



## BEST PRACTICE-2 RESEARCH AND INNOVATION: BRIDGING KNOWLEDGE AND IMPACT



# OBJECTIVES



**Foster a Culture of Continuous Innovation**



**Bridge the Gap Between Research and Practical Application**



**Enhance Knowledge Sharing and Collaboration**



**Ensure Ethical and Responsible Innovation**



**Measure and Maximize Impact**



**Support Capacity Building and Talent Development**



## THE CONTEXT

The push for research and innovation at RLAC is aligned with national objectives, outlined in the National Education Policy (NEP) 2020, which stresses the need for integrating research into undergraduate education.

Although primarily an undergraduate institution, RLAC has made significant efforts to develop an infrastructure that supports faculty and student research while emphasizing the importance of intellectual property rights (IPR) and entrepreneurship.

A key focus is also placed on enhancing employability by providing research-based learning opportunities, such as summer internships, that prepare students for both academic and industrial careers. By fostering this environment, RLAC seeks to produce socially impactful research while strengthening its academic reputation.



## **THE PRACTICE**

**Cultivating the Research Ecosystem:  
Nurturing Interdisciplinary Collaboration and Knowledge  
Growth**



# OBJECTIVES OF RESEARCH AND PATENT POLICY IN RLAC



- 1) To create and promote a culture of research and innovation among the teaching faculty.
- 2) To organize International and National Conferences/Seminars/Workshops, Faculty Development Programs on research related topics such as research methodology, grant proposal writing and research article writing etc.
- 3) The proposal will be duly checked by the Institutional Integrity Panel and the Ethical Committee in order to ensure integrity, ethics and quality in research.
- 4) To bring out an annual/periodic compendium of abstracts/papers presented by the staff and students in various seminars /conferences/workshops.
- 5) To provide guidance, technical support and recommendation for extramural financial assistance.
- 6) To encourage faculty to supervise Ph.D students in sciences, humanities and commerce.
- 7) To train and motivate undergraduate students to pursue research and translate their innovative ideas into products.





# OBJECTIVES OF RESEARCH POLICY IN RLAC

- ▶ 8) All the students and faculty and research staff are expected to conduct research and publish of highest standards of ethical conduct, truth and accuracy. All manuscripts are required to be checked for plagiarism before submitted for publication by the purchased software by the College – Turnitin.
- ▶ 9) Any kind of suspected academic fraud or misconduct will be dealt with the rules and regulations prescribed by DU/UGC in this respect (Refer to <http://www.du.ac.in/index.php?page=prevention-of-plagiarism-shodhganga-thesis-repository>). The Article publication charges should be borne from the extramural Research Grant by the concerned faculty.
- ▶ 10) All the equipment purchased out of extramural finding will be the property of the college and are required to be deposited with the concerned department and take No Objection Certificate.
- ▶ 11) All the intellectual property generating out of the research conducted on the premises of the college will be the property of the college. The PIs will have the right to the copyright of the Publications/ Software developed out of the research.



# OBJECTIVES OF RESEARCH POLICY IN RLAC

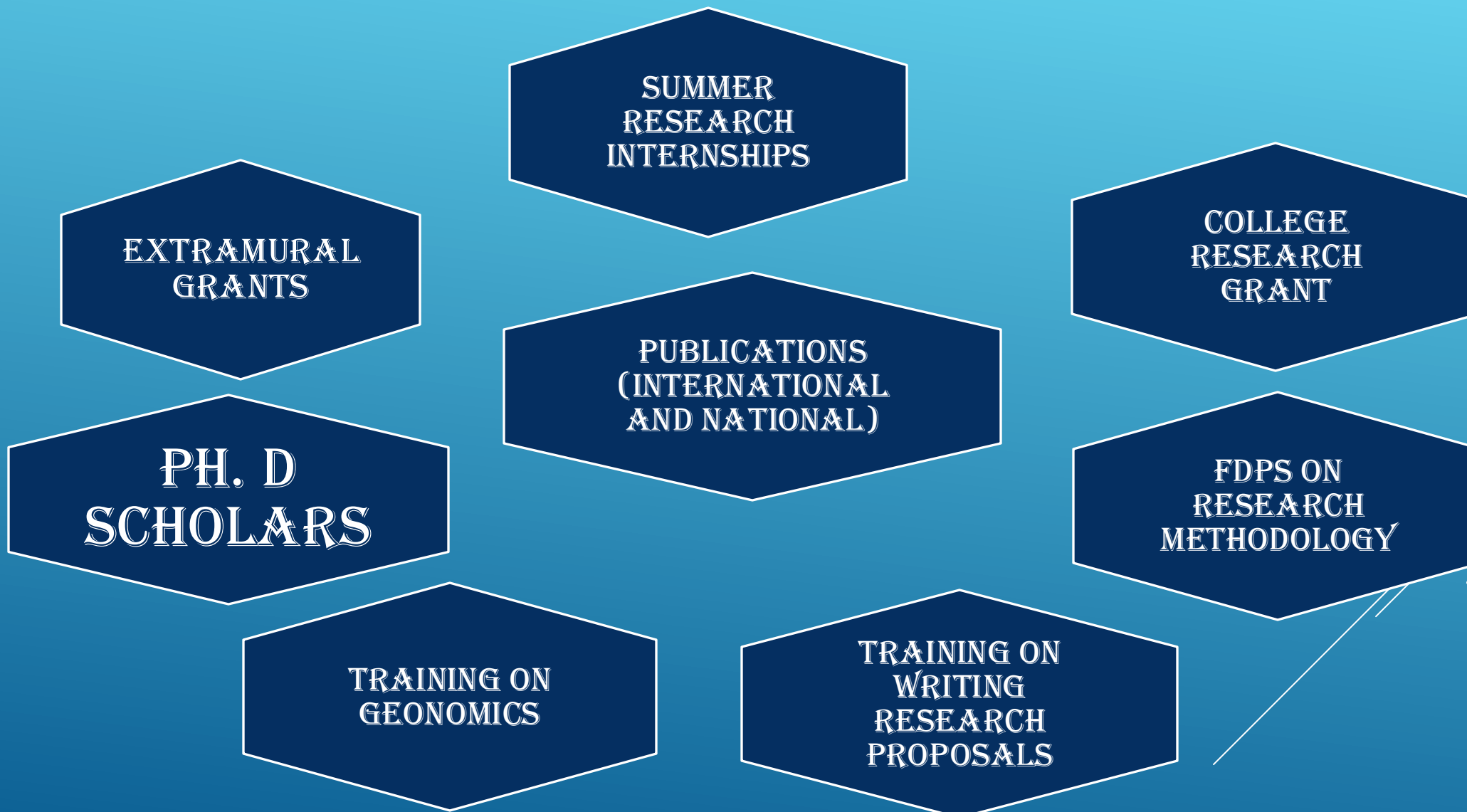
- ▶ 12) College administration has created fund to finance small research projects submitted by the faculty members to Research and IPR Cell after deliberation on the merit of the proposal submitted.
- ▶ 13) This is to facilitate an atmosphere of Research in the college and generation of preliminary data to be provided to funding agencies such as UGC, DST, DBT, ICSSR, ICHR, ICMR, Ministry of Ayush, Welcome trust etc. while applying for extramural grants.
- ▶ 14) All our faculty is expected to complete their Ph.D. However, regular faculty members who, for some reason, are not pursuing doctoral studies are encouraged to take up research projects - Minor or Major.
- ▶ 15) The administration will make efforts to provide infrastructural support to such projects and assist in applying to the funding agencies. The college will pay for the registration of intellectual Property Rights if it is not funded through the extra mural grants.

**\*THE COLLEGE AIMS TO GENERATE KNOWLEDGE THROUGH RESEARCH WITH EMPHASIS ON THE TRAINING OF ITS STUDENTS AND THE INTELLECTUAL GROWTH OF THE FACULTY.**

**\*THE COLLEGE SUPPORTS ATTORNEY FEE OF FILLING THE PATENT APPLICATION.**



# CULTIVATING THE RESEARCH ECOSYSTEM: NURTURING INTERDISCIPLINARY COLLABORATION AND KNOWLEDGE GROWTH







# RESEARCH PROJECTS- 2019- 2024

**A TOTAL OF 17 RESEARCH PROJECTS  
HAVE BEEN SANCTIONED BY NATIONAL  
AND STATE FUNDING AGENCIES DURING  
LAST 5 YEARS**



**RESEARCH  
PROJECTS  
THROUGH  
EXTRAMURAL  
RESEARCH GRANT  
17 IN LAST FIVE  
YEARS**

(NMHS, under MOEF&CC,  
Government of India. DBT,  
ICMR, IMPRESS-ICSSR, ICSSR,  
IoE, DU, DST,  
Geospatial Information Science  
& Engineering- HUB (GCIE  
HUB)



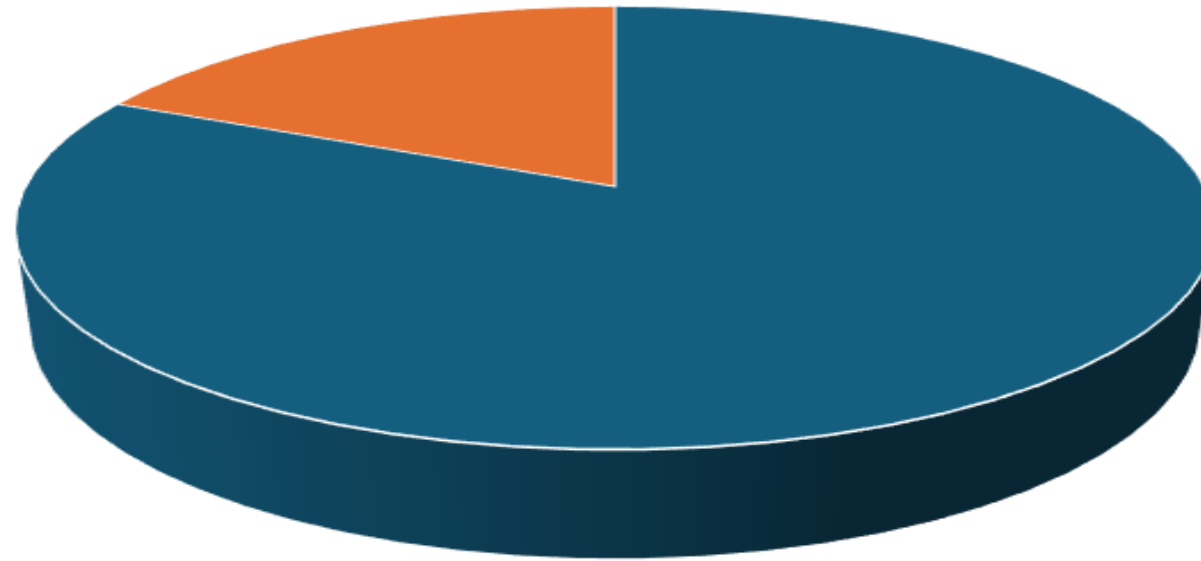
# **EXTRAMURAL Research Grants received by faculty**

**(last 5 years)**

**Amounting to INR 4,773,382**

**(FOUR CRORES SEVENTY SEVEN LAKHS THIRTY THREE THOUSAND EIGHTY TWO RUPEES)**

## Grants received by the faculty in the last 5 years (2019-2024)

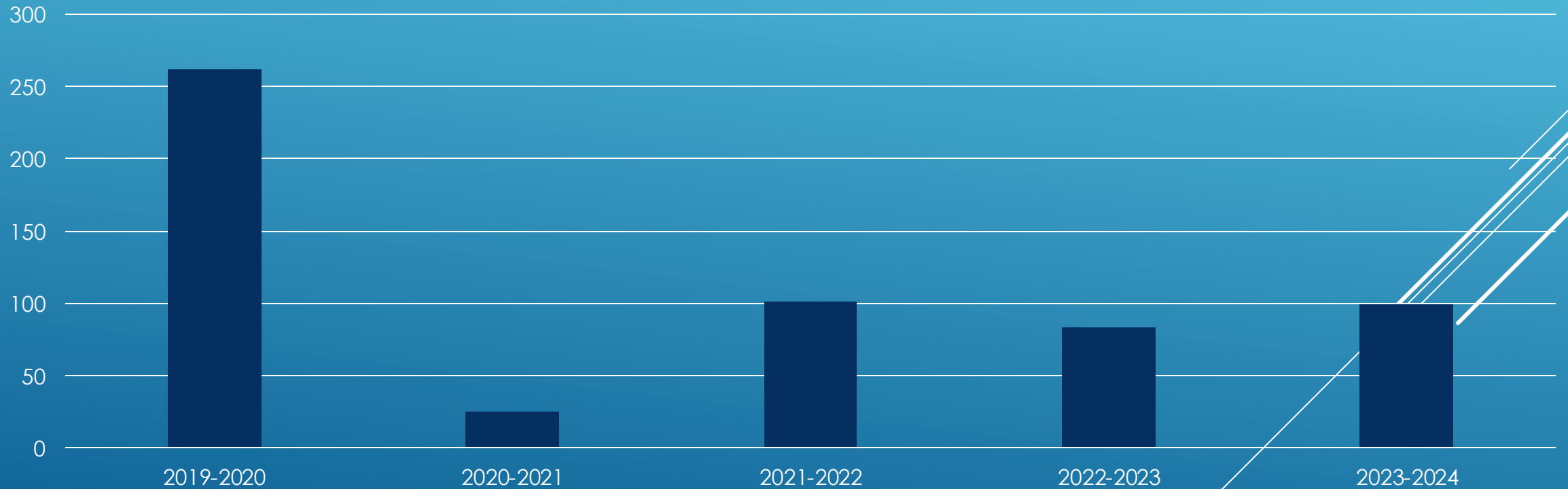


- 18 faculty members are involved in research projects (extramural grants)
- 4 faculty are involved as Co-Pi in different projects outside the college



# EXTRAMURAL GRANTS RECEIVED BY RAM LAL ANAND COLLEGE (2019-2024)

AMOUNT SANCTIONED IN LAKHS







# SANCTIONED RESEARCH PROJECTS



S.No	Name of the Project/ Endowments, Chairs	Name of the PI/Co-PI	Department of PI/Co-PI	Year of Award	Amount Sanctioned	Duration of the project	S.No
1	"Enhancement of Livelihood Opportunities through Sustainable Development using Multifaceted Support Plans for Village Cluster around Patiya in Takula Block, Almora District, Uttarakhand"	Principal Investigator: Prof Seema Gupta, Co-PIs- Prof. Rakesh Kumar, Prof. Mukta Mazumdar Dr. Rajesh Sachdev, Dr. Prabhas Pande	Statistics, Geology and History	2019	199.9982 Lacs	3 Years (Extended till June 2023)	1
2	DBT Foldscope Research Project DBT Foldscope Research Project on "Betel Nut Chewing Induced Genotoxic Changes - Evaluation and Awareness Study in Young Population of North-Eastern State of India"	Prof. Prerna Diwan- PI	Microbiology	2018-19	8 lacs	1.5 Years	2
3	Alterations in oral microbiome of Betel nut chewing population of North Eastern India and its Correlation with Oral Cancers: Prospecting Microbial Consortium for Therapeutic potential	Principal Investigator: Dr. Prema Diwan- PI; Dr. R K Gupta, Dr. James Wahlang- Co-PIs	Microbiology	2019	35.90 lacs	3 Years	3
4	Communicating the Science behind the phenomenon of Antibiotic Resistance to promote social awareness"	Principal Investigator: Prof. Prerna Diwan	Microbiology	2019	5 lacs	2 Years	4



# SANCTIONED RESEARCH PROJECTS



5	Study of varied complexities of North East region and role of National Cadet Corps to integrate it strongly within the national mainstream	Principal Investigator: Dr. Sanjay Kumar, Co-PI: Dr. Rita Jain	Hindi, Statistics	2019	4.99 lacs	1 year	IMPRESS-ICSSR
6	A study of Socio-economic and cultural impact of the left-wing Extremism(LWE) in Bastar, Chhattisgarh	Principal Investigator: Dr. Prema Malhotra	English	2019	8.0 lac	2 years	ICSSR
7	DBT Star College Grant	Dept. of Microbiology	Microbiology	2020	25 lacs	3 Years	DBT
8	Faculty Research Programme Grant-loE	Dr. Swagata Karmakar-Co-PI	Environmental Studies	2021	3.0 lac	1 year	loE, DU



# SANCTIONED RESEARCH PROJECTS



9	Resistome metagenomic profiling of bioaerosols in metro network in Delhi NCR	Prof. R K Gupta-PI, Dr. Sunila, Prof. Prema Diwan-Co-PIs	Microbiology	2021	56.0	3 years	ICMR
10	Targeting biofilm formation by inhibiting Cysteine biosynthesis pathway enzymes in ESKAPE Pathogens with natural products	Prof. RK Gupta-PI, Dr. Vibha Gupta, Prof. Prema Diwan-Co-PIs	Microbiology	2021	42.0 lac	3 years	ICMR
11	Assessment and Monitoring of Depth of Anaesthesia using Explainable AI (2021-13397)	Dr Neeraj K Sharma, Prof Rakesh K Gupta	Computer Science	2022	19.55 lac	1 Year	ICMR
12	Development of computational framework for COVID-19 multi-omics data analysis in collaboration with IBAB, Bengaluru	Ms. Dikscha Sapra (CO-PI)	Computer Science	2022	28.30 lac	2 Years	ICMR



# SANCTIONED RESEARCH PROJECTS



13	New Adhoc Research Scheme (BMI Division)	Dr. Nidhi Verma (CO-PI)	Microbiology	2022	28.9lac	2 Years	
14	Major Research Project (RP Division)	Project Investigator: Dr Saurabh Kumar Sharma, Co-Project Directors: Dr. RK. Brojen Singh, Dr. Prakasha Chandra Sahoo and <b>Dr. Nidhi Verma</b>	Microbiology	2022	7.0 lac	2 Years	ICSSR
15	Sustainable livelihood enhancement of SC communities in Chainpura Tehsil of Niwai, Rajasthan	Principal Investigator: Prof. Prema Diwan, Co-PIs: Prof. Rakesh Kumar Gupta, Prof. Sanjay Sharma, Dr. Nidhi Yadav, Mr. Siddharth Gupta	Microbiology, Hindi, Political Science, BMS	2023	69.75lacs	2 Years	DST
16	Assessment of Income Tax Declaration Scheme 2016: Experimental Evidence on the Taxpayer Compliance Behaviour	Dr. Debashree Das	Economics	2023	4.0lac	6 Months	ICSSR
17	Traditional knowledge hub for indigenous communities in India"	Principal Investigator: Saurabh Kumar Sharma, Co-PI: Prof.R.K. Broje Singh, Prof Neel Sarovar BhavTesahm, <b>Dr. Nidhi Verma</b> , Dr. Saylee Deshmukh, Dr. Kuldeep Choudhry, RRAC	Microbiology	2023	25.94	3 Years	Geospatial Information Science & Engineering- HUB (GCIE HUB)



# ONGOING RESEARCH PROJECTS



Name of the Project/ Endowments, Chairs	Name of the Principal Investigator/Co-investigator	Department of Principal Investigator	Year of Award	Amount Sanctioned (total)	Amount released in 2023-24	Duration of the project	Name of the Funding Agency	Type (Government/n on-Government)
Sustainable livelihood enhancement of SC communities in Chainpura Tehsil of Niwai, Rajasthan	Prof. R K Gupta, Prof. Perna Diwan ,Prof Sanjay Sharma, Dr Nidhi Yadav,Mr Siddharth Gupta	Microbiology	2023 (ongoing)	69,75,678	3828875 dated 11.12.23	2 years	DST	<b>Government of India</b>
ICSSR Short term Empirical Project	Dr Debashree Das	Economics	Sep 2023-March 2024	4,00,000	2,00,000 dated 17.10.23	6 months	ICSSR	<b>Government of India</b>
Targeting biofilm formation by inhibiting Cysteine biosynthesis pathway enzymes in ESKAPE pathogens with natural products ICMR/4780	Prof. R K Gupta Prof. Perna Diwan Dr.Vibha Gupta	Microbiology	2021(ongoing in 2022-23)	42,30,620	1069731 dated 25.09.24	3 years	ICMR	<b>Government of India</b>





# COLLEGE RESEARCH GRANT (CRG) SCHEME:

**OBJECTIVE:** To enhance the teaching learning process through the conduct of inhouse Research grants to small projects of team of faculty and students



# THE OBJECTIVE

- ▶ The First call of the college research grant (CRG), initiated in 2019-2020 saw wide participation from at least 5 departments of the college and resulted in granting of 7 proposals
- ▶ As the colleges reopened in Feb 2022 POST COVID, the Research & IPR cell of the College was on its toes throughout the year to make up for the time lost and worked extensively to enhance the teaching learning process through the conduct of research projects and internships and to create an innovative ecosystem in the college.
- ▶ Due to the disruption caused by the COVID-19 pandemic, the projects were granted time extensions twice. Project work was successfully completed by all the PIs in Dec 2022. The outcomes of these projects are very encouraging and enthused faculty members and students to get involved in research and helped in creating an innovative ecosystem in the college.





# OUTCOME OF CALL- I OF INHOUSE COLLEGE RESEARCH GRANT

- ▶ Training of more than 164 students
- ▶ Students learnt to design a research study, devise methodology, learned to implement the methodology, complete the study, compile and analyze results, write a project report, draw inferences, and plan further study. Students also learned scientific writing and communicating the findings in the form of publications and presentations.
- ▶ Faculty could generate preliminary data for submitting proposal for extramural funding
- ▶ A total of 5 research articles were published in international journals of repute by the investigators with students as co-authors.
- ▶ A total of 11 papers were presented at international conferences.
- ▶ Seven dissertations were submitted by the students working under these projects.



## CRG- NUMBER OF FACULTY AND STUDENTS BENEFITTED

CRG	No. of FACULTY BENEFITTED	No. of STUDENTS BENEFITTED	GRANTS SANCTIONED	IMPORTANT OUTCOMES
CRG I	12 Faculty Members	50 Students	2.85 Lakhs	<p>A total of 5 research articles were published in international journals of repute by the investigators with students as co-authors.</p> <p>A total of 11 papers were presented at international conferences.</p> <p>Seven dissertations were submitted by the students working under these projects.</p>
CRG II	13 Faculty Members	51 Students	7.45 lakhs	The CRG Projects work in progress
CRG III	19 Faculty Members	63 Students	7.45 Lakhs Grant	Awaiting proposals



# SUMMER RESEARCH INTERNSHIPS: UNLOCKING INNOVATION





# SUMMER INTERNSHIPS OFFERED TO THE STUDENTS



Objective: To facilitate the faculty members to take students for the summer internships to inculcate research culture in the college in line with the NEP, during the academic session 2022-2023.

12 proposals were received in the first call , out of which 8 proposals requiring grant of up to Rs. 80000/- were technically approved and were carried out by the faculty members.



# FINANCIAL SUPPORT TO TEACHERS FOR ATTENDING CONFERENCES/ WORKSHOPS/FDPS



<b>YEAR</b>	<b>NUMBER OF FACULTIES BENEFITTED YEARWISE</b>
<b>2019-2020</b>	27
<b>2020-2021</b>	16
<b>2021-2022</b>	22
<b>2022-2023</b>	23
<b>2023-2024</b>	98



# PROMINENT RESEARCH/ PROJECTS OUTCOMES





# EVIDENCE OF SUCCESS





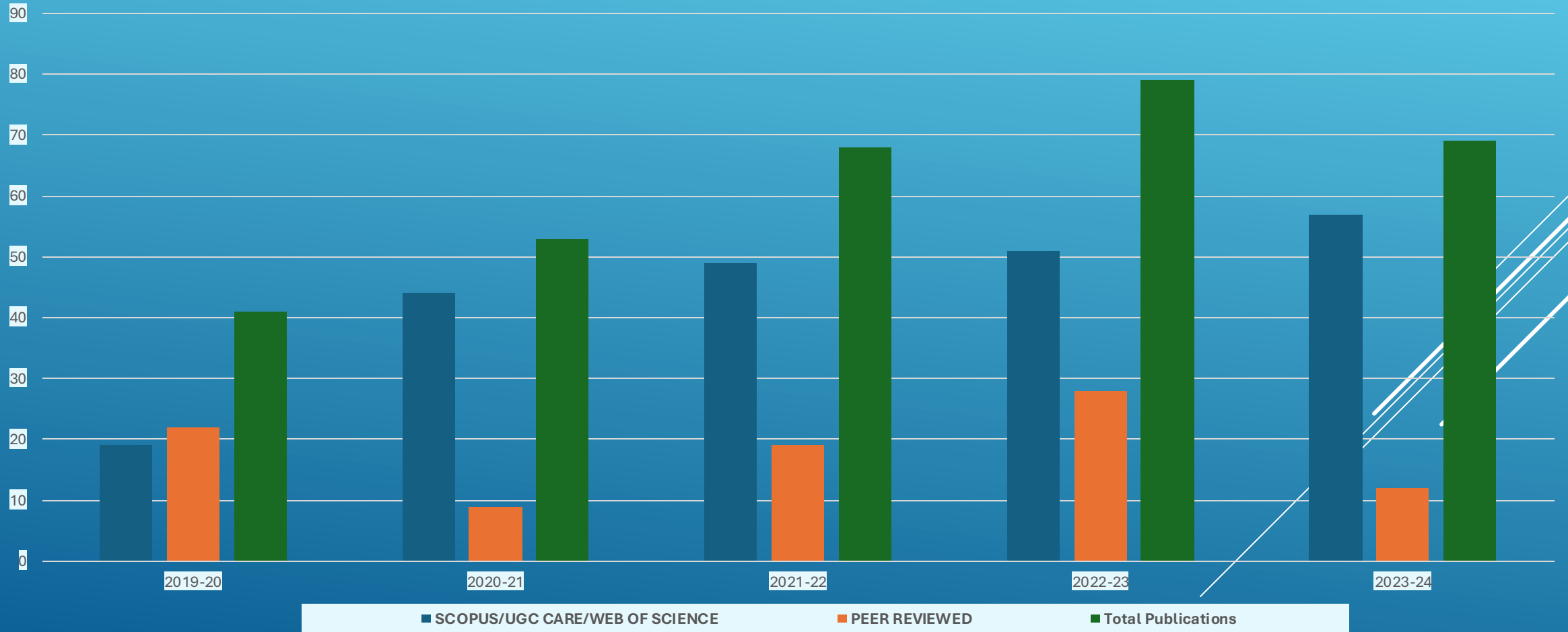
**323 RESEARCH PUBLICATIONS (2019-2024) PUBLISHED BY THE FACULTY AND STUDENTS OF RAM LAL ANAND COLLEGE.**

**THESE PUBLICATIONS INCLUDE OPEN ACCESS JOURNALS LISTED IN SCOPUS, UGC-LISTED JOURNALS, PEER REVIEWED AND CONFERENCE PROCEEDINGS.**



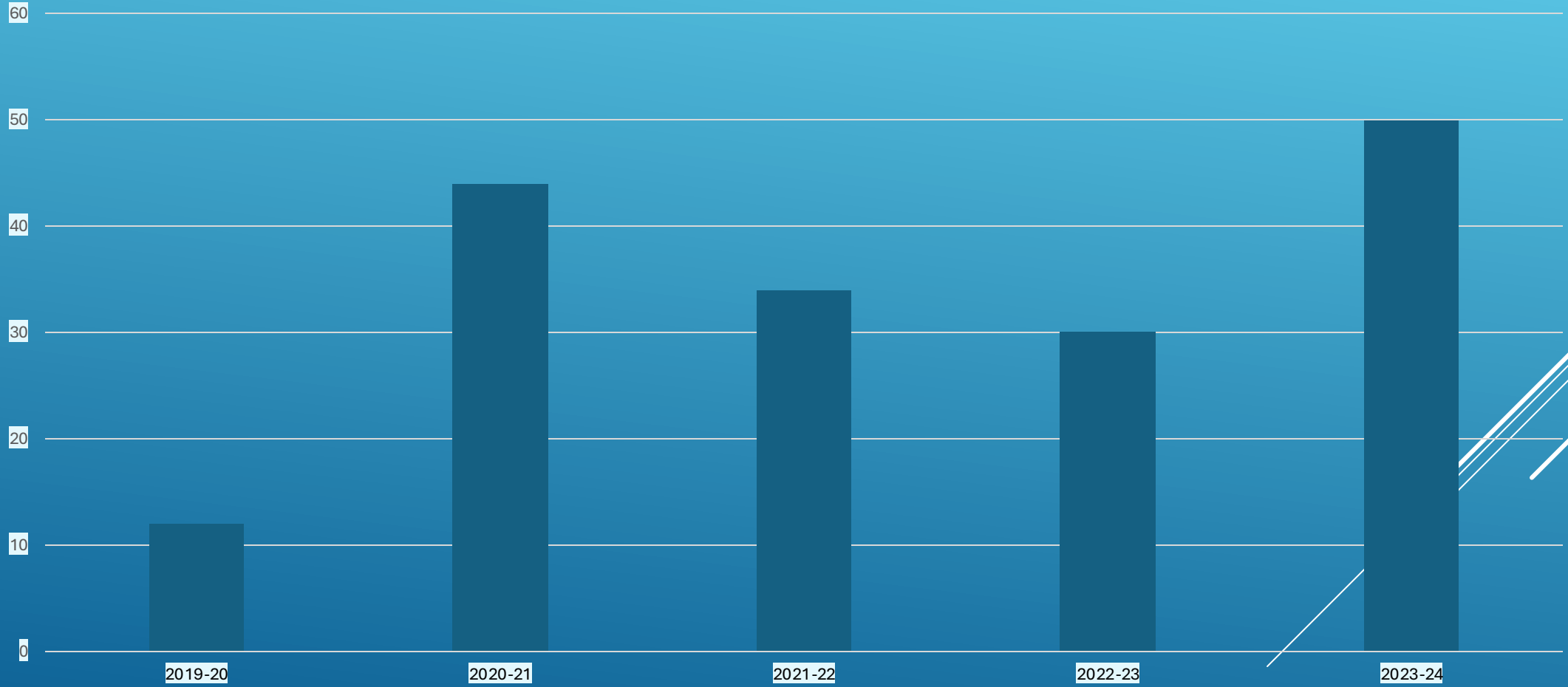


# NUMBER OF SCOPUS ARTICLES PUBLISHED ACCORDING TO THE THOMSON REUTERS SCALE WITH IMPACT FACTOR 2 OR MORE INCLUDING WEB OF SCIENCE, UGC CARE AND PEER REVIEWED





**NUMBER OF BOOKS AND CHAPTERS IN EDITED VOLUMES/BOOKS PUBLISHED AND PAPERS PUBLISHED IN NATIONAL/ INTERNATIONAL CONFERENCE PROCEEDINGS PER TEACHER DURING LAST FIVE YEAR**



■ Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five year



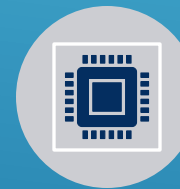
## HONOURS/ DISTINCTIONS

- 1. Prof. Rakesh Kumar awarded the Sahitya Ratna by the BPA Foundation on 9th March 2024**
- 2. Dr. Deepti Gupta adjudged Best Paper Presenter at the School of Vocational Studies, Dr. B. R. Ambedkar University, New Delhi on 27.03.2024**
- 3. Dr. Anubha adjudged Best Paper Presenter at Dept of Commerce, Delhi School of Economics, University of Delhi on 15th of March, 2024**

# PH. D SCHOLARS REGISTERED TILL DATE



TILL DATE , 15 FACULTY MEMBERS HAVE BEEN RECOGNIZED AS RESEARCH GUIDES HAVING MORE THAN 15 RESEARCH SCHOLARS REGISTERED UNDER THEM



THE SCHOLARS HAVE BEEN BENEFITED WITH AN AMOUNT OF RS, 1,00,000/- ANNUALLY FOR RESEARCH RELATED ACTIVITIES



# NEW PHD STUDENTS REGISTERED IN THE CURRENT YEAR 2023-2024

S.NO	NAME OF THE FACULTY	NAME OF THE STUDENT	THESIS TITLE	YEAR
1	PROF. RAKESH KUMAR GUPTA	MS. SHUBHAM SHARMA	PROBIOTIC BASED THERAPEUTIC APPROACH: EXPLORING REVERSAL OF ORAL MICROBIOTA DYSBIOSIS LEADING TO ORAL CANCERS IN BETEL QUID CHEWERS	2023
2	PROF. PRERNA DIWAN	HARSHITA GUPTA	PROSPECTING ORAL CANCER SIGNATURES IN BETEL QUID CHEWERS THROUGH OMICS APPROACH	2023
3	PROF. VANDANA GANDOTRA (CO SUPERVISOR)	MR. KAPESH SUBHASH	COMPUTER SCIENCE	2023
4	PROF. ARCHANA GAUR	MR. BAJRANG BALI KAHAR	NIRALA AUR NAJRUL KI KAVITA MEIN RASHTRIYATA KE SVAR KA TULNATAMAK ADHYAYAN	2023
5	PROF. SANJAY KUMAR SHARMA	MS. ARPITA LAKHERA	BAGHELI AUR CHATTISGARHI LOKGEETON KA SANSKRITIK ADHYAYAN	2023



# PATENTS





# PATENTS

- ▶ 05 PATENTS APPROVED/SACTIONED:
- ▶ College FUNDS PATENTS Filing
- ▶ PATENTS ARE GRANTED THOROUGH EMPANELLED PATENT LAWYERS
- ▶ ONE PATENT HAS BEEN FILED IN THE CURRENT YEAR



# PATENTS GRANTED

1. **6349127** US Design Patent and AI-Driven Centrifuge Tubes for Optimized Laboratory Workflows
2. **418733** Methods of Screening Inhibitors for HCV
3. **6345938** UK Design Patent and Smart Biometric device to Record Attendance of Employees
4. **International Patent (IP Australia) Patent No: 2021105696** Internet of Things Sensor Network Based Intelligent System for Monitoring and Securing Smart Environment from Unauthorised Object
5. **382818-001** IOT Based Blood Oxygen Saturation Meter



## PATENTS FILED

Indian Patent Application Filed - **202411010372**  
Method For Metagenomic DNA Extraction From  
Bioaerosols Collected Using Bio sample

**\* COLLEGE SUPPORTS FUNDING OF PATENTS AS AN INSTITUTIONAL  
POLICY**



# CHALLENGES

SPACE CRUNCH

UNDERGRADUATE  
STUDENTS WITH  
HEAVY  
CURRICULUM

NO FUNDING  
FROM UGC

**INSPITE OF THE CHALLENGES, RLAC IS PUTTING ITS  
BEST EFFORTS IN FOSTERING RESEARCH AS ONE OF THE  
BEST PRACTICES**



# CENTER FOR ENTREPRENEURSHIP AND TECHNOLOGY DEVELOPMENT (E-CELL: THE PRACTICE CREATING THE ECOSYSTEM



# CENTER FOR ENTREPRENEURSHIP AND TECHNOLOGY DEVELOPMENT (E-CELL)

- ▶ This center inaugurated on 24th August, 2017 by Shri P. P. Shrivastav (IAS Retd), Ms Lalita Nijhawan, Entrepreneur, Director Nijhawan Group of Companies and Mr. Arnab Chakraborty National Director, **UNCTAD-Empretec** Programme for India, Empretec India Foundation.
- ▶ This center is aimed to enrich and sharpen the entrepreneurial skills of students who wish to establish and successfully run their own enterprises in future.
- ▶ The center conducts training programs, workshops for students. It also invite novel ideas from students and hold Ideathons and Hackathons. The center also fund promising ideas for development.





THE CENTRE FOR ENTREPRENEURSHIP  
AND TECHNOLOGY DEVELOPMENT



RAM LAL ANAND COLLEGE  
University of Delhi

Celebrating  
World Entrepreneurs' Day

E-CELL, RLAC PRESENTS

# STARTUP MASTERCLASS SPEAKER SESSION

21 AUGUST, 2023  
12 PM ONWARDS

SEMINAR ROOM



**SAURABH JAIN**

Founder, Fun2Do Labs | Ex-Vice President Paytm

REGISTER NOW



For Queries:  
Aayush Kumar: 9873132111  
Mehul Ray: 9711277921

Mr. Siddharth Gupta

Prof. Seema Gupta  
Convener

Prof. Rakesh K Gupta  
Principal



Latitude: 26.703112  
Longitude: 80.124247  
Accuracy: 600.0 m  
Time: 21-08-2023 12:31  
Note: speaker session

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Accuracy: 600.0 m  
Time: 21-08-2023 12:22  
Note: speaker session

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Ram Lal Anand College | University of Delhi  
Centre for Entrepreneurship and Technology Development

ECELL RLAC  
presents

# BLUEPRINT FOR BRILLIANCE

“ENTREPRENEURIAL JOURNEY : FROM IDEA TO INNOVATION”



7 NOVEMBER, 2023

12 PM-2PM

SEMINAR ROOM



**SHIVANI SINGH**

Mentor of Change, NITI Ayog | Govt. Projects,  
LG Electronics



REGISTER NOW

FOR QUERIES, CONTACT:  
RISHU RAJ - 9310182438  
DIKSHA - 9910275414

MR. SIDDHARTH GUPTA  
CO-CONVENOR

PROF. SEEMA GUPTA  
CONVENOR

PROF. RAKESH KUMAR GUPTA  
PRINCIPAL



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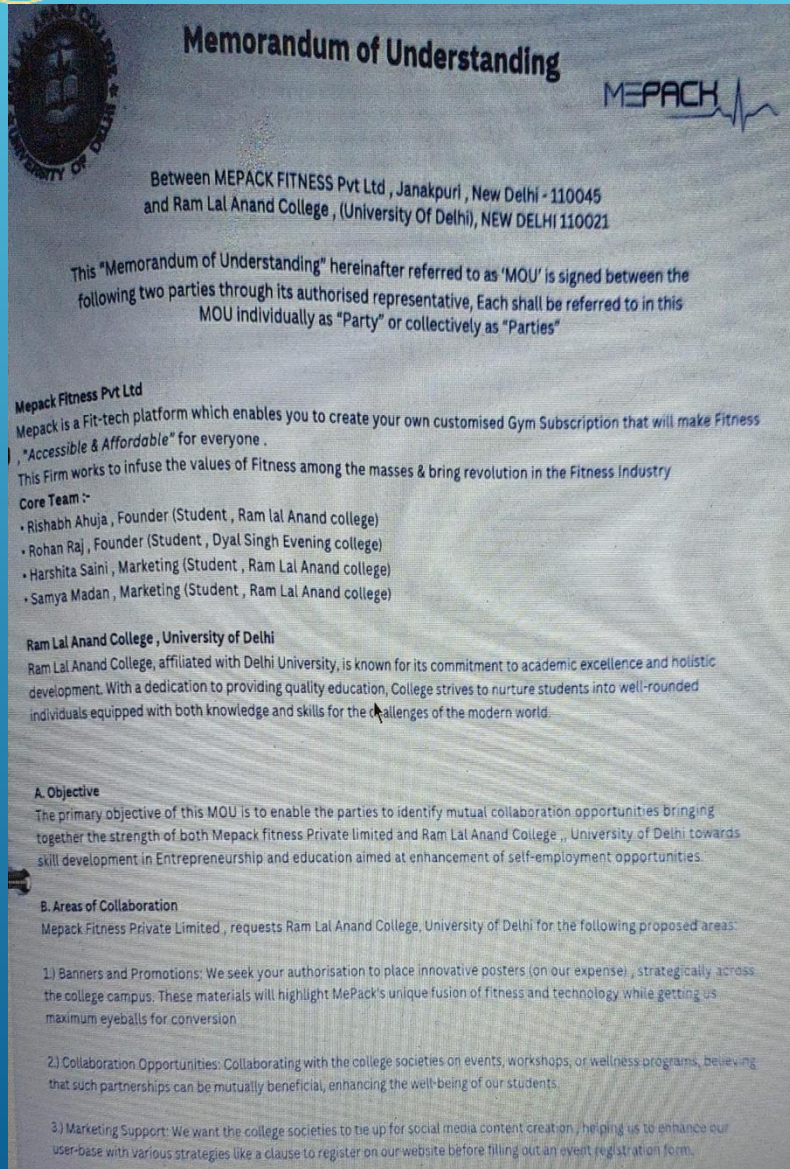


**RLAC SUPPORTS  
START UPS,  
INNOVATION : 05  
STARTUPS HAVE BEEN  
INCUBATED BY THE  
INSTITUTION**



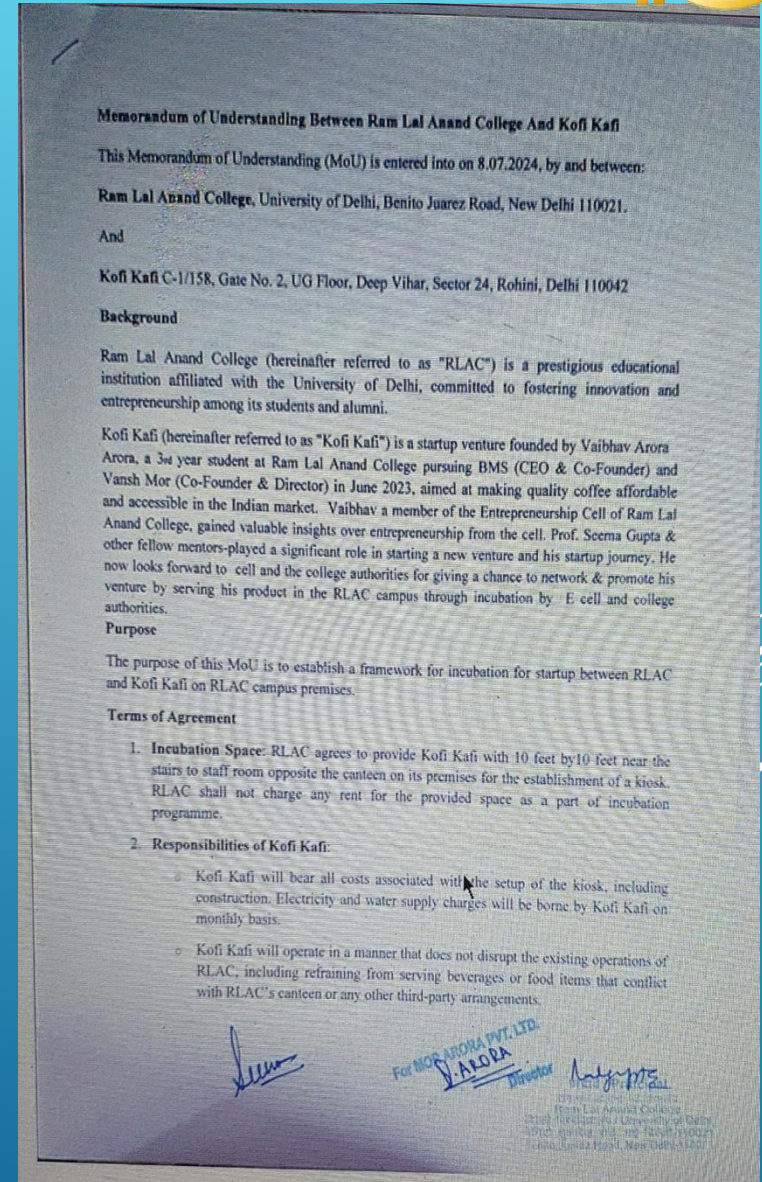


# RLAC COMMITTEED TO FOSTER INNOVATION AND ENTREPRENEURSHIP for STUDENTS



MoU with Mepack that makes fitness "Accessible and Affordable" Shark Tank Funded

MoU with Kofi Kafi- a venture by Student Vaibhav







RLAC COMMITTEED TO FOSTER INNOVATION AND ENTREPRENEURSHIP for STUDENTS



ALWAYS YOU FIRST

LIVE

Shark Tank India

Play in Full Screen

# RISHABH AHUJA ON SHARK TANK



# RLAC COMMITTEED TO FOSTER INNOVATION AND ENTREPRENEURSHIP for STUDENTS



## POINTERS/ TERMS OF WORKING:

Kofi Kafi will be incubated in the RLAC Campus to help scale up the core idea of making quality coffee affordable & distributable.

The college will provide support through incubation by providing the discussed space to Kofi Kafi to setup the kiosk.

The college will NOT charge/fund the rent for the space themselves & Kofi Kafi would have to BEAR Initial Investment of building kiosk, Electricity & water supply charges on monthly basis.

Kofi Kafi would not serve any beverage/food items disrupting any chaos between college authorities & any other 3rd party (canteen,etc.)

Kofi Kafi would look to create a better and positive environment in the college premises & would strictly avoid getting involved in any chaos.

Kofi Kafi would love to help the College Incubators to inspire other students by officially placing a board of 'A startup incubated by Ram Lal Anand College'.

Kofi Kafi would prefer to serve their product as affordable(We are going to serve at a discounted price of Rs10) as possible to the students & staff of Ram Lal Anand College by issuing a special discount card for the staff & along with the same curate different offers (like special discounts to students scoring good in exams, sports team performing well for the college,etc.) for the students to make their purchases more affordable.





## OTHER NOTABLE EVENTS

1. An orientation program was held on 6th September 2019. Founder of Startup Monk, Mr. Sivesh (Angel Investor) was invited for this event. He mentors and facilitates building startups from scratch, in addition to being an angel investor and a TEDx Speaker. 150 participants
2. Business Plan Competition 2.0 was conducted on 11th November 2019. The ideas were adjudged by Mr. Aishwarya Kachhal (Angel Investor) (Founder & CEO of Quick) and Aditya Rastogi, B.Com Programme III year was awarded a cash Prize of Rs. 5000/- for Best Startup Idea. Additionally students won the following awards related to Innovation and Entrepreneurship in 2019-20.



# THE INNOVATION PRACTICE



- **Brief feedback from a participant**

“The Start-Up Conclave hosted by E-Cell RLAC was an inspiring and engaging event that provided a valuable platform for witnessing the innovation of emerging entrepreneurs. The opportunity to see startups pitch their ideas to investors and receive insightful feedback from judges like Ms. Sheetal Kakkar and Mr. Rahul Lakhmani was particularly enlightening. The event highlighted the importance of networking, strategic thinking, and perseverance in the entrepreneurial journey. It motivated us to explore our own entrepreneurial ideas and provided a firsthand look at the dynamics of pitching and investment. The recognition and cash prizes awarded to outstanding ventures further encouraged a spirit of creativity and competition. Overall, the conclave was a remarkable experience that fostered a deeper understanding of the entrepreneurial ecosystem and inspired us to think ambitiously about our own future endeavors”



RAM LAL ANAND COLLEGE | UNIVERSITY OF DELHI  
CENTRE FOR ENTREPRENEURSHIP AND TECHNOLOGY  
DEVELOPMENT (E-CELL)

presents

# STARTUP CONCLAVE

"WHERE IDEAS TAKE FLIGHT"

**Hola Future Leaders**  
Explore. Connect. Make An Impact

Date: 5 April, 2024  
Time: 12:00 pm  
Venue: Front Lawn

**Book Your Stall**

FOR QUERIES CONTACT:  
MEHUL RAY: 97112 77921  
DIKSHA: 99102 75414

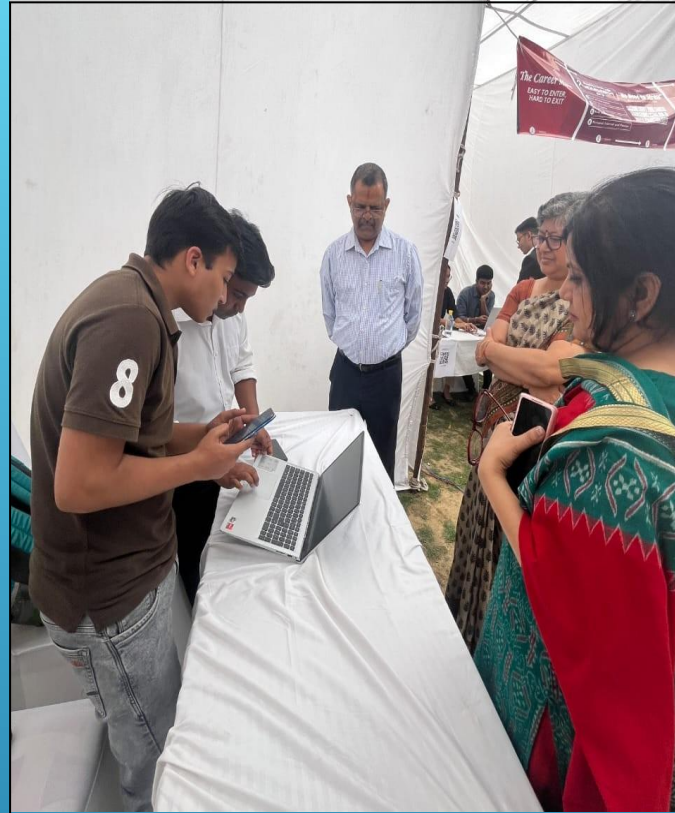
@ecellriac

Students of All DU Colleges are Cordially Invited to Have a Visit

MR. SIDDHARTH GUPTA  
CO-CONVENOR

PROF. SEEMA GUPTA  
CONVENOR

PROF. RAKESH KUMAR GUPTA  
PRINCIPAL







# OTHER NOTABLE EVENTS 2023-24



Sr. No.	Name of Events/ Activity	Date of Event/ Activity	No. of Faculties Attended	No. of Students Attended	Name of the Guest
1.	Entrepreneur Day <ul style="list-style-type: none"><li>Startup Masterclass (Speaker Session).</li><li>Entrepreneurship Quiz Competition</li></ul>	21 August, 2023	5	80+	Mr.Saurabh Jain
2.	<ul style="list-style-type: none"><li>Orientation</li></ul>	24 September, 2023	5	80+	
3.	<ul style="list-style-type: none"><li>Blueprint For Brilliance (Speaker Session)</li></ul>	7 November, 2023	5	75+	Ms.Shivani Singh
4.	<ul style="list-style-type: none"><li>E-Summit Beyond the Pitch (Speaker Session)</li><li>Construct-A-Thon (B-Plan Competition)</li><li>Panel Talk</li> <li>Startup Conclave</li></ul>	4-5 April, 2024	5	300+	Mr.Shubham Maheshwari Mr.Nachiket Bhatia Mr.Natwar Agarwal Mr.Nitesh Singh  Mr.Nischal Sharma  Mr. Rahul Lakhmani Ms. Sheetal Kakkar



S.NO	EVENT/ COMPETITION	NAME OF THE STUDENT AWARDEE	AWARD AND AWARDDING BODY	DATE OF AWARD
1	<b>Business Plan Competition 2.0. The ideas were judged by Mr. Aishwarya Kachhal (Founder &amp; CEO of Quick)</b>	<b>Aditya Rastogi, B.Com Programme III year</b>	<b>Best Startup Award, Centre for Entrepreneurship and Technology Development, Ram Lal Anand College, University of Delhi</b>	<b>11th November 2019</b>
2	<b>Innovative Idea Presentation (Metagenomics and Genome editing)</b>	<b>Anurag (II year), Poorvi (II year), Shaubhik (III year), B.Sc (Hons) Microbiology</b>	<b>Best Innovative Idea Award -I; DBT Star College Scheme Sponsored</b>	<b>2nd May 2020</b>
3	<b>Innovative Idea Presentation (DBT Star College Scheme Sponsored seminar on Metagenomics and Genome editing)</b>	<b>Lalit Mohan, Keshav Goyal B.Sc (Hons) Microbiology III year</b>	<b>Best Innovative Idea Award -II;</b>	<b>2nd May 2020</b>
8	<b>Business Plan Competition</b>	<b>Abhishek Gupta, Rounak Rai, Sarthak Gupta, Tushar Taneja And Vishal Bhola</b>	<b>I Prize; Dyal Singh College, University of Delhi</b>	<b>27th September 2019</b>
9	<b>Business Plan Competition</b>	<b>Rounak Rai, Sarthak Gupta, Tushar Taneja</b>	<b>II Prize; Moti Lal Nehru College, University of Delhi</b>	<b>1st February 2020</b>
10	<b>Corporate Meet</b>	<b>Ojasvi Srivastava. Bcom Programme, III year</b>	<b>Best Solution Award, Finance and Investment Cell, Kirori Mail College University of Delhi</b>	<b>3rd February 2020</b>
11	<b>Billion Dollar Deal</b>	<b>Ojasvi Srivastava. Bcom Programme, III Year</b>	<b>I Prize, Deshbandhu College, University of Delhi</b>	<b>2nd March 2020</b>



# RLAC COMMITTED TO FOSTER INNOVATION AND ENTREPRENEURSHIP for STUDENTS



To,  
The Principal

Ram Lal Anand College  
University of Delhi.

**Subject:** Proposal requesting Mentorship for the Ed-Tech Startup "EduShield"

**Dated:** 8 November 2023

Respected sir,  
I hope you are doing well. With humble submission I am writing to seek your guidance and support for an Ed-tech startup I have been working on collectively, namely EduShield.

Our goal is to keep on navigating the students to experience visualized guidance on educational goals, life skills and more offering resources, alongside interactive tools to enhance foster learning by skilled mentors. As of date, EduShield has mentored more than 1 lakh students in their career paths.

The mentors are the known pillars of our institution in the Ed-tech world. I would be more than grateful if we can gather mentorship in areas such as,

- Content management
- Video editing
- Social media management
- Graphic designing.

Our one-on-one mentoring sessions provide pupils to receive personalized advice tailored to their needs and professional settings, to tackle challenges and make informed decisions.

Henceforth, as an alumnus of Ram Lal Anand College I deeply value the education and opportunities provided here and believe the experience that would be provided in the near future would be highly valuable to scaling EduShield.

I would be extremely grateful if you could offer your time and expertise to help guide me through this journey.

Thank you for your time and consideration.

Warm regards,  
Sagar Chaudhary  
85275 67041  
Founder, EduShield

To,  
The principal  
Ram Lal Anand College  
5, Benito Juarez Marg  
South campus, Anand niketan  
New Delhi- 110021

Date: 5<sup>th</sup> Jan 2024

Subject : Request for mentorship for my start up named Buniwithlove

Respected sir,

I hope this message finds you well. My name is Prachi Arya, and I am currently a student at Ram Lal Anand College pursuing Bachelors of Management Studies. I am reaching out to assign mentor for my startup so that I can get guidance for smooth functionality of Buniwithlove.

I have a deep passion for crochet and believe it can be a medium for creativity and community. My startup aims to provide high-quality creative products made from yarns, along with online tutorials and a platform for crochet enthusiasts to connect and share their work.

I greatly admire the faculty in startup and business management , and I believe their guidance would be invaluable as I navigate the challenges of starting a business. I am eager to learn from their experiences and insights.

I would appreciate the opportunity to discuss this further and explore how we might work together. Thank you for considering my request.

Best regards,

Prachi Arya  
(Bachelors of management studies)

## EDUSHIELD (ED- TECH STARTUP) FOUNDER MR. SAGAR CHAUDHARY

## STUDENTS SEEKING MENTORSHIP FOR THEIR STARTUPS





# REPRESENTATIVE COURSES RELATED TO ENTREPRENEURSHIP



<b>NAME OF THE COURSES</b>	<b>DEPARTMENT</b>
SUSTAINABLE ECO TOURISM AND ENTREPRENEURSHIP	DEPARTMENT OF BMS
Innovation and Entrepreneurship ( Semester III)	SEC Credit – 2 DEPARTMENT OF commerce
DESIGN THINKING	DEPARTMENT OF BMS



# RLAC COMMITTED TO FOSTER INNOVATION AND ENTREPRENEURSHIP for STUDENTS



**RAM LAL ANAND COLLEGE**  
UNIVERSITY OF DELHI

**KA-CHING**  
THE COMMERCE SOCIETY OF RLAC

IN COLLABORATION WITH ALUMNI COMMITTEE  
WE PRESENT YOU

## ALUMNI BAITHAK



**SPEAKER:**  
**MR. SAURABH GUPTA**  
Batch : 2003-2006

**TOPIC: INVESTMENT BANKING**

Currently working at Citicorp Services India Ltd  
As Manager Investment banking Professional  
with 14+ years experience in BFSI domain.

**DATE** 📅  
Wednesday  
11 Oct, 23

**TIME** 🕒  
02.00-04.00 PM

**VENUE** 📍  
Seminar room

**DO REGISTER**



For further info contact: **KARMANYA SAHNI**, PRESIDENT OF KA-CHING

**PROF. RAJIV KUMAR**, CONVENER OF ALUMNI COMMITTEE | **DR. NUPUR SABOO**, CONVENER OF KA-CHING | **DR. RITU VATS**, Teacher in Charge of Commerce Department. | **PROF. RAKESH KUMAR GUPTA**, PRINCIPAL

# ALUMNI BAITHAKS

**RAM LAL ANAND COLLEGE**  
UNIVERSITY OF DELHI

## ALUMNI BAITHAK 2.0



**Purva Arora**  
Batch:2016-2019  
Audit Manager - Deloitte, INDIA  
Chartered Accountant  
BCOM(Hons) Graduate

**TOPIC - Insides of CA & Financing**

**DATE** 📅  
Tuesday, 13th February'24

**TIME** 🕒  
11:00 AM to 1:30 PM

**VENUE** 📍  
Seminar room

**DO REGISTER**



**KARMANYA SAHNI**, PRESIDENT OF KA-CHING | **DR. NUPUR SABOO**, CONVENER OF KA-CHING | **DR. RITU VATS**, TEACHER-IN-CHARGE OF DEPARTMENT OF COMMERCE | **PROF. RAKESH KUMAR GUPTA**, PRINCIPAL



# SOME GLIMPSES



New Delhi, DL, India  
Delhi University South Campus, New Delhi,  
110021, DL, India  
Lat 28.577934, Long 77.161508  
02/13/2024 11:42 AM GMT+05:30  
Note : Captured by GPS Map Camera





# RLAC COMMITTED TO FOSTER INNOVATION AND ENTREPRENEURSHIP for STUDENTS



RAM LAL ANAND COLLEGE  
UNIVERSITY OF DELHI

KACHING - THE COMMERCE SOCIETY

**PRESENTS**

**ZEUS 3.0**

**EVENTS**

2nd & 3rd APRIL, 2024

11.00 AM ONWARDS

RAM LAL ANAND COLLEGE

FOR ANY QUERIES, CONTACT  
Ishita Goel (Secretary) 8447899748  
Dev Anora (Vice President) 9988150505

KARMANYA SAHNI (PRESIDENT) DR. NUPUR SABOO (CONVENER) DR. RITU VATS (Teacher incharge) PROF. RAKESH KUMAR GUPTA (PRINCIPAL)



RAM LAL ANAND COLLEGE  
UNIVERSITY OF DELHI

KA-CHING - THE COMMERCE SOCIETY

**PRESENTS**

**BUSINESS CONCLAVE**

CA ARCHIT AGARWAL  
Founder@ THINKING BRIDGE

RAGHUVVEER NATH  
Vice President@ IIVPM

ATUL KULSHRESHTHA  
Senior Vice President@  
QUINTES GLOBAL

Topic: Roadmapping india's  
Journey towards achieving  
Viksit Bharat 2047

2nd APRIL, 2024

11.00 AM ONWARDS

Amphitheater, Ram Lal  
Anand College

FOR ANY QUERIES, CONTACT  
Ishita Goel (Secretary) 8447899748  
Dev Anora (Vice President) 9988150505

KARMANYA SAHNI (PRESIDENT) DR. NUPUR SABOO (CONVENER) DR. RITU VATS (TEACHER IN-CHARGE) PROF. RAKESH KUMAR GUPTA (PRINCIPAL)

RAM LAL ANAND COLLEGE  
UNIVERSITY OF DELHI

KACHING - THE COMMERCE SOCIETY

**PRESENTS**

**FRANCHISE FORUM**

**EVENTS**

3rd APRIL, 2024

11.00 AM ONWARDS

RAM LAL ANAND COLLEGE

FOR ANY QUERIES, CONTACT  
Ishita Goel (Secretary) 8447899748  
Dev Anora (Vice President) 9988150505

CASH PRIZE WORTH ₹3000

KARMANYA SAHNI (PRESIDENT) DR. NUPUR SABOO (CONVENER) DR. RITU VATS (Teacher incharge) PROF. RAKESH KUMAR GUPTA (PRINCIPAL)

RAM LAL ANAND COLLEGE  
UNIVERSITY OF DELHI

KA-CHING - THE COMMERCE SOCIETY

**PRESENTS**

**BRANDVERSE**

2nd APRIL, 2024

1:30 PM Onwards

RAM LAL ANAND COLLEGE

FOR ANY QUERIES, CONTACT  
Ishita Goel (Secretary) 8447899748  
Dev Anora (Vice President) 9988150505

CASH PRIZE WORTH ₹3000

KARMANYA SAHNI (PRESIDENT) DR. NUPUR SABOO (CONVENER) DR. RITU VATS (TEACHER IN-CHARGE) PROF. RAKESH KUMAR GUPTA (PRINCIPAL)

RAM LAL ANAND COLLEGE  
UNIVERSITY OF DELHI

KA-CHING - THE COMMERCE SOCIETY

**PRESENTS**

**MARKVERSE**

3rd APRIL, 2024

1:30 PM Onwards

RAM LAL ANAND COLLEGE

FOR ANY QUERIES, CONTACT  
Ishita Goel (Secretary) 8447899748  
Dev Anora (Vice President) 9988150505

CASH PRIZE WORTH ₹3000

KARMANYA SAHNI (PRESIDENT) DR. NUPUR SABOO (CONVENER) DR. RITU VATS (TEACHER IN-CHARGE) PROF. RAKESH KUMAR GUPTA (PRINCIPAL)



**PROMINENT  
RESEARCH PROJECTS  
OUTCOMES  
BENEFITTING  
COMMUNITIES AT LARGE**



# EVIDENCE OF SUCCESS





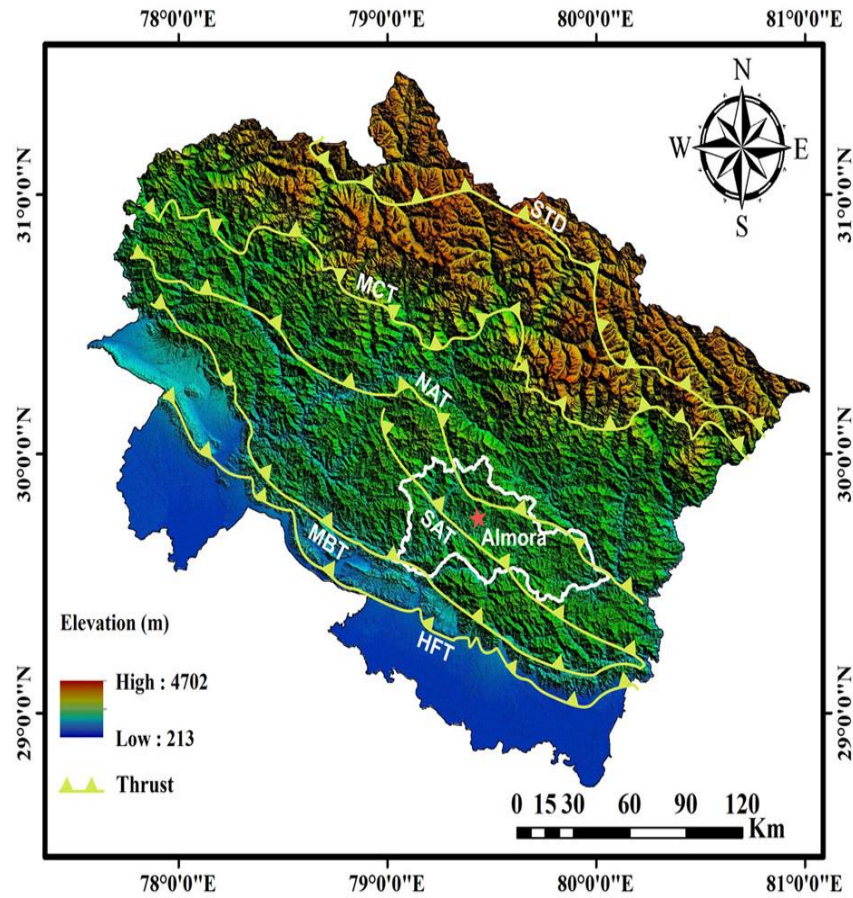
## RESEARCH PROJECT-1 2019-23

### ENHANCEMENT OF LIVELIHOOD OPPORTUNITIES THROUGH SUSTAINABLE DEVELOPMENT USING MULTIFACETED SUPPORT PLANS FOR VILLAGE CLUSTER AROUND PATIYA IN TAKULA BLOCK, ALMORA DISTRICT, UTTARAKHAND

#### The objectives our project were-

- Mitigation/Minimising Human Wildlife Conflict (HWC) to protect crops from animal invasion.
- Bring about augmentation in agricultural production through training of the farmers in scientific methods of cultivation with a cooperative farming approach.
- Develop a sustainable geo-tourism model through discovery of a geo-site for education, protection of geo-heritage of the area and bringing about economic benefit to the rural community.
- Create additional income generation enterprises.
- Increase green cover in the area.
- Irrigation and potable Water Management.













## GEO-EXCURSION SITE INCLINED BED SECTION (KOTYURA)



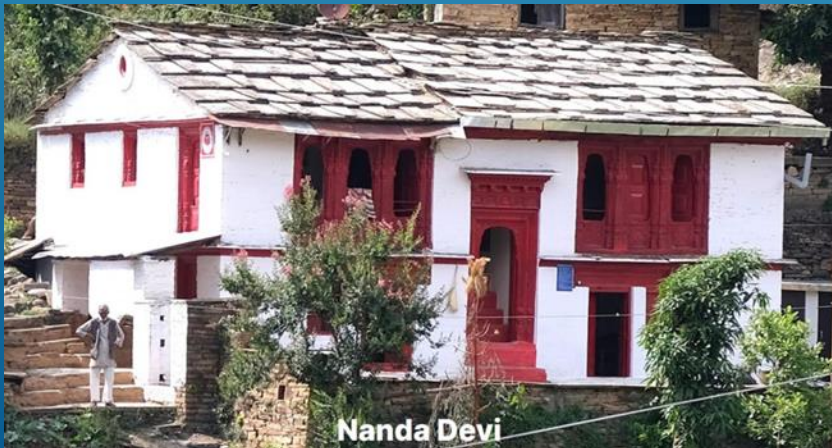
COORDINATES 29°40'3.07"N 79°40'55.37"E

This three-side open exposure of inter-bedded Quartzite and Mica Schist, formed under marine depositional environment, belongs to Neo-proterozoic Period. These meta-sedimentary rocks provide excellent opportunity to understand the concepts of bedding plane, their attitude (dip and strike), along with linear and planar features. It also provides a base for petrographic, lithological, microfacies and other analysis which can reveal the tectonics and geological history of the area.



Funded by: National Mission on Himalayan Studies (NMHS)  
Implementing Institution- Ram Lal Anand College (University of Delhi)









## **OUTCOMES OF THE PROJECT**

- ▶ The 14 acres pilot area including both fallow and land under cultivation has been brought under solar fencing for protection against animal invasion on the farmland. Besides solar fence, use of additional deterrents such as PVC chain link fence at the base of the solar fence, Agri-cans, solar animal repeller with flashing lights and sound has substantially reduced the invasion of animals like wild boar and porcupine whereas partial success has been achieved against monkey invasion. Provisioning of power tiller, line maker and training in scientific methods of farming has not only brought the target area under active cultivation but has also substantially increased the production of traditional crops such as, Wheat, rice, Millet (Madua), Maize (Madira), black soybean (Bhatt), yellow soybean, Pigeon pea (Arhar), horse gram (Gahat) and mustard.
- ▶ The identification of new geo-site in the Pilkha-Kasoon stretch of the Sundarpur-Kasoon road, spread over 7-9 kms, has been a valuable addition in the field of Geological education and a sustainable step towards protection of geo-heritage. The significance of the geo-site has been validated by experts from Indian universities, GSI and NMHS. A number of field study trips for the undergraduate students of the University of Delhi have already been successfully organized. As an integral part of the model, home stays (14 units) have been developed around the geo-site to provide budget accommodation to the geo-tourists and create additional income for the house owners. The home stay owners have already hosted geo-tourists (students). The geo-tourism model has not only become sustainable but has also created a vested interest among the community to protect geo-heritage of the area. It is the first model of its kind in the field of geotourism.



# OUTCOMES OF THE PROJECT



- ▶ For capacity building in allied activities to generate additional income in the target villages, Training/Workshops have been organized wherein the villagers across 4 villages have been trained by experts and scientists.
- ▶ As a part of the green water management, a solar pump has been installed at one of the villages (Bhatgaon) which faces scarcity of irrigation water in summer months. To ensure availability of potable water during scarce months, several ancient springs/water reservoirs (*naulahs*) have been cleaned and a few of them renovated.
- ▶ To partially increase green cover in the project area and to generate additional source of income Fruit orchards have been developed in Patiya and Kotyura villages





Patiya Village  
Cluster Project  
(NHMS)  
Ram Lal Anand  
College, University  
of Delhi







# OUTCOMES BENEFITTING COMMUNITY AT LARGE DEVELOPMENT OF A UNIQUE GEO-TOURISM MODEL

Geo-excursion is an essential component of the curriculum of Undergraduate and Post-Graduate students across India. However, it is also being realized that geo-sites, essential for Geological field study, is getting depleted due to both natural and manmade reasons. It is also a fact that our hills are getting destroyed due to indiscriminate rock mining and unplanned development projects with disastrous ecological consequences. This is particularly true in the case of Himalayas which falls under an extremely fragile and sensitive eco-zone. The only way forward is development of sustainable geo tourism with emphasis on education, protection of our geo-heritage and economic benefits to the local community.



# DEVELOPMENT OF A UNIQUE GEO-TOURISM MODEL

- ▶ Geotourism potential of places with geo-educational values coupled with a sustainable approach involving the local community has not been tested so far. The development of a Geo-site for Geotourism and Geo-education in India by the faculty members of RLA College at Patiya village cluster in the Almora district, represents the first such endeavour.
- ▶ Five faculty members of the college have developed a first of its kind Geo-tourism model in India, around a village cluster near Almora under “Patiya Village Cluster” Project, sanctioned by the Ministry of Environment, Forest and Climate Change and funded and monitored by National Mission on Himalayan Studies (NMHS). The model included identification (19 no), GPS marking of geo-locations (spread over 5-7 KMs) and fixing of Information boards highlighting special geological features of these locations. These locations are spread over five villages situated 15 kms from Almora town in Uttarakhand.
- ▶ To provide direct economic benefit of the model to the local community and to create budget accommodation for the geo-tourists, some of the village houses have been developed into homestays. These houses have been equipped with modern bathrooms. However, the heritage value of the houses has been kept intact. A total of seven such homestays have been developed having a total accommodation for 75-80 geo-tourists. Several students field trips have been organized with excellent feedback from the students.
- ▶ The economic benefit accruing to the villagers has increased over time and they are turning into real custodians of the developed geo-site and the geo-diversity of the Kumaon Himalaya. The model has been much appreciated by experts from GSI and NMHS as well as the district administration.





Location - 5

$29^{\circ}40'11.19''\text{N} / 79^{\circ}40'29.85''\text{E}$

The exposed area exhibits the effects of mechanical (mechanical weathering) and biochemical weathering caused by pine, moss, lichen, and grass roots, which weaken rocks into smaller rocks that are further eroded in place or transported and deposited at other locations and help form soil by supplying mineral particles like sand, silt, and clay, ultimately sculpting the landscapes.

Location - 1

$29^{\circ}39'51.80''\text{N} / 79^{\circ}39'59.97''\text{E}$

The exposed mica schist is coarse (Mica grows at the expense of other mica grains, producing mica large enough to be seen in hand samples), medium-grade metamorphic rock (upper greenschist-lower amphibolites facies), having highly developed schistosity, or tendency to split into layers, and formed from mudstone or shale.











## Natural Products from Patiya Village

These are some products grown organically by the Self-Help groups from Patiya, Kotyura, Bhatgaon and Kasoon villages of Patiya Cluster Project. These products are produced by using biofertilizers made out of cow dung and other household organic waste by means of vermicomposting.







The tourists get to stay in village houses redesigned to provide modern facilities preserving their heritage values. Some of the houses are almost 100 years old with mud floors and walls with beautiful carvings on wood. These have been renovated with modern bathroom and toilet fittings.

The house owners would extend their hospitality to the tourists showcasing their rural culinary skills. They have been trained in hospitality to serve hygienic food and provide clean bed and linens. In addition, the tourists would be served food grown locally.

The home stay accommodation is spread across villages located close to the marked Geo-excursion sites. The walkable distance of the sites from the home stays would reduce the needs as well as cost of transportation. All the home stay units have a beautiful valley and mountain view.



# RESEARCH PROJECT-2

## COMMUNICATING THE SCIENCE BEHIND THE PHENOMENON OF ANTIBIOTIC RESISTANCE TO PROMOTE SOCIAL AWARENESS


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Home > [Journal of Public Health](#) > Article

### Cross-sectional study: knowledge assessment of youth regarding the global public health threat of antibiotic resistance

Original Article | Published: 19 December 2023  
(2023) [Cite this article](#)



**Journal of Public Health**

[Aims and scope](#) →  
[Submit manuscript](#) →

Lalit Mohan, Shaubhik Anand, Muskan Mittal, Keshav Goyal, Akanksha, Aman Dixit, Rakesh Kumar Gupta, Rita Jain & Prerna Diwan ✉

Access





# RESEARCH PROJECT-3

## SUSTAINABLE LIVELIHOOD ENHANCEMENT OF SCHEDULED CASTES COMMUNITIES OF CHAINPURA TEHSIL, NIWAI, RAJASTHAN



### Objectives



- Livelihood enhancement through introduction of bio-fortified pearl millet and vermicomposting technology



- To establish Poshan Vatikas to manage malnutrition and supplementing income.



- To apply low-cost technological solutions for fluoride removal for providing safe drinking water





## EXPECTED BENEFITS/ OUTCOMES TO TARGET POPULATION THROUGH THIS PROJECT:

- ▶ Youth can be drawn towards agriculture by the proposed trainings on good and sustainable agricultural practices directed towards an increase in yield that will improve livelihood. Improved nutritional and health status of women, children, and other family members of target SC population in the areas is foreseen through consumption of fortified millets and drinking water with prescribed fluoride content.
- ▶ Vermicomposting will reduce environmental pollution, enhance crop productivity, and crop quality using organic fertilizers. It will provide livelihood to village women of SC community.
- ▶ While women farmers role remains largely unrecognized, this will build their capacities and asset base and enhance socio economic status.





## TRAININGS UNDER DST\_SEED FUND AT NIWAI RAJASTHAN FOR VILLAGERS FOR 110 HOUSEHOLDS

- ▶ On 10th June, 2024 training, "Production Technology of Bio fortified Pearl millet Varieties and Value Addition ," was conducted to educate the participants on advanced agricultural practices for bio fortified pearl millet (Bajra) and its value addition. Seeds of the bio fortified pearl millet was distributed in the same training to the beneficiaries.
- ▶ A two days training programme "Method of vermicompost making" was organized on 2/5/2024 and 3/5/2024 at Niwai Rajasthan for the villagers
- ▶ A two days training programme "Soil testing through low cost technologies" was organized from 3/4/2024 and 4/4/2024.





सम लाल आनन्द कॉलेज, दिल्ली विश्वविद्यालय  
दिनांक : 10.06.2024  
एवम् समय : दोपहर 12 बजे  
कलस्टर 1 और 2  
सिकोईडिकोन  
के संयुक्त तत्वाधान में डी.एस.टी. सीड वित्तपोषित परियोजना  
"बाजार की बायोप्लैस्टिक किराओं का उत्पादन एवं प्रयोग का मूल्यांकन" पर।  
प्रशिक्षण शिविर - 1



Niwai, Rajasthan, India  
9WHH+9G9 Shiv mangal garden, Niwai, Rajasthan 304021, India  
Lat 26.378311°  
Long 75.928962°  
01/06/24 01:25 PM GMT +05:30



Niwai, Rajasthan, India  
9WHH+9G9 Shiv mangal garden, Niwai, Rajasthan 304022, India  
Lat 26.378161°  
Long 75.928113°  
03/04/24 02:13 PM GMT +05:30



निवाई, राजस्थान, भारत  
9WHH+9G9 शिव मंगल गार्डन, निवाई, राजस्थान 304021, भारत  
Lat 26.378369°  
Long 75.929202°  
02/05/24 12:57 PM GMT +05:30

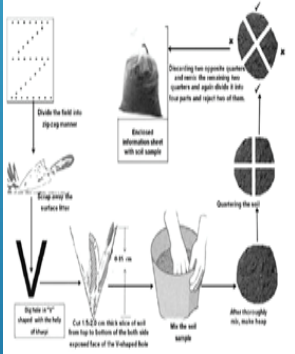
- \* एकत्रित की गई पूरी मिट्टी को हाथ से अच्छी तरह मिला लें तथा साफ कपड़े पर डालकर गोल ढेर बना लें।
- \* अंगुली से ढेर को चार बराबर भागों में बांट दें। जिसमें से दो आमने सामने के भाग हटा दें एवं शेष दो भागों की मिट्टी पुनः अच्छी तरह से मिला ले व गोल ढेर बनायें। यह प्रक्रिया तब तक दोहराये जब तक लगभग आधा कि.ग्रा. मिट्टी शेष रह जाये। यह प्रतिनिधि नमूना होगा।
- \* सूखे मिट्टी नमूने को साफ प्लास्टिक थैली में रखें तथा इसे एक कपड़े की थैली में डाल दें।
- \* नमूने के साथ एक सूचना पत्रक जिस पर समस्त जानकारी लिखी हो, एक प्लास्टिक की थैली में अन्दर तथा एक कपड़े की थैली के बाहर बांध दें।

नमूना एकत्र करने वाले का नाम एवं हस्ताक्षर  
.....  
एकत्रित करने का दिनांक .....  
इसके पश्चात् नमूनों को प्रयोगशाला में परीक्षण हेतु भेजे।

**नमूना एकत्रीकरण एवं संग्रहण में सावधानियाँ-**

- \* जहाँ खाद का ढेर रहा हो वहाँ से नमूना न लें।
- \* नमूना चिह्नित इकाई से ही लें।
- \* साफ औजारों (जंग रहित) तथा साफ थैलियों का उपयोग करें।
- \* नमूनों के साथ सूचना पत्रक अवश्य रखें।
- \* सूचना पत्रक में जानकारी स्पष्ट लिखी होना चाहिये।
- \* वृक्षां के नीचे से मृदा नमूना एकत्र नहीं करना चाहिये।
- \* मेड़ों के समीप से मृदा नमूना एकत्र नहीं करना चाहिये।
- \* मृदा नमूनों को जहाँ फटीलाइजर, केमिकल्स या डिजर्टेंट इत्यादि रखा हो, ऐसे स्थानों पर संग्रहित कर नहीं रखना चाहिये।
- \* लंबे समय तक संग्रहण के लिये काँच या ग्लास, पोर्सलीन (Porcelain) के बरतन या पालीथीन का उपयोग करना चाहिये।

**मिट्टी से नमूना कैसे लेते हैं ?**



सूचना पत्रक पर निम्न जानकारी लिखी होनी चाहिए।

- गांव का नाम
- तहसील का नाम
- जिला का नाम
- सिंचित/असिंचित

डी.एस.टी.सीड परियोजना,  
रामलाल आनंद कॉलेज, दिल्ली विश्वविद्यालय एवं  
सिकोईडिकोन के संयुक्त तत्वावधान में  
एक दिवसीय मिट्टी परीक्षण प्रशिक्षण के  
अन्तर्गत प्रकाशित

लेखक :  
डॉ. सागर कुमार शर्मा, प्रोफेसर प्रेरणा दीवान  
प्रोफेसर राकेश कुमार गुप्ता, प्रोफेसर संजयकुमार  
डॉ. निधि यादव, श्री सिद्धार्थ गुप्ता, श्रीमती अनिता शर्मा





## RESEARCH PROJECT 4



# ALTERATIONS IN ORAL MICRO BIOME OF BETEL NUT CHEWING POPULATION OF NORTH EASTERN INDIA AND ITS CORRELATION WITH ORAL CANCERS: PROSPECTING MICROBIAL CONSORTIUM FOR THERAPEUTIC POTENTIAL



Review

### Evaluating Alterations of the Oral Microbiome and Its Link to Oral Cancer among Betel Quid Chewers: Prospecting Reversal through Probiotic Intervention

Prerna Diwan <sup>1,\*</sup>, Mohit Nirwan <sup>1</sup>, Mayank Bahuguna <sup>1</sup>, Shashi Prabha Kumari <sup>1</sup>, James Wahlang <sup>2</sup> and Rakesh Kumar Gupta <sup>1</sup>

PLOS ONE

RESEARCH ARTICLE

### Identifying oral microbiome alterations in adult betel quid chewing population of Delhi, India

Mayank Bahuguna <sup>1</sup>, Sunila Hooda <sup>1</sup>, Lalit Mohan <sup>2</sup>, Rakesh Kumar Gupta <sup>1</sup>, Prerna Diwan <sup>1,\*</sup>

OUTCOME-  
POTENTIAL  
DEVELOPMENT OF  
THERAPEUTIC FOR  
PREVENTION/CURE  
OF ORAL CANCER  
CAUSED DUE TO  
BETEL NUT CHEWING



- ▶ <https://rlacollege.edu.in/pdf/research-projects/research-projects-2020-21.pdf>
- ▶ <https://rlacollege.edu.in/pdf/research-projects/research-projects-2019-20.pdf>
- ▶ <https://rlacollege.edu.in/pdf/research-projects/research-projects-2018-19.pdf>

**IMPORTANT LINKS FOR RESEARCH PROJECTS**





# REMARKABLE OUTCOMES

- The comprehensive outcomes of research activities at **Ram Lal Anand College** reflect its commitment to academic excellence, innovation, and the holistic development of both faculty and students.
- These outcomes span across different dimensions of research, student engagement, and institutional recognition, contributing significantly to the college's intellectual and professional growth.



## KEY OUTCOMES:-

### Enhanced Research Culture and Intellectual Growth:

- The college research grants have fostered a vibrant research culture, allowing faculty members to pursue innovative and interdisciplinary research. This has led to the generation of significant academic output, including research papers, books, and policy papers, which have a direct impact on the college's intellectual environment.
- Research projects have led to faculty-student collaboration, contributing to the academic and professional development of students. These projects have often addressed relevant societal, environmental, and technological challenges, thereby contributing to problem-solving in these areas.



# KEY OUTCOMES:-



## **Student Development through Internships and Research Exposure:**

- Summer internships have been instrumental in bridging the gap between theoretical knowledge and practical application. Students have gained hands-on experience, enhancing their analytical, technical, and problem-solving skills. These internships often result in higher employability, better career prospects, and preparedness for future research or industry roles.

## **Institutional Recognition and Academic Prestige:**

- Faculty and students have actively contributed to national and international publications, which has enhanced the academic reputation of Ram Lal Anand College. Research papers published in reputed peer-reviewed journals, books, and conference presentations have brought recognition to the institution both nationally and globally.



# KEY OUTCOMES:-



## Innovation and Societal Impact:

- Research projects are focused on solving real-world problems, contributing to environmental conservation, sustainability, technology, and societal development. This has led to innovations, including new models, frameworks, and technologies that can be applied in various sectors. The college has also contributed to policy discussions through its research, especially in areas of public importance, thereby impacting government policies, NGOs, and other organizations.

## Collaborations and Partnerships:

- Research activities have often led to fruitful **collaborations with national and international institutions**, facilitating exchange programs, joint research projects, and resource sharing. These partnerships have strengthened the college's global academic presence.
- Industry collaborations, fostered through internships and project-based learning, have enabled the practical application of research and enhanced opportunities for technology transfer and commercialization.





# CONCLUSION



- ▶ The research activities at RLAC have significantly contributed to the academic and professional development of both faculty and students.
- ▶ The outcomes of college research grants, summer internships, research projects, and national/international publications are not only reflected in the institution's increased academic recognition but also in the personal growth of its students and the broader societal impact of its research.
- ▶ The college continues to foster a research-driven environment, positioning itself as a key contributor to academic and intellectual progress in India.