



# शिवाजी कॉलेज (दिल्ली विश्वविद्यालय) Shivaji College (University of Delhi)

NAAC ACCREDITED "A" GRADE COLLEGE



## 6.4 Research-based Learning

### 6.4.1 Activities of Central Research and Innovation Cell: Srijan 2024

Annual presentation of Research Findings of Minor Research Projects 2022-23 at Srijan 2024 organised by College Research and Innovation Cell, Shivaji College on 23 April 2024 at Jijabai Auditorium. Chief Guest was Prof. Tejbir Singh Rana, Coordinator, IQAC and Patron and Principal Prof. Virender Bhardwaj graced the occasion.

#### Poster of the event




## College Research and Innovation Cell

(NAAC Accredited with 'A' grade)

### Shivaji College, University of Delhi

New Delhi-110027




CORDIALLY INVITES ALL TEACHERS AND STUDENTS TO ANNUAL FESTIVAL

# SRIJAN 2024

Presentations of Research Findings of Minor Research Projects (2022-23)



**Chief Guest**  
**Prof. Tejbir Singh Rana**  
Coordinator, IQAC  
Shivaji College  
University of Delhi

**Inauguration: 10:00 AM – 10:30 AM**

MRP/2022-2023/0001 – 10:30 – 10:50 AM  
MRP/2022-2023/0002 – 10:50 – 11:10 AM  
MRP/2022-2023/0003 – 11:10 – 11:30 AM  
MRP/2022-2023/0004 – 11:30 – 11:50 AM  
MRP/2022-2023/0005 – 11:50 – 12:10 PM  
MRP/2022-2023/0006 – 12:10 – 12:30 PM  
MRP/2022-2023/0007 – 12:30 – 12:50 PM

**Patron**  
**Prof. Virender Bhardwaj**  
Principal  
Shivaji College  
University of Delhi





**Date: 23 April, 2024**



**Time: 10:00 AM**



**Venue: Jijabai Auditorium**

**Dr Prabuddh Kumar Mishra**  
Convenor

**Organising Team**  
Prof. Prabhavathi, Dr Renu Baweja, Dr Abhijeet Mishra,  
Dr Nidhi Tyagi, Ms. Anshula Upadhyay & Dr Devender Singh Meena

**Prof. Virender Bhardwaj**  
Principal



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(दिल्ली विश्वविद्यालय)

## Shivaji College

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### Attendance of Srijan 2024 held on 23 April 2024 at Jijabai Auditorium

Attendance  
"SRIJAN-2024," organized by the College Research and Innovation Cell (Date: 23/04/2024)  
Shivaji College

Sr. No	Name of Faculty	Department	Signature
1.	Prof. Prabhat	Botany	Prof. Prabhat
2.	Dr. Renu Baniya	Biochemistry	Dr. Renu Baniya
3.	Ms. Nimba Kant	Ecology	Ms. Nimba Kant
4.	Prof. T. S. Rana	Geography	Prof. T. S. Rana
5.	Rishi Tewari	Geography	Rishi Tewari
6.	Dr. P. K. Sahni	Geography	Dr. P. K. Sahni
7.	Dr. Lalita Rana	Geography	Dr. Lalita Rana
8.	Dr. Neena Khanna	Chemistry	Dr. Neena Khanna
9.	Dr. Mukesh Kumar Mehta	Geography	Dr. Mukesh Kumar Mehta
10.	Dr. Sunita Singh	Biochemistry	Dr. Sunita Singh
11.	Dr. Usha Yadav	Biochemistry	Dr. Usha Yadav
12.	Dr. Jayita Chakraborty	Biochemistry	Dr. Jayita Chakraborty
13.	Dr. Nikita Rani	Mathematics	Dr. Nikita Rani
14.	Dr. Kiren Bamel	Botany	Dr. Kiren Bamel
15.	Dr. Seema Talwar	Botany	Dr. Seema Talwar
16.	Dr. Bharat Rathi	Geography	Dr. Bharat Rathi
17.	Ekta Raman	SPM, Geography	Ekta Raman
18.	Ms. Anshu Upadhyay	English	Ms. Anshu Upadhyay
19.	Dr. Renu Kumari	Sanskrit	Dr. Renu Kumari
20.	Dr. Saumya Singh	Commerce	Dr. Saumya Singh
21.	Ms. Nidhi Sehrawar	Economics	Ms. Nidhi Sehrawar
22.	Dr. Jyoti Kumar Chaudhary	Zoology	Dr. Jyoti Kumar Chaudhary
23.	Yogita Rani Naji	Commerce	Yogita Rani Naji
24.	Dr. Geetika Singh Mehta	Botany	Dr. Geetika Singh Mehta

Dr. Prabhakar K. Mishra  
Convener, CRC

Attendance  
"SRIJAN-2024," organized by the College Research and Innovation Cell (Date: 23/04/2024)  
Shivaji College

Sr. No	Name of Student	Semester & college roll no	Signature
72	Akshita	VII, 21/22021	Akshita
73	Biya Ray	VII, 21/22020	Biya Ray
74	Supriya	VII, 21/22058	Supriya
75	Lakshya	VII, 21/22064	Lakshya
76	Kundan	VII, 21/22054	Kundan



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## 6.4.2 Intramural Research Scheme

### List of Research Projects sanctioned in January 2023 and continuing in 2023-24

Intramural Research Scheme Minor Research Projects Sanction Year: 2022-2023 Final List for Certificate					
S. No.	File No.	Principal Investigator/s	Title of Project	Student Details	Sanction Order Details and Date of Start (DOS)
1.	MRP/2022-2023/0001	Dr. Neena Khanna (Dept. of Chemistry) Dr. Parveen Gahlyan (Dept. of Chemistry)	Synthesis of rhodamine based chemosensors and their application in detection of toxic metal ions	1. Garv Gupta 2. Sakshi Bhardwaj 3. Yogita 4. Garv Gaur 5. Gunit Marakata All from B.Sc. (H) Chemistry	SH/Adm./2175/23 Dated 31/01/2023  DOS: 02/02/2023
2.	MRP/2022-2023/0002	1. Dr. Neetu Rani (Dept. of Mathematics)	'Mathematical Modelling for Volume Estimation of Guava (Psidium Guajava L.)'	1. Raghav Anand Nath 2. Vaibhav Bhatt 3. Sneha Bhatt 4. Shashvat Kumar Mishra 5. Ishita Mishra All from B. Sc. (H) Mathematics 6. Saloni B.Sc. (H) Botany 7. Nitesh Saini B. Sc. Physical Science with Computer Science 8. Sourabh Sharma B. Sc. (H) Physics	SH/Adm./2295/23 Dated 03/03/2023  DOS: 05/03/2023
3.	MRP/2022-2023/0003	1. Dr Kiran Bamel (Dept. of Botany) 2. Dr Seema Talwar (Dept. of Botany)	'Impact of Elevated Temperature on the Seed Germination of Medicinal plants (Catharanthus roseus and Trigonella foenum-graecum)'	1. Ankit (Roll No. 22/09005) B. Sc. (H) Botany 2. Tribeni (Roll No. 22/09022) B. Sc. (H) Botany 3. Palak (Roll No. 22/23052) B.Sc. (Prog.) Life Sciences 4. Shorya (Roll No. 22/23071) B.Sc. (Prog.) Life Sciences 5. Gautam (Roll No. 22/23065) B.Sc. (Prog.) Life Sciences	SH/Adm./2296/23 Dated 03/03/2023  DOS: 05/03/2023

Conti..





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4.	MRP/2022-2023/0004	1. Dr Preeti Tiwari (Dept. of Geography) 2. Ms Ekta Raman (Dept. of Geography)	Impact Assessment of Swachh Bharat Mission in Raghbir Nagar.	1. Sonia Borana (Roll No. 22/31050) B.A. (H) Geography 2. Maseera Siddiqui (Roll No. 22/31029) BA(H) Geography 3. Ayush Yadav B.A. (H) Geography 4. Ashish Kumar B.A. (H) Geography 5. Vedanshi Singh B.A. (H) Geography	SH/Adm./2297/23 Dated 03/03/2023  DOS: 05/03/2023
5.	MRP/2022-2023/0005	1. Dr Jayita Thakur (Dept. of Biochemistry) 2. Dr Usha Yadav (Dept. of Biochemistry)	Comparative analysis of the effects of dietary supplements on Drosophila melanogaster	1. Sayena Simron B.Sc. (H) Biochemistry (Roll No. 21/06055) 2. Sanjana Gupta B.Sc. (H) Biochemistry (Roll No. 21/06007) 3. Anusha B.Sc. (H) Biochemistry (Roll No. 21/06034) 4. Sahil Anand B.Sc. (H) Biochemistry (Roll No. 21/06031) 5. Shivangi Aggarwal B.Sc. (H) Biochemistry (Roll No. 21/06030) 6. Vandana B.Sc. (H) Biochemistry (Roll No. 21/06047) 7. Debdatta Chatterjee B.Sc. (H) Biochemistry (Roll No. 22/06009) 8. Khushi B.Sc. (H) Biochemistry (Roll No. 21/06051) 9. Ayush Sachan B.Sc. (H) Biochemistry (Roll No. 21/06015) 10. Tushar Gupta B.Sc. (H) Biochemistry IV Roll No. 22/06032	SH/Adm./2298/23 Dated 03/03/2023  DOS: 05/03/2023



#### 6.4.3 Extramural Research Projects

##### List of Projects in 2023-24

Name of Principal Investigators	Duration	Title	Funding Agency
Dr. Sunita Singh, Department of Biochemistry, Shivaji College, University of Delhi, Raja Garden, New Delhi 110027 Co-Principal Investigator :Dr. Jayita Thakur, Department of Biochemistry, Shivaji College, University of Delhi, Raja Garden, New Delhi 110027	Three Years	Evaluation of Self Amplifying mRNA Mediated Enzyme Replacement Therapy for the Treatment of Phenylketonuria	Indian Council of Medical Research (ICMR)
Prof. Prabhavati Co-Principal Investigator: Dr Kiran Bamel and Dr Devender Singh Meena	2 Years (September 2022-2024)	Development of DNA Barcodes for Medicinal Plants used in Unani System of India	CCRU, Ministry of Ayush, GoI, New Delhi
Prof. Deepika Yadav Co-Principal Investigator: Dr Nidhi Tyagi and Dr Rakesh Roshan	1 Year (2023- 24)	An Indigenous Study of Zootherapeutic practices and its Contemporary Status of Raji Tribe of Uttarakhand	Indian National Science Academy, New Delhi



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Project approval letter of Dr Sunita Singh

tel: 26588204-26588662-26589620

www / GRAM : शिवजी / SCIENTIFIC  
Web site : www.shivajicollege.ac.in  
E-mail : shivajicollege@delhi.ac.in

**icmr** भारतीय आयुर्विज्ञान अनुसंधान परिषद  
**INDIAN COUNCIL OF MEDICAL RESEARCH**  
डी. रामलिंगस्वामी भवन, अन्सारी नगर, पोस्ट बॉक्स 4911, नई दिल्ली - 110 029  
V. RAMALINGASWAMI BHAVAN, ANSARI NAGAR, POST BOX 4911, NEW DELHI - 110 029  
Date: 01.05.2024

F. No. :- 33/16/2023/RD/BMS (E-File No. : 170637)

To  
The Principal  
Shivaji College, Raja Garden,  
University of Delhi-110027.

**Subject:-** Sanction of budget allotment for project entitled, "Evaluation of Self-Amplifying mRNA Mediated Enzyme Replacement Therapy for the Treatment of Phenylketonuria" under, Dr. Sunita Singh, Associate Professor, Department of Biochemistry, Shivaji College, Raja Garden, University of Delhi-110027.

Sir/Madam,  
The Director General of the ICMR sanctions the above mentioned research scheme initially for a period of One Year with effect from subject to extension up to the total duration as specified in para 5 below:-

- The Director General of the ICMR also sanctions the budget allotment of **Rs. 39,67,085/- (Rupees Thirty Nine Lakh Sixty Seven Thousand Eighty Five Only)** as detailed in the attached statement for the 1<sup>st</sup> Year. The grant-in-aid will be given subject to the following conditions.
- The payment of the grant will be made in lump-sum to the Head of the Institute. The first instalment of the grant will be paid generally as soon as report regarding appointment of the staff is received by the ICMR. The Staff appointed on the project should be paid as indicated in the budget statement.
- The staff on the project will be recruited as per the rules and procedure of the host institute and second part of the undertaking be obtained from the employees of the project. The staff grant will not be released unless the required undertaking [part-II] from Head of the Institute is received in this office.
- The Host Institute shall utilize the grant after following the provisions laid down in the GFRs 2017 and TA rules.
- The demand for payment of the subsequent instalment of the grant should be placed with the ICMR in the prescribed Performa. The approved duration of the scheme is **Three Years**. The annual extension will be given after review of the work done on the scheme during the previous year.
- One copy of the annual progress report in the attached prescribed performa should be submitted to the ICMR every year after completion of ten months of the project giving complete actual details of the research work done. Failure to submit the report in time may lead to termination of project.
- Subject to the condition that the grant will be utilize after following the provisions laid down in the GFRs-2017 & TA Rules. Please keep the fund in a separate Saving Bank Account opened for ICMR funded Research Projects so that interest earned thereon is credited in to this account.  
The receipt of this letter may please be acknowledged.

Yours faithfully,  
(Jaibir Singh)  
Sr. Administrative Officer  
For Director General

**Copy together with a copy of the budget statement forwarded to information to:-**  
✓ Dr. Sunita Singh, Associate Professor, Department of Biochemistry, Shivaji College, Raja Garden, University of Delhi-110027.  
2. Accounts - V for information.  
3. Copy together with the budget forwarded to Budget Section [Finance Section] for compilation of the Council Budget.  
4. IRIS ID: - 2023-19848.

(Jaibir Singh)  
Sr. Administrative Officer  
For Director General



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**Project Approval Letter of Prof Prabhavathi**

F. No 3-66/2022-CCRUM/Tech  
CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE  
(Ministry of Ayush, Government of India)  
61-65 Institutional Area, Opp. D-Block  
Janakpuri, New Delhi- 110058  
Dated: 26.02.2024

**SANCTION ORDER**

Approval of the Director General, CCRUM, New Delhi is hereby accorded for an amount of **Rs. 19,89,624/-** (Rupees Nineteen Lakh Eighty Nine Thousand Six Hundred and Twenty Four Only) for collaborative project entitled "Development of DNA barcodes for (Unani) medicinal plants in India" awarded to Prof. Prabhavathi Professor Shivaji College Delhi University, New Delhi for a period of two years. The head-wise break-up of Grant in aid of the project is as under:-

S. No	Particulars	1 <sup>st</sup> Year (Rs.)	2 <sup>nd</sup> Year (Rs.)	Total (Rs.)
1	Manpower: JRF @31,000/month + 27% HRA	4,72,440/-	4,72,440/-	9,44,880/-
2	Consumables	5,00,000/-	4,00,000/-	9,00,000/-
3	Contingency	20,000/-	30,000/-	50,000/-
4	Minor Equipment	-	-	-
5	Institutional Support (@5%)	49,622/-	45,122/-	94,744/-
	<b>Total</b>	<b>10,42,062/-</b>	<b>9,47,562/-</b>	<b>19,89,624/-</b>

Sanction of the Director General, CCRUM, New Delhi is accorded for payment of **Rs. 4,21,168/-** (Rupees Four Lakh Twenty One Thousand One Hundred and Sixty Eight Only) as **Second year grant in aid** for the project after deduction of Unspent balance of Rs.4,31,638/- of First year and 10% of the remaining amount of second year i.e. Rs.94,756/- as per above mentioned table.

The expenditure will be debitable from the head "Research Activities" for the current financial year 2023-24.

(Mohammad Parvez)  
Administrative Officer  
for Director General

Copy to:

- Accounts Officer, CCRUM Headquarters, New Delhi for payment to "Central Bank of India. Account No 3022985619 with IFSC code CBIN0283942"
- Prof. Prabhavathi Professor Shivaji College Delhi University, New Delhi.
- Dr. Kiran Bamel, Co-PI, Associate Professor, Dept. of Botany, Shivaji College, University of Delhi, New Delhi.
- Dr. Dorendra Singh Meena, Co-PI, Associate Professor, Dept. of Botany, Shivaji College, University of Delhi, New Delhi.
- Principal, Shivaji College, University of Delhi, New Delhi.
- Concerned File

F A/2023-2024/8






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**Project approval letter of Prof. Deepika Yadav**

  
INDIAN NATIONAL SCIENCE ACADEMY  
Bahadur Shah Zafar Marg, New Delhi - 110 002  
☎ : 23221931 - 23221950 (EPABX); Fax : 91-11-23231095,  
23235648  
eMail : [ijhs@insa.nic.in](mailto:ijhs@insa.nic.in)

Madhendra Narayan  
AED-I, (History of Science)

No. IHS/RC/  
Dated 26/06/2023

Ref : "A comprehensive study on indigenous zootherapeutic practices and its contemporary status in Raji tribe of Uttarakhand"

Dear Dr. Deepika Yadav,

The following grant has been sanctioned by the academy for the year 2023-2024:


Recommended with the facilities of one Junior Research Fellow @ Rs 25,000/- p.m. and Contingency & Travel of Rs. 60,000 p.a. and Institutional Overhead if any

The grants in yearly installment will be released to the host institution on receipt of the claim bill in the enclosed proforma in duplicate.

1. This sanction is meant for full time research and a Certificate to this effect is required to be furnished.
2. The host institution shall send an audited statement of account at the end of each financial year along with the utilization certificate. The unspent grants at the end of the financial year would be adjusted against the grant to be released for the next year.
3. A detailed progress report of the research study (in five-six pages) shall be of utmost importance for considering the renewal of the project by the Commission.

Please acknowledge the receipt of the letter and communicate to undertake the above study and bill in duplicate for the yearly grant through the Head of the host Institution indicating the date from which you propose to commence the project work.

With kind regards,

Yours sincerely,  
  
(Madhendra Narayan)  
AED-I, History of Science

Dr. Deepika Yadav  
Associate Professor  
Department of Zoology  
Shivaji College  
Delhi University, Raja Garden,  
New Delhi 110027

CC:

1. The Principal, Shivaji College, Delhi University, Raja Garden, New Delhi-110027
2. Dr. Nidhi Tyagi (CO-PI), Assistant Professor, Shivaji College, Delhi University.
3. Dr. Rakesh Roshan (CO-PI), Assistant Professor, Shivaji College, Delhi University.
4. Deputy Executive Director-I (Finance & Admin.)
5. Office copy