



# RAMAKRISHNA MISSION VIVEKANANDA CENTENARY COLLEGE



## 2<sup>nd</sup> Year Evaluation Report (2021 - 22)

### DBT-STAR College

### Department of Botany

**Patron:**

**Swami Kamalasthananda**  
Principal, RKMVC College

**Coordinator:**

**Swami Vedanuragananda**  
DBT-STAR College Scheme

**Presented By**

**Dr. Anirban Kundu**  
Departmental Coordinator  
DBT-STAR College Scheme

# Overview of the Presentation



Sl. No.	Topics to be Covered
1.	New practicals introduced in each dept. supported under the scheme
2.	Equipments procured for the proposed new practicals
3.	Interdisciplinary projects executed by the students
4.	Workshops and seminars organized supported under the scheme
5.	Faculty improvement programs
6.	Visits to industry and important labs of national eminence
7.	Lectures Delivered by Experts/Speakers
8.	Outreach Activities
9.	Resource Generated
10.	<b>Novel Activities Introduced Under the Scheme</b>
11.	Impact of the Star College Scheme
12.	Grant Received and Utilization
13.	Future Activities

## New Practical's Introduced Under the Scheme:



Sl. No.	Name of the Practical	Level	Number of Beneficiaries	Use of Instruments Procured under the Scheme
1.	Isolation & culture of soil microbes.	1 <sup>st</sup> Sem	24	Compound microscope, Digital weighing balance, pH meter
2.	Endospore staining.	1 <sup>st</sup> Sem	24	Water Bath, Compound microscope
3.	Cytoplasmic streaming in plant cells.	1 <sup>st</sup> Sem	24	Compound microscope
4.	Isolation and culture of fungi	2 <sup>nd</sup> Sem	24	Compound microscope, Digital weighing balance, pH meter
5.	Measurement of microclimatic variables	3 <sup>rd</sup> Sem	35	Soil thermometer, Anemometer, Hygrometer, Lux meter, Rain gauge
6.	Water & soil quality assessment	3 <sup>rd</sup> Sem	35	Digital TDS / Conductivity Meter, pH meter,
7.	Pollen viability assay and germination.	4 <sup>th</sup> Sem	35	Compound microscope
8.	Isolation of DNA (plant & bacterial)	4 <sup>th</sup> Sem	35	Microcentrifuge, Vortex shaker, Micropipette,
9.	Quantification of DNA	4 <sup>th</sup> Sem	35	Spectrophotometer
10.	Agarose gel electrophoresis.	5 <sup>th</sup> Sem	13	Powerpack, Electrophoresis unit, Micropipette, UV-transilluminator
11.	SDS-PAGE	5 <sup>th</sup> Sem	13	Powerpack, Vertical Gel Electrophoresis
12.	Absorption spectrum of photosynthetic pigments.	6 <sup>th</sup> Sem	13	Spectrophotometer
13.	Effect of light intensity on the rate of photosynthesis.	6 <sup>th</sup> Sem	13	Lux meter



# Projects Undertaken by the UG Students

Project Title	Name of the Student (Sem V)	Guided by
Pharmacological activities of <i>Cleome viscosa</i> .	Spandan Hazra	Biswajit Roy
Studies on use of popularly known herbal plants as anti-diarrheal medicines	Kiran Mandal	Anirban Bhar
Minerals in plants : Beneficial & non-beneficial roles	Mainak Chatterjee	Avik Kumar Choudhury
Isolation and culture of microalgae from freshwater.	Arghya Singha Ray	Harisankar Dey
Ecological Aspect of Organic Farming	Ayodeep Ghosh	Harisankar Dey
Remedial effects of popular herbal plants on common cold and fever: a small survey	Sanajit Giri	Anirban Bhar
Use of Popularly Known Herbal Plants For Immunomodulatory Effect.	Santanu Kar	Anirban Bhar
Role of microalgae in wastewater treatment	Rohit Ghara	Harisankar Dey
Revisiting Mendelism in the light of biostatistics	Sourav kr. Dutta	Avik Kumar Choudhury
Role of microalgae as biofertilizer	Chayan Maity	Harisankar Dey
Water Transport in Plants	Subham Chatterjee	Avik Kumar Choudhury
Pollen and seed dispersal of <i>Cleome viscosa</i> .	Suman Paul	Biswajit Roy
Phenology, Chromosome Number and Pollen physiology of <i>Cleome viscosa</i>	Subhradeep Sarkar	Biswajit Roy

# Webinars by Eminent Scientists (Online)



Date	Topic	Delivered By
17 <sup>th</sup> Sept, 2021	Abiotic Stresses in Agriculture: Impact and Management	<b>Prof. Himanshu Pathak</b> Director, National Institute of abiotic Stress Management-ICAR Pune, Maharashtra
4 <sup>th</sup> Oct, 2021	Air Pollution and its Impact on Plants	<b>Dr. Richa Rai</b> Senior Scientist CSIR-National Botanical Research Institute, Lucknow
7 <sup>th</sup> Oct, 2021	Why and How to Adopt Research as a Career Option	<b>Prof. RK Kohli</b> Vice Chancellor, Amity University, Mohali
30 <sup>th</sup> Dec, 2021	Food Technology for a Better Tomorrow	<b>Prof. Hari Niwas Mishra,</b> Dept. of Agricultural and Food Engineering, IIT Kharagpur

# Seminars/Workshops Conducted Under the Scheme (Offline)



Date	Topic	Delivered By
12th Mar, 2022	Life style modification & health promotion program for students: prevention, counseling & wellbeing	Dr. Biswajit Das, Chief Medical officer, Coal India Limited, Govt. of India

Build up your health. Do not dwell in silence upon your sorrows.....  
-Swami Vivekananda

**One day seminar on,**  
“Life style modification & health promotion program for students: prevention, counselling and wellbeing.”

- ✓ Discussions
- ✓ Troubleshoot
- ✓ Live Interactive sessions

**Organised under *DBT STAR College scheme* by,**  
**Department of Botany**  
**Ramakrishna Mission Vivekananda Centenary College,**  
**Rahara, Kolkata- 700118**

**Speaker: Dr. Biswajit Das**  
**Chief medical officer (CMO),**  
**Coal India Limited, Govt. of India.**

**Patron:** Sw. Kamalasthananda,  
Principal, RKMVCC

12<sup>th</sup> March, 2022  
3:00 pm @Vivekananda Hall, RKMVC College

**Executive Committee:**  
Dr. Swapan Kumar Ghosh  
Dr. Niloy Chakraborty  
Dr. Harisankar Dey  
Dr. Anirban Kundu  
Dr. Avik Kumar Chowdhury  
Dr. Biswajit Roy

**Program coordinators:**  
Sw. Vedanuragananda, Coordinator DBT STAR, RKMVCC  
Mr. B.B. Chattopadhyay, HOD, Botany, RKMVCC  
Dr. Biswajit Ghosh, Coordinator, PG Botany RKMVCC  
**Convenor:** Dr. Anirban Bhar, Assistant Professor, PG Botany, RKMVCC





# Seminars/Workshops Conducted Under the Scheme



Date	Topic	Delivered By
21st Mar, 2022	ABC of Genome Editing	Dr. Kutubuddin Ali Molla, Scientist, ICAR-National Rice Research Institute, Cuttack.

One day seminar on,  
**"ABC of Genome Editing"**

Organised under **DBT STAR College scheme** by,  
Department of Botany  
Ramakrishna Mission Vivekananda Centenary College, Rahara, Kolkata-700118  
*In collaboration with,*  
Indian National Young Academy of Science

**Speaker: Dr. Kutubuddin Ali Molla**  
**Scientist (Biotechnology)**  
**Crop Improvement Division**  
**ICAR-National Rice Research Institute**  
**Cuttack, Odisha, India**  
**Fulbright Postdoc Scholar (2017-19)**  
**Pennsylvania State University, USA.**  
**INSA Young Scientist**  
**ISCA Young Scientist**  
**Convenor: Dr. Biswajit Roy, Assistant Professor, PG Botany, RKMVCC**

**venue**

21<sup>st</sup> March, 2022  
2:00 pm @Vivekananda Hall,  
RKMVC College

**Patron: Sw. Kamalasthananda,**  
**Principal, RKMVCC**

**Program coordinators:**  
Sw. Vedanuragananda, Coordinator DBT STAR, RKMVCC  
Mr. B.B. Chattopadhyay, HOD, Botany, RKMVCC  
Dr. Biswajit Ghosh, Coordinator, PG Botany RKMVCC

**Join us freely**

Live stream link:

**Executive Committee:**  
Dr. Swapan Kumar Ghosh  
Dr. Niloy Chakraborty  
Dr. Harisankar Dey  
Dr. Anirban Kundu  
Dr. Avik Kumar Chowdhury  
Dr. Anirban Bhar



# Workshops (Hands-on-Training) Supported by the Scheme



Date	Topic	Number of Beneficiaries
15 <sup>th</sup> March, 2022	Herbarium Methodology & Plant Nomenclature	60





# Outreach Activities



Date	Topic	Delivered By	Number of Beneficiaries
23 <sup>rd</sup> Feb, 2022	<b>Bioprospecting &amp; Plant Biotechnology</b>	<b>Dr. Biswajit Ghosh Dr. Anirban Kundu Dr. Biswajit Roy Dr. Anirban Bhar</b>	<b>50</b>

Sl. No.	School
1.	Rahara Bhabanath Institution
2.	Madhyamgram High School for Boys
3.	Madhyamgram Girls high School
4.	Sodepur Chandrachur Vidyapith
5.	GSMS Taki Boys School

# Few Moments of the Outreach Program



**Principal Maharaj Addressing the Students**



**Sodepur Chandrachur Vidyapith**



**Madhyamgram Girls High School**



**GSMS Taki Boys School**



**Madhyamgram High School for Boys**



**Rahara Bhabhanath Institution**

# Interdepartmental/Interdisciplinary Enrichment Programs



Date	Topic
22 <sup>nd</sup> March 2022	Interdepartmental Poster and Elocution Competition on “Earth Day”





# Interdepartmental Enrichment Program



Date	Topic	Delivered By	Number of Beneficiaries
29 <sup>th</sup> March, 2022	Methods in Bioinformatics	Dr. Anirban Kundu	25



# A Visit to Biotech Industry



Date	Venue	Accompanied By	Number of Beneficiaries
27 <sup>th</sup> Dec, 2021	<b>GCC Biotech</b>	<b>Dr. Anirban Kundu</b> <b>Dr. Avik Kumar Choudhury</b>	<b>18</b>





# A Visit to Horticulture Industry

Date	Venue	Accompanied By	Number of Beneficiaries
17 <sup>th</sup> Feb, 2022	<b>Pallishree Nursery Pvt. Ltd.</b>	<b>Dr. Anirban Kundu</b> <b>Dr. Harisankar Dey</b>	<b>30</b>



# A Visit to AJCB Indian Botanic Garden & BSI



Date	Venue	Accompanied By	Number of Beneficiaries
25 <sup>th</sup> Feb, 2022	AJCB Indian Botanic Garden	Dr. Anirban Kundu	48
	Botanical Survey of India (BSI)	Dr. Biswajit Roy	

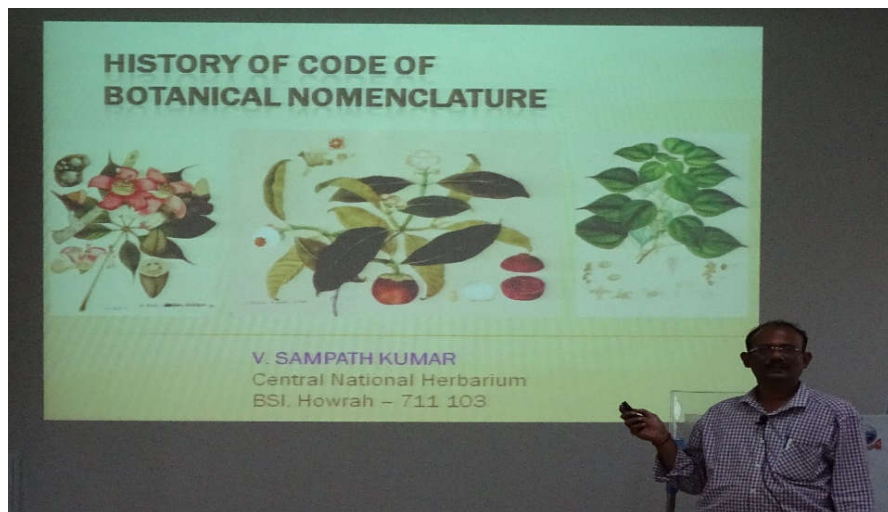






# Faculty Improvement Programs

Date	Topic	Number of Beneficiaries
16 <sup>th</sup> March, 2022	Modern Trends in Plant Taxonomy	30



## Resources Generated:



### Lab Manual:

Resource Generated	Faculties Involved
Generation of eLaboratory Manuals	Bidyut Bhushan Chatterjee
	Biswajit Ghosh
	Anirban Kundu
	Anirban Bhar

### Documentation of Flora:

Resource Generated	Faculties Involved
Documentation of Algal Microflora	Harisankar Dey
	Avik Kumar Choudhury
Documentation of Angiosperm Diversity	Biswajit Roy

# Training of Lab Manpower

**Feb 09, 2022**

**Hands-on-Training: Reagents & Buffer Preparation**



**Demonstration of Instruments  
Procured Under the Scheme**

**Feb 09, 2022**



# Novel Activities Introduced under the Scheme



**7 Days - Practical Bridge Course: 8<sup>th</sup> to 15<sup>th</sup> Dec, 2021**



# Novel Activities Introduced under the Scheme

## Digitalization of Herbarium Specimens:

Faculty Involved: Dr. Biswajit Roy

Acronym: RKMVCCH



NYBG STEERE HERBARIUM

Home Discover Collections Science Digital Index Herbarium Virtual Herbarium News

Home » Index Herbarium » Herbarium Details

RAMAKRISHNA MISSION VIVEKANANDA CENTENARY COLLEGE

EDIT CREATE NEW

Overview Collections Summary Staff Map

**Name**  
RAMAKRISHNA MISSION VIVEKANANDA CENTENARY COLLEGE

**Herbarium Code**  
RKMVCCH

**Current Status**  
Active

**Contact**  
+919433516795  
Fax: NIL  
Email: biswajit.roy@rkmvcchrahara.org

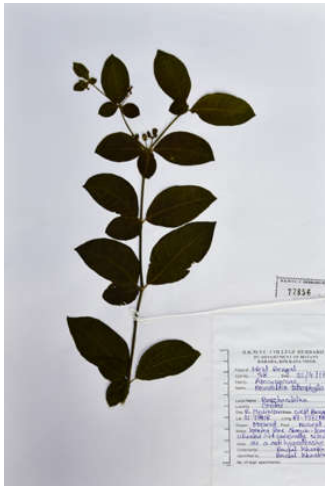
**Address**  
RKMVC College Herbarium  
BOTANY  
TAXONOMY AND BIOSYSTEMATICS LAB  
RAMAKRISHNA MISSION VIVEKANANDA CENTENARY COLLEGE  
AKHIL MUKHERJEE ROAD, CHOWDHARY PARA  
KHARDAHA, WEST BENGAL 700118  
India

**Specialty**  
**Taxonomic Coverage:** Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms.

**Geography:** WEST BENGAL, INDIA AND ADJOINING AREAS OF HIMALAYAS

**Notes**  
Entered Apr 2022/ Herbarium specimens of seedlings of angiosperms; Permanent slides of pollen of angiosperms.

**Feedback**  
[Send comment or correction to the Editor of Index Herbarium](#)



NEW YORK BOTANICAL GARDEN



**Get In Touch With Us**

The New York Botanical Garden  
2900 Southern Boulevard  
Bronx, NY 10458-5126  
+1 (718) 817-8626  
ntamowsky@nybg.org

**Herbarium Hours:**  
Monday - Friday: 9 a.m. to 4:30 p.m.  
Weekends and holidays: Closed

**Resources**

Staff  
Volunteer  
Visitor Information  
Science Digital  
Collections  
The Hand Lens  
Terms & Conditions

# Impact of the DBT-Star College Scheme



Passing Year	No. of Students	% of Successful Candidates	Opted Higher Studies in Central or State Universities	TIFR, JAM. Etc.	Jobs in Industry & Academia
2021	40	100%	26	3	2

Session	GATE	CSIR-NET	DBT-JRF
2021-2022	6	3	1

# Grant Received and Utilization



## Grant Received & Utilization

<b>Year</b>	<b>2021 - 2022</b>
<b>Total Grants Received</b>	<b>Rs. 3,00,000/- (Recurring)</b>
<b>Total Expenditure</b>	<b>Rs. 3,01,756/-</b>

<b>Sl. No.</b>	<b>Utilization</b>
<b>1.</b>	<b>Chemicals &amp; Reagents</b>
<b>2.</b>	<b>Seminar/ Workshops &amp; Outreach Programs</b>
<b>3.</b>	<b>Industry &amp; Academia Visits</b>

# Future Activities



## Workshop for Faculties:

Workshop on Bioinformatics.

Techniques in Molecular Biology.

## Workshop for the Students:

Workshop on Herbarium Techniques.

Hands-on-Training on Molecular Biology Techniques.

## Outreach Programmes:

Bioinformatics Awareness Programme.

Workshop on Modern Instruments in Biological Sciences.

Medicinal Plants and Bioprospecting.

## Study Visits:

Industry & Institutes of National Repute.

Educational Tours in Different Phyto-Geographical Regions.



# Qualitative Improvements due to DBT Support



- Overall improvement of departmental infrastructure through the DBT-STAR College grant.
- Individual access to instruments for the smooth running of the practicals.
- Interdepartmental Enrichment Activities will allow development of scientific aptitude in the subject and allied field.
- Introduction of new practicals, development of resource materials (SOP) and exposure of students to new techniques and instruments.

**Thank You**