

Summer training program on Research Methodology 4.0

Department of Biochemistry

June 21-July 19, 2024

No. of participants: 40

The summer training program of research methodology 4.0 is organized by the Department of Biochemistry, Shivaji College, University of Delhi under the aegis of DBT Sponsored Star College Scheme with the supervision of Dr. Jayita Thakur, , Dr. Renu Baweja, Dr. Sunita Singh Dr. Usha Yadav, Dr. Shvetambri and, Dr. Abhijeet Mishra from June 21-July 19, 2024. The training program was structured into six modules, each focusing on a different aspect of research.

The first module was taken by Dr. Renu Baweja in which she introduced participants to the core aspects of research methodology, including types of research, setting objectives, and writing research proposals. Assignments involved reading and summarizing a research paper on ultra-processed food. The resource person for the next module was Dr. Usha Yadav in which she introduced the concept of research design and sample design. This is followed by the on bioethics, plagiarism, and proper referencing techniques by Dr. Shwetambhri. The next module was covered by Dr. Sunita Singh who taught the method of data collection and its digitilization. Under her mentorship, health camp was also organized in the college premises. The next module was covered by Dr. Jayita Thakur, in which participants learned about many areas of data presentation, data processing, and statistical analysis of the data. The last module of the training program was covered by Dr. Abhijeet Mishra in which he emphasized the need for well-defined research topic, clear objectives, and thorough preparation to ensure the success of a research project.

The program concluded successfully with a valedictory session and student feedback. The structured approach, practical tasks, and expert guidance provided a comprehensive learning experience, equipping students with essential research skills.

Event Poster



Shivaji College
NAAC Accredited Grade "A"
University of Delhi
Department of Biochemistry
(under the aegis of DBT sponsored Star College Scheme)

National Summer Training Program (NSTP)
on
RESEARCH METHODOLOGY 4.0
June 21 – July 19, 2024

LEARNING OUTCOMES
Participants will:

- Learn to design a research-based study and conduct a review of the literature
- Conduct survey-based data collection and organize a health camp
- Analyze data using biostatistics followed by the interpretation of data
- Report the findings of the project with appropriate citations and check for plagiarism

WHO CAN APPLY?
UG and PG students

REQUIREMENT:
Access to Laptop/Desktop
[Click here to register](#)

Last date for registration: June 17, 2024*
*No registration fees. Limited seats are available.
Selected students will be informed through their registered Email ID.
Certificates will be issued after the successful completion of the NSTP.

PROGRAM COORDINATORS
Dr. Jayita Thakur, Dr. Renu Baweja,
Dr. Sunita Singh, Dr. Shvetambri
Dr. Usha Yadav

TEACHER-IN-CHARGE
Dr. Abhijeet Mishra

PATRON
Prof. Virender Bhardwaj
Principal

Glimpses of the events





Summer Training Program on Methods of Quality Control for Medicinal Herbs and Preparations

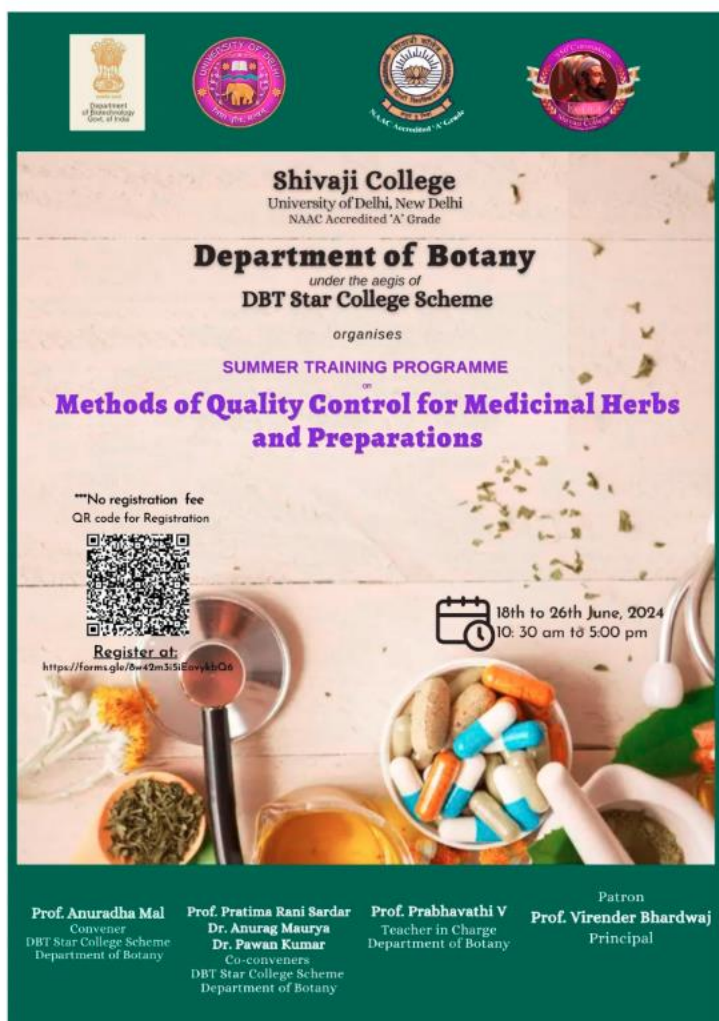
Department of Botany

June 18-26, 2024

Number of Participants: 32

Summer Training Programme on '*Methods of Quality Control for Medicinal Herbs and Preparations*' was organized by the Department of Botany under the aegis of DBT Star College Scheme from 18-26 June, 2024. A sum 32 undergraduate students of various streams including,

Botany, Zoology, Biochemistry, and Biomedical Science, from the Shivaji College and the Bhaskaracharya College of Applied Science participated in the training programme. The aim of this training programme was to give an orientation about advance methodologies and techniques utilized for identification and standardization plant based medicine. It included the exposure to in house facility of morphological identification, anatomical and chemical characterisation of plant based drugs. A greater exposure of molecular characterisation of drugs, their testing on neurological functions of animals, and animal cell culture were given at a visit to Delhi Pharmaceutical Sciences and Research University (DPSRU), Delhi on 24th June 2024 (Monday). DPSRU also provided an opportunity to witness advanced techniques for isolation, purification and characterisation of phytochemicals, their herbal garden and the next generation DNA sequencing facility to our participants. Participants submitted a study report at the end of the training program.



Shivaji College
University of Delhi, New Delhi
NAAC Accredited 'A' Grade

Department of Botany
under the aegis of
DBT Star College Scheme
organises

SUMMER TRAINING PROGRAMME
on
Methods of Quality Control for Medicinal Herbs and Preparations

No registration fee
QR code for Registration

Register at:
<https://forms.gle/bw42m3i5iEevy8bGo>

18th to 26th June, 2024
10:30 am to 5:00 pm

Prof. Anuradha Mal
Convener
DBT Star College Scheme
Department of Botany

Prof. Pratima Rani Sardar
Dr. Anurag Maurya
Dr. Pawan Kumar
Co-conveners
DBT Star College Scheme
Department of Botany

Prof. Prabhavathi V
Teacher in Charge
Department of Botany

Patron
Prof. Virender Bhardwaj
Principal



Representative photographs, report and attendance of the field visit to DPSRU, New Delhi:



शिवजी कॉलेज
Shivaji College
(University of Delhi)
NAAC ACCREDITED "A" GRADE COLLEGE

वर्क रोल/Ref. No. SCS/24/1529/24 दिनांक/Dated 24/07/2024

TO WHOM IT MAY CONCERN

This is to certify that the below-mentioned 24 participants of the Summer Training Programme went on an educational field visit to the Delhi Pharmaceutical Sciences and Research University (DPSRU), Delhi on **24th June 2024 (Monday)**. The training programme entitled, *Methods of Quality Control for Medicinal Herbs and Preparations* was organized by the Department of Botany, Shivaji College, University of Delhi under the aegis of the DPT Star College Scheme, from June 18-26, 2024. This visit allowed students to deepen their understanding of medicinal herbs, their cultivation, harvesting, storage, advanced techniques for phytochemical analyses, and the methods for making herbal formulations. It provided exposure to the procedures for checking the effect of herbal drugs on animal physiology and behaviour, and to the next-generation DNA sequencing technology. **Dr Anurag Maurya** and **Dr Pawan Kumar** were conveners of this visit.

S. No.	Participant's Name	College Name**	S. No.	Participant's Name	College Name**
1.	Aayush Kumar	B. Sc. (H) Botany	13.	Uday	B. Sc. (Life Sciences) MIC
2.	Prachi	B. Sc. (H) Botany	14.	Anusha	B. Sc. (Life Sciences) MIC
3.	Vishal Singh	B. Sc. (H) Botany	15.	Aakha	B. Sc. (Life Sciences) MIC
4.	Vishal Singh	B. Sc. (H) Botany	16.	Anusha	B. Sc. (Life Sciences) MIC
5.	Shubham	B. Sc. (H) Botany	17.	Kanishk	B. Sc. (Life Sciences) MIC
6.	Neha Pandey	B. Sc. (H) Botany	18.	Lakshy	B. Sc. (Life Sciences) MIC
7.	Anshu	B. Sc. (H) Botany	19.	Saurabh Singh	B. Sc. (Life Sciences) MIC
8.	Anjali	B. Sc. (H) Botany	20.	Sitara	B. Sc. (Life Sciences) MIC
9.	Anika Kumar	B. Sc. (H) Botany	21.	Niharika Das	B. Sc. (H) Biomedical Sciences BCAS
10.	Mishel Singh	B. Sc. (H) Botany	22.	Jyoti Chatterjee	B. Sc. (H) Biomedical Sciences BCAS
11.	Drig Yadav	B. Sc. (H) Botany	23.	Sachin Gauram	B. Sc. (H) Biomedical Sciences BCAS
12.	Raksh	B. Sc. (H) Botany	24.	Sahani Prasad	B. Sc. (H) Biomedical Sciences BCAS

** MIC - Shivaji College, University of Delhi; BCAS - Bhabhargava College of Applied Sciences, University of Delhi

Pooja Vender Bhardwaj
Principal

राजा गार्डन, रिंग रोड, नई दिल्ली-110027, राजा गार्डन, रिंग रोड, नई दिल्ली-110027 • ऑफिस: 011-23119644
दूरभाष/टेलफैक्स: 011-23156651 • ई-मेल: shivajicollege.ac@gmail.com • वेबसाइट: www.shivajicollege.ac.in



Attendance for the Programme:

Attendance

4

certificate received

Feedback

for the Summer Training Programme on 'Methods of Quality Control for Medicinal Herbs and Preparations' organised by the Department of Botany, Shivaji College, University of Delhi under the aegis of the DBT Star College Scheme, from June 18-26, 2024.

1. Name of the participant (as to be written in the certificate): RAKESH
2. College: SHIVAJI COLLEGE
3. Course: BSC (Hons) BOTANY
4. Email: rakesh446864@gmail.com
5. Contact No: 9560446864
6. How would you rate the workshop on a scale of 1 (Poor) to 5 (excellent)? : 4
7. How informative were the lecture sessions on a scale of 1 (Poor) to 5 (excellent)? : 5
8. How would you rate the practical sessions on a scale of 1 (Poor) to 5 (excellent)? : 4
9. How would you rate the trip to Delhi Pharmaceutical Sciences and Research University, Delhi, on a scale of 1 (Poor) to 5 (excellent)? : 5
10. What are your key takeaways from this workshop?

- ① Informative sessions for the part of Botany.
 - ② Storage preparations for Medicinal Herbs etc.
 - ③ Gain insights into the plants chemical composition and potential efficacy.

11. Suggestions for improvement in future (if any).

Date: July 5, 2024

Signature: Rakesh

Feedback

for the Summer Training Programme on 'Methods of Quality Control for Medicinal Herbs and Preparations' organised by the Department of Botany, Shivaji College, University of Delhi under the aegis of the DBT Star College Scheme, from June 18-26, 2024.

1. Name of the participant (as to be written in the certificate): Kashish
2. College: Shivaji College
3. Course: BSc, Life Sciences
4. Email kashishjangra2525@gmail.com
5. Contact No: 7982997468
6. How would you rate the workshop on a scale of 1 (Poor) to 5 (excellent)? : 4
7. How informative were the lecture sessions on a scale of 1 (Poor) to 5 (excellent)? : 4
8. How would you rate the practical sessions on a scale of 1 (Poor) to 5 (excellent)? : 5
9. How would you rate the trip to Delhi Pharmaceutical Sciences and Research University, Delhi, on a scale of 1 (Poor) to 5 (excellent)? : 5
10. What are your key takeaways from this workshop?

Through hands on training we gained valuable insight into herbarium techniques, microscopic and cytological methods, DNA isolation, .

11. Suggestions for improvement in future (if any).

Theory classes could be held in auditorium
Overall, learning experience is good.

Date: 5 July, 2024 Thursday

Signature:

Kashish Jangra

Feedback

for the Summer Training Programme on 'Methods of Quality Control for Medicinal Herbs and Preparations' organised by the Department of Botany, Shivaji College, University of Delhi under the aegis of the DBT Star College Scheme, from June 18-26, 2024.

1. Name of the participant (as to be written in the certificate): JYOTSNA CHATTERJEE
2. College: Bhaskaracharya College of Applied Sciences
3. Course: B.Sc.(Hons) Biomedical Science
4. Email : jyotsnachatterjee1101@gmail.com
5. Contact No: 8588009057
6. How would you rate the workshop on a scale of 1 (Poor) to 5 (excellent)? : 5
7. How informative were the lecture sessions on a scale of 1 (Poor) to 5 (excellent)? : 5
8. How would you rate the practical sessions on a scale of 1 (Poor) to 5 (excellent)? : 5
9. How would you rate the trip to Delhi Pharmaceutical Sciences and Research University, Delhi, on a scale of 1 (Poor) to 5 (excellent)? : 5
10. What are your key takeaways from this workshop?

I learnt about many uncommon medicinal herbs, their properties and uses. The different methods and techniques to identify, isolate and separate different components of the plants intrigued me. The trip to the Delhi Pharmaceutical Sciences and Research University was very educational and was interesting to know about the research field of pharmaceutical.

11. Suggestions for improvement in future (if any).

The workshop as a whole was well-managed, time efficient and very knowledgeable for me as a student of Biomedical science. But would have liked if aspects such as studying basic machinery of drug ^{also} from medicinal herbs in a human system and how they affect the biochemistry in us would be included.

Date: 5th July, 2024

Signature: Chatterjee

Feedback

for the Summer Training Programme on 'Methods of Quality Control for Medicinal Herbs and Preparations' organised by the Department of Botany, Shivaji College, University of Delhi under the aegis of the DBT Star College Scheme, from June 18-26, 2024.

1. Name of the participant (as to be written in the certificate): Tarun Verma
2. College: Shriharacharya College of Applied Science
3. Course: Biomedical Science
4. Email: tarunverma3178@gmail.com
5. Contact No: 9718147969
6. How would you rate the workshop on a scale of 1 (Poor) to 5 (excellent)? : 4
7. How informative were the lecture sessions on a scale of 1 (Poor) to 5 (excellent)? : 4
8. How would you rate the practical sessions on a scale of 1 (Poor) to 5 (excellent)? : 4
9. How would you rate the trip to Delhi Pharmaceutical Sciences and Research University, Delhi, on a scale of 1 (Poor) to 5 (excellent)? : 4
10. What are your key takeaways from this workshop?

We came to know about the various medicinal properties of various common plants and herbs that helped us to delve into fascinating world of plants. Also, this workshop helped in learning various techniques and methods to observe, utilize and visualise the plant structure and its compounds.

11. Suggestions for improvement in future (if any).

If possible please provide ppt's used during lecture session.

Date: 05 July 2024

Signature: Tarun Verma

Summer training program on Analytical Tools and Techniques

Department of Chemistry

July 04-July 10, 2024

No. of participants: 25

Programme Schedule

Day	Date	Session	Topic of Hands on Training	Resource Persons
Thursday	04.07.2024	09:30 AM-3:30 PM	Isolation of Caffeine from tea leaves	Dr. P. K. Sahu Dr. Vandana Katoch Ms. Tamanna
Friday	05.07.2024	09:30 AM-3:30 PM	Synthesis of iron nano particles.	Dr. Anil K. Aggarwal Dr. Richa Arora Dr. Rangnath Ravi Dr. Bimal Prasad Jit (ICMR, Department of Biochemistry, AIIMS) Dr. Vinod Kumar (JNU, External Expert)
Saturday	06.07.2024	09:30 AM-3:30 PM	Separation and isolation of o-nitrophenol and p-nitrophenol by column chromatography.	Dr. N.G .Giri Dr. Yogesh Dr. Reeta
Monday	08.07.2024	09:30 AM-3:30 PM	Separation and isolation of active components of medicine.	Dr. Bhaskar Mohan Kandpal Dr. Priti Mr. Deepesh Singh
Tuesday	09.07.2024	09:30 AM-3:30 PM	Estimation of calcium in milk sample.	Prof. Rahul Singhal Dr. Priyanka Kumari Dr. Seema
Wednesday	10.07.2024	09:30 AM-3:30 PM	Use of crystallographic software 'mercury, diamond or Olex' for drawing structures.	Mr. Mahendra Kumar Meena Dr. Sunil Yadav Dr. Priyanka Kumari Dr. Seema Dr. Vijay Kumar (Lady Erwin College, External Expert)

Summary of Activities

1. **Isolation of Caffeine from Tea Leaves (July 4):** Participants learned techniques for extracting caffeine, enhancing their understanding of plant-derived compounds.
2. **Synthesis of Iron Nanoparticles (July 5):** Students were introduced to nanoparticle synthesis, a vital area in materials science, guided by multiple experts.
3. **Separation of o-Nitrophenol and p-Nitrophenol (July 6):** The use of column chromatography was emphasized, allowing participants to grasp separation techniques.
4. **Isolation of Active Components of Medicine (July 8):** This session highlighted methods relevant to pharmaceutical applications, encouraging participants to explore medicinal chemistry.
5. **Estimation of Calcium in Milk Samples (July 9):** Participants performed quantitative analysis, gaining experience in food chemistry.
6. **Crystallographic Software Training (July 10):** The final day focused on utilizing software for molecular visualization, essential for structural analysis in chemistry.

Conclusion

The "Analytical Tools and Techniques" summer training program at Shivaji College successfully provided participants with valuable hands-on experience and insights into various analytical methods. The collaborative efforts of faculty members and external experts enriched the learning environment, preparing students for future challenges in the field of chemistry. This summer training was conducted under the guidance of Prof. Virender Bhardwaj, the principal of Shivaji College and the convenorship of Prof. P. K. Sahu and support of Prof. N. G. Giri, Teacher-In-charge of the Department of Chemistry, Shivaji College.



**Summer Training Program on Tools & Techniques for assessing Basic
Health Parameters & making Healthy Lifestyle Choices
Department of Zoology
July 2-10, 2024
Number of Participants:**

A hands-on summer training was conducted by the faculty members of Department of Zoology under the aegis of DBT Star College Scheme from July 2nd-10th 2024 in Zoology Laboratories I and II and Jijabai Auditorium. Seven modules were conducted over this duration pertaining to assessment of basic health

parameters. Over 40 participants received completion certificates for successfully completing the training, these were from different pan-India Universities.

Name of Module	Resource Persons
Evaluation of dietary & health preferences	Dr. Manas K. Dhal, Dr. Samya Das, Mr. Manish K. Sachdeva
Anthropometric Measurements	Dr. Aeshna Nigam & Dr. Ankita Dua
Assessment of food choices & environmental sustainability in relation to carbon foot printing	Dr. Manas K. Dhal, Dr. Samya Das & Dr. Deepika Yadav
Water Quality Testing and study of effects of long-term consumption of R.O. water	Dr. Nidhi Garg & Dr. Sunita Gupta
Self-Assessment of Healthy food choices based on food labels	Ms. Nimita Kant & Dr. Jitendra K. Chaudhary
Assessment of Mental Health status using HDRS	Dr. Jitendra K. Chaudhary, Ms. Nimita Kant & Dr. Tsewang Namgial
Epidemiological studies of impact of lifestyle choices and disorders	Dr. Deepika Yadav & Dr. Rakesh Roshan

Learning outcomes achieved post the Summer training:

- Understand the relationship between dietary preferences and common health issues
- Master techniques for accurate anthropometric measurements and interpret the data to evaluate health status
- Evaluate the environmental impact of various food choices & promote sustainable food choices
- Understand the principles and importance of water quality testing
- Self-Assessment of Healthy Food Choices Based on Food Labels
- Understand the use of the Hamilton Depression Rating Scale (HDRS) for assessment of mental health
- Understand the principles of epidemiology in lifestyle and health research

POSTER



SHIVAJI COLLEGE

University of Delhi
NAAC Accredited 'A' Grade

Department of Zoology

(under the aegis of DBT sponsored Star College Scheme)
organises

Summer Training Program

on

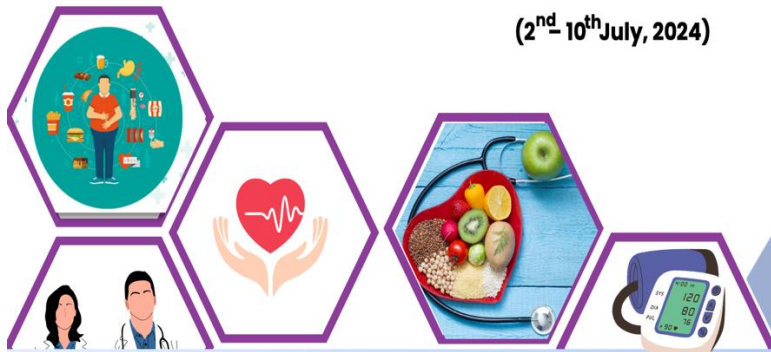
"Tools and Techniques for assessing basic health parameters and making healthy life style choices"

(2nd - 10th July, 2024)

Last date for registration
30th June, 2024

No registration fees.
Limited seats are available.

Selected students will be informed through their
registered Email ID.
Certificates will be issued after the successful completion
of the Training Program.



Ms. Nimita Kant
Dr. Jitendra K. Chaudhary
Dr. Ankita Dua
CO-CONVENERS, DBT STAR COLLEGE SCHEME
(DEPARTMENT OF ZOOLOGY)

Dr. Deepika Yadav
TEACHER-IN-CHARGE
CONVENER, DBT STAR COLLEGE SCHEME
(DEPARTMENT OF ZOOLOGY)

Department of Zoology
ORGANISING TEAM

Prof. Virender Bhardwaj
Principal
(PATRON)

"Tools and Techniques for assessing basic health parameters and making healthy life style choices"



Learning Outcomes :

Link for Registration:
<https://forms.gle/sNLvTR1y5I5em2uW9>

- Understand the relationship between dietary preferences and common health issues
- Master techniques for accurate anthropometric measurements and interpret the data to evaluate health status
- Evaluate the environmental impact of various food choices & promote sustainable food choices
- Understand the principles and importance of water quality testing
- Self-Assessment of Healthy Food Choices Based on Food Labels
- Understand the use of the Hamilton Depression Rating Scale (HDRS) for assessment of mental health
- Understand the principles of epidemiology in lifestyle and health research



Eligibility: UG/PG Students



