali,** Shabhat Rasool, Sadaf Ali, Rukhsana Akhter, Azher Arafah, Muneeb U. Rehman & Saiema Rasool	Clinico-Pharmacological Perspective of Honey and Propolis. (2020) ISBN number 13:978-9811573040, Springer.
15.	Zarka Zaheen, Ali Mohd Yatoo, Shafat Ali, **Md. Niamat Ali**, Sabhiya Majid, Shabhat Rasool, Shahzada Mudasir Rashid, Sheikh Bilal Ahmad, Manzoor ur Rahman Mir & Uzma Zehra	Honey: types, composition and antimicrobial mechanisms. (2020), ISBN number 13:978-9811573040, Springer
16.	Shafat Ali, Adil Farooq Wali, Ali Mohd Yatoo, Sabhiya Majid,Saiema Rasool, Rehan Khan, **Md Niamat Ali,** Javaid Ahmad Wani, Sanah Farooq, Shabhat Rasool, Hilal Ahmad Wani & Muneeb U. Rehman	Effect of pesticides on fish fauna: Threats, challenges, and possible remedies. (2020), ISBN number 978-3-030-35690-3, Springer
17.	Ali Mohd Yatoo, Saiema Rasool, Shafat Ali, Sabhiya Majid, Muneeb U. Rehman, **Md. Niamat Ali,** Rafiqa	Vermicomposting: An eco-friendly approach for recycling/management of organic wastes. (2020),ISBN number 978-3-030-35690-3, Springer

	Eachkoti, Shabhat Rasool, Shahzada Mudasir Rashid & Sanah Farooq	
18.	Zarka Zaheen, Aadil War, Shafat Ali, Ali Mohd Yatoo, **Md Niamat Ali**, Sheikh Bilal Ahmad, Muneeb U. Rehman, Bilal Ahmad Paray	Common bacterial infections affecting freshwater fish fauna and impact of pollution and water quality characteristics on bacterial pathogenicity (2021), ISBN number 13-9781771889582, Apple Academic Press.
19.	Muniza Manzoor,Kulsum Ahmad Bhat, Naziya Khurshid, Ali Mohd Yatoo, Zarka Zaheen, Shafat Ali, **Md Niamat Ali,** Insha Amin,Manzoor Mir, Shahzada Mudasir Rashid, Muneeb U. Rehman	Bio-indicator species and their role in monitoring water pollution (2022), ISBN number 13-978-0323856249, Academic Press
20.	Shafat Ali, Dr. Mosin Saleem Khan,Javaid Wani, Sunia Faiz, Muneeb U. Rehman, Sabhiya Majid, **Md Niamat Ali**	miRNAs: the genetic regulators of immunity (2022), ISBN number 13.978-0323902502, Academic Press
21.	Shafat Ali, Muneeb U. Rehman **Dr Md Niamat Ali**, Azher Arafah	Clinical Applications of Immunogenetics (2022), 13.978-
22.	**Ruqeya Nazir,** Sabeehah Rehman, Marofull Nisa, Uqab Baba	Exploring bacterial diversity: from cell to sequence (2019), ISBN number 13:978-01281749510323902502
23.	**Ruqeya Nazir,** Mir Riasa Zaffar, Insha Amin	Bacterial biofilms: the remarkable heterogeneous biological communities and nitrogen fixing microorganisms in lakes (2019),ISBN number 13:978-0128174951, Elsevier
24.	Uqab Baba, Gousia Jeelani, Sabeehah Rehman, **Bashir Ahmad Ganai, Ruqeya Nazir**, Javid Ahmad Parray	Trends in Heavy Metal Remediation: An Environmental Perspective. (2021), ISBN number 13:9781119547952, Wiley
25.	Shah Ishfaq,Uqab Baba, Jeelani Gousia, **Ruqeya Nazir, Bashir Ahmad Ganai**	Polar microbes as climate-resilient pathways for mitigation of climate change (2021), ISBN number 13:978-9813345102, Springer
26.	**Ruqeya Nazir**, Insha Amin	Role of Green Nanotechnology in Alleviating Climate Change. (2021),ISBN number 13:978-9813345102, Springer
27.	**Ruqeya Nazir,** Riasa Zaffar	Climate Change Extenuation by Greenhouse Gas Quenching Microflora. (2021), ISBN number 13:978-9813345102, Springer.
28.	Rouf Ahmad Dar, Mawish Mahroof, Manpreet Kaur, **Ruqeya Nazir**, Khalid Gul, Farha A . K	Technological Aspects of Bioactive Compounds and Nutraceuticals from Microbial Sources. In Bioactive Compounds and Nutraceuticals from Dairy, Marine, and Nonconventional Sources (2024) ISBN number 13:978-1774914984, Apple Academic Press
29.	**Dr Zaffar Bashir**, M Y Zargar, Dinesh Kumar Vishwakarma	Potassium-solubilizing Microorganisms for Sustainable Agriculture 2019 13:978-0367345297 CRC Press.
30.	Shazia Mukhtar, **Dr Zaffar Bashir**, Rakeeb Ahmad Mir, Sajad Zargar	Genomic approaches for the improvement and conservation of buckwheat. 2021 978-981-16-3875-6 Springer.
31.	Kaisar Ahmad Bhat,Aneesa Batool, Madeeha Mansoor,	Silicon- and nanosiliconmediated disease resistance in crop plants 2022 2021.978-0-323- 91225-9.

	Madhiya Manzoor, **Dr Zaffar Bashir**, Momina Nazir	
32.	**Burhan Hamid**	Potent Biotechnological Applications of Psychrozymes 2021 13:978-9813345102 Springer.
33.	Zahara Sultan, Najeebul Tarfeen, **Burhan Hamid**, **Zaffar Bashir,** Tufail	Plant tissue culture and its role in plant breeding programs 2023
34.	Khair Ul Nisa, Najeebul Tarfeen **Dr. Burhan Hamid**, Qadrul Nisa Humaira Bhat, Saba Wani, **Dr Zaffar Bashir,** Ali Mohd Yatoo Shabir H Wani	Nanoremediation: A Sustainable Reclamation Method for Future Deployment 2024 13:978-1774914861 Apple Academic Press.

Seminar/Conferences/ Workshops organised by Centre: **13**

1. One Day National Symposium on World Microbiome Day under the theme "Microbiomes for Life: Celebration of the Microbial World" Organized by: Centre of Research for Development (CORD) in collaboration with Microbiologists Society, India (MSI).: 27th June, 2022
2. Workshop on "Reproductive Technologies in Wildlife Conservation" Organized by: Biodiversity and Wildlife Conservation Laboratory at CORD, University of Kashmir and CCMB-Laboratory for Conservation of Endangered Species: 18-20 May 2022
3. Cafe Mandala, Bio-entrepreneurship and skilling for Kashmir and Ladakh, Organized by: AIC-CCMB and CORD, KU: 21st July, 2022.
4. Talk on "Travellers in Trouble: Threats to migratory birds" Talk on "Travellers in Trouble: Threats to migratory birds", by Dr. Asad R. Rahmani, Member, Governing Body Wetlands International South Asia; Organized by: CORD, KU 24th August 2022.
5. One day brain storming meeting on "Developing technologies for diagnosing impurities in fibre used in the Pashmina shawl weaving industry" Organized by: CSIR-CCMB, Hyderabad and CORD, KU19 September, 2022.
6. Inauguration of Conservation Science and Innovation Laboratory (CoSI Lab) Inaugurated by: Prof Nilofer Khan (Hon'ble VC), Dr. Mohit Gera (PCCF and HOFF, J&K), Dr. Vinay Nandicoori (Director CSIR-CCMB), Mr. Suresh Gupta (CWLW, J&K). 21 September, 2022.
7. Two day workshop on, "Hands-on training on techniques for isolation of DNA and quantitative PCR for environmental and forensic samples" Organised by: Centre of Research for Development (CORD), University of Kashmir in collaboration with Atal Incubation Center (AIC-CCMB), Laboratory for the Conservation of Endangered Species (LaCONES-CCMB), IKP Knowledge Park Hyderabad, and RECL Jammu6 & 7 th March, 2023.
8. Three day Workshop on, "Wrap up of tools and techniques in Microbiology" Organised by: Microbiology Research Laboratory and P.G Programme in Microbiology, Centre of Research for Development (CORD), University of Kashmir: 15-17th March, 2023.
9. Organized lecture series on "**Various Aspects of Microbiology**" in 2 nd week of May2023
10. Organised workshop on "**Wrap up of tools and techniques in Microbiology"** from March 15-17 2023.
11. One Day Symposium on **World Microbiome Day** under the theme **"Microbiomes for** Life: Celebration of the Microbial World" on 27th June, 2022 organized by Centre of Research for Development (CORD) in collaboration with Microbiologists Society India.

12. One Day Symposium on **World Microbiome Day** under the theme **"Microbiomes for Life: Celebration of the Microbial World"** on 27thJune, 2022 organized by Centre of Research for Development (CORD) in collaboration with Microbiologists Society, India (MSI)
13. Organized lecture series on **Campylo bacterjejuni** in 2ndweek of May 2021.

Workshops, Conferences, Symposia and Seminars attented by Faculty

Prof. Bashir Ahmad Ganai (Attended workshops)

- Attended a workshop on "Medical Imaging: "Preclinical Imaging in Drug Discovery" Organized by Tata Memorial Centre: Advanced Centre for Treatment, Research and Education in cancer" Kharghar, Navi Mumbai Jan.14-18, 2019.
- Attended a workshop on "Advances in Molecular Biology" organized by Department of Zoology Punjab University Chandigarh from (18-25) Feb., 2020.
- Attended "One Week Online Training Program on Biostatistics (February 21 – 27, 2021) from Science Institute Lucknow.
- Attended "One day work shop for signing a MOU between Vigyan Prasar and Kashmir University and Central University for Prioritizing Science in Kashmiri Language held in Degree College Charisharief Budgam (Sept.,30 ,2021).
- Attended a 3 Day Workshop on "Science Translation in the Urdu Language" as a Resource person on (SCOPE) by CUK in Collaboration with Prsar Vigyan New Delhi "dated 24/26 - 03-2022 Central University of Kashmir, Main Campus Tulmulla, Ganderbal.
- Chaired as session on a workshop /CME on "Diabetes- Education to Protect Tomorrow" on the occasion of World Diabetes day held on 14th Nov, 2022, organized by the Department of Biochemistry Govt., Medical College Srinagar.
- Acted as Judge for Evaluation of Presentations for young Scientist Awards on the eve of "National Conference cum Workshop on Innovations and Entrepreneurship for Sustainable Development" held on 20th Dec. 2022, organized by the Central University of Ganderbal Nuner.
- Chaired as session on "Regional Young Investigators Meeting (RYIM), Srinagar on theme "Igniting Curiosity and Training young minds of J&K for Sustainable future" Organized by University of Kashmir, held on 19-21 Sept., 2023.
- Chaired as session on theme "Drug de-addiction" Organized by Clinical Biochemistry University of Kashmir, held on 6th Sept., 2023
- Delivered a special talk on "Role of Molecular biology techniques in identification of Microbes" on the event of HIGH-END workshop "Karyashalla' on "Microbial techniques of food products' on 7/02/23.
- Delivered a lecture on "plastic pollution and its ill effects on human" on the eve of world Environment Day held at North Campus Baramulla on 7th June 2023.
- Chaired as session on "Regional Young Investigators Meeting (RYIM), Srinagar on theme "Igniting Curiosity and Training young minds of J&K for Sustainable future" Organized by University of Kashmir, held on 19-21 Sept, 2023.
- Chaired as session on theme "Drug de-addiction" Organized by Clinical Biochemistry University of Kashmir, held on 6th Sept., 2023 Lectures delivered in Refresher courses in Staff academic college, Kashmir University since, 2008.

Prof. Md. Niamat Ali (Attended workshops)

- One day workshop on "Towards Quality Enhancement of University Publications" organized by Directorate of Internal Quality Assurance (DIQA), University of Kashmir, Srinagar on 20. 12. 2022.
- Three Weeks Capacity Building Programme on "DNA Barcoding of Animals Using Cytochrome-C Oxidase Subunit I (COI)", Organized by Rajiv Gandhi Centre for Biotechnology, Centre for Advanced Research and Training in Biotechnology, Department of Biotechnology, Ministry of Science & Technology, Government of India, Thycaud, Thiruvananthapuram, Kerala, India.
- Two Weeks National workshop on "Application of Tissue Culture in Genetic Studies" Organized by National Dairy Research Institute, Karnal, Hariana, India.
- Three Weeks "XIth National Training Programme on Electron Microscopy for Scientific Investigators", Organized by All India Institute of Medical Sciences, New Delhi, India.
- One Week Training Programme on "Writing a Scientific Paper" Organized by Publication and Information Directorate (PID), CSIR, Delhi, India.
- Three Weeks Capacity Building Programme on "Multimedia and E-content Development" Organized by IUAC Campus,
- Aruna Asaf Ali Marg, New Delhi in collaboration with EMMRC, Kashmir University, Srinagar – 190 006, J & K, India.
- Three Weeks National Training Programme on "Experimental Parasitology, Molecular Biology and Immunodiagnostics", Organised by P .G. Department of Zoology, University of Kashmir, Srinagar-190 000, J & K, India.
- Ten Days National Workshop on "Experimental Parasitology and Immunodiagnostics", Organized by P. G. Department of Zoology, University of Kashmir, Srinagar-190 006, J & K, India.
- One Week Workshop on "Internet Assessment and Online Information Retrievals", Organized by Indian National Science Documentation Centre, New Delhi, India.
- One Week Workshop on "Electron Microscope, X- Ray Diffraction and their Application in Material Sciences and Biological Sciences", Organized by USIC, Jadavpur University, Kolkata, West Bengal, India.
- One Year Diploma Course in Statistics, A. M. U., Aligarh, India.

Dr. Ruqeya Nazir (Attended workshops)

- Attended and delivered an invited talk on "Isolation and characterization of cold resistant active enzymes from psychrophilic bacteria of glacial soils in Kashmir valley" in three Days International Conference on theme **"International conferences on Microbiological Research: Current challenges anf future perspectives" jointly organized by Deptt. Of Microbiology, Bhrathidasan University Tiruchirapalli and Microbiologists Society India from** 9 January, 2024 to 11 January, 2024. Participated and presented in Two Day International Conference on theme
- **"Coronaviruses: Past, Present and Future"** organized by SKUAST-K on 10th and 11th May, 2022. **Attended, Co-chaired** and **Adjudged** the National Seminar on **"Recent Advances in Science and Technology for Agriculture Sustainability"** organized by Department of Botany, School of Life Sciences, Science Campus, Central University of Kashmir on 5th and 6th July, 2022.
- Attended Two Day Workshop on title **"Hands on Training and Workshop on Real Time PCR"** organized by CSIR-IIIM on 17th and 18thMarch, 2021.
- Attended Conference entitled "**Waste Water Treatment"** organized by NIT, Jalandar from 25th -27th June, 2021.

- Attended Workshop entitled **"Working in BSL-III Laboratory and Practices for Handling *Mycobacterium tuberclosis***" organized by University of Delhi, South Campus from 22nd- 28th November, 2021.
- Participated in Workshop entitled "**Shaping the Way"** organized by Career Counselling University of Kashmir and TASL on 27thand 28th August, 2021.
- Participated in Orientation Course entitled**"Effects of Use, Dependency and Prevention of Drugs in Educational Institutes"** organized by Zainul Abideen Technical Training Centre from 21stJune - 1stJuly, 2021.
- Attended online Two Days **"SPARC-Indo-US Immunology Workshop"**organized jointly by IIT Ropar, Punjab & George Washington University, USA held on 12th and 13thJune, 2020.
- Successfully completed the Online Module entitled**"Plagiarism"**from28 Research eracademy.com, Elsevier, on Friday, 12thJune, 2020, Presented by Catriona Fennell.
- Participated in HG Webinar series 2020 onPerspectivesandProspectsof„OMICS˝Approaches in Health and Diseaseorganized by Department cum National Centre for Human Genome Studies and Research, Punjab University, Chandigarh from 1st- 4th June, 2020.
- Participated in International Webinar on **"Recent Advances in Understanding**
- **Eukaryotic Protein Synthesis using Various Interdisciplinary Approaches"** organized by P.G. Department of Biotechnology, Lyallpur Khalsa College, Jalandhar, Punjab held on 29thMay, 2020.
- Attended and delivered an Invited Lecture entitled "**Morphological Identification and**
- **Molecular Characterization of GIT Helminth Parasites of *Cervus hanglu hanglu"*** in a Two-Day Workshop on **"Wildlife Disease Monitoring and Diagnosis"** on 2nd and 3rd August, 2019, held at Dachigam, Srinagar, J&K.
- Attended One Day Workshop on **"Wildlife Forensics"** on 1st August, 2019, held at Dachigam, Srinagar, J&K.
- Attended Two Day Workshop on **"Beat Air Pollution" and "Recent Trends in Environmental Sciences"** on the eve of observance of World Environmental Week on 11th and 12thJune, 2019, held in the Department of Environmental Science, University of Kashmir.
- Attended and presented a paper in the **Fifth International Conference on**
- **Nanotechnology (2019)** on **"Nano Bioremediation for Cleaner Environment"** organized by NIT Srinagar and IIT Kharagpur, from 7th- 11th April, 2019.

Talks, Lectures in refresher/Faculty Development Course

Prof. Bashir Ahmad Ganai

- Delivered a lecture in Human Resource Development Centre on "Environment and Health". Organized by Kashmir University, dated 05 - 02-2019.
- Delivered a lecture in Human Resource Development Centre on "DNA structure, Isolation and Characterization". Organized by Kashmir University, dated 16 - 12-2019.
- Delivered a lecture in Department of Environmental science on "PCR and its variants". Organized by Kashmir University, dated 8-04-22021 in a workshop on Recent Advances in Environmental Sciences.
- Delivered a lecture in Human Resource Development Centre on "PCR and its applications in diagnosis". Organized by Kashmir University, dated 26 - 08-2021
- Talk on Role of Mother tongue language in learning process in 'Hello Good Morning" on 21-02-2022 through DD Kashmir

- Delivered a three lecture in three days work shop on Molecular Biology techniques organized by CORD "dated 21/22/23 - 02-2022
- Delivered a lecture on "Development of Medical Science in India before and After Independence" in seven days National Science Festival (SCOPE) by CUK in Collaboration with Prsar Vigyan New Delhi "dated 24 - 02-2022
- Live Radio Talk on Role of Biochemistry and Molecular Biology in Day today life" on 21-03-2022 through FM102.6
- Delivered a Lead lecture on the eve of World Environmental Day 2022 with the theme only 'Only One Earth" in SKUAST, Shalimar Srinagar.
- Delivered a speech on the eve of Awareness Program organized by DLSA (District legal Service Authority) Ganderbal and SKUAST at Forestry College Ganderbal on 16th June, 2022 with the theme "Legal Awareness Program on Climate Change: Role of Government institutions and Laws"
- Delivered a lecture on the eve of international plastic day at Central University of Kashmir, Green Campus Ganderbal on 5thJuly, 2022 with the theme "Plastic & microplastic its harmful effects on Biodiversity particularly on humans and ways for reducing its effects"
- Delivered a lecture on the eve of international plastic day at University of Kashmir, on 30th Sept., 2022 with the theme "Harmful effects of Plastic on humans" Organized by Department of Social work.
- Delivered a lecture on "Plastic pollution and its harmful effects on Biodiversity and ways for reducing its effects" on the occasion of National Conference on; Role of Science, Technology, Executive and Public in Environmental Conservation and Waste Management organized by Department of Life Science and Environmental Studies Govt., Degree College Chrarisharief Budgam on Oct 27-28th ,2022
- Delivered a lecture on PCR and its Applications and Hands on training on "Isolation od DNA and PCR to College Teachers on the eve of workshop on Molecular Biology Techniques organized by Degree College Idgah in Collaboration with Department of Bio resources University of Kashmir and Department of Science and Technology Govt., of J&K held on 24th Sept., 2022
- Delivered a special talk on "Substance Abuse and its ill effects" on the eve of two days training program on Substance Abuse for College teachers organized by Department of Social work University of Kashmir on 6th Dec, 2022
- Delivered a lecture on the "Role of Scientists in formulation of Public Policies" on the eve of the workshop held from 5th-9th Dec, 2022 on Science- Policy- Society -Interface organized by Department of Environmental Science University of Kashmir, Srinagar in collaboration with Govt., Degree College for Women, Sopore.
- Delivered a special talk on "Role of Molecular biology techniques in identification of Microbes" on the event of HIGH-END workshop "Karyashalla' on "Microbial techniques of food products' on 7/02/23.
- Delivered a lecture on "plastic pollution and its ill effects on human" on the eve of world Environment Day held at North Campus Baramulla on 7th June 2023.
- Delivered a lecture on "plastic pollution and its ill effects on human life" on eve of One-day Interactive programme on Environmental Education focusing on Conservation, opportunities and challenges organized by Degree College Sumbal on 4th Nov., 2023.
- Delivered a lead lecture on "Diabetes and Environment" on eve of World Diabetes Day organized by GMC, Baramulla on 14th Nov., 2023.
- Delivered a lead lecture on "Importance of Business Fest in Education Departments" on eve of Two day workshop Day organized by GDC Boys Sopore on 29th Nov., 2023.

- Delivered a lecture in Vernacular language highlighting the significance of world disability day "organized by North Campus University of Kashmir Delina Baramulla on 6th Dec., 2023.
- Delivered a lecture "Role of mathematics in Learning Biology; A intricate Dance" on the eve of National Mathematics Day on 22nd Dec., 2023 in SKUAST Wadoora Sopore.

Prof. Md. Niamat Ali

- Presented a paper (poster) in "Seminar [First Position]", on "Biochemical characterization of liver, muscle and ovary at different gonadal stages in Rainbow trout (Onchoryhncus mykiss)", organized by Division of Fishery Engineering, Faculty of Fisheries, SKUAS-K, Srinagar, from 18-07-2019 to 19- 07-2019

Dr. Ruqeya Nazir

- Attended and delivered an invited talk on "Isolation and characterization of cold resistant active enzymes from psychrophilic bacteria of glacial soils in Kashmir valley" in three
  Days International Conference on theme **"International conferences on Microbiological Research: Current challenges anf future perspectives" jointly organized by Deptt. Of Microbiology, Bhrathidasan University Tiruchirapalli and Microbiologists Society India from** 9 January, 2024 to 11January, 2024.
- Attended and delivered an Invited Lecture entitled "**Morphological Identification and Molecular Characterization of GIT Helminth Parasites of *Cervus hanglu hanglu"*** in a Two-Day Workshop on **"Wildlife Disease Monitoring and Diagnosis"** on 2ndand 3August, 2019, held at Dachigam, Srinagar, J&K.
- Presented a paper (oral) in "Fifth International Conference on Nanotechnology (2019)", on "Nano bioremediation for cleaner environment•"organized by NIT Srinagar and IIT Kharagpur, from 07-04- 2019 to 11-12-2019.
- Delivered a lecture in Two-day workshop on Wildlife disease monitoring and diagnosis. Organized by CCMB Hyderabad in collaboration with wild life Department, J & K Govt, held at Dachigam Srinagar, J&K., 02 - 08-2019 to 03-08-2019.
- Delivered a lecture in CSIR-SRTP 2020. Training, organized by CSIR and University of Madras, dated 21 - 07-2020
- Chaired a session in an online national level poster, slogan and video competition on, "Role of microorganisms in promoting human health". Organized by organized by Microbiologists Society, India-Haryana Chapter on 26th November, 2020., dated 26 - 11-2020
- Delivered a lecture in workshop on Wrap up of Tools and Techniques in Microbiology. Organized by Centre of Research for Development, University of Kashmir, 15 - 03-2023 to 17-03-2023
- Chaired a session in World Environment Day, 2022. Organized by Deptt. of Environmental Science, UOK in collaboration with J & K, Science and technology council and Manasbal development authority, JK Govt., dated 06 - 06-2022
- Delivered a lecture in Training course on Microbiological methods. Organized by Division of Veterinary Microbiology and immunology, faculty of veterinary sciences, SKUAST-K, Shuhama, Srinagar, 07 - 03-2023 to 17-03-2023

Emeritus Scientist/Scientists Delivered Talks/Lectures/ act as Viva Voce Examiners in the Centre 2019-2024

S. No	Resource person	Designation	Title of the lecture/ Examinar	Date
01	Dr. M.A Hanifa	Emeritus Scientist	Guest lecture on title "Plight and motivation of Research"	26-07-2019
02	Dr. Ulfat Beig	Scientist	Guest lecture on title, "Understanding the life of E-Coli	07-07-2019
03	Dr. Karthikeyan Vasudevan	Senior Principal Scientist,	Guest lecture on title,"Scientific activities in CCMB Hyderabad"	01-08-2020
04	Dr. Prem Kumar	PrincipalScientist	Viva - Voce	08-10-2020
05	Prof.Manzoor-ur-Rehman	Professor	Viva - Voce	02-12-2020
06	Prof. Abubakr Sidiqque	Professor	Viva - Voce	16-12-2020
07	Dr. Saroj Arora	Professor	Viva - Voce	11-07-2020
08	Prof. Mukhtar Ahmad Khan	Professor	Viva - Voce	28-12-2020
09	Dr.Farooq A Lone	Professor	Viva - Voce	28-12-2020
10	Prof. Saleem Javaid	Professor	Ph.D Viva Voce	29-09-2022
11	Prof. Seema Lange	Professor	Ph.D Viva Voce	06-03-2022
12	Prof. Mohammad Afzal	Professor	Ph.D Viva Voce	15-02-2022
13	Prof. Shakir Ali	Professor	Ph.D Viva Voce	28-04-2022
14	Prof. Farooq AhmadLone	Professor	Ph.D Viva Voce	30-03-2022
18	Prof. Shakir Ali	Professor	Viva - Voce	08-08-2022
19	Prof. Yashpal Sharma	Professor	Viva - Voce	20-03-2022
20	Prof. Gulnaz Bashir	Professor	Tuberculosis and its Lab diagonosis	16-03-2023
21	Prof. Zaffar Amin Shah	Professor & Head	Viva - Voce	14-02-2023
22	Prof. Farooq A Lone	Professor & Head	Viva - Voce	30-03-2023
23	Prof. A. R. Yousuf	Former Expert member	Viva - Voce	14-02-2023
24	Prof. Altaf Ahmad Bhat	Professor & Head	Basic Guide to PCR in Microbial Diagonosis	15-03-2023
25	Dr. Parvez Ahmad Dar	Assistant Professor	Recent advances in Immunological diagnostic techniques	16-03-2023
26	Prof. Arvind Deshmukh	Professor & Former Head	Scope and fields of Microbiology	09-05-2023

Awards, Medals and Membership of Faculty members: 03

Name of the awadee	Name of the award	Name of the awarding body
Dr. Ruqeya Nazir	Distinguished Microbiologist Award	Dept. Of Microbiology, Bhrathidasan University Tiruchirapalli, Tamil Nadu and Microbiologists Society, India in an international Conference
Prof. Bashir Ah. Ganai	Best Teacher award	University of Kashmir
Prof. Bashir Ah. Ganai	Best Teacher award	Microbiology Society of India and University of Kashmir
Raisa Zaffar & Dr Ruqeya Nazir	Best paper Award	International conference on Materials, Reliability, safety and environmental issues-2021 organised by Dr. B. R. Ambedkar national Institute of Technology, Jalandhar

Scholars with JRF/NET/SET/GATE Since 2019: 26

S.No	Name of the candidate	Examination	Year	Discipline
01	Ms. Gousia Jeelani	GATE	2021	Life Science
02	Ms. Sabeehah Rehman	MANF-JRF	2019	Life Science
03	Ms. Parveena Firdous	MANF-JRF	2019	Life Science
04	Mr. Haneef Mohammad Bhat	MANF-JRF	2019	Life Science
05	Mr. Shabir Ahmad Bhat	MANF-JRF	2019	Life Science
06	Mr. Sameer Ahmad Dar	CSIR-JRF	2019	Life Science
07	Ms. Chamba Wangnoo	CSIR-JRF	2019	Life Science
08	Ms. Toyeeba Hassan	ICMR-SRF	2019	Life Science
09	Mr. Aqib Rehman	CSIR-JRF	2019	Life Science
10	Mr. Mohammad Aamir Malik	CSIR-JRF	2021	Life Science
11	Ms. Uzma Shabir	CSIR-JRF	2021	Life Science
12	Ms. Humaira	GATE	2020	Life Science
13	Mr. Naveed Gulzar	CSIR-JRF		Life Science
14	Ms. Zulaykha Khurshid Dijoo	NET-JRF	2019	Environmental Science
15	Mr. Ishfaq Shafiq Khan	CSIR/UGC- JRF		Life Science
16	Ms. Wasifa Noor	CSIR -SRF		Life Science
17	Mr. Junaid Bashir	GATE	2020	Life Science
18	Ms. Najeeb ul Tarfeen	ICMR-JRF	2019	Life Science
19	Mr. Syed Nasir Ahmad	GATE/NET	2022	Life Science
20	Mr. Talib Shareef	NET	2021	Life Science
21	Mr. Tanveer Ah Mir	DBT-JRF/GATE	2022	Life Science
22	Mr. Tufail Ahmad Bhat	SET/GATE	2023	Life Science
23	Ms. Mawish Mahroof	GATE	2023	Life Science
24	Ms. Rizwana Ali	GATE	2023	Life Science
25	Irshad ahmad naik	GATE	2023	Life science
26	Ishfaq ahmad malik	NET	2022	Life science
27	Mudaser Ah. Dar	NET	2022	Life Science

Placements of scholars since 2019

S. No	Name	Nature of Job
01	Neesa Majid	Research Assistant at VRDL Baramulla
02	Jeelani Ah. Dar	Teacher, Education Department
03	Raies Raja	Teacher, Education Department
04	Parveena Firdous	C-Assistant Professor, Higher Education Department
05	Sabiha Rehman	Guest Lecturer, Higher Education Department

Annual Publication of the Centre: Journal of Research and Development (ISSN 0972-5407)

[Since 2001 continuing till date]

Collaborations of PhD Programme

Outside University of Kashmir

- Jamia Hamdard, New Delhi
- IHBT-Palampur, Himachal Pradesh
- Government Medical College, Srinagar
- Central Silk Board, Pampore & TI

  IIIM, Srinagar
- SKIMS, Soura Srinagar
- SKUAST-K Shalimar
- Barkatullah University, Bhopal
- Punjabi University Patiala Punjab
- Pondicherry University, Puducherry
- NIT, Srinagar

Within University of Kashmir

- Department of Zoology
- Department of Botany
- Department of Biotechnology
- Department of Biochemistry
- Department of Clinical Biochemistry
- Department of Environmental Sciences
- Department of Chemistry
- Department of Geography & Reg. Development

- Institute of Home Scienc

Short Term Projects

Centre provides laboratory facility and guidance to students of other recognized Indian Universities and Colleges for performing their short term M. Sc/ B.Tech/ M.Tech Projects. Some such institutes are:

Name of the University/ Institutes	Name of the Candidate
Amity University, Noida	Adeela Hamid
RIMT University Mandi Gobingarh, Punjab	Insha Nabi

Facilities created

Centre was able to establish conservation science and inivation laboratory (COSI LAB). CSIR-Centre for Cellular and Molecular Biology (CCMB), Centre of Research for Development (CORD), University of Kashmir, along with Atal Incubation Centre - of CCMB established a 'Conservation Science and Innovation Laboratory' (CoSI) based at CORD, University of Kashmir. This laboratory will function as a field office to provide scientific knowledge, training and forensic diagnostic services for the interpretation of relevant evidence in a manner best suitable for presentation in the court of law to curb wildlife crime in the region. It would serve as a knowledge hub for innovative technologies to be tested in the field to improve livelihoods and sustainability in the region. It would also disseminate knowledge on biodiversity and transfer skills to improve conservation outcomes.

Extention activities/ Workshop attended by faculty members:

Prof. Mahammad Niamat Ali

- One Month "Training Cum Workshop on Molecular Biology", Organized by SHRM Bio-technologies, Poddar House, Madhyamgram, Kolkata-700155, West Bengal, India.
- One Month Training Course on "Cloning and Expression of Animal Genes" Organized by Jiwaji University; Gwalior, India. (sponsored by DBT, New Delhi). University Grand Commission (New Delhi) Recognized this Training Programme as Refresher Course.

Dr. Ruqeya Nazir

- Attended a Training course on "Microbiological methods " VPCI, University of Delhi from 7th March 2023-17th March 2023.
- Attended a Training programme on "Recent Advances Molecular Virology " VPCI, University of Delhi from 9th jan 2023- 24th jan 2023.

- Attended a Training Course on **" Protein biochemistry and Biophysics"** at Centre for Protein Science, Design & Engineering (CPSDE) COE-FAST Centre of Excellence, MinistryofHRD, Govt. ofIndiaw.e.f6th January-28th February,2020 at IISER,Mohali, Punjab.
- Attended a Training Course in the Department of Biochemistry, Dr. R.P. Govt. Medical College Kangra at Tanda, Himachal Pradesh from 1st- 31stJanuary, 2019.
- Delivered a lecture in Training course on Microbiological methods. Organized by Division of Veterinary Microbiology and immunology, faculty of veterinary sciences, SKUAST-K, Shuhama, Srinagar, 07 - 03-2023 to 17-03-2023.

Healthy Practices of the Department:

- Imparts training to officials/scientists of other State and Central Institutions like LAWDA, Fisheries, Deptt of Central Silk Board, Pollution Control Board, etc.
- Conducts water analysis of various samples provided by State Government agencies like State Pollution Control Board, Lakes & Waterways Development Authority, Economic Reconstruction Agency, Public Health Engineering, NIT Srinagar, J&K Govt. Fisheries Department, etc.
- Management plans for biodiversity board of Jammu and Kashmir. Students and research scholars are provided a platform to interact with the scientists of national and international repute through organizationof special invitedlectures.
- The syllabus has been formulated as such so as to keep it in tune with the national standards so that the students find it easier to qualify national level examinations such as CSIR-UGC,NET, ICAR, GATE etc.
- Research projects funded by the national agencies such as DBT, DST, CSIR, UGC etc. are routinely undertaken by the revered faculty members.
- The departmental faculty keep on attending conferences/seminars/Orientation and refresher Courses to improve upon theirteaching pedagogy.
- The focus of the research in the department has always been in tune with the contemporary issues and challenges.

Weaknesses of the Department (if any):

Shortage of P. G. Classroom and PG Lab Infrastructure of research Labs is long pending issue. Reelectrification is the dire need of the Research labs for the safety of costly equipments

Future Plans for CORD and Microbiology

The future plans for the growth of our research centre focus on enhancing its infrastructure, expanding research capabilities, fostering collaborations, and addressing key scientific and societal challenges. These

initiatives aim to establish the centre as a leading hub of innovation, contributing to knowledge creation and practical solutions across various domains.

1. Infrastructure Expansion

To support cutting-edge research, the Centre plans to:

- Upgrade Facilities: Invest in advanced equipments such as high-throughput sequencing platforms, electron and confocal microscopes, and real-time PCR systems.
- Specialized Laboratories: Develop dedicated labs for key areas such as genomics, proteomics, and bioinformatics, along with biosafety-level facilities for infectious disease research.
- Sustainability Features: Incorporate sustainable practices, such as energy-efficient systems and green technologies, to create an eco-friendly research environment.

2. Multidisciplinary Research Initiatives

The Centre will prioritize multidisciplinary projects to address global challenges, including:

- Infectious Diseases: Develop novel diagnostics, vaccines, and therapeutics for emerging pathogens.
- Environmental Sustainability: Study microbial roles in bioremediation, climate resilience, and renewable energy production.
- Agricultural Biotechnology: Explore microbial applications in soil health, crop enhancement, and pest control.

3. Collaboration and Partnerships

- Academic Collaborations: Partner with leading universities and research institutions globally to share knowledge, resources, and expertise.
- Industry Linkages: Strengthen ties with biotech, pharmaceutical, and agricultural industries to translate research into practical applications.
- Government and Non-Profit Partnerships: Work with funding agencies, NGOs, and policy-making bodies to align research with societal needs.

4. Faculty and Researcher Development

- Recruitment: Attract talented researchers with diverse expertise to enrich the research ecosystem.
- Professional Development: Provide opportunities for training, international fellowships, and conferences to enhance skills and stay updated with global trends.
- Mentorship Programs: Establish mentorship networks for junior researchers and students, fostering an innovative and collaborative culture.

5. Funding and Resource Mobilization

- Grants and Endowments: Actively pursue competitive grants from national and international funding bodies.
- Industry Sponsorships: Seek financial support for specific projects and infrastructure development through corporate partnerships.
- Alumni Contributions: Leverage alumni networks for funding and support in expanding the Centre's capabilities.

6. Knowledge Dissemination and Outreach

- Publications and Patents: Encourage high-impact publications and secure intellectual property rights for innovative discoveries.
- Workshops and Conferences: Host national and international events to foster idea exchange and showcase research outcomes.
- Community Engagement: Conduct awareness programmes to highlight the societal relevance of ongoing research.

7. Long-Term Goals

- Centre of Excellence: Position the research centre as a globally recognized hub for innovation in its focus areas.
- Incubation and Startups: Develop an incubation Centre to nurture startups based on the Centre's research, promoting entrepreneurship.
- Global Recognition: Strive for international certifications and rankings to enhance the Centre's reputation.

Through strategic investments in infrastructure, talent, and collaboration, our research center aims to push the boundaries of scientific exploration. By aligning its goals with pressing global challenges, the center aspires to make a lasting impact on science, industry, and society. These initiatives will not only elevate the center's standing but also reinforce its role as a catalyst for innovation and progress.

Research Publication since 2019

1. Baba Uqab, **Ruqeya Nazir**, **Bashir Ahmad Ganai**, Praveen Rahi, Mercury-tolerant metalophiles: A bio tool for remediation of mercury (Hg) affected Environs, Process Safety and Environmental Protection, Volume 191, Part B, 2024, Pages 2074-2081, **ISSN:** 0957-5820 **(IF 6.9)**
2. Javaid Hameed, **Ruqeya Nazir** (2024); Probiotic Potential of Lactobacillus andEnterococcus Strains IsolatedFrom the Faecal Microbiota of CriticallyEndangered Hangul Deer (Cervushangluhanglu): Implicationsfor Conservation Management; Probiotics andAntimicrobialProteins (**IF: 4.5)** (ISSN:1867-1314)
3. Nisar, S., Shah, A.H. & **Ruqeya Nazir** The clinical praxis of bacteriocins as natural anti-microbial therapeutics. *Arch Microbiol* **206**, 451 (2024). **(IF 2.8)**
4. Bhat, H.M**., Ruqeya Nazir** & Kashoo, Z.A. Rising Threats of Viral Infections: Exploring Probiotics as Antiviral Agents. Indian J Microbiol (2024). https://doi.org/10.1007/s12088-024-01378-4 **(IF 2.1)**
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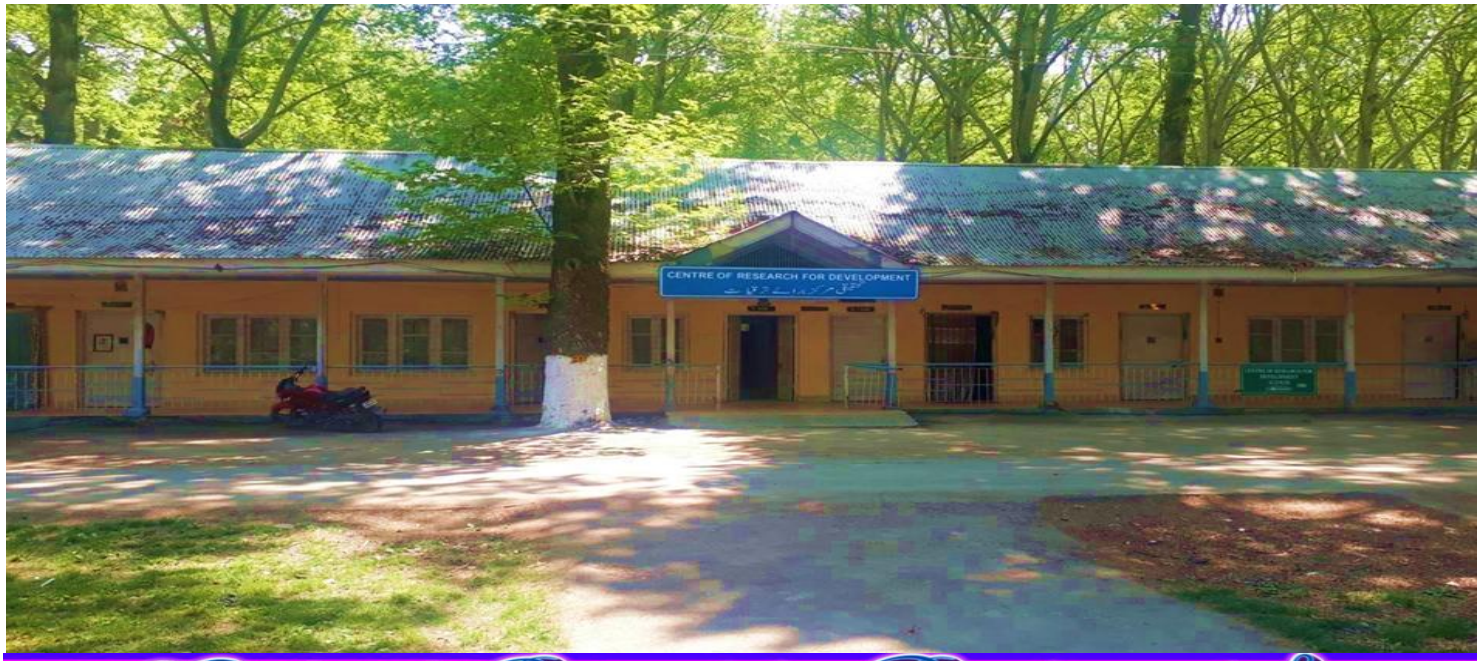

Centre of Research for Development & P.G. Programme in Microbiology University of Kashmir, Srinagar, J&K