



GOVERNMENT OF INDIA
Ministry of Science & Technology
Department of Science & Technology
DST/CURIE-PG/2022/88 (G)
(WISE KIRAN)

Technology Bhawan, New Delhi

Dated: 20/12/2022

Sanction Order

Subject: Financial assistance for the project entitled “Application requesting funding under the CURIE Programme” submitted by Dr. Utpal Dutta, HANDIQUE GIRLS' COLLEGE, GUWAHATI, KAMRUP METROPOLITAN, ASSAM, 781001 Release of the First installment regarding

Sanction of the President is hereby accorded to the approval to the above mention project at a total cost of Rs. 6147360.00/- (Rupees Sixty One Lakh Forty Seven Thousand Three Hundred Sixty only) for a duration of 3 Years . The detailed breakup of the grant for General as well as Capital Components are given below:-

General Component : ₹ 2647360.00/-

Capital Component : ₹ 3500000.00/-

Items	Budget Summary (in Rs.)			
	Year-1	Year-2	Year-3	Total
1- Non-Recurring				
Autoclave,Biosafety cabinet,BOD incubator,CO2 incubator,Digital balance (04),Double distillation unit,Ekman Dredge with accessories,Electrophoresis (03),Fume hood,IR spectrophotometer,Microscopes (04)-.Autoclave,Biosafety cabinet,BOD incubator,CO2 incubator,Digital balance (04),Double distillation unit,Ekman Dredge with accessories,Electrophoresis (03),Fume hood,IR spectrophotometer,Microscopes (04) {2 each from Zeiss & Labomed},Microtome,Microwave	3500000	0	0	3500000

Pawan Kumar

पवन कुमार / PAWAN KUMAR

वैज्ञानिक 'डी' / Scientist 'D'

विज्ञान और प्रौद्योगिकी विभाग
DEPTT. OF SCIENCE & TECHNOLOGY

भारत सरकार / Govt. of India

नई दिल्ली-110016 / New Delhi-110016

reactor,Refrigerated Centrifuge,Rotary evaporator with chiller and vacuum pump,UV-Vis spectrometer - 1				
Subtotal (Capital)	3500000	0	0	3500000
2- Recurring				
Project Staff	264000	264000	264000	792000
Project Associate-I-1(Fellowship for Project Assistant @ Rs.22,000/PM (consolidated) for 36 months)	264000	264000	264000	792000
Consumables	400000	50000	50000	500000
Contingency	50000	25000	25000	100000
Travel	100000	50000	50000	200000
Overhead	377120	39120	39120	455360
Any Other (Networking Facilities)-Networking Facilities	200000	0	0	200000
Any Other (Infrastructure Facilities)-Infrastructure Facilities (Including One Smart Class)	200000	100000	100000	400000
Subtotal (General)	1591120	528120	528120	2647360
Total Project Cost (Cap.+ Gen.)	5091120	528120	528120	6147360

2. The sanction of the President is also accorded to the release of Rs. 1591120/- (Rupees Fifteen Lakh Ninty One Thousand One Hundred Twenty only) to the "Director/Registrar/Principal/Controller/Comptroller, HANDIQUE GIRLS' COLLEGE" being the First installment of grant as mentioned above table under "General Component" for the above mentioned project.

3. The expenditure involved is debitable to Demand No. 89, Department of Science & Technology for the year 2022-23:

3425	Other Scientific Research(Major Head)
3425.60	Others : (Sub-Major Head)
3425.60.200	Assistance to Other Scientific Bodies(Minor Head)
3425.60.200.68	Science and Technology Institutional and Human Capacity Building(Sub Head)
3425.60.200.68.01	Disha Programme for Women in Science
3425.60.200.68.01.31	Grants-in-aid General
	(Previous: 3425.60.200.55.01.31)

Pawan Kumar
20/12/2022

पवन कुमार / PAWAN KUMAR
वैज्ञानिक 'डी' / Scientist 'D'
विज्ञान और प्रौद्योगिकी विभाग
DEPTT. OF SCIENCE & TECHNOLOGY
भारत सरकार / Govt. of India
नई दिल्ली-110016 / New Delhi-110016

4. The amount of Rs. 1591120/- (Rupees Fifteen Lakh Ninty One Thousand One Hundred Twenty only) will be drawn by DDO, DST and disbursed to the "CNA account of Autonomous body TDB in respect of Science and Technology Institutional and Human Capacity Building Scheme".

Name of A/C Holder	Science and technology Institutional and Human Capacity Building TDB
Bank A/C No	60414917022
Name of the Bank & branch	Bank of Maharashtra, Press Enclave - New Delhi
RTGS/IFSC code	MAHB0000593

5. The amount of Rs. 1591120/- (Rupees Fifteen Lakh Ninty One Thousand One Hundred Twenty only) will be drawn by the "CNA account of Autonomous body TDB and will be disbursed to the Director/Registrar/Principal/Controller/Comptroller, HANDIQUE GIRLS' COLLEGE". The bank details for electronic transfer of funds through RTGS are given below:-

Name of A/C Holder	curie Programme Handique Gilrs College
Bank A/C No	60423465153
Name of the Bank & branch	Bank of Maharashtra
RTGS/IFSC code	MAHB0001275

6. As per Rule 234 of GFR 2017, the sanction has been entered at S. No 55 . in the register of grants maintained in the WISE KIRAN for the scheme Consolidation of University Research for Innovation and Excellence in Women Universities (CURIE)

7. This issues with the concurrence of IFD vide their Concurrence Dy. No. IFD/C/I /121222/31/02196 dated 12/12/2022.

8. The GI will keep all the funds received in the Central Nodal Account only and shall not transfer the funds to any other account or not divert the same to Fixed Deposits/ Flexi-Account/ Multi-Option Deposit Account/ Corporate Liquid Term Deposit (CLTD) account etc. The funds released to GI shall not be parked in bank account of any other agency.

9. The GI will ensure the compliance of OM. No. F. No. 1/(18)/PFMS/FCD/2021 dated March 9, 2022 of Department of Expenditure, Ministry of Finance.

10. This sanction order is subject to the Terms & Conditions as annexured .

Pawan Kumar
20/12/20
Pawan Kumar
(Scientist - 'D')
pawan.kumar@nic.in

To,
The Pay & Accounts Officer,

Department of Science & Technology,
New Delhi – 110 016.

Copy of information and necessary action to:

1. The Principal Director of Audit, Scientific Department, IIIrd floor, AGCR Building, I.P. Estate, New Delhi.
2. The Financial Advisor, Integrated Finance Division, Technology Bhavan, New Mehrauli Road, Block C, Qutab Institutional Area, New Delhi, Delhi 110016
3. The Internal Audit Wing, Department of Science & Technology, Technology Bhavan, New Mehrauli Road, Block C, Qutab Institutional Area, New Delhi, Delhi 110016
4. Drawing and Disbursing Officer, DST, Cash Section. (two copies)
5. Dr. Utpal Dutta, Principal, Zoology, HANDIQUE GIRLS' COLLEGE, Guwahati, Kamrup Metropolitan, Assam - 781001
The Director/Registrar/Principal/Controller/Comptroller/Chief Executive
6. Officer(CEO), HANDIQUE GIRLS' COLLEGE, Guwahati, Kamrup Metropolitan, Assam - 781001
7. Secretary, TDB, New Delhi (for allocation of limits to implementing agency)
8. Head (WISE KIRAN) DST
9. Sanction Folder (WISE KIRAN)

Pawan Kumar
20/11/20 22
Pawan Kumar
(Scientist - 'D')
pawan.kumar@nic.in

Annual Progress Report

CURIE (Consolidation of University Research for Innovation and Excellence) Core Grant for Women PG Colleges

Session- Year 1

Submitted By

Dr. Ranjit Sarma

Handique Girls' College

Guwahati, Assam, 781001

1. Project Title:	Application requesting funding under the CURIE Programme
Ref. No:	DST/CURIE-PG/2022/88(G)
2. Name of Principal & Address: E-mail: Phone/M:	Dr. Ranjit Sarma Handique Girls' College, Panbazar Guwahati, Assam, 781001 rsarmajrt@gmail.com Mobile: 9435092990
3. Nodal Officer (Name & Address): E-mail: Phone/M:	Dr. Akhtar Hussain Email: akhtariisc@gmail.com Mobile: 8486994829
4. Approved Objectives:	
<ol style="list-style-type: none"> 1. Introduce a broader selection of elective subjects and integrate competitive exam preparation into the curriculum. 2. Provide students with greater access to scientific equipment and laboratories to develop practical skills. 3. Improvement of research activities. 	
Date of Start: 20 December 2022	Total Cost of Project: Rs. 6147360.00 (Sixty-one Lakh Forty-Seven Thousand Three Hundred Sixty Rupees Only) Recurring: Rs. 2647360.00 (Twenty-Six Lakh Forty-Seven Thousand Three Hundred Sixty Rupees Only) Non-Recurring: Rs. 3500000.00 (Thirty-Five Lakh Rupees only)
Date of Completion: 20 December 2025	Expenditure as of <u>31 March 2024</u> Recurring: Rs. 1500198.00 (Fifteen Lakh One Hundred Ninety-Eight Rupees Only) Non-Recurring: Rs. 3500000.00 (Thirty-Five Lakh Rupees only)
Name of Sanctioned Equipment:	Digital balances (4) Fume hood (1) Rotary evaporator with vacuum pump and chiller (1) FT-IR with accessories (1) Autoclave (1) Orbital shaking BOD incubator (1) Double Distillation apparatus (1) Microtome (1)

	Ekman Dredge (1) Biosafety cabinet (1) Microscope (4) Electrophoresis (3) UV-Vis spectrometer with accessories (1) Refrigerated Centrifuge (1)
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5. Sanction Details:

S. No	Sanction Date	Sanctioned amount (in Rs.)	Released amount (in Rs.)	UC details Amount/Date	Remarks
1	20.12.2022	6147360.00	5091120.00	Rs. 5000198.00 Date: 23.07.2024	Rs. 5000198.00 is the expenditure as of 31 March 2024

6. Procurement/Usage of Equipments:


S. No.	Sanctioned Equipment List	Model & Make and Company	Cost (Rs.)	Date of installation	Working (Yes/No)	Utilization Rate (%)
1	Digital Balances (4)	Model: BL 220H, Shimadzu & Model: PBG 321, Wensar	89680.00 & 66000.00	03.06.2023 & 22.06.2023	Yes	100
2	Fume Hood (1)	Make: Almicro	88500.00	29.06.2023	Yes	100
3	Rotary vacuum evaporator with pump and chiller (1)	Model: OT-RVE-42 MS OPTICS Technology	257240.00	10.06.2023	Yes	100
4	FT-IR Spectrometer with accessories (1)	Model: Cary 630 Make: Agilent	825932.00	20.11.2023	Yes	100
5	Autoclave (1)	Model: ICON-IIC-125-C Make: ICON	115746.00	19.08.2023	Yes	100
6	Orbital shaking BOD incubator (1)	Model: NU-110B Make: Navyug Udyog	123003.00	17.06.2023	Yes	100
7	Double Distillation apparatus (1)	Model: DDU1500 Make: Borosil	68664.00	23.08.2023	Yes	100

8	Microtome (1)	Model No: RMT-30 Make: Radical	38213.00	09.08.2023	Yes	100
9	Ekman Dredge (1)	WILDCO	116230.00	2.08.2023	Yes	100
10	Biosafety cabinet (1)	Model: NU-158 Make: Navyug	158002.00	06.08.2023	Yes	100
11	Microscope (4)	Model: LX-400-LED and LX-400-LED. Make: Lebonmed & LABOVISION C2 and Zeiss Primostar 3	266680.00 208890.00 & 200600.00 146320.00	07.08.2023 & 16.08.2023	Yes	100
12	Electrophoresis (3)	GURUN 20M, GURUN 24 H and powerpack	100300.00	14.06.2023	Yes	100
13	UV-Vis spectrometer with accessories (1)	Systronics Model: 2202-TS	300000.00	19.06.2023	Yes	100
14	Refrigerated Centrifuge (1)	Model: 5425 R G, Rotor FA-24 x 2 Make: Eppendorf	330000.00	23.08.2023	Yes	100
Total			Rs. 3500000.00 (Rupees Thirty-Five Lakhs only)			
Plans for utilizing the equipment facilities in the future:			<p>All the equipment is fully functional and will be utilized within the departments for teaching and research. M.Sc. students can access these facilities for practical classes and research work. Faculty members will use the equipment for their research projects. We also plan to conduct workshops at our college for external participants, showcasing the use of these equipment in teaching and research.</p> <p>For example,</p> <ol style="list-style-type: none"> 1. Expand the choice of electives for our M.Sc students by adding Medicinal Chemistry, Organic Synthesis, Fishery Biology, and Animal Ecology and Wildlife Biology to our course offerings. 2. Investigation of plant extracts and defined phytochemicals in terms of their immunomodulatory, hepatoprotective, antiparasitic, and reproductive system effects. 			

	<p>3. Testing of plant extracts for their inhibitory effect on insect cellulase and amylase.</p> <p>4. Training/Hands-on training on DNA isolation from fish/insects/mammals and sequence.</p> <p>5. Hand-on training on karyotyping of fish.</p> <p>6. Lab visit to IASST, IITG, Tezpur University</p>
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7. Activities Conducted During Year:

(a) Department of Botany

Activity 1	
Title	A Talk on “Preparedness for Competitive Examinations in Life Sciences with emphasis on NET/SLET/GATE”
Date	28 th August, 2023
Target Group	P.G. Students
Resource Person	Dr. Sandip Choudhury, Assistant Professor, Nowgong Girls’ College
Photographs	<div style="text-align: center;">  <p>A talk on</p> <p>“Preparedness for Competitive Examinations in Life Sciences with emphasis on NET/SLET/GATE”</p> <p>By Dr. Sandip Choudhury</p> <p>Nowgong Girls’ College</p> <p><i>Organised by</i></p> <p>Department of Botany, Handique Girls’ College, Guwahati</p> <p><i>Under the auspices of</i></p> <p>CURIE Project, Department of Science & Technology Govt. of India</p> <p>Date: 28th August, 2023</p> </div>



Activity 2:

Department of Botany along with the Dept of Chemistry and Zoology, Handique Girls' College celebrated International Women's Day on 8th March, 2024 by organising a talk was organised on the topic Women in STEM: The CRISPR-Cas9 for the students of M.Sc Courses under DST-CURIE WISE KIRAN. The lecture was delivered by Dr. Purabi Deka Bose, Assistant professor, Department of Molecular Biology & Biotechnology, Cotton University, Guwahati. In her lecture Dr Bose highlighted different aspects of gene editing tools such as CRISPR-Cas9 and made everyone understand about its application on prevention or treatment of numerous diseases such as AIDS. The talk was attended by 41 teachers & students across CURIE beneficiary departments.

Activity 3:

Department of Botany organized an online talk on the topic entitled 'Forthcoming trajectory of Health and Life Sciences on 30th may, 2024. Dr Paramananda Saikia, Ph D, Entrepreneurial Scientist, MilliporeSigma, Burlington, Massachusetts, USA was the resource person. In his talk Dr Saikia highlighted the advancement of medical technologies, personalised treatments and our understanding of human biology. He also enlightened the participants on the revolutionization of healthcare delivery and improved quality of life globally. Over 80 students and faculty members participated in the talk.

(b) Department of Chemistry

Activity-1

DST-CURIE sponsored Informative Lecture Event on 'Career Counselling for Higher Education and Competitive Examinations' on 1st September, 2023

Resource person: Dr. Rupam Sarma

Number of students participated:

PG : 30

UG : 40

Speaker
Dr. Rupam Sarma
Assistant Professor
Department of Chemistry
Nalbari College
Nalbari, Assam

Organized by
Department of Chemistry
Handique Girls' College
Guwahati, Assam

1st September 2023 | 11 a.m.



Activity-2

Special Test-I for NET/GATE, 2023 (Total Marks: 200) under the DST-sponsored CURIE Program on 8th October (Sunday), 2023

Examination coordinator: Dr. Anup Choudhury

Number of PG students appeared : 24

Attendance for Special Test - I
NET/GATE
Date: 08/10/2023
Name of Test Supervisor: Dr. Anup Choudhury
Signature and Name of Test Supervisors

Sl. No.	Name	Signature	Class
1	Debraj Nigam	Debraj Nigam	M.Sc. 1 st Sem
2	Utsav Barua	Utsav Barua	M.Sc. 1 st Sem
3	Utsav Barua	Utsav Barua	M.Sc. 1 st Sem
4	Utsav Barua	Utsav Barua	M.Sc. 1 st Sem
5	Susmita Barua	Susmita Barua	M.Sc. 3 rd Sem
6	Dimpal Sarma	Dimpal Sarma	M.Sc. 3 rd Sem
7	Chaitanya Kalita	Chaitanya Kalita	M.Sc. 1 st Sem
8	Radhika Mishra	Radhika Mishra	PG 1 st Sem
9	Abhishek Barua	Abhishek Barua	PG 1 st Sem
10	Chaitanya Kalita	Chaitanya Kalita	PG 1 st Sem
11	Bhiksha Kalita	Bhiksha Kalita	PG 3 rd Sem
12	Apurba Barua	Apurba Barua	PG 3 rd Sem
13	Chaitanya Kalita	Chaitanya Kalita	PG 1 st Sem
14	Chaitanya Kalita	Chaitanya Kalita	PG 1 st Sem
15	Chaitanya Kalita	Chaitanya Kalita	PG 1 st Sem
16	Chaitanya Kalita	Chaitanya Kalita	PG 1 st Sem
17	Chaitanya Kalita	Chaitanya Kalita	PG 1 st Sem
18	Chaitanya Kalita	Chaitanya Kalita	PG 1 st Sem
19	Chaitanya Kalita	Chaitanya Kalita	PG 1 st Sem
20	Nandita Handique	Nandita Handique	PG 3 rd Sem
21	Rita Gogoi	Rita Gogoi	PG 1 st Sem
22	Minara Begum	Minara Begum	PG 1 st Sem
23	Chaitanya Kalita	Chaitanya Kalita	PG 1 st Sem
24	Chaitanya Kalita	Chaitanya Kalita	PG 1 st Sem

PG-3rd Sem = (13), PG-1st Sem = (11)
Total Number of Students Present = (24)



First Three Positions_Special Test I_NET-GATE_October 2023

Rank	Name	Class
1 st	Minara Begum	PG-3 rd Semester
2 nd	Dhritima Kalita	PG-1 st Semester
3 rd	Chayanika Kalita	PG-1 st Semester

Activity-3

'National Science Day Celebration' under the DST-CURIE programme sponsored by DST, Government of India and organised by the Department of Chemistry in association with CHEMAGIC, on 28th February, 2024

Resource person: Dr. Hiranya Kumar Choudhury

Programmes:

- (1) Magic show
- (2) Science communication competition
- (3) Popular science lecture

Number of students participated: PG : 30, UG : 50

Number of students participated in the 'Science Communication Competition' : 15

Results of 'Science Communication Competition'

- 1st Position**
Sahin Rahman (UG 4th Sem, Chemistry)
2nd Position
Bhaswati Das (UG 4th Sem, Chemistry)
3rd Position
Dikshita Kalita (PG 4th Sem, Chemistry)
Geetanjali Basumatary (UG 2nd Sem, Botany)



Activity-4

Seminar presentation on Environmental Chemistry by MSc 3rd Sem students

(c) Department of Zoology

- (1) Organised one lecture series for MSc IIIrd sem students of Zoology from 17/8/2023, once in a week for three consecutive weeks by Chinmoy Panda, PM Research fellow, Department of Bioengineering, IIT, Guwahati. Topic: Proteomics and Biochemistry (Under CURIE project)
- (2) Conducted a talk on "Road Map for preparation of CSIR-NET in Life Science" for Zoology students on 24/8/23. Resource person: Hadida Yasmin, Head, and associate professor, Dept of Zoology, Cooch Behar Panchanan Barma University, West Bengal (Under CURIE project)
- (3) One online talk was arranged for MSc Students in collaboration with Gauhati U on 25/8/2023. Topic: "Perspectives on human reproduction" delivered by Prof Stuart R Milligan, Visiting professor of reproductive biology, King's College London, University of London (Under CURIE project)
- (4) The Department of Zoology along with the Dept of Chemistry and Botany Handique celebrated International Women's Day on 8th March 2024. In this regard a talk was

organised on the topic Women in STEM: The CRISPR-Cas9 for the students of M.Sc Courses under DST-CURIE WISE KIRAN. The lecture was delivered by Dr. Purabi Deka Bose, Assistant professor, Department of Molecular Biology & Biotechnology, Cotton University, Guwahati-01. She has highlighted different aspects of gene editing tools such as CRISPR-Cas9 and made everyone understand its application in the prevention or treatment of numerous diseases such as AIDS. A total of 41 nos of teachers & students under CURIE beneficiary departments attended the program.

- (5) The Zoology Department has organized an online talk on the theme “Immunity through the Ages: Navigating the Science of Ageing and Immunology” on the occasion of International Day of Immunology on 29/4/2024 under the aegis of DST Curie. The Target group was PG students of our college & neighboring colleges. A total of 38 students participated and interacted in the talk. Prof Shibnath Mazumdar, Dept of Zoology, University of Delhi, New Delhi delivered the talk.

Activity-1



Fig. Organised one lecture series for MSc III rd sem students of Zoology from 17/8/2023, once in a week for three consecutive weeks by Chinmoy Panda, PM Research fellow, IIT, Guwahati. Topic: Proteomics and Biochemistry (Under CURIE project)

Activity-2

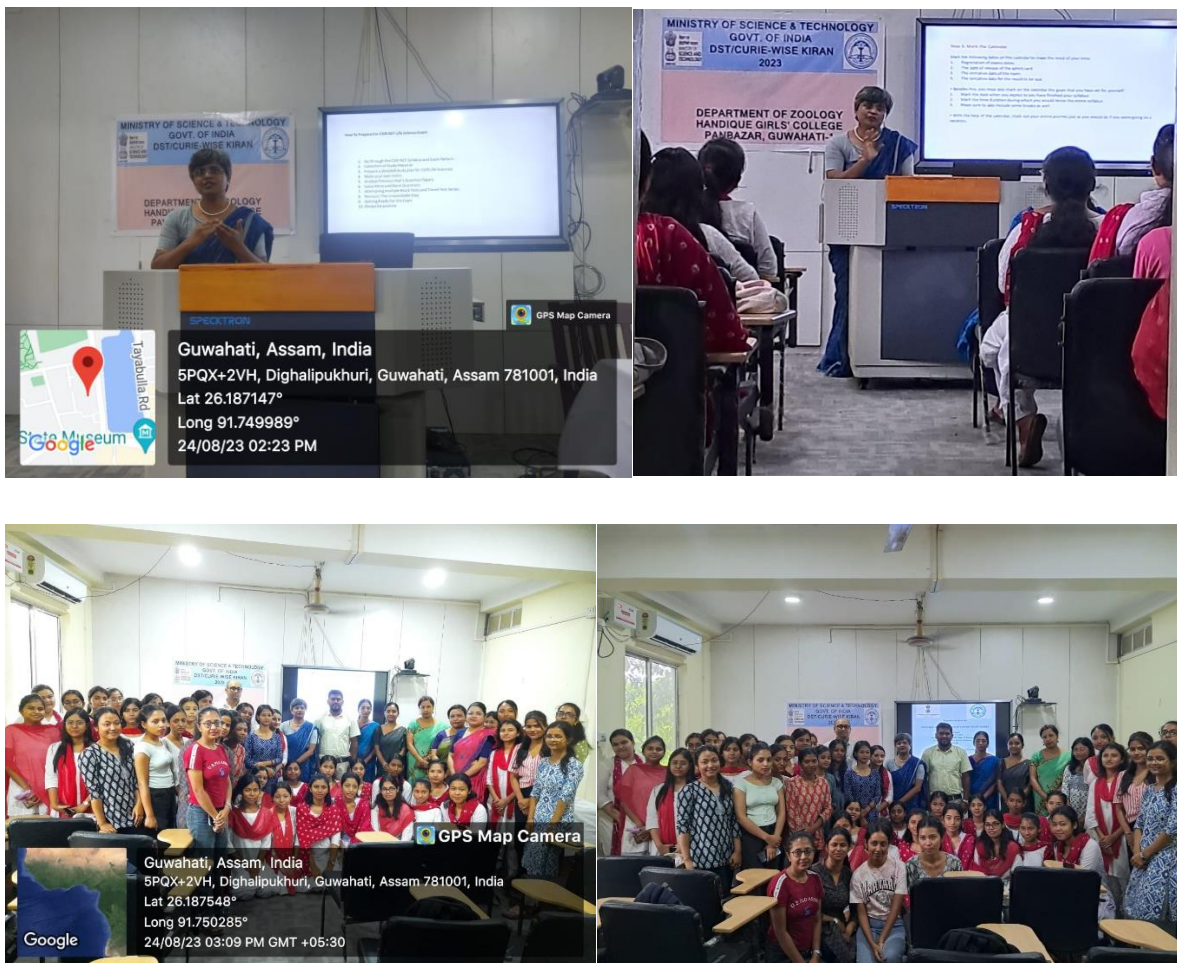


Fig. Department of Zoology conducted a talk on "Road Map for preparation of CSIR-NET in Life Science" for Zoology students on 24/8/23. Resource person: Hadida Yasmin, Head and associate professor, Dept of Zoology, Cooch Behar Panchanan Barma University, West Bengal (Under CURIE project)

Activity-3

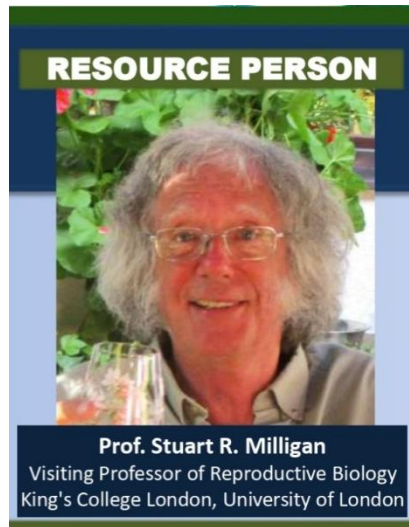


Fig. One online talk was arranged for MSc Students in collaboration with GU on 25/8/2023. Topic: "Perspectives on human reproduction" delivered by Prof Stuart R Milligan, Visiting professor of reproductive biology, King's College London, University of London (Under CURIE project).

Activity-4





Fig. Department of Zoology along with the Dept of Chemistry and Botany Handique celebrated International Women's Day on 8th March, 2024. In this regard a talk was organised on the topic Women in STEM: The CRISPR-Cas9 for the students of M.Sc Courses under DST-CURIE WISE KIRAN. The lecture was delivered by Dr. Purabi Deka Bose, Assistant professor, Department of Molecular Biology & Biotechnology, Cotton University, Guwahati-01. She has highlighted different aspects of gene editing tools such as CRISPR-Cas9 and made everyone understand its application on the prevention or treatment of numerous diseases such as AIDS. A total of 41 nos of teachers & students under CURIE beneficiary departments attended the program.

Activity-5

**CELEBRATION OF
INTERNATIONAL DAY OF IMMUNOLOGY, 2024**

Invited Lecture Programme On

**“Immunity through the Ages: Navigating the
Science of Ageing and Immunology”**

29TH APRIL, 2024

Speaker:
Dr. SHIBNATH MAZUMDAR
Professor
DEPARTMENT OF ZOOLOGY, UNIVERSITY OF DELHI,
NEW DELHI

Organized by
Department of Zoology
Handique Girls' College, Guwahati-01
UNDER THE AEGIS OF DST-CURIE-WISE KIRAN. **Time: 2:00 PM ONLINE MODE**

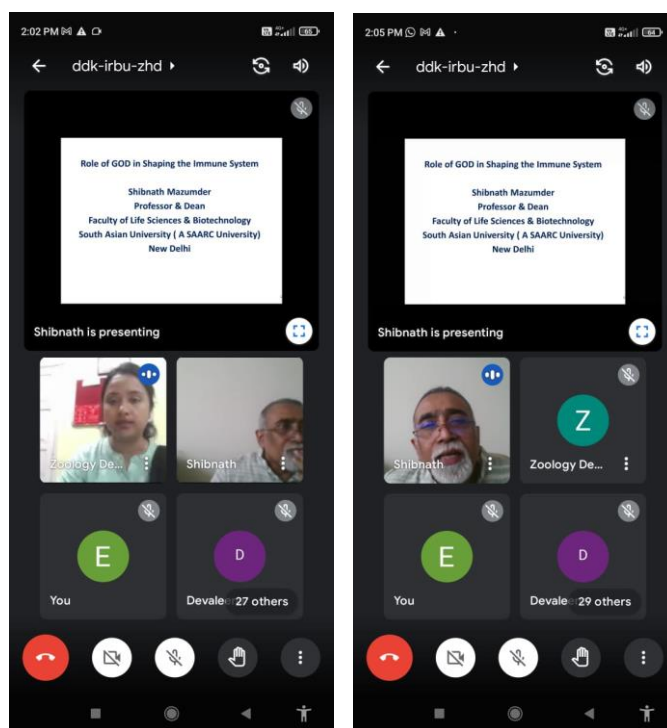


Fig. Zoology Department has organized an online talk on the theme “Immunity through the Ages: Navigating the Science of Ageing and Immunology” on the occasion of International Day of Immunology on 29/4/2024 under the aegis of DST Curie. The Target group was PG students of our college & neighboring colleges. A total of 38 students participated and interacted in the talk. Prof Shibnath Mazumdar, Dept of Zoology, University of Delhi, New Delhi delivered the talk.

8. Research Programs as per Target and Timelines:

(a) Department of Botany

Research activities of faculty:

A departmental research work entitled ‘Studies on endophytic fungi and their secondary metabolites isolated from *Clerodendrum* sp, a traditionally used medicinal plant in Assam’ has been initiated utilizing the infrastructure facility under the CURIE project. The project was jointly undertaken by Dr Prabhali Doley, Ms Sudem Wary, and Sadiqul Ahmed Assistant Professors, dept. of Botany, Handique Girls’ College.



M.Sc. Dissertation:

M.sc. students successfully defended their dissertation projects utilizing the infrastructure created under CURIE project. The titles of the dissertation projects are as follows.

1. Comparison of some selected indigenous rice varieties of Bajali And Karbi-Anglong districts of Assam with an improved variety for germination, grain characteristics, culinary and nutritional value.
2. Effect of gibberellin on seed germination and early seedling growth of some selected indigenous rice cultivars (*Oryza sativa* L.) of Assam under salt stress.
3. Synergistic alleviation of drought stress with salicylic acid and gallic acid and genetic variation exploration in Kola Joha (*Oryza sativa* L.)
4. Studies on amelioration of differential low pH stress in some selected indigenous rice cultivars (*Oryza sativa* L.) of Assam.
5. Comparison of some selected indigenous rice varieties of Dhubri and Karbi Anglong district of Assam with an improved variety for germination, grain characteristics, culinary and nutritional value.
6. Combined effect of salicylic acid and gallic acid in mitigation of drought stress in some selected indigenous rice cultivars (*Oryza sativa* L.) of Assam
7. Alleviation of salt stress with gibberellin and genetic variation exploration in Keteki Joha (*Oryza sativa* L.)

8. Comparison of some selected indigenous rice cultivars of East Karbi Anglong, Assam with an improved variety for germination, grain characteristics, culinary and nutritional value.

(b) Department of Chemistry

The dissertation work has been done by 15 M.Sc. students in different areas which are supported by the chemicals, glassware, and instruments procured under the CURIE project. The topics included Inorganic synthetic materials, medicinal chemistry, nanochemistry, computational chemistry, and biodiesel production.

(c) Department of Zoology

The dissertation work has been done by 15 M.Sc. students in different areas which are supported by the chemicals and instruments procured under the CURIE project.

9. Details of Networking Facilities Developed:

Smart Classroom Initiative: The Department of Chemistry has acquired a smartboard and established a dedicated smart classroom for MSc students, funded by the CURIE grant. The classroom is equipped with internet and Wi-Fi connectivity, enabling students to access online resources in real time during lessons. Additionally, all three departments have installed Wi-Fi facilities in the departmental computer labs, providing high-speed internet access for the benefit of students and faculty.

Computation Lab: The Department of Chemistry has established a computational laboratory for the practical work of MSc students. This facility allows students to conduct computational work during their dissertation research.

Analytical Instruments Laboratory: The Department of Chemistry has also developed an analytical instruments room housing sophisticated scientific instruments such as an FT-IR spectrometer. Additional instruments will be accommodated in the near future.

10. Details of SSR Activities Conducted:

- (a) Teachers are involved in organizing quiz on science and environment among school/college students.
- (b) One of the faculty is involved in the project evaluation of National children's Science Congress, for the state of Assam.
- (c) The chemistry department organized CHEMAGIC Program to popularize chemistry education among school students in nearby schools

11. Project Outcomes:

(a) Publications (in SCI journals):

(a) Botany: 02

(b) Chemistry: 13

(c) Zoology: 04

Details of Publications:

From Department of Chemistry

1. J. Dutta, A. Bera, A. Upadhyay, A. K. Yadav, S. Banerjee, T. Sarkar, A. Hussain*, Photoactivated Anticancer Activity of Cobalt(III) Complexes with Naturally Occurring Flavonoids Chrysin and Silibinin, *ChemBioChem*. (Publisher: **Wiley**). 2024. DOI: <https://doi.org/10.1002/cbic.202400484>.
2. B. Deka, T. Sarkar, A. Bhattacharyya, R. J. Butcher, Samya Banerjee, S. Deka, K. K Saikia, A. Hussain*, Synthesis, characterization, and cancer cell-selective cytotoxicity of mixed-ligand cobalt(III) complexes of 8-hydroxyquinolines and phenanthroline bases, *Dalton Trans.*, **2024**, 53, 4952. (Publisher: **RSC**). DOI: <https://doi.org/10.1039/D3DT04045C> (HOT article, cover page).
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From Department of Zoology



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15. Choudhury, A., Hasan, I., Gogoi, P., & Haloi, D. J. (2023). Efficacy of compounds used in mosquito repellents (DEET, picaridin, prallethrin and IR3535) against odorant binding protein (OBP20) of *Anopheles gambiae*: A molecular docking study. <https://doi.org/10.33307/entomon.v48i2.888> *ENTOMON* 48(2): 185-194 (2023)
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(b) Book Chapters Published (International/ National): 02 (Zoology)

1. **Lahkar, R. and Deka, P. (2024)**. A comparative study on silkworm excreta as organic fertiliser. In the Book “Current Trends and Advances in Life Science Research”, Edited by Parag Deka, Mallika Gogoi, Bandita Talukdar, pp. 156-165, ISBN: 978-81-922432-9-0
2. **Haloi, D, J., and Hasan, I. (2024)** (Study of prevalence and diversity of vegetable pest in some rural areas of Udalguri district, Assam. Edited by Parag Deka, Mallika Gogoi, Bandita Talukdar, pp. 74-89, ISBN: 978-81-922432-9-0

(c) Trainings/ Workshops/Seminars/ Conferences Conducted:

(a) Department of Botany

Title	Two-day workshop on “Basic Bioinformatics: Tools and Omics Applications”
Date	26 th & 27 th September, 2023
Target Group	PG Students
Resource Person	Dr. Manisha Choudhury, Dept of Zoology, Gauhati University
Photographs	 <p>GPS Map Camera</p> <p>Lat 26.180853° Long 91.767101°</p> <p>27/09/23 10:17 AM GMT +05:30</p> <p>Handique Girls' College, Guwahati- 781001</p> 



Lat 26.187519° Long 91.750147°

26/09/23 03:14 PM GMT +05:30

Handique Girls' College, Guwahati- 781001

GPS Map Camera



Lat 26.187372° Long 91.750061°

27/09/23 03:52 PM GMT +05:30

Handique Girls' College, Guwahati- 781001

GPS Map Camera



(b) Department of Chemistry

2-Day Workshop on “Good Laboratory Practice, Chemical Safety, ChemDraw Use, and Data Plotting Using Origin Software” during November 16-17, 2023 for PG students

Resource person: Dr. Hiranya Kumar Choudhury

Speakers and demonstrators:
Dr. Hiranya Kumar Choudhury
Dr. Akhtar Hussain
Dr. Anup Choudhury

Number of PG students participated:
PG 1st Semester: 15
PG 3rd Semester: 15



(c) Department of Zoology

Organized a two-day workshop on Molecular Biology Techniques on 13th and 14th Sep, 2023. Resource person Dr. Rezwan Hussain, Managing Director, RA SciTech Solutions, Guwahati (Under CURIE project).

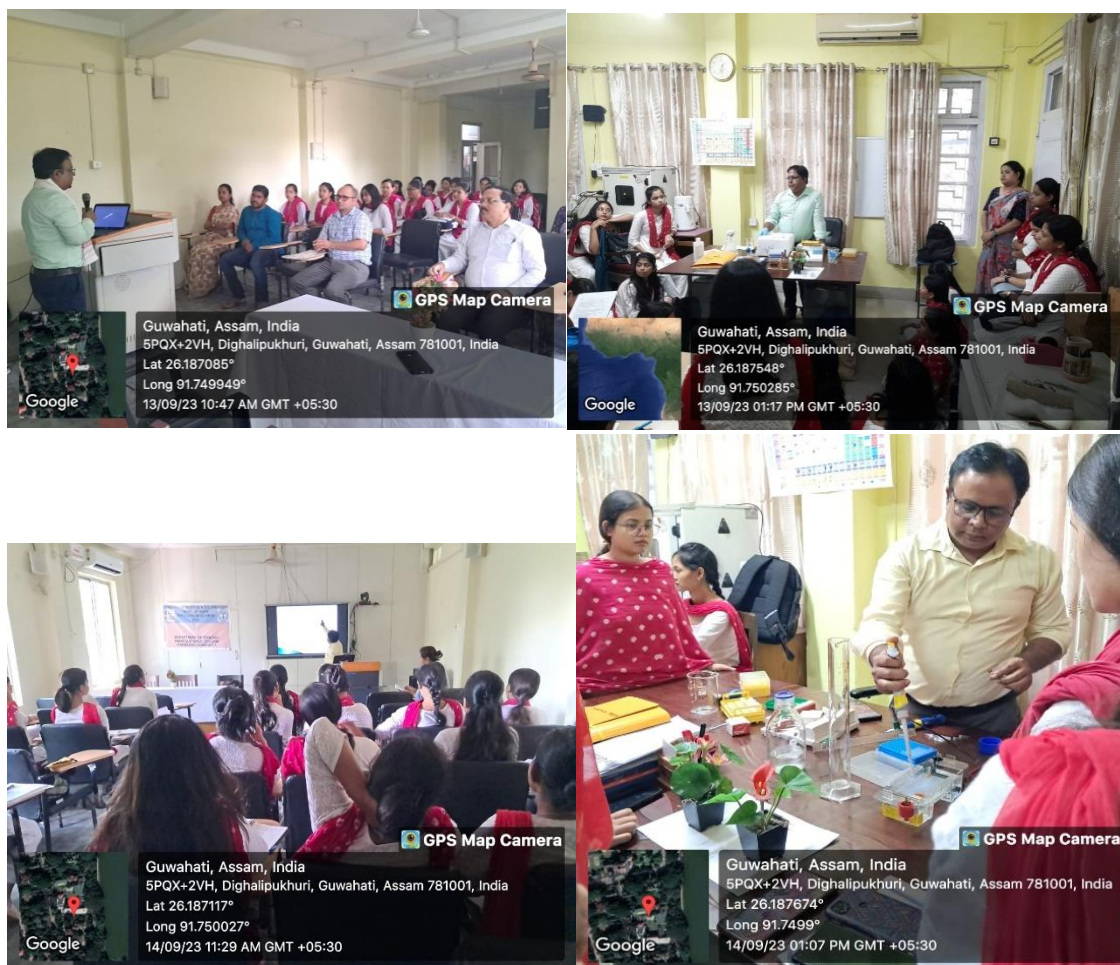


Fig. Dept of Zoology organized a two-day workshop on Molecular Biology Techniques on 13th and 14th Sep, 2023. Resource person Dr. Rezwon Hussain, Managing Director, RA SciTech Solutions, Guwahati (Under CURIE project).

(d) Technical Personnel Trained: 01

(e) Girls Enrolled in Post Graduate Program (Subject Wise):

Botany: 08

Chemistry: 15

Zoology: 15

(f) Girls Enrolled in PhD Program (Subject Wise):

Botany: 01 (M.Sc. Passed out)

Chemistry: 01 (M.Sc. Passed out) + 02 (under faculty members at Gauhati University)

Zoology: 01(M.Sc. Passed out)

12. Timelines Vs. Achievements:

Timelines	Achievements
0-2 Months	Advertisements and recruitment of Manpower
2-5 Months	Advertisement for the purchase of equipments and consumables
6-10 months	Receive of equipments and consumables, NET/SLET/GATE Orientation Classes
4-12 months	Conduct of workshops, lectures (online/offline)
8-12 months	MSc. Dissertation work by students
-	PG intake capacity of Botany increased from 8 to 15 from 2024
-	Introduction of Plant Pathology as a Special paper in PG Botany
-	One student each from Chemistry and Zoology qualified for CSIR-NET
-	Zoology Department recognized as a Ph.D. laboratory under Gauhati University
-	Introduction of "Fish & Fishery Biology" as an optional paper for PG in Zoology
-	19 Research Publications by faculties in reputed peer-reviewed journals

13. Other details:

Some key plans for this year

1. Visit to the nearby pharma industries (Sun and Ajanta Pharma) and sign MoUs for internships
2. Workshops based on existing instrument facility
3. Conduct weekend classes by faculty and invited faculties on NET/SLET
4. Seminar lecture series by Leading scientists in the fields
5. Quiz competitions for MSc students including nearby PG colleges
6. Research methodology workshops for MSc students
7. Visits to the laboratory of reputed research Institutions like IITG, IASST, Tezpur University
8. Journal club for students to develop research and presentation skills
9. Research publications by students and presentation in conferences/symposia

Ahman 1/08/2024

Dr. Akhtar Hussain

(Nodal Officer)

Dr. Akhtar Hussain
Assistant Professor
Depul. of Chemistry
Handique Girls' College
Guwahati-1, Assam, India

Ranjan
1/8/24

Dr. Ranjit Sarma

(Principal)

Principal
Handique Girls' College
Guwahati-781001