



# Vidyasagar University



**Midnapore, West Bengal  
721102**

## 6.5.2: Supporting Documents



**Academic Audit follow up notice**



**Conferences, Seminars, Workshops on quality conducted**



**Participation in NIRF along with status.**



**Collaboration details.**



**Orientation programme notification & Photo**



# Vidyasagar University



**Midnapore, West Bengal  
721102**

**Academic Audit follow action taken**



# VIDYASAGAR UNIVERSITY

Internal Quality Assurance Cell  
MIDNAPORE - 721102, WEST BENGAL, INDIA

Ref. No - VU/IQAC/ 074/2022

Date: 14/07/2022

## Notice

This is to notify that an Internal Academic Audit of all departments and centres will start on 18.07.2022 in the concerned department. All HoDs' are requested to make ready the academic report (Given format) for the last two academic sessions. All faculty members of the departments are requested to present during the visit of the department. The scheduled date and time are in the attached with this mail.

Your cooperation are highly appreciated.

(Prof. Madhumangal Pal)

Director, IQAC

Convener, Internal Academic Audit committee

Vidyasagar University

Director  
Internal Quality Assurance Cell  
VIDYASAGAR UNIVERSITY  
Midnapore-721102, W.B.



# VIDYASAGAR UNIVERSITY

Internal Quality Assurance Cell  
MIDNAPORE - 721102, WEST BENGAL, INDIA

Ref. No - VU/IQAC/ 074 /2022

Date: 13/07/2022

*Visit Scheduled of Academic Audit Team in the Dept./ Centre.*

Sl. No.	Department	Date	Time
1	Applied Mathematics	18.07.2022	02:30 P.M.
2	Anthropology	18.07.2022	03:30 P.M.
3	Bengali	19.07.2022	03:30 P.M.
4	English	19.07.2022	04:30 P.M.
5	Physics	20.07.2022	02:30 P.M.
6	Chemistry	20.07.2022	03:30 P.M.
7	Philosophy	21.07.2022	02:30 P.M.
8	Sanskrit	21.07.2022	03:30 P.M.
9	Microbiology	22.07.2022	02:30 P.M.
10	Fishery Science	22.07.2022	03:30 P.M.
11	History	25.07.2022	03:30 P.M.
12	Political Science	25.07.2022	04:30 P.M.
13	Botany	26.07.2022	02:30 P.M.
14	Electronics	26.07.2022	03:30 P.M.
15	Economics	27.07.2022	02:30 P.M.
16	Sociology	27.07.2022	03:30 P.M.
17	Geography	28.07.2022	02:30 P.M.
18	Remote Sensing	28.07.2022	03:30 P.M.
19	MBA	29.07.2022	02:30 P.M.
20	Commerce	29.07.2022	03:30 P.M.
21	Zoology	01.08.2022	02:30 P.M.
22	Computer science	01.08.2022	03:30 P.M.
23	Santali	02.08.2022	02:30 P.M.
24	Library Science	02.08.2022	03:30 P.M.
25	Human Physiology	03.08.2022	02:30 P.M.
26	Bio-Medical Laboratory & CND	03.08.2022	03:30 P.M.
27	Hindi	04.08.2022	02:30 P.M.
28	Women Study Centre	04.08.2022	03:30 P.M.
29	Centre for Environment Studies	05.08.2022	02:30 P.M.
30	Centre for Adivasi Studies	05.08.2022	03:30 P.M.
31	Centre for Life Science	06.08.2022	02:30 P.M.



# VIDYASAGAR UNIVERSITY

P.O. : Vidyasagar University, Midnapore - 721 102, Dist.: Paschim Medinipur,  
West Bengal, INDIA.

Dated : 08.06.2022

## NOTIFICATION

This is to notify for general information of all concerned that as per NAAC guidelines an Academic Audit is required for Higher Educational Institutions. The Vidyasagar University is going to conduct two types of Academic Audits i.e. (i) Internal Academic Audit and (ii) External Academic Audit for each of the Academic Departments and Centres of the University. In the first phase the Internal Academic Audit will be conducted for last two years (2019-2020 and 2020-2021). All Heads of the Academic Departments and Centres are requested to fill-in the audit report format (enclosed herewith) with the departmental information / data for each session separately and make it ready within 20th June, 2022. The Academic Audit team will visit the departments and centres within the month of July, 2022. The final report of the Academic Audit will be uploaded on the University website.

All concerned are being informed accordingly.  
This is issued with the approval of the competent authority.


Sd/-  
Registrar

Memo No. VU/R/Noti./825/2022 Dated: 08.06.2022

Copy forwarded for information and necessary action to:

1. The Dean(Actg.), Faculty of Arts and Commerce,
2. The Dean(Actg.), Faculty of Science,
3. All HOD's / TIC s of all Academic Departments and Centres,
4. The Director (Actg.), CDOE,
5. The Director, IQAC,
6. The Senior Information Scientist for wide circulation on the University website,
7. The Secretary to the Vice-Chancellor for kind information to the Hon'ble Vice-Chancellor,
8. The Office Supdt., Registrar's Office,
9. The Establishment Section,
10. Guard File



  
08/06/22  
(Dr. J. K. Nandi)

Registrar  
Registrar  
Vidyasagar University  
Midnapore - 721102  
West Bengal, India

Session: 2020-2021

**Data Capture Form (DCF) for  
Internal Academic Audit  
Report**

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Department of .....

Name of the HOD: .....

Date of submission:

**Document for IQAC**  
Vidyasagar University





# VidyaSagar University

## FORMAT OF INTERNAL ANNUAL ACADEMIC AUDIT (1<sup>st</sup> July to 30<sup>th</sup> June)

### Session:

1. Name of the Department :\_
2. Faculty Information:

Sl. No.	Name	Designation	Qualifications	Specialization	Teaching Experience	No. of M. Phil /Ph. D. supervised (during the year)

### 3. Thrust areas of the department:

- (a)
- (b)
- (c)
- (d)

### 4. Records:

Description	Yes/No
Lab Log Book	
Smart Class Log Book	
Stock Register	
Resolution of DC meeting	

Resolution of Ph. D. committee meeting	
Resolution of Students-Teachers meeting	
Resolution of Parents-Teachers meeting	
Internal Assessment Marks	

**Student's information:**

5. Intake capacity :

6. Demand Ratio (Intake capacity: :  
No. of applications received)

7. Students Enrolment (semester wise) :

	Female	Male	Total
First Semester			
Secondly Semester			
Third Semester			
Fourth Semester			

8. Teacher: Student Ratio :

9. Teacher: Research Scholar Ratio :

10. Success rate of Students :

11. Mechanism of interaction with students (Lectures/tutorials/practical classes):

12. (a) Students' placement record:

Sl. No.	Name of the Student	Passing year	Designation and name of the organization	Approximate Salary

(b) Students' record for higher Study:

Sl. No.	Name of the Student	Passing year	Name of program (Ph.D., M.Phil, M. Tech, etc.)	Name of University

13. Co-curricular activities organized by the PG students:

14. Participation in co-curricular activities by the PG students:

**Teaching-Learning activities:**

15. Courses offered by the department:

- (a) PG course: Yes/No
- (b) UG course: Yes/No
- (c) Ph.D.: Yes/No
- (d) Value added course: Yes/No, If yes, name of the course and duration.
- (e) Skill development course: Yes/No, If yes, name of the course and duration.
- (f) Soft skill development course: Yes/No, If yes, name of the course and duration.
- (g) Certificate course: Yes/No, If yes, name of the course and duration.
- (h) Any other course:

16. Teaching:

- a) Whether the teachers completed the work assigned by the DC? Yes/No  
If not: % of syllabus covered and state the reason.
- b) Whether the teachers completed the syllabus? Yes/No  
If not: % of syllabus covered and state the reason.

17. (a) Number of ICT enabled classrooms/smart classrooms available in the department (specify the equipment /instruments):  
(b) Percentage of faculty members that use ICT enabled//smart classrooms in the teaching-learning process:

18. Mode of evaluation of students:

- (a) Class test : Yes/No
- (b) Home assignment : Yes/No
- (c) Seminar presentation : Yes/No
- (d) Quiz : Yes/No
- (e) Any other (please specify):

19. Class information

Sl. No	Course / Paper	No. of classes allocated [for a paper of 50 marks, 40 lectures (each lecture of one hour duration) <u>should</u> be allocated]	No. of classes taken
1			
2			
3			
4			
5			
6			





32. Citation information for the faculty:

Name of faculty	Scopus Indexed		Google Scholar Indexed		
	Citation	h-index	Citation	h-index	i10-in dex
<b>Prof. ABC XYZ</b> Scopus ID: Google Scholar ID: ResearchGate ID: Vidwan ID:					
<b>Prof. UVW PQR</b> Scopus ID: Google Scholar ID: ResearchGate ID: Vidwan ID:					

33. Whether the department has any MoU/Collaboration with another institute? Specify.

34. Whether the department has an effective waste disposal mechanism:

- (a) Solid waste: Yes/No
- (b) E-waste: Yes/No
- (c) Chemical waste: Yes/No
- (d) Biological waste: Yes/No

35. Details of Parents-Teachers Interaction (No. of Meeting arrange, Date of meeting, number of members attend, ATR of the meeting, some important issues discussed in the meeting):

36. Details of alumni of the Department with their present employment (Name of the alumni, name of organization with address, designation, contact no. if, any endowments):

37. Details of Alumni Association with important activities undertaken (nature of activity, date(s), no. of participants, etc.):

38. **SWOT Analysis**

A. **Strength:**

- (i)
- (ii)
- (iii)

B. **Weaknesses:**

- (i)

(ii)

(iii)

C. **Opportunities:**

(i)

(ii)

(iii)

D. **Threat:**

(i)

(ii)

(iii)

39. Special achievements of faculty members/highlights of the department, if any:

**Signature of Head of the Department**

**Observations of the Academic Audit Team:**

Signature of the members of the audit team:

Name

Signature

1.

2.

3.

4.



# Vidyasagar University



**Midnapore, West Bengal  
721102**

**Conferences, Seminars, Workshops on quality conducted**

# WEBINAR / SEMINAR

## “Kobita theke Canvas”

by **Sri Manasij Majumdar**  
Eminent Art Critic

Sri Manasij Majumdar, eminent art critic spoke on the interface between Art and Poetry on 22nd March 2022 in the Birendra Sasmal Hall of the University. The title of the talk was “Kobita theke Canvas”. This special lecture was chaired by Prof. Sibaji Pratim Basu, Hon’ble Vice-Chancellor of Vidyasagar University. The lecture was highly interactive and teachers, students and scholars actively participated in the programme.

**Date: 22<sup>nd</sup> March, 2022**

**Time: 2.00 pm,**

**Birendra Sasmal Hall**



# Commerce

March 24, 2022

## Title: Intellectual Property Rights and India's Economic Independence

### Speakers

1. Prof. (Dr.) Saradindu Bhaduri, Centre for Studies in Science Policy, School of Social Sciences, Jawaharlal Nehru University, New Delhi
2. Prof. (Dr.) K.D. Raju, Rajiv Gandhi School of Intellectual Property Law, IIT, Kharagpur

On March 24, 2022, the Department of Commerce at Vidyasagar University hosted a national webinar in tribute to India's 75th anniversary of independence. Intellectual Property Rights and India's Economic Independence was the topic of the webinar. We have invited Professor (Dr.) Saradindu Bhaduri from the School of Social Science at Jawaharlal Nehru University in New Delhi and Professor (Dr.) K.D. Raju from the Rajiv Gandhi School of Intellectual Property Law at the Indian Institute of Technology in Kharagpur to participate in the discussion. The presentation began on schedule at 11.30 am and ran till 2 pm. 132 people participated in the webinar, according to the online attendance record. Participants in the event include departmental students, University faculty members and also faculty from the University's affiliated colleges.

The webinar's participants have been warmly welcomed by Professor (Dr.) Braja Ballav Pal, the Head of the Department. Professor Satyajit Saha, the dean of science, gave a speech as the webinar's chief guest. IPR and Innovation: Popular Template in Discourse was the subject of the first session, which was presented by Professor Saradindu Bhaduri. He emphasised that the purpose of intellectual property rights was to support inventors and innovators in their work. Professor Bhaduri, however, demonstrated that there is no substantial correlation between a country's expenditure on IPR and the level of innovation in that country using a variety of data from international agencies. He believed that any sort investment in IPR might not support a culture of innovation or invention. Professor Bhaduri urges the creation of IPR policies and regulations that are centred on innovation.

# Commerce

In the second session of the webinar, Professor (Dr.) K.D. Raju, the second resource person, gave his presentation. Economic development and geographic indications were tied to his subject. Prof. Raju gave an example of how GI tags may protect local artists' and crafts people's rights to use their community's identity as a trademark and help the rural economy.

Professor (Dr.) Kalpataru Bandopadhyay, a senior faculty member in our department, presided over both sessions. The conference was deemed successful thanks to the presentation of two contrasting accounts in two sessions on IPR. Each session was brought to a close by the chairperson's brief remarks. The webinar came to an end after a vote of thanks was given by Dr. Abhijit Sinha, an Associate Professor of the Department, to the Dean of Science, reputable resource persons, the students, faculty members from several associated colleges, and everyone else involved. Without the support and cooperation of the administration and all seven faculty members of the department webinar would not have been so successful. The whole program was video recorded by the Computer Centre of our University.

**VIDYASAGAR UNIVERSITY** 75  
आज़ादी का अमृत महोत्सव  
Celebrating 75 Years of Indian Independence

**WEBINAR**  
on

"Intellectual Property Rights and India's Economic Independence"

Organised by:  
Department of Commerce, Vidyasagar University  
March 24, 2022, 11:30 AM – 1:30 PM (IST)

**Speakers:**

 Prof. (Dr.) Saradindu Bhaduri,  
Centre for Studies in Science Policy,  
School of Social Sciences,  
Jawaharlal Nehru University, New Delhi

 Prof. (Dr.) K.D. Raju,  
Rajiv Gandhi School of Intellectual Property  
Law,  
IIT Kharagpur

Contact: Dr. Brjhabalav Pal, Head, Department of Commerce, Vidyasagar University.  
Email: pal.brjhabalav@gmail.com, Mobile: 89007 63078

Registration link: <https://forms.gle/HWuGveYBjYYVtH2A>  
Join us at the Google meet id: <https://meet.google.com/stz-bxnr-zja>

# Economics

## Title: Status of Industry and Agriculture after Liberalisation in India

Date: 15th December 2022

Mode: Online

### Speaker

Professor Hiranya K Nath, Professor of Economics, Sam Houston State University

The program was inaugurated by Professor (Dr.) Sibaji Pratim Basu, Hon'ble Vice-Chancellor, Vidyasagar University.

Economic development is the primary objective of the majority of world nations. This truth is accepted almost without any controversy. Agriculture plays a very important role in the Indian economy. It provides adequate food grains; it has been helpful to employment generation, obtaining foreign currency and rural development. Industrialization, also, plays a vital role in the development of developing countries because they can solve their problems of general poverty, unemployment, backwardness, low production, low productivity and low standard of living, etc. It is equally important for developed countries as well as it helps them not only to maintain their existing growth but also to enjoy still higher standards of living to avoid cyclic fluctuations.

Therefore, rapid industrial growth has been a major objective of planning in India. It is a wellknown fact that India is an agrarian country. In 1951, India's then Prime Minister Jawaharlal Nehru announced that India had to become industrialized and that as fast as possible. Around the 1980s, there was considerable gloom about the immediate prospects for industrial growth, despite having a surplus of food, and foreign exchange stocks for a few years in the late 1970s, widely regarded as long-term constraints on India's economic growth. For a variety of reasons, a lack of industrial demand, especially for investment goods, was widely accepted to be the principal reason for relative stagnation since the 1960s.

# Economics

However, there was also an argument that controls on output, investment and trade, popularly called the permit license raj were stifling private initiative and wasting meagre public resources. Reportedly, controls led to widespread inefficiency in resource use, as reflected in poor total factor productivity growth, or rises in incremental capital-output ratios in the 1970s. The gloom was perhaps accentuated by the oil price and agriculture supply shocks in the late 1970s, together with political uncertainty which was standard prevailing when Indian democracy entered the coalition era at the national level for the first time in 1977.

However, from 1980 onwards, after domestic political uncertainty ended, industrial policy witnessed greater pragmatism with a gradual loss of controls, and a greater willingness to import technology and foreign private capital to modernize the manufacturing sector. In the 1980s, many branches of manufacturing like the automotive industry, cement, cotton spinning, food processing, and polyester filament yarn, witnessed modernization and expansion of scales of production. Industrial export growth also improved in the second half of the 1980s as import restrictions moved from quotas to tariffs (as the first phase of trade reforms) although at very high levels, and steady depreciation of the currency in nominal terms. The turnaround in industrial output growth in this decade has been variously attributed to liberalization, improvement in public investment, and public sector performance. The Indian Government had undertaken policy reforms since 1980, but the most radical reforms have occurred since 1991, after the severe economic crisis in the fiscal year 1990-91. Prime Minister Rajiv Gandhi and Finance Minister Dr. Manmohan Singh together initiated the reform, popularly known as LPG (Liberalization, Privatization and Globalization).

One cannot deny the fact that economic and financial reforms after 1990 have increased our GDP growth to more than eight per cent. However, it has failed to establish the balance between growth and equity; various sections of the societies could not derive the benefit of this growth. Neglecting the inclusion aspect of growth may aggravate social problems in the long run.

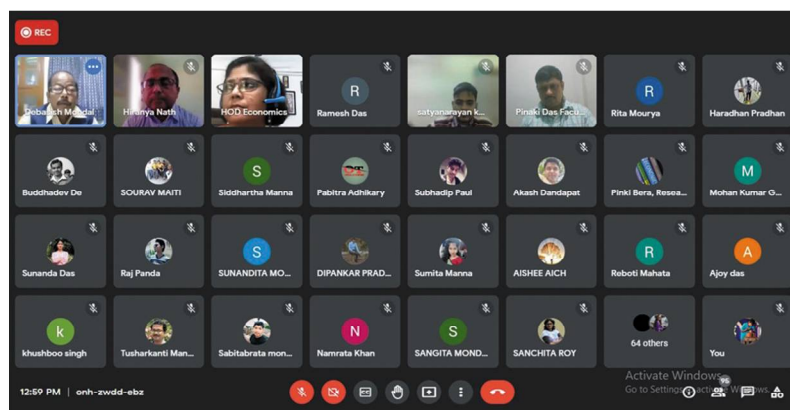
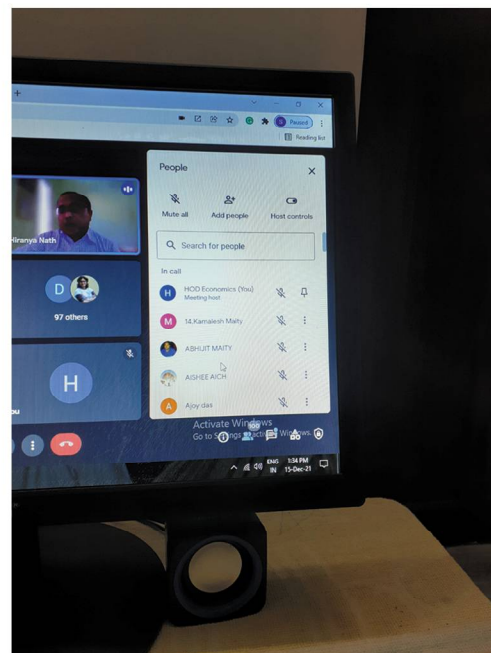
# Economics

Therefore, it has become the core issue of the Indian political process. It has become part of the agenda for nation-building. One of the most disturbing features of the growth process is that despite the high growth of overall GDP and per capita income after the launching of economic reforms, the growth rate of Indian agriculture has decelerated significantly. Since agriculture continues to be the largest sector of the economy in terms of employment, the deceleration of growth of this sector has serious implications for the living standards of agricultural workers-both farmers and agricultural labourers. It was expected that agriculture would be the main beneficiary of macroeconomic policy changes brought about by economic reforms in 1991 and trade liberalization after the setting up of the WTO in 1995. But after the economic reforms, Indian agricultural performance continuously declined. The government has taken several steps for increasing investment and growth in the agricultural sector, which include the creation of Long Term Irrigation Fund (LTIF), Micro Irrigation Fund for water use efficiency, promotion of commercial organic farming, etc. The government of India has launched the Central Sector Scheme of financing facility under Agriculture Infrastructure Fund (AIF) to boost Agriculture Infrastructure relating to post-harvest management and community farming assets. The Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) Scheme is being implemented with a view to providing income support to all landholding farmer families across the country, to enable them to take care of expenses related to agriculture and allied activities as well as domestic needs. Further, the Government of India has launched the Aatmanirbhar Bharat Abhiyan (ABA) to strengthen Infrastructure, Logistics, Capacity Building, Governance and Administrative Reforms for Agriculture. As a collaborative result, according to the National Statistics Office, agriculture has been the bright spot in the economy despite COVID-19.

The average rate of growth of Indian Industry in the ten years (1981-82 to 1990-91) was 7.8 per cent. The post-reform period up to 2000-01 was marked by considerable fluctuations and thus showed a total lack of consistency in industrial growth performance. The main causes of unsatisfactory industrial performance in the post-reform period up to 2000-01 were exposed to external competition, the slowdown in investment, infrastructural constraints, and difficulties in obtaining funds for expansion, sluggish growth in exports, anomalies in tariff structure and contraction in consumer demand.

# Economics

To conclude we can rightly say that the industrial sector has flourished more than the agrarian sector in the post reform era. It is a positive result from the prospect of development for a country. But we should also consider the fact that being an agrarian nation primarily, we cannot overlook the role of agricultural sector in our country. The development of all the sectors are interconnected. The growth of industrial sector should pave the way for agricultural development as well. The agricultural sector should reap the advantage of industrial development, in the form of machines and technological upgradation. So, it is the right time that we analyse the impact of liberalisation on both agriculture and industrial sector. Also to discuss and find out a way to further maximise the positive impacts of liberalisation and to connect the sectoral up gradation with each other.



# English

## **Title: A Brief Report on the 1<sup>st</sup> Aninda Basu Roy Memorial Lecture Organized by the Alumni Association, Department of English**

**Date: 21 October 2021**

**Mode: Online**

The Alumni Association of the Department of English of Vidyasagar University organized the 1<sup>st</sup> ANINDA BASU ROY (1993-2015) MEMORIAL LECTURE on 21 October 2021 at 7 PM virtually via Google Meet. Prof. Sibaji Pratim Basu, the Hon'ble Vice-Chancellor of Vidyasagar University, inaugurated the programme and gave the inaugural address on this occasion. The memorial lecture, entitled "Polycoloniality and the Plural Strands of Decolonization" was delivered by Prof. Saugata Bhaduri, Professor of English, Centre for English Studies, School of Language, Literature and Cultural Studies, Jawaharlal Nehru University, New Delhi. The talk was profoundly engaging, erudite and brought home many new ideas. It was fascinating in the context of the 75th celebration of Independence. The other dignitaries present were Prof. Tapan Kumar De, the Dean of Arts and Commerce, Vidyasagar University, Prof. Satyajit Saha, Dean, Faculty of Science, Vidyasagar University, Dr Jayanta Kishore Nandi, Registrar of Vidyasagar University, Dr Jolly Das, Head of the Department of English, Faculty members of the Department of English (former and present), Vidyasagar University, and family members of Late Prof. Roy including Mrs Nupur Basu Roy (wife) and Ms Adrija Basu Roy (daughter). The alumni of the Department of English extended their cordial support to the organization of the programme. Over 220 participants (including students, teachers and researchers from other institutions) were present at this event. A memorial video was made to pay tribute to Prof. Roy on behalf of the Alumni Association of the Department of English, Vidyasagar University.

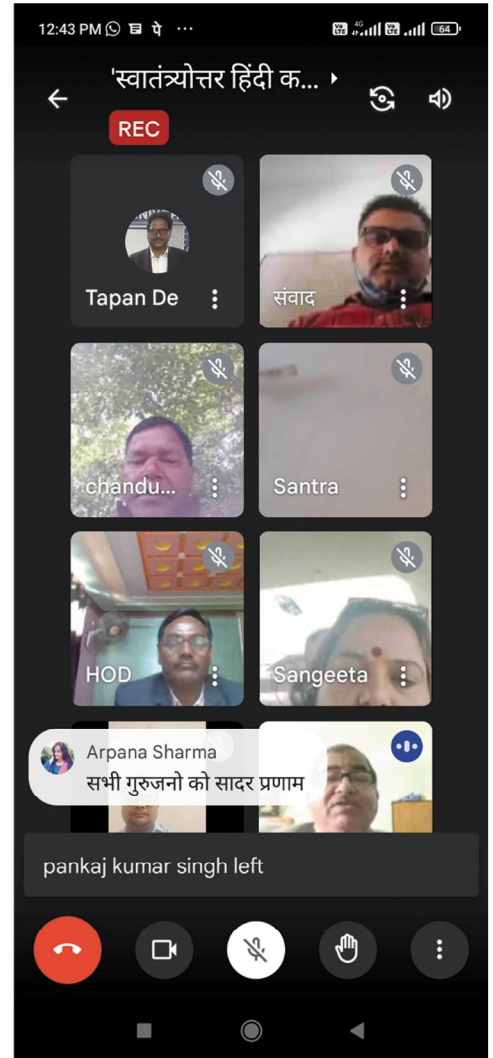
# Hindi

Date: 18th January, 2022

Mode: Online

## Title: 'स्वातंत्र्योत्तर हिंदी कविता: राष्ट्र, इतिहास और लोकतंत्र

मिदनापुर 18 फरवरी।विद्यासागर विश्वविद्यालय के हिंदी विभाग की ओर से आजादी के अमृत महोत्सव पर 'स्वातंत्र्योत्तर हिंदी कविता: राष्ट्र, इतिहास और लोकतंत्र' विषय पर एक अंतरराष्ट्रीय वेब संगोष्ठी का आयोजन किया गया। कार्यक्रम का शुभारंभ विभाग के शोधार्थी पंकज कुमार सिंह द्वारा सरस्वती वंदना के साथ हुआ स्वागत वक्तव्य देते हुए विभागाध्यक्ष डॉ प्रमोद कुमार प्रसाद ने माननीय कुलपति प्रो. शिवाजी प्रतिम बसु के प्रति आभार प्रकट करते हुए सभी आमंत्रित वक्ताओं का स्वागत किया। उद्घाटन वक्तव्य देते हुए विद्यासागर विश्वविद्यालय के कला और वाणिज्य के डीन प्रो.तपन कुमार दे ने कहा हिंदी विभाग द्वारा आयोजित यह संगोष्ठी इस अर्थ में महत्वपूर्ण है कि आजादी के 75 वर्ष के इतिहास को हिंदी कविता में तलाशने की कोशिश की जा रही है।उन्होंने स्वातंत्र्योत्तर हिंदी कविता के मूल स्वर पर चर्चा करते हुए कहा कि हिंदी कविता जनोन्मुखी है। बीज भाषण देते हुए प्रो दामोदर मिश्र (कुलपति, हिंदी विश्वविद्यालय, हावड़ा) ने कहा कि स्वातंत्र्योत्तर हिंदी कविता में राष्ट्र, इतिहास और लोकतंत्र पृथक नहीं बल्कि एक दूसरे से जुड़े हुए हैं।उन्होंने स्वातंत्र्योत्तर हिंदी कविता की समृद्ध परंपरा और वैशिष्ट्यों पर चर्चा करते हुए कहा कि हिंदी कविता ने नवजागरणकालीन कविता की परंपरा और लोकतांत्रिक मूल्यों को अपना विषय बनाया। अध्यक्षीय वक्तव्य देते हुए प्रो मुक्तेश्वरनाथ तिवारी (अध्यक्ष, हिंदी एवं भाषा भवन, विश्व भारती, शांतिनिकेतन) ने कहा कि स्वातंत्र्योत्तर हिंदी कविता ने साहसिक कार्य किया है।हिंदी कविता ने राष्ट्र और लोकतंत्र के दामन को थामे रखा।हिंदी कविता सामाजिक आजादी के स्वप्न का आख्यान है।स्वातंत्र्योत्तर हिंदी कविता आजादी के बाद के संघर्ष का कथा है। डॉ सत्यप्रकाश तिवारी ने कहा कि आजादी के बाद के भारत के विविध छवियों पर चर्चा करते हुए कहा कि हिंदी कविता ने आधुनिक विमर्शों को अपना केन्द्रीय स्वर बनाया। नौदरलैंड से जुड़ी डॉ पुष्पिता अवस्थी का नेटवर्क कमजोर रहने के कारण उन्होंने अपना संदेश भेजते हुए कहा कि हिंदी कविता उम्मीद और व्यवस्था-विरोधी कविता है। प्रो आशोष त्रिपाठी (काशी हिंदी विश्वविद्यालय, वाराणसी) ने कहा कि स्वातंत्र्योत्तर हिंदी कविता प्रतिरोध और संघर्ष की कविता है।हिंदी कविता लोकतंत्र की क्रिटिक रचती है।हिंदी कविता ने मानव विरोधी अलोकतांत्रिक गठजोड़ और चरित्र को चिन्हित करती है। कार्यक्रम का सफल संचालन डॉ संजय जायसवाल ने तथा धन्यवाद जापन डॉ श्रीकांत द्विवेदी ने दिया।तकनीकी संयोजन शोधार्थी मधु सिंह और रूपेश यादव ने किया।इस अवसर पर विज्ञान विभाग के डीन प्रो. सत्यजीत साहा,मकेश्वर रजक,नीरज शर्मा,कलावती कुमारी, ठाकुर, शशि शर्मा, जगदीश भगत ,प्रीति पटेल सहित देश-विदेश से बड़ी संख्या में साहित्य प्रेमी उपस्थित थे।



# Hindi



विद्यासागर विश्वविद्यालय



हिंदी विभाग द्वारा आयोजित  
एकदिवसीय अंतरराष्ट्रीय वेब-संगोष्ठी

विषय - स्वातंत्र्योत्तर हिंदी कविता: राष्ट्र, इतिहास और लोकतंत्र  
18 फरवरी 2022, दोपहर 12 बजे



संरक्षक  
प्रो. शिवाजी प्रतिम बसु  
माननीय कुलपति  
विद्यासागर विश्वविद्यालय



उद्घाटनकर्ता  
प्रो. तपन कुमार दे  
संकायाध्यक्ष, कला एवं वाणिज्य  
विद्यासागर विश्वविद्यालय



बीज वक्तव्य  
प्रो. दामोदर मिश्र  
माननीय कुलपति  
हिंदी विश्वविद्यालय

आमंत्रित वक्ता



प्रो. मुक्तेश्वरनाथ तिवारी  
विश्वभारती, शांतिनिकेतन  
नीदरलैंड



डॉ. पुष्पिता अवस्थी  
बी.एच.यू. बनारस



प्रो. आशीष त्रिपाठी  
बी.एच.यू. बनारस



डॉ. सत्यप्रकाश तिवारी  
कोलकाता

डॉ. प्रमोद कुमार प्रसाद  
विभागाध्यक्ष एवं अध्यक्ष, संगोष्ठी समिति

डॉ. संजय जायसवाल  
संयोजक, संगोष्ठी

डॉ. श्रीकांत द्विवेदी  
संयोजक, संगोष्ठी

आलेख पत्र हेतु संपर्क करें- 9331075884 / 9564812059

कार्यक्रम से जुड़ने के लिए गूगल मीट डाउनलोड करें। लिंक कार्यक्रम से पूर्व दे दिया जाएगा।

# History

**Title : The Dawn of a New Age: Ideas and Institutions in 19th century India**

**Date: 2nd December 2021**

**Mode: Online**

The program was inaugurated by Prof. Sibaji Pratim Basu,  
Hon'ble Vice-Chancellor, Vidyasagar University

(a) Speaker: Dr. Parimala V. Rao, Associate Professor,  
Centre for Jakir Hussain Studies, JNU, New Delhi

Topic: 'The world of Sanskrit education, Sanskrit College and Vidyasagar'

(b) Speaker: Prof. Amiya Sen, Centre for the Study of  
Comparative Religions and Civilizations,  
Jamia Milia Islamia, New Delhi

Topic: 'Two Reformers from Modern Bengal: Rammohun Roy and  
Iswarchandra Vidyasagar'

(c) Speaker: Prof. Mohammad Sajjad, Department of History,  
Aligarh Muslim University

Topic: 'Sir Syed Ahmed Khan and women education in Aligarh'

**Title: The Dawn of a New Age: Culture and Pedagogy in Modern India**

**Date: 3rd December 2021**

**Mode: Online**

(a) Speaker: Prof. Sudeshna Banerjee, Department of History,  
Jadavpur University


Topic: 'Homely Pedagogy: a less highlighted sphere of reform'

(b) Speaker: Prof. Bhaskar Chakrabarty, Department of History,  
University of Calcutta

Topic: 'Renaissance in the Mofussil: Calcutta Culture and  
Suburban Life in the 19th century'

# History

Department of History, Vidyasagar University  
Cordially Invites You to an Online Lecture.




**PROF. SANJUKTA DAS GUPTA**

ON

**"Adivasis and Historical Representations:  
Eastern India Since the 19th Century"**

Date: 16/11/2021  
Time: 03:00 PM (IST)

DR. SANJUKTA DAS GUPTA,  
ASSOCIATE PROFESSOR AT THE DIPARTIMENTO  
"ISTITUTO ITALIANO DI STUDI ORIENTALI - ISO"  
OF SAPIENZA UNIVERSITÀ DI ROMA.



[meet.google.com/xrr-axof-vdk](https://meet.google.com/xrr-axof-vdk)

**RETHINKING GENDER : AN  
INTERDISCIPLINARY PERSPECTIVE**  
DEPARTMENT OF HISTORY, VIDYASAGAR UNIVERSITY  
CORDIALLY INVITES YOU TO JOIN THIS WEBINAR.  
DATE: 08/03/2022. 03:00 PM (IST), ONWARDS

"SESSION WISE WEBINAR DETAILS"

**Inaugural Session (03:00-03:20 PM)**  
Welcome Address (03:00-03:05 PM) from: Associate Professor,  
Department of History, Vidyasagar University  
**Inaugural Address: Prof. Sibaji Pratin Basu**  
Hon'ble Vice-Chancellor,  
Vidyasagar University. 

**Special address (03:20-03:30 PM): Prof. Tapan Kumar Das,**  
Dean of the Faculty of Arts and Commerce, Vidyasagar University

**Session 1: 03:30 - 04:15 PM**  
Title: Child Marriage in Historic of Bengal.  
Speaker: Prof. Mary C. John  
Centre for Women's Development Studies, Delhi  
Chair of the session: Dr. Asha Das, Dept. of English, Vidyasagar University 


**Session 2: 04:15 - 05:00 PM**  
Title: Feminist Standpoint and Limit of Epistemic.  
Speaker: Prof. Aranta Kumar Ghosh  
Madras Institute of Development Studies, Chennai.  
Chair of the session: Dr. Sneha K.K. Dept of Philosophy, VU 

**Session 3: 05:00-07:00 PM**  
Title: Interdisciplinary and Collaborative Approaches to Gender Studies:  
Modernizing States and Burning Woods.  
Speaker: Prof. Meena Khantabhai  
Dept. of Anthropology and Gender and Sexuality Studies, University of Iowa, USA  
Chair of the session: Dr. Santoshini Bhattacharya, Director,  
Centre for Environmental Studies, Vidyasagar University 

**Session 4: 07:05 - 08:30 PM**  
Title: "Housewife, Concomitant and Devotee: Women's Religious  
Lives in Ancient and Early Medieval India."  
Speaker: Prof. Mahalakshmi Ramakrishnan, OAS 2ND  
Chair of the session: Dr. Dakshina Das, Dept. Of History,  
Vidyasagar University 

more of photos, an online view,  
Dept. of History, Vidyasagar University  
<https://meet.google.com/soi-cool-mj?w=22w>

Department of History, Vidyasagar University  
Cordially Invites You to an Online Lecture.




A bold rethinking of the origins of contemporary Hinduism, and an argument against the long-established notion of religious reform.


**Brian A. Hatcher**

ON

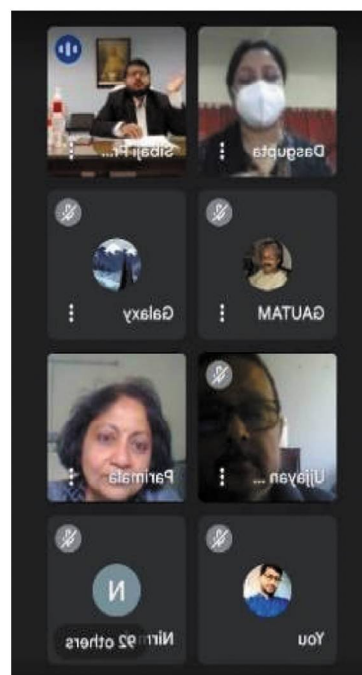
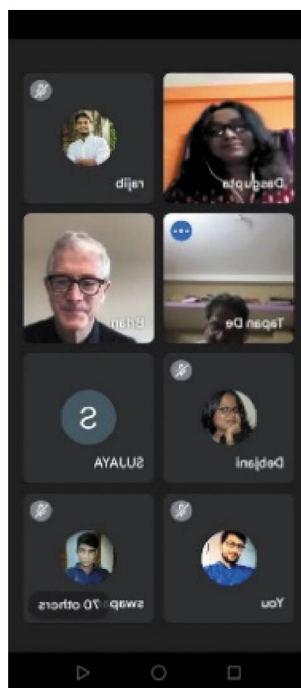
**"RETHINKING HINDUISM IN THE  
EARLY COLONIAL MOMENT."**

Date: 30/08/2021  
Time: 10:00 AM (EST)  
7:30 PM (Indian Time)

Inaugural Address  
Professor and Past Chair of Sociology, Department of Sociology,  
York University, Toronto, ON M3J 1P5 



[meet.google.com/qfw-rpuur-ark](https://meet.google.com/qfw-rpuur-ark)



# Library Science

Date: February 26, 2022

Time: 11 a.m. - 2.15 p.m.

Mode: Online

Google Meet Link: <https://meet.google.com/dsr-rpew-kav>

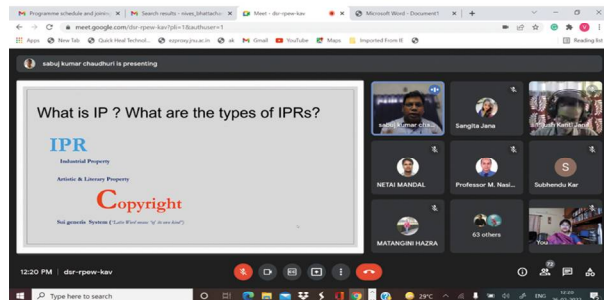
## Title:

## One Day International Webinar on 'Digital archiving of printed documents in view of Copyright Act: Issues and challenges in post Covid era'

### List of Speakers:

- Dr. Md. Nasir Uddin Munshi, Professor, Department of Information Science and Library Management, University of Dhaka
- Dr. Sabuj Kumar Chaudhuri, Dept. of Library and Information Science, University of Calcutta
- Mr. Rifaudeen Meera, University Librarian, South Eastern University of Sri Lanka, Sri Lanka

Total number of registered participants:  
540 from India, Uganda, United Arab Emirates, Nigeria, Phillipines, Algeria, Bangladesh



Copyright happens to be one central idea that has immense impact on librarianship for generations. In true sense of the term it is an exclusive right of the authors or creators or their authorised person or body to reproduce the same work. At the same time it protects from unsolicited tampering. Works covered by copyright range from books, music, paintings, sculpture, and films, to computer programs, databases, advertisements, maps, and technical drawings.

The world's first copyright law was the Statute of Anne, enacted in England in 1710. This Act introduced for the first time the concept of the author of a work being the owner of its copyright, and laid out fixed terms of protection. Following this Act, copyrighted works were required to be deposited at specific copyright libraries, and registered at Stationers' Hall. There was no automatic copyright protection for unpublished works.

Legislation based on the Statute of Anne gradually appeared in other countries, such as the Copyright Act of 1790 in the United States, but copyright legislation remained uncoordinated at an international level until the 19th century. In 1886, however, the Berne Convention was introduced to provide mutual recognition of copyright between nation states, and to promote the development of international standards for copyright protection. The Berne Convention does away with the need to register works separately in each individual country, and has been adopted by almost all the nations of the world (over 140 of the approximately 190 nation states of the world). Following the United States' adoption of the treaty in 1988 the Convention now covers almost all major countries. The Berne Convention remains in force to this day, and continues to provide the basis for international copyright law.

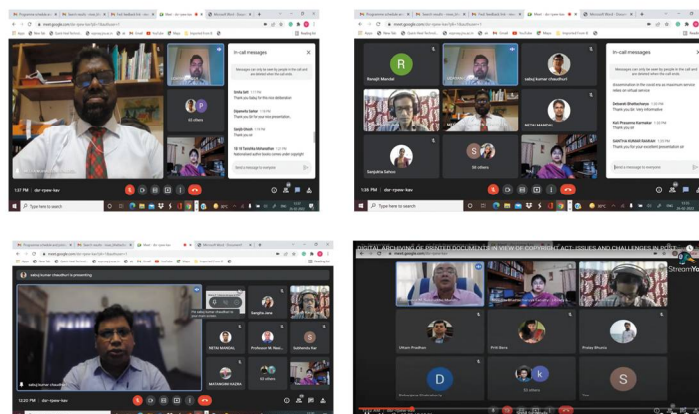
# Library Science

Copyright is the engine of progress. It encourages creativity and innovation and enables producers to benefit financially. You may have come across the words 'copyright protected' on many items you buy. They include movie DVDs, music, books, computer software and a myriad of other things. The term implies they are protected by copyright laws, and only the holders have the right to sell and profit from these products.

But sometimes though the original ideas and works are copyright protected, because of the concept of 'fair use' we find copying of copyrighted material done for a limited and "transformative" purpose, such as comment upon, criticize, or parody a copyrighted work. Such uses can be done without permission from the copyright owner. In other words, fair use is a defense against a claim of copyright infringement. If your use qualifies as a fair use, then it would not be considered an infringement.

The collection and long-term preservation of digital content pose challenges to the intellectual property regime within which libraries and archives are accustomed to work. How to achieve an appropriate balance between copyright owners and users is a topic of ongoing debate in legal and policy circles. Due to the outbreak of the pandemic Covid 19 since December 2019, libraries are bound to give online digital services and the closure of libraries in most of the nations for the general public has forced them to digitise the documents otherwise which would have been distributed in physical form. Are these issues falling under the Copyright Violation Act is the real question. If it is a violation then how could the libraries overcome the hurdle and provide on-time services to the users by providing an e-copy of the documents in need.

With these concepts and ideas in mind and to find solutions to the above problems, the Department of Library and Information Science, Vidyasagar University has planned to organize an International webinar on the topic 'Digital archiving of printed documents in view of Copyright Act: Issues and challenges in post covid era' in the last week of February 2022.



# Business Administration

**Date: 2nd February, 2022**

**Mode: Online**

## Managing Personal Finance and Wealth Creation

The Department of Business Administration, in collaboration with the Association of Mutual Funds in India, organised an International Webinar on “Managing Personal Finance and Wealth creation” on 2nd February, 2022 as a part of the celebration of ‘Azadi ka Amrit Mahotsav’. The theme of the webinar was selected on the belief that during the last few years, the rate of return from the most common and popular investment in banks and post offices etc. has gradually declined. Also, prevailing inflation rates and tax liabilities further reduce the expected return from investments. Wealth creation ensures financial liquidity and helps in the financial crisis at the time of say, medical, educational or retirement requirements. To achieve financial empowerment, it is important that the investors are aware and informed about different financial products and services so that they can get maximum returns in the long-run through investments according to their financial goals.

The webinar provided a platform for interaction and discussion among different academic intellectuals, research scholars, heads of different regulatory agencies, corporate personalities and practitioners, in a single and global platform to deliberate on important issues concerning potential wealth creators with an ultimate objective to arrive with newer ideas and thoughts that may lead the earners to become better investors and ensure a sustainable secured future for themselves and their families.

The Webinar received an overwhelming response with more than 1,700 registrations from all over India and abroad. More than 700 participants joined the online webinar through Zoom and YouTube platform.

Dr. Tarak Nath Sahu, Associate Professor and Head, Department of Business Administration and the Convener of the Webinar welcomed all the resource persons, dignitaries and delegates present in the webinar. The Hon’ble Vice-Chancellor of Vidyasagar University, Prof Sibaji Pratim Basu inaugurated the webinar and delivered the inaugural speech.

As the Chief guest of the Webinar, Prof. Tapan Kumar De, the present Dean, Faculty of Arts and Commerce deliberated a valuable speech. Prof. Satyajit Saha, Dean, Faculty of Science, as the Guest of Honour, graced the occasion through his deliberation.

# Business Administration

Prof. S. Anand, Director, Postgraduate studies and research, College of Banking and Financial studies, Oman, acted as the Speaker of the Webinar and discussed the different alternative avenues of investment and their pros and cons. Shri Surya Kant Sharma, the former DGM-SEBI and Sr. Consultant-AMFI, the second speaker of the webinar, shared the overall investment strategy from the view point of an investor or household with a special emphasis on mutual fund investment.

**DEPARTMENT OF BUSINESS ADMINISTRATION**  
**VIDYASAGAR UNIVERSITY**  
 MIDNAPORE, WEST BENGAL.

In Collaboration with  
**Association of Mutual Funds in India**  
 is organising an International Webinar on  
**"MANAGING PERSONAL FINANCE AND WEALTH CREATION"**

**INAUGURATOR**  
  
**Prof. S. Anand S**  
 Director  
 Postgraduate Studies and Research,  
 College of Banking and Financial  
 Studies (CBFS), Sultanate of Oman

**CHAIRPERSON OF THE SESSION**  
  
**Prof. R. P. Banerjee**  
 Chairman & Director  
 EILM - Kolkata

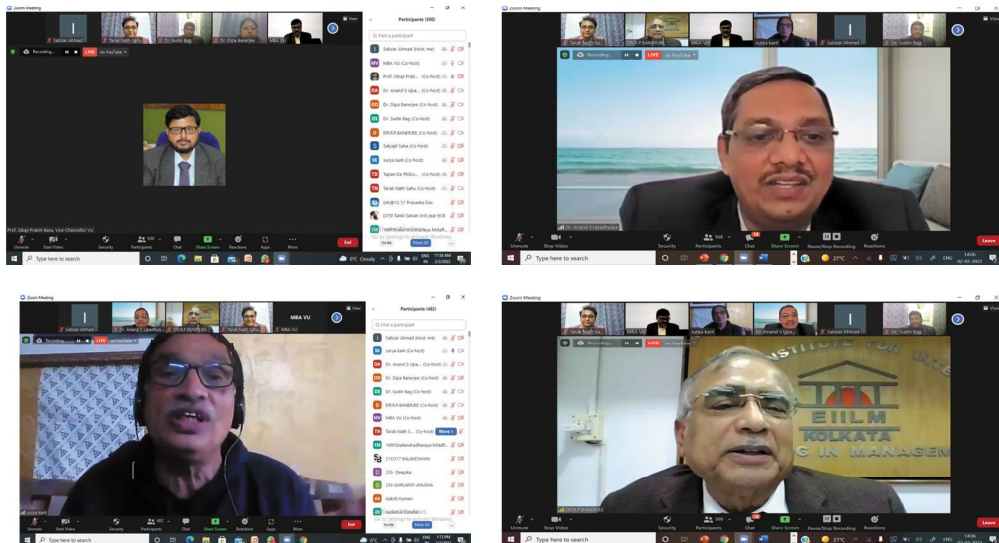
**EMINENT SPEAKERS\***  
  
**Surya Kant Sharma**  
 Sr. Consultant-AMFI  
 (Former DGM SEBI)

**CO-ORINATOR**  
  
**Dr. Tarak Nath Sahu**  
 Associate Professor & Head  
 Department of Business  
 Administration,  
 Vidyasagar University

**Platform: ZOOM**  
  
 Join Zoom Meeting  
<https://us02web.zoom.us/j/810656704552?pwd=OT1hMDJlVmluREUyMmZlRkF1eXZkdz09>  
 Meeting ID: 810 6567 0455    Passcode: 151431

**Participants of the webinar will get E- Certificate**

Prof R.P. Banerjee, Chairman and Director, EILM-Kolkata acted as the Chairperson of the session. The session was coordinated by Dr. Debasish Biswas, Assistant Professor, Department of Business Administration. At the end of the Webinar, a formal vote of thanks was delivered by Dr. Sudin Bag, Assistant Professor, Department of Business Administration.



# Business Administration

Date: 21st March to 27th March, 2022  
Mode: Online

## Seven-day faculty development programme on Research Methodology

The Department of Business Administration in collaboration with Department of Economics and IQAC, Vidyasagar University organised a Seven-day Faculty Development Programme on “Research Methodology” from 21st March to 27th March, 2022.

The theme of the FDP had been selected to guide scholars and academicians execute quality research work as acknowledged by different regulatory and accreditation institutions like UGC, MHRD, AICTE, NAAC etc. In most of the disciplines such as commerce, management etc., there is no specific course on Econometrics, and the research scholars are unaware about the appropriate uses of statistical and econometric tests which can produce robust results. Research findings heavily contribute in policy formulation in different sectors. Accordingly, knowledge of writing and conducting good research is very much essential. In line with these goals, the programme was designed for a topic-wise brief discussion on theory, followed by thorough practical sessions. So that, by the end of the programme, the participants would be able to develop their conceptual clarity and practical knowledge to analysis the data and interpret the results for their research purpose.

The FDP had received an overwhelming response from all over India. The participants were from 10 States like; Maharashtra, Delhi, Assam, Telangana, Punjab, Odisha, Kerala, Jharkhand, Chandigarh and West Bengal. Around 75 participants registered for the programme.

The Hon'ble Vice-Chancellor, Prof Sibaji Pratim Basu inaugurated the programme and motivated the participants through his speech. The programme was graced by the presence of eminent speakers like Professor Girijasankar Mallik, Western Sydney University, Australia, who also presided as the Chief Guest; Prof. Satyajit Saha, the present Dean, Faculty of Science, who was the Guest of Honour of the programme; Registrar, Dr. Jayanta Kishor Nandi, as the special guest and Prof. Madhumangal Pal, Professor of Mathematics and Director, IQAC, as the Guest of Honour. They shared their experiences and enlightened the participants through their wisdom.

The speakers on the first day of the session Prof. Girijasankar Mallik, Western Sydney University, Australia and Prof. Mihir Kumar Pal, Department of Economics, Vidyasagar University, West Bengal broadly discussed the basic Econometrics and application of Econometric Tools. On the second-day Prof. Rudra Prakash Pradhan, Vinod Gupta School of Management, IIT Kharagpur, explained the basics of Time Series through Virtual mode. In the second half Prof. Girijasankar Mallik elucidated on the topic Logit and Order Logit Modelling. Prof. Debasish Mondal, Department of Economics, Vidyasagar University discussed several statistical tests like Unit Root Test, etc. that can be used to generate robust results for secondary datasets. Dr. Chandrima Chakraborty, Department of Economics, Vidyasagar University, and Prof. Girijasankar Mallik further elaborated on different other statistical tools like VECM, VAR, Volatility Modelling on the fourth day of the programme. The fifth day was again presided by Prof. Girijasankar Mallik who discussed Panel Data Modelling and tests to be performed to generate results from a Panel data. On the same day, Dr. Ramesh Chandra Das, Associate Professor of Economics at Vidyasagar University, explained Forecasting using Time Series Technique. The sixth day speaker was Dr. Pinaki Das, Associate Professor, Department of Economics, Vidyasagar University, who detailed into the types of panel data and use of statistical tools for such data. The external and inhouse resource persons tried their level best to cover each and every topic of Time series econometrics, Panel data Analysis, Logit and Probit modelling etc. and explained how these can be performed using statistical software like STATA and EViews. The sessions were very well coordinated by the Program Coordinators Dr. Debasish Biswas, Assistant Professor, Department of Business Administration, Vidyasagar University, Dr. Sudin Bag, Assistant Professor, Department of Business Administration, Vidyasagar University and Dr. Dipa Banerjee, Assistant Professor, Department of Business Administration, Vidyasagar University.

# Business Administration

The Seven Day programme came to an end with the valedictory session which was graced by the presence of Prof. Tapan Kumar De, Dean, Faculty of Arts and Commerce and Prof. Madhumangal Pal, Director, IQAC, Vidyasagar University. They appreciated the efforts of the Conveners Dr. Tarak Nath Sahu, Associate Professor and Head, Department of Business Administration, Vidyasagar University and Dr. Shrabanti Maity, Associate Professor and Head, Department of Economics, Vidyasagar University for organizing such programmes and congratulated on completing the programme successfully. They also recognized the need of organizing such programmes in the future for the benefit of the scholars and generation of quality research work.

The FDP received a lot of positive feedback from faculty members and research scholars from both the groups – online and offline. Each day there were two sessions of two hours including open question-answer session. Google Meet was used as the online platform and the session links and related data for practical was provided before the start of the session. The registered participants were engaged in a special WhatsApp group and by email. After completion of the FDP, on the seventh day, the participants' progress was checked through an online assessment based on the sessions. Seventy-four e-certificates were awarded to the registered participants by email.



# Philosophy

Date: 7th January 2022  
Mode: Online

## Title: Cognitive Science: An Emergent Interdisciplinary Field Developed After Independence

The Department of Philosophy, Vidyasagar University organised an online workshop on "Cognitive Science: An Emergent Interdisciplinary Field Developed After Independence" on 7th January 2022 to celebrate seventy five years of Indian independence. The programme commenced at 10.30 am after a process of (free) online registration of the participants – which comprised a section of the students of the Departmental of Philosophy and research scholars. The entire inaugural session was chaired by Prof. Prabhat Kumar Misra, Retired Professor, Dept. Of Philosophy, Vidyasagar University. The HoD, Prof. Bhupendra Chandra Das greeted the participants with his welcome address. In absence of the Hon'ble Vice Chancellor, Prof. Tapan kumar De, Dean, Faculty Council of Post Graduate Studies in Arts and Commerce inaugurated the workshop and spoke on the importance of such workshops. According to Prof. De, the workshop was appropriate for the occasion as Cognitive Science began its journey after 1950 and established itself as an interdisciplinary research area. Cognitive Science relates Philosophy with Neuroscience, Anthropology, Artificial Intelligence, Psychology, Mathematics, Philosophy of Mind and other disciplines and tries to bring new insights into the working of the mind.

The poster is titled "One Day National Level Workshop" and is held in honor of the 75th anniversary of Indian independence. The main title of the workshop is "Cognitive Science: An Emergent Interdisciplinary Field Developed after Independence". It is organized by the Department of Philosophy at Vidyasagar University, Midnapore, West Bengal. The workshop is scheduled for January 7, 2022, starting at 10:30 AM. Two esteemed speakers are featured: Professor Lopamudra Choudhury from Jadavpur University and Professor Smita Sirker from Jawaharlal Nehru University. The registration is free, and a Google Meet link is provided for online participation. A feedback form link is also included, with a note that submission is mandatory for receiving an E-Certificate.

**One Day National Level Workshop**  
On  
**Cognitive Science: An Emergent Interdisciplinary Field Developed after Independence**  
Organized by  
Department of Philosophy, Vidyasagar University, Midnapore, W.B, 721102

Date: 07/01/2022  
Time: 10.30 am Onwards

Esteemed Speakers

**Professor Lopamudra Choudhury,**  
Department of Philosophy  
Jadavpur University

**Professor Smita Sirker**  
Department of Philosophy  
Jawaharlal Nehru University

Registration Link:  
<https://forms.gle/UEicFF6MWSPrka2r8>

\*Free Registration\*

Google Meet Link:  
<http://meet.google.com/qky-srzy-prn>  
Join By Phone(US) +1484-756-1292  
Pin: 585571517

\*\*Feedback link will be provided. Feedback forms submission are mandatory to get the E-Certificate\*\*

# Philosophy

Prof. Satyajit Saha, Dean, Faculty Council of Science, said a few words regarding the relevance of the workshop. Thereafter the Chairperson, Prof. Misra, delivered his speech. The inaugural session was concluded by Dr. Shewli Dutta, Assistant Professor, Vidyasagar University with a brief vote of thanks.

Dr. Smita Sirkar, Associate Professor, Jawaharlal Nehru University, was the first speaker of the workshop. The title of her lecture was “Historical Development of Cognitive Science”. According to Dr. Sirkar, the intellectual landscape related to human knowledge and experimental psychology began to change dramatically in 1956. George Miller proposed that memory limitations can be overcome by recoding information into chunks, mental representations that require mental procedures for encoding and decoding the information. At that time, primitive computers had been around for only a few years, but pioneers such as John McCarthy, Marvin Minsky, Allen Newell, and Herbert Simon were founding the field of artificial intelligence.

Dr. Sirkar pointed out that the central idea of cognitive science is best understood in terms of representational structures in the mind and computational procedures that operate on those structures. Most work in cognitive science assumes that the mind has mental representations analogous to computer data structures, and computational procedures similar to computational algorithms. She touched upon such topics as the information processing system of the mind, a critique of Behaviourism, input-output model, human species as representation, Turing Machine, Connectionist Model etc.

The next speaker, Prof. Lopamudra Choudhury, Professor, Jadavpur University, discussed the gamut of thriving research areas related to Cognitive Science. According to Prof. Choudhury, reasoning, emotion, language, perception and memory are some of the areas where a scholar of Cognitive Science can pursue his/her research work. She talked about institutional development in the area such as the Cognitive Science Society, Journal of Cognitive Science, and introduced the audience to various ultramodern devices like EEG, FMRI, PET that helps an investigator understand the functioning of the human brain and activities of different regions thereof. She spoke on different types of software dedicated to optical character recognition, speech recognition, machine translation etc. which employ algorithms for understanding human emotion, reasoning etc.

After the speakers had concluded their presentations, a vibrant interactive session ensued. At the end Dr. Sumana Bera, Assistant Professor, Vidyasagar University ended the session with a vote of thanks to the administrators, speakers, participants and all the personnels directly or indirectly related to the workshop.

# Philosophy

## Title: International Webinar on The Role of Contemporary Vedantic Thinkers on Indian Freedom Movement

Date: 15th February 2022

Mode: Online. Google meet link fzy-vbpg-fyb

The programme commenced at 7 pm with the welcome address delivered by the HoD, Professor Bhupendra Chandra Das. Professor Das greeted the participants with a brief introductory note on the theme of the webinar. According to him, Vinayak Damodar Savarkar, Bal Gangadhar Tilak, Thiruvalluvar are the names of some philosophers who made theoretical Vedanta Practical. He also mentioned some important points that helps one to understand the relation between philosophical speculation and nation building. In absence of the Hon'ble Vice Chancellor of our University, Prof. Tapan kumar De, Dean, Faculty Council of Post Graduate Studies in Arts and Commerce inaugurated the webinar and delivered a small speech on the significance of such webinars. He said that most of modern Indian thinkers are Vedantins and they blended the teachings of Veda to everyday practice to prepare each Indians a greater human being. The technical session was chaired by Prof. Prabhat Kumar Misra, Retd. Professor, Department of Philosophy, Vidyasagar University. Professor Nalini Bhushan, Andrew W. Mellon Professor in the Humanities and Professor of Philosophy, Smith College, USA, was the first speaker of the webinar.

The poster is for a webinar titled "One Day (Online) International Webinar On The Role of Contemporary Vedantic Thinkers on India's Freedom Movement". It is organized by the Department of Philosophy, Vidyasagar University, Midnapore, W.B., 721102. The date is 15.02.2022, and the time is 7 pm onwards. The poster features two speakers: Professor Raghunath Ghosh (Retd.), Department of Philosophy, University of North Bengal, and Professor Nalini Bhushan, Andrew W. Mellon Professor in the Humanities and Professor of Philosophy, Smith College, USA. The registration link is <https://forms.gle/zamQrPyvohV6pytT7>. The poster also mentions that registration is free and the last date of registration is 13.02.2022. A feedback link will be provided, and feedback form submission is mandatory to get the E-Certificate.

One Day (Online) International Webinar  
On  
**The Role of Contemporary Vedantic Thinkers on India's Freedom Movement**  
Organized by  
Department of Philosophy, Vidyasagar University, Midnapore, W.B., 721102  
Date: 15.02.2022      Esteemed Speakers      Time: 7 pm Onwards

**Professor Raghunath Ghosh (Retd.),**  
Department of Philosophy,  
University of North Bengal

**Professor Nalini Bhushan**  
Andrew W. Mellon Professor in the  
Humanities and Professor of  
Philosophy, Smith College, USA

Registration Link:  
<https://forms.gle/zamQrPyvohV6pytT7>

\*Free Registration\*  
Last Date of Registration: 13.02.2022

Google Meet Link:

\*Feedback link will be provided. Feedback form submission are mandatory to get the E-Certificate

# Philosophy

The title of her lecture was “The Creativity of Indian Philosophy: How Vedantic Thinking Took Center Stage in the Quest for Indian Independence”. She tried to attend the creative work of Swami Vivekananda and Mahatma Gandhi who wrote and taught during the period of colonial rule. Both, according to her, were ecumenical thinkers and tried to establish a Vedantic Universalism. Both reinterpret philosophy through dialogue, and tried to falsify the nature of the material world. Both Rabindranath and Gandhi were Indian Nationalist thinkers and emphasized on the practice of self-mastery. According to Gandhi Independence is meaningless without self-mastery or satyagraha which is based on the prescriptions of Bhagavadgita. Mahatma Gandhi was not simply a thinker, but also an activist of Indian National movement. Professor Bhushan also highlighted the impact of philosophy on the freedom movement then, and the impact of philosophy to us as an independent nation now. Her talk was partly autobiographical, going back to her training in philosophy at Madras Christian College. She reflected on the importance of the recovery of our intellectual lineage, paying tribute to those who went before, and paving the way for those who are to come after.

The next was speaker Professor Raghunath Ghosh, Retd. Professor, Department of Philosophy, North Bengal University, presently Senior Fellow, ICPR, and Emeritus Fellow, UGC. The title of his lecture was, “Sri Aurobinda’s Concept of Nation-Soul: An Evaluation”. He discussed on the philosophy of Sri Aurobindo, who was also a poet, Acharya and Indian nationalist. The American philosopher Ken Wilber has called Sri Aurobindo “India’s greatest modern philosopher sage”. Professor Ghosh said that Aurobindo was a true Acharya as he prescribed to practice all those dharmas which he practiced himself. According to Aurobindo, Nationalism equals to humanity, fraternity, honour. We should respect, sacrifice and progress for the sake of humanity. Nationalism starts with the concept of motherhood, that is, the love for motherland. Nation-soul-mother – all three are hyphenated due to their close relationship. Professor Ghosh also talked about Aurobindo’s concept of five Indian Values, Vedanta concept of Maya, divine body etc. with immense clarification.

At the end of the technical session, Professor Prabhat Kumar Misra, the chairperson of the session, summed up the main arguments of the speakers and invited questions followed which a vibrant interactive session ensued. After his conclusion four paper presentations took place. Just before the commencement of the first presentation, Prof. Satyajit Saha, Dean, Faculty Council of Science, joined the webinar and said a few words regarding the relevance of such programmes. At the end Dr. Sumana Bera, Assistant Professor, Department of Philosophy, Vidyasagar University ended the session with a formal vote of thanks to the administrators, speakers, participants and all the key personnel directly or indirectly related to the webinar.

# Political Science

Date: 15 December, 2021  
Mode: Online

## Report on the Webinar “Constitution, Public Policy and Development”

In today's Webinar the Hon'ble VC was present along with resource persons: Prof. Bisnu Choudhury, Prof Manas Chakraborty, Deans of Arts and Science faculty, The Registrar, VU, the faculty of our department and accompanied by Research Scholars, Paper-presenters and the students.

With the permission of the Hon'ble VC, our Teacher in Charge, Dr. Suratha Kumar Malik gave the Welcome Address. First Dr Sujay Ghosh gave a short concept note of the Seminar, saying: “As it has been said that India started her Constitutional journeys 75 years back and when Indian Democracy started, many ‘Pandits’ in the West predicted that Indian Democracy won't survive”. In continuation he also said that “Some alternative view dawned upon them after the end of the Cold War when they took a fresh look and while investigating the breakaway of Soviet Union, they found that lack of democracy was among the reasons and that time India experimented with democracy gained respect and was recognized all over in the world”.

With the end of Dr. Sujay Ghosh's speech Dr. Swatilekha Bhattacharya invited the Dean of Arts, Prof. Tapan De to say few lines. Prof. De mentioned that Indian constitution is the main pillar or the three pillars of the Indian democracy that is the judiciary, administrative and the legislative department.



# Political Science

Indian constitution is standing on a philosophy of all-round development. He concluded by saying that developed that the life of our Constitution isn't static rather dynamic and as and when situation demands the constitution can be amended.

Next Dr. Swatilekha Bhattacharya invited our guest of honor, the Registrar, VU to say few lines on the webinar. He said: "As an Indian citizen I feel this constitution or coalition development is not only important to the students of the political sciences but it is very much important to each and every one". He concluded by mentioning how the fundamental rights of the constitution of India protects the sovereignty of each and every individual as well as assure the developments of ourselves.

Next Dr. Bhattacharya invited the Honorable VC to formally inaugurate the webinar and also to deliver his inaugural address. The Hon'ble VC addressed us (the students) that we have to focus on the pre independence period, otherwise we cannot understand the India journey of the Indian State since 1947 and onward in 1950 when the Constitution was officially started functioning. He also mentioned the significance of colonialism, its merits and demerits and how it has opened the door for the Indians towards the Enlightenment ideas of the West about the American Revolution, the French Revolution, the ideas of equality, liberty and fraternity, all these important components have been touched. Sir also pointed out that constitution isn't just a book but it's the spirit which the political systems, the leaders, the politicians, the policymakers they should follow. The Hon'ble VC concluded his inaugural speech and declared 'open' of the webinar and everyone. Dr. Bhattacharya gave the formal vote of thanks of the inaugural session.

Dr. Bhattacharya then invited Prof. Ambarish Mukherji to chair over the first Technical Session. Prof. Mukherji invited Prof. Manas Chakraborty to deliver his speech. With this the 1st technical Session started. Prof. Chakraborty in detail spoken about the meaning of public policy and enlightened us on the concept of public policy, by citing the various definitions by various scholars on Policy Studies and the policy sciences approach starting from Harold Lasswell and many other. He also focused on various issues like process of policy formulation particularly in a state like ours where maximum is policy welfare. Lastly, he also mentioned about the globalizing environment in the present era which we are living in that affects the public policy making.

Next Prof. Ambarish Mukherji requested Prof. Bisnu Choudhury to deliver his speech. His topic was on 'Constitution and the Center-State Relations'. He discussed very important issues starting from the inspirations behind the framing of our constitution and the reasons behind the adoption of parliamentary federal structure. He also traveled through the 70 years of history of the Indian federal system and the tension areas that cropped up overtime between the center and the state.

Next, Dr. Ambarish Mukherjee invited Dr. Ghosh and Dr. Bhattacharya for the discussion session and to comment on the last two speeches given by professor Manas Chakraborty and Professor Bisnu Choudhury. After the discussion session a short question answer session was held before the lunch break and the 1st Technical Session ended.

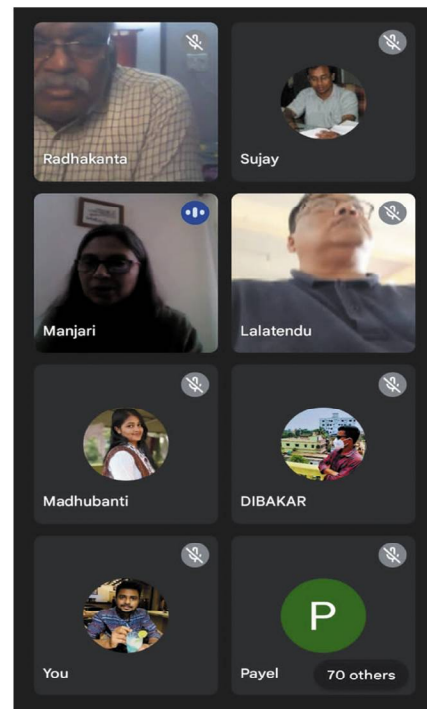
# Political Science

Date: 31st May  
and 1st June 2022  
Mode: Online

## Title: Two Days National Webinar on 'Electoral Politics and Citizenship in post-Independence India'

Under the aegis of our honorable Vice chancellor, Prof. Sibaji Pratim Basu, this webinar was organized by Dept. of Political Science, Vidyasagar University on 31st May and 1st June 2022 and it had three sessions: Inaugural session, Technical session 1 and Technical session 2. This report presents the encapsulation of the main arguments of the key speakers and a brief summary of the paper presenters.

The inaugural session, chaired by Prof. Ambarish Mukhopadhyay, was foundational as it set the tone and momentum for the forthcoming lectures. Firstly, Dr. Tapan De, in his inaugural address, highlighting the popularity of Democracy as form of governance, its indirect participatory nature and the fundamental rights entitled to citizens, aired the issue of democratic backsliding. In addition, he also briefly spotlighted 'Duties' that citizens and political parties possess to safeguard the democratic values, procedures and institutions. Then Prof. Ambarish Mukherjee, in his concluding remarks, presented a broad conception of citizens' political participation that is not limited to periodic casting of votes at the time of election. Furthermore, he also touched various issues such as electoral reforms, violence and corruption during election, and also divergent conceptions of citizenship, namely traditional, global and netizens.



# Political Science

Two eminent speakers: Prof. Radhakanta Mallik and Prof. Manjari Katju lectured in this session. Prof. Radhakanta Mallik spoke on the topic 'Indian Constitution in strengthening Democracy and Citizenship'. He started with explaining the distinctiveness of India's acquisition of constitutional democracy from the West and in that explanation he mentioned the representative character of Indian constitution, reflected in the preamble's first phrase and also the indiscriminate entitlement of rights to all citizens, electoral manifestos of political parties, and administrative reforms which reflect the accommodative aspects providing every stratum of people an opportunity to participate. Lastly, he concluded by mentioning the need of the hour which are: 1) Cessation of electoral bonds 2) Intervention of Supreme court to prohibit the usage of religion as a means of mobilizing people and 3) Citizens active engagement to preserve democracy. The second speaker, Prof. Katju spoke about the 'procedural part of electoral politics in contemporary time'. She began with defining citizenship and election, the former as a normative concept and the latter as an empirical exercise, and asserted that despite institutions being a product of social, economic and political configurations, they exert influence on politics and the course of politics. Additionally, she spoke about the regulatory and educative role of Election Commission (EC) in which she explained how EC equalizes citizens through enfranchisement, and also detailed the complexity of conducting an election. Lastly, she concluded by conceptualizing the works of EC, that are: 1) Nation building 2) Modernization and 3) Political awareness.



# Santali

on 16-05-202,  
at 4.00 P.M. to 8.00 P.M.  
online mode

## 117th Birthday Celebration of Pt. Raghunath Murmu

117th Birthday Celebration of Pt. Raghunath Murmu was held on 16-05-202, at 4.00 P.M. to 8.00 P.M. through the Department of Santali V.U. in online mode. He was inventor of Santali Script Olchiki and he has wrote about 21 Santali olchiki books and he was very much popular in Santal Society. In this webinar programme about 75 participants were present.

### PROGRAMME

16.05.2022 – Topic – “Pt. R.N. Murmu-Birthday Celebration” – on the auspicious of 75th Azadi Ka Amrit Mahotsav of V.U. Midnapore, W.B.

4.00 P.M. to 5.30 P.M.- Inaugural Session

4.00 P.M. – Welcome Address – Dr. Ratan Hembram, Asst. Prof. & Head, Dept. of Santali, V.U.

4.10 P.M. – Inaugural Address – Prof. Tapan Kumar De, Dean, Arts & Com., V.U., W.B.

4.30 P.M. – Chief Guest Address – Prof. Satyajit Saha, Dean, Since, V.U., W.B.

4.40 P.M. – Key note Address – Dr. Sushil Kr. Hansda, Retd.- I.C., V.U., W.B.

4.50 P.M. – Address by Guest –Dr. Suhrid Kr. Bhowmick, Retd.- Asso. Prof. Uluberia college. W.B.

5.00 P.M. – Address by Guest – Sri Kalicharan Hansda, IFS, Rtd. Odisha.

SECOND SESSION –

5.20 P.M. to 8.00 P.M – Chairperson- Dr. Sushil Kr. Hansda, Retd. I.C., V.U., W.B.

5.30 P.M.- Speaker – (1) Sri Nabin Besra – Bankura, W.B.

5.40 P.M.- Speaker – (2) Sri Sarat Ch. Mardi – Bankura, W.B.

5.50 P.M.-Speaker – (3) Dr. Naku Hansda,- S.U., Sambalpur, Odisha

6.05 P.M. -Speaker – (4) Dr. Jatindranath Besra,- Maharaja Sriram Bhanj Deo, U.Baripada,Odisha

6.20 P.M. - Speaker – (5) Dr. Dhaneswar Manjhi,-Asst. Prof. & TIC-V.B., Shantinikatan, W.B.

7.20 P.M. - Speaker – (6) Mr. Bhagla Saren – Haludboni – Jamshedpur – 02

7.35 p.m.- Chairpersons Speech – Dr. Sushil Kr. Hansda, Retd. I.C., V.U., W.B

7.50 P.M. to 8.00 P.M.- Vote of Thanks –(10) Mr. Shyamcharan Hembrom,

Asst. Prof., Dept. of Santali, V.U., W.B.

# Santali

15th November, 2021  
from 12.00

## One day webinar on the 146th Birthday Anniversary of 'Birsa Munda' Distingugaished Freedom Fighter

Chief Guest – dr. Sushrid Kumar Bhowmick, Eliment Santali Literature.

Speaker – Dr. Ratan Hembram, Asst. Prof., Dept of Santali, V.U.

Chief Speaker – Dr. Sushil Kumar Hansda, Former Inspector of colleges, V.U.

Inaugurator – Professor Shibaji Pratim Basu, Hon'able Vice-Chancellor, Vidyasagar University.

Welcome Song – By the Students of Santali, Dept. of Santali, V.U.

Welcome address – Sri Shyamcharan Hembrom, Head, dept of Santali, V.U.

Vote of thanks – Dr. Dulee Hembrom

Participants – About – 75 participants are participated in the webinar.

Note – Birsa Munda was born 15th November in the year 1875 at the native village chalkad under the police station of Tamar, District – Ranchi in Jharkhand. His movement name is called Ulgulan he died on 6th june, 1900. He started Ulgulan in the 1900 years. As a result of the apprising CNT Act. Was regulated in the year 1908.

## One day 168th 'HUL DIWAS' cum Seminar

30-06-2022  
at 11.00 A.M. to 5.00 P.M

An One day 168th 'HUL DIWAS' cum seminar was organized in the Department of Santali, V.U. on 30-06-2022 at 11.00 A.M. to 5.00 P.M. by the Students of 2nd& 4th Semester, CBCS Students and all the faculty members of Department of Santali, V.U. In this programme Sri Shyamcharan Hembrom and Dr. Khudiram Murmu Delivered the Special Lecture many students participated in the programme with Speech, Songs and dances I this 75th AZADI KI AMRIT MAHOTSAV Occasion about more than 100 student we are participated in this programme. Through this programme a Students became aware the movement of Sidhu, Kanhu, Chand, Bhayro, Phulo, Jhano and CNT Act. 1908. And its importance of Sidhu-Kanhu HUL.

# Santali



# Sociology

## Title: Understanding Social Issues in Indian Nationalist Movement”

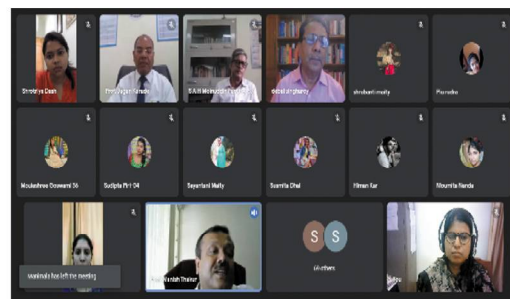
Date: 29.03.2022

Mode: Online <https://meet.google.com/wcf-eivb-wac>

### Resource persons for the Webinar:

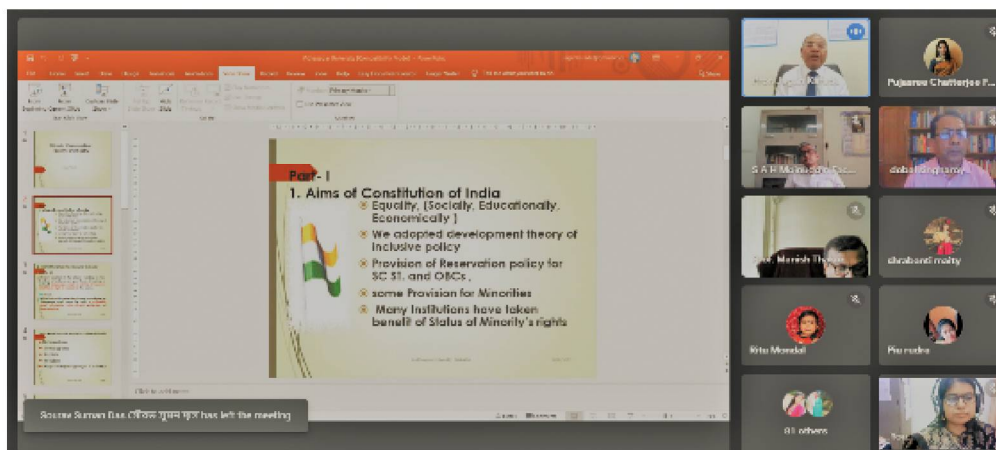
- Prof. Debal K Singharoy, Former Professor of Sociology, IGNOU
- Prof. Jagan Karade, Head, Department of Sociology, Shivaji University, Kolhapur.
- Prof. Manish K. Thakur, Professor, IIM, Calcutta

On the occasion of India's 75th year of independence, Department of Sociology of Vidyasagar University in collaboration with Sociology Alumni Association, Vidyasagar University, while celebrating Azadi ka Amrit Mahotsav, is going to organize a National Webinar on “Understanding Social Issues in Indian Nationalist Movement” on 29.03.2022. The webinar attempts to understand the relevance of various social issues which were predominant in Indian society prior to the Independence. India became independent in 1947 through ‘transfer of power’. India's freedom struggle is not a truncated event but rather it was a long period of various social and political issues which led to its culmination.



# Sociology

In liberating India from the British rule, Indian leaders have identified various social components which are unique to India's identity. In the decades leading up to independence, our country was facing various issues like its poor economic condition, illiteracy and predominance of superstitious beliefs of people, blind belief in religion, hierarchical caste-based dominance and marginalisation of some sections of people and to some extent, lack of unity among the Indians. Indians didn't had solidarity, which was essential in creating a nation-wide united sense of patriotism (Robb, 2002). The movements of Mahatma Gandhi and B.R Ambedkar regarding untouchability points to the relevance of caste related issues in pre-independent India. The rising tide of Dalit consciousness under the leadership of Ambedkar paved the way for their recognition as a distinct identity since 19th century. While discussing the relevant social issues in Indian nationalist movement, the subtle role of communalism cannot be denied. Current Indian political life is also stifled with communal tension which has its long roots in history. The need for economic freedom along with other factors like education, emergence of new ideas were pertinent issues in India's freedom movement.



## Themes:

- The relevant social issues in India's nationalist movement
- The importance of caste related issues in Indian Independence
- Communalism and pre independent India
- Ideas that inspired the struggle for independence

# ANTHROPOLOGY

## Title: Problems and Prospects of Tribal Population in India

**Date: 09/03/2022**

**Time: 11:00 AM to 06:00 PM**

### List of Invited Speakers

**Prof. Sarthak Sengupta, Former Professor of Anthropology,  
Dept. of Anthropology, Dibrugarh University**

**Prof. Sarit Kumar Chaudhuri, Dept. of Anthropology,  
Rajiv Gandhi University**

India with 8.6% of tribal population is finding it difficult to bridge the gap that exists between tribal and non-tribal population in regards to socio-economic condition, health and health care. Though most of the tribal population of India is very hard-working, but dependence on primitive technology makes their effort less effective. Most of the tribal population in India lives in rural area and many of them in very remote places. As a result, availability and accessibility to good education, healthcare and other social support is very low among them. Though many of them can access to different services but affordability is also low due to low socio-economic status. Malnutrition and poor health and lack of proper health seeking behavior are a cruel reality that has become so normal that they don't even consider most of those as problems. Even after seven decades of independence, India is finding it difficult to bridge the gap that exists between tribal and non-tribal population in regards to healthcare. It should also be noted considerable progress has been made over the years. Poverty among tribal population declined by more than a third, healthcare facilities improved in rural/tribal areas and others. Though notable development has been made, yet the tribal populations of India account for over a quarter of the country's poorest people and they suffer triple burden of disease, especially communicable disease. The proposed webinar will focus upon the various problems and prospects of tribal population of India. It is very important for academic community to focus on problems of tribal population and search for solutions. It is also very important to regularly focus light to get attention of the mainstream society and government towards the problems and challenges of tribal population. To serve the above mentioned goals the Dept. of Anthropology, Vidyasagar University will organize a webinar to discuss social, economic, health and healthcare problems of tribal population of India.

# ANTHROPOLOGY

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**Prof. Sarit Kumar Chaudhuri, Dept. of Anthropology,  
Rajiv Gandhi University**

India with 8.6% of tribal population is finding it difficult to bridge the gap that exists between tribal and non-tribal population in regards to socio-economic condition, health and health care. Though most of the tribal population of India is very hard-working, but dependence on primitive technology makes their effort less effective. Most of the tribal population in India lives in rural area and many of them in very remote places. As a result, availability and accessibility to good education, healthcare and other social support is very low among them. Though many of them can access to different services but affordability is also low due to low socio-economic status. Malnutrition and poor health and lack of proper health seeking behavior are a cruel reality that has become so normal that they don't even consider most of those as problems. Even after seven decades of independence, India is finding it difficult to bridge the gap that exists between tribal and non-tribal population in regards to healthcare. It should also be noted considerable progress has been made over the years. Poverty among tribal population declined by more than a third, healthcare facilities improved in rural/tribal areas and others. Though notable development has been made, yet the tribal populations of India account for over a quarter of the country's poorest people and they suffer triple burden of disease, especially communicable disease. The proposed webinar will focus upon the various problems and prospects of tribal population of India. It is very important for academic community to focus on problems of tribal population and search for solutions. It is also very important to regularly focus light to get attention of the mainstream society and government towards the problems and challenges of tribal population. To serve the above mentioned goals the Dept. of Anthropology, Vidyasagar University will organize a webinar to discuss social, economic, health and healthcare problems of tribal population of India.



# BMLSM

## Bio-Medical Laboratory Science and Management

### Title: Comparative aspect of health and nutritional studies between pre-independence and post independence phases

#### List of speakers:

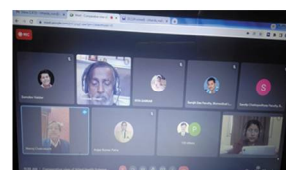
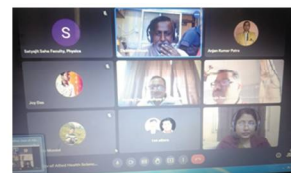
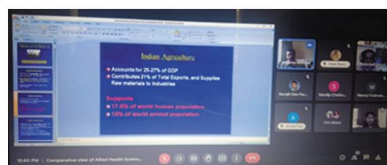
1. Dr. Monoj Kumar Chakrabarty, Emeritus Scientist, ICMR-National Institute of Cholera & Enteric Diseases
2. Dr. Sukanta Mondal, Principal Scientist, ICAR-National Institute of Animal Nutrition & Physiology, Bangaluru

**Date: 28.01.2022 Time: 10:30 am onwards**

**Online: <https://meet.google.com/jvo-yqgt-xae>**

The webinar highlighted the national health status in comparative aspect between pre and post independent phases. Different health care strata which were not framed in pre-independent era but primary health care strata was developed in post independent period from the view point of disease prevention, health promotion and early recovery from diseases. By such improvement, in font mortality rate, maternal mortality rate, under 5 mortality rate were decreased significantly by upgraded health care service. The diagnostic techniques were dramatically improved for early detection of diseases that minimize life risk. Biochemical, Biophysical, imaging techniques were developed and upgraded so that prediction about disease can be identified.

Nutrition is closely related with health status. Nutrition improve immunity which is associated with disease prevention. Food productivity, food preservation, food fortification and food security all were developed in post-independent phase which are closely linked with health promotion and disease prevention. Supplementary nutrition programmees were developed in post-independent phase which is a mile stone in community health upgradation and disease regulation.



# Botany

## National Webinar on Recent Trends of Research in Plant and Microbial Sciences 3-4 February, 2022

<p><b>Organising Committee:</b></p> <p><b>Chief Patron</b> <b>Prof. Shibaji Pratin Basu</b> Vice Chancellor, Vidyasagar University</p> <p><b>Patron</b> <b>Prof. Satyajit Saha</b> Dean (Actg), Faculty of Science, Vidyasagar University</p> <p><b>President</b> <b>Dr. Asis Kumar Nandi</b> Head, Department of Botany and Forestry</p> <p><b>Organizing Secretary</b> <b>Prof. Debdulal Banerjee</b> Coordinator, UGC-DRS SAP II Department of Botany and Forestry</p> <p><b>Treasurer</b> <b>Dr. Gunjan Biswas</b> Department of Botany and Forestry</p> <p><b>Members</b> <b>Prof. Amal Kumar Mondal</b> <b>Prof. Prakash Karmakar</b> <b>Mr. Ram Kumar Bhakat</b> <b>Dr. Nilanjana Banerjee</b> Department of Botany and Forestry</p>	<p><b>National Advisory Committee:</b></p> <p>Prof. P. S. Bisht, Gobind Ballabh Pant University Prof. V. K. Anand, Jammu University Prof. Arun Lahiri Majumdar, Bose Institute Prof. Kashinath Bhattacharjya, Visva Bharati Prof. Krishnend Acharya, Calcutta University Prof. Sankar Narayan Sinha, Kalyani University Prof. Subrata Raha, Sidhu Kanhu Birla University Prof. Subrata Mondal, Visva Bharati Prof. Adimpunya Mitra, IIT, Kharagpur Prof. T. K. Maity, Burdwan University Prof. Chandan Sengupta, Kalyani University Prof. Mrinal K. Maity, IIT, Kharagpur Prof. Subhan Mukherjee, Kalyani University Prof. Anath Bandhu Das, Utkal University Prof. Rabindra Nath Sinha, Tripura University Prof. Binota Nayak, Sambalpur University Prof. G. G. Maity, Kalyani University Prof. Aloka Bhattacharjee, Burdwan University Prof. Rite Kundu, Calcutta University Prof. Abhijit Banerjee, Burdwan University</p> <p>Online sessions will be hosted in <b>Google meet</b> <b>Student Registration Free</b> <b>Registration Link</b> <a href="https://docs.google.com/forms/d/e/FAIpQLSdfU7z3joTVlwHfllwzGfThyEHlgH-M3HGorG5EqA/viewform?usp=cf_link">https://docs.google.com/forms/d/e/FAIpQLSdfU7z3joTVlwHfllwzGfThyEHlgH-M3HGorG5EqA/viewform?usp=cf_link</a></p> <p><b>Address for Correspondence:</b> Prof. Debdulal Banerjee, Organizing Secretary, RTRPMS-2022, Dept. of Botany and Forestry, Vidyasagar University, Midnapore-721102, West Bengal E-mail: <a href="mailto:db@mail.vidyasagar.ac.in">db@mail.vidyasagar.ac.in</a> Phone: 0932276340 (CB), 09831336353 (CB), 09476434998 (AKA) Website: <a href="http://www.vidyasagar.ac.in">www.vidyasagar.ac.in</a></p>	<p><b>UGC DRS SAP II Sponsored</b></p> <p><b>National Webinar on</b></p> <p><b>Recent Trends of Research in Plant and Microbial Sciences</b></p> <p><b>(RTRPMS-2022)</b></p> <p>(3rd February—4th February, 2022)</p>   <p><b>Organized by:</b> <b>Department of Botany and Forestry</b> <b>Vidyasagar University</b> Midnapore- 721102 West Bengal, India</p>
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**REGISTRATION FORM**  
(Please fill in block letters)  
UGC DRS SAP II Sponsored  
National Webinar  
on  
Recent Trends of Research in Plant and Microbial Sciences (RTRPMS-2022)  
(3<sup>rd</sup> February—4<sup>th</sup> February, 2022)  
Organized by:  
Department of Botany and Forestry,  
Vidyasagar University,  
Midnapore—721102, West Bengal, India

Name: .....

Designation: .....

Institute: .....

Address for correspondence: .....

E-mail: .....

Phone/Mobile: .....

Title of abstract: .....

Presentation: (if any) : Yes / No

Details of registration fees paid:  
Date: ..... Amount: Rs. ....

Signature: .....

Place: ..... Date: .....

Filled-in-Registration form may be scanned and send through e-mail along with the abstract to the organizing secretary at: [db@mail.vidyasagar.ac.in](mailto:db@mail.vidyasagar.ac.in)

**Guidelines for Abstract submission**

Abstract for oral and poster presentation (within 300 words) may be sent by email to: [db@mail.vidyasagar.ac.in](mailto:db@mail.vidyasagar.ac.in) with in 30.01.2022.

All the communications should be made by email only. The format of the abstract: text in MS Word with Times New Roman & 1.5 spacing. Title: all capitals, bold, 14 pt. Author (s): bold, 12 pt. Address: (11 pt) e-mail: only one e-mail of Corresponding author should be provided. Abstract body: (12 pt). Key-words: up to 5 Nos. (12pt).

**Thematic areas:**  
Biodiversity, Taxonomy, Ecology, Genetics, Reproductive Biology, Biotechnology, Plant Physiology, Pathology, Microbiology, Cryptogamic Botany, Economic Botany, Biochemistry, Molecular Biology, Microbiology and all relevant branches of plant and microbial science.

**REGISTRATION FEE (before 30.01.2022)**

Students :	Free
Research Scholars:	200/-
Faculties/Scientist:	300/-


Students will get e-certificate; hard copy of certificate and abstract book will be provided to Research Scholars and Faculties/ Scientists.

**Mode of payment:**  
Registration fees should be paid in cash to the treasurer along with the registration form. Fees to be submitted to Dr. Gunjan Biswas, Treasurer, RTRPMS-2022, Department of Botany and Forestry, Vidyasagar University

**Last date for Abstract Submission: 30.01.2022**  
**Last date of Registration: 30.01.2022**

**About the University & the Department of Botany and Forestry**

Vidyasagar University, named after one of the most illustrious sons of Bengal as well as one of the doyens of Indian Renaissance, Pandit Iswar Chandra Vidyasagar, has grown out of a long cultural and educational movement in West Bengal in general and in the undivided district of Midnapore in particular. Within the last 30 years of its existence the university has registered its growth both academically and socially through the services to the rural community. Situated outside the historic city of Midnapore, the University is proud of its beautiful sprawling greenery and plastic-free eco-friendly campus.



**Department of Botany and Forestry** is UGC DRS SAP II sponsored having seven faculty members. In the year 1990 the Department of Botany and Forestry started its journey as a nontraditional department by including Forestry along with Botany in the course of post-graduate teaching and research. Department possesses some sophisticated instruments for researches like HPLC, HPTLC, Gel-Doc system, Cryomicrotome, Cold chamber, Rotary evaporator, high end microscopes etc. Faculty members of the department are engaged in different fields of research such as: Exploration of plant diversity of Jungalmahal, Chilkigarh heritage site and coastal areas. Yield enhancement of Cashew nut through bee keeping, endophytic microbial diversity study along with their useful metabolites; study of ethnomedicinal plants, sacred groves, algal diversity, bryoflora; exploration of fungal micro and macroflora etc.

# Chemistry

## **Title: Evolution in Teaching and Research in Chemical Science in India**

**Date and Time: 27 January 2022**

**Mode: Online**

### **Speakers**

**1: Prof. Dulal C. Mukherjee, Former President, Indian Chemical Society**

**My modest interaction with some great scientific mind of India: A journey through down memory lane**

**2: Prof. Chittaranjan Sinha, Professor, Department of Chemistry, Jadavpur University.**

**Journey of Science from Ancient Times to Free India: In Search of Salvation of Mankind**

The Indus Valley Civilization (7000 BCE—1500 CE) is one of the oldest civilizations in the world. The historians documented important time periods to the growth of Indian civilization, such as the Vedic period (1500 BCE—400 BCE), Maha-Janapadas period (400 BCE—200 CE), Middle Ages (200 CE—1200 CE), Early Modern Era (1200 CE—1757 CE), Colonial British Era (1757 CE—1947 CE) and the Free India. The driving force for the evolution of civilization is the development of science and technology. The History of Science in India inculcates mainly Architecture, Astronomy, Cartography, Logic, Mathematics. The World's First University was established in Takshila in 700 BC; studied over 60 subjects with thousands of students from all over the world. Indian scholars made a substantial contribution to the various fields of science from the Indus valley civilization to the Republic of India. Ancient India added '0' (Zero) to mathematics; introduced decimal system by Indian Philosophers like Aryabhata, Varahamihir, Bhaskaracharya, Baudhayan, Brahmagupta, Charaka, Susruta, Nagarjuna, Khana, Lilavati and many others. On-going through ancient literature all time great scientist Albert Einstein remarked, 'We owe a lot to the ancient Indians, teaching us how to count. Without which most modern scientific discoveries would have been impossible.' A large set back of Indian achievement in Science and Technology in the Middle age (200 CE—1200 CE) had been analyzed by Acharya P C Ray in his book, 'A History of Hindu Chemistry'

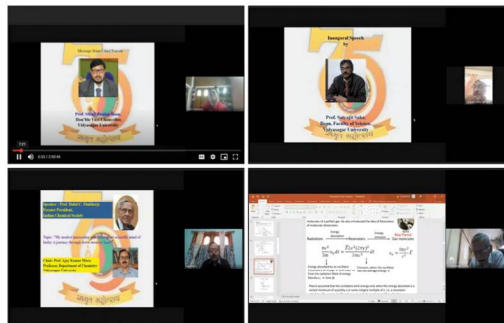
# Chemistry

later edited by Prof. Priyadarajan Ray (History of Chemistry in India – Ancient and Medieval Period) and focused three reasons – the caste system, The Manuism (Manubad) and the Sam-karaism (Maya-bad). In Early Modern Era (1200 CE—1757 CE) during the Mughal dynasty the restoration of achievement in science and technology in Indian society had been started. Modern science in India jerked in the Colonial British Era at the later part of the Nineteenth Century with the footsteps of Acharya J. C. Bose, Acharya P. C. Ray, Srinivasa Ramanujan and the culture of Science & Technology has engulfed free India with the gifted talents of Sir C. V. Raman, S. N. Bose, M. N. Saha, P. C. Mahalanabis, S. S. Bhatnagar and others. With the inauguration of Universities (started in 1857) and the Indian Association for the Cultivation of Science (1876) followed by IISc (1909), Bose Institute (1917), IITs (started in 1951), IISERs (started in 2006) and many other institutes and Govt. aided organisations like UGC, DST, CSIR, ICMR, ICAR, AICTE along with private research labs in Industries accelerated the research in Science and Technology in the Country. India, as of today, has the second largest youth population of 229 million (age group of 15-24 years) and is a unique advantage that many developed countries lack and we should be able to sensitize the young minds in scientific research, at least try our best by providing a unique comprehensive course structure.



**75** भारत अमृत महोत्सव  
75 Azadi Ka Amrit Mahotsav

Department of Chemistry  
Vidyasagar University, Midnapore, West Bengal  
We cordially invite you in  
One-day National Webinar  
On  
*Evolution in teaching and research in Chemical Science in India*  
Date: 27th January, Thursday, 2022 Time: 1 pm Onward  
in celebration of  
Azadi Ka Amrit Mahotsav  
Inaugural address will be delivered  
by  
**Prof. Sibaji Pratim Basu, Hon'ble Vice-Chancellor, Vidyasagar University**  
Guest of Honour:  
Prof. Satyajit Saha, Dean, Faculty of Science, Vidyasagar University  
Eminent Speakers:  
Prof. Dulal C. Mukherjee, Former President, Indian Chemical Society  
Prof. Chittaranjan Sinha, Professor, Department of Chemistry, Jadavpur University  
Free Registration Web Platform:  link: <https://meet.google.com/cib-ejgw-cvi>  
Registration Link : <https://forms.gle/u8aD9TbwtVzt4JS4A>



# Computer Science

22 April, 2022

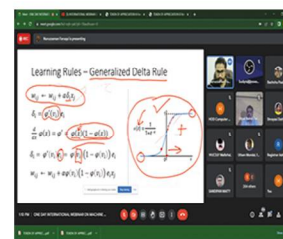
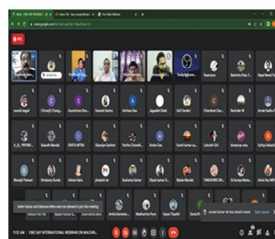
Title: Machine Learning and Deep Learning

## Speakers

1. Dr. Nuruzzaman Faruqui, Senior Lecturer, Daffodil International University, Bangladesh  
(Topic: A Journey from ANN to Deep Neural Network)
2. Dr. Bidyut Kumar Patra, Assistant Professor, NIT Rourkela, Odisha, India  
(Topic: Recommender System)

No. of participants: 1138

Name of the states from where the participants attended the program: Bangladesh, Australia, Iran, Malaysia, Odisha, Kerala, Maharashtra, Tamil Nadu, Gujarat, Karnataka, Arunachal Pradesh, Sikkim, Jharkhand.



# Electronics

## Title : Recent Trends in Communication

Date: 24/01/2022

Time: 02:30 pm

Link: [meet.google.com/tzn-kida-xxa](https://meet.google.com/tzn-kida-xxa)

### List of speakers:

1. Professor Amitabha Bhattacharya, Department of Electronics and Electrical Communication Engineering, Indian Institute of Technology, Kharagpur, India.
2. Professor Partha Roy Chaudhuri, Department of Physics, Indian Institute of Technology, Kharagpur, India.

Ground Penetrating Radar as a sub-surface sensor

Professor Amitabha Bhattacharya, Department of Electronics and Electrical Communication Engineering, Indian Institute of Technology, Kharagpur, India.

Modern communication is also called internet of things. So, you need many sensors in ocean, air and earth. One such sensor is ground penetrating radar. The technology of ground penetrating radar will be discussed and the research areas highlighted.

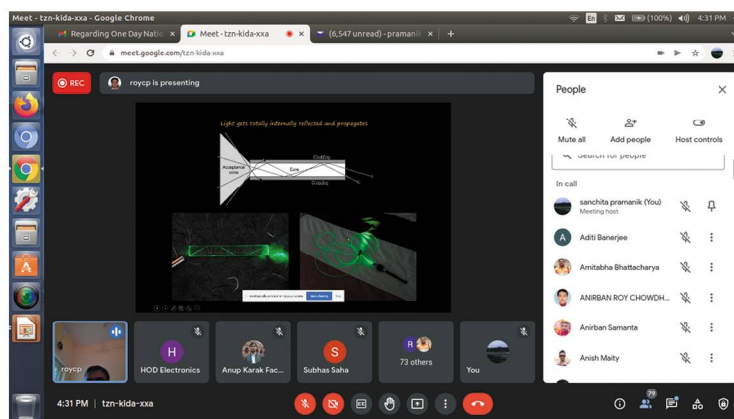
All-fiber Devices with Fused Fiber Coupler & Hollow Optical Fiber for Optical Communication

Partha Roy Chaudhuri, Department of Physics, Indian Institute of Technology, Kharagpur-721302, India

A brief review of the foundation technology of two building blocks of all-fiber devices, namely, the fused fiber couplers and the hollow optical fiber devices, are discussed here. The discussion includes configuration of a few application-specific devices used in today's telecommunication networks along with their mode-coupling/modal propagation nature and functional characteristics intended for a comprehensive understanding of these devices. Today's optical communication circuits use several in-line branching components that distribute optical signals in a predetermined fashion. Many of these components are passive, data-format transparent, and are able to combine/split optical power or multiplex wavelengths, regardless of the information content of the signal. In an all-fiber component, the necessary functions of manipulation/processing of optical signal are performed whilst the signal is still guided by the fiber. It has the advantage that the component can be readily spliced to a signal carrying fiber and can be easily installed into a fiber circuit with common fiber-handling tools [1].

# Electronics

All-fiber components, realized from fiber in the form of fiber only, are directly compatible with fiber networks and systems, having advantages in terms of mode-matching, low insertion loss and ease of fabrication when compared with the competing integrated or bulk-optic technologies. Fused fiber coupler (FFC) constitutes one such component technology, which form the building block for a variety of branching components used in various applications [2]. These range from passive telephony, fiber amplifiers, cable TV networks to distributed sensing. Another important host of a few all-fiber components is based on the hollow optical fiber (HOF). HOF has recently come up with a number of useful all-fiber devices, such as selective core-mode blocker, all-fiber band-pass filter, broadband mode converter for Gigabit Ethernet system, higher-order mode dispersion compensator [3] and acoustically tunable all-fiber polarization controller [4]. In this presentation, we discuss the fused fiber coupler technology, its underlying physics with some application-specific key components followed by a similar discussion on hollow optical fiber and devices. The structure of a 2x2 fused coupler is shown in the Fig.1 which is the basic building block and host of higher order arrays and other components. As a 4-port device two of these ports can individually or jointly act as input while the remaining ones serve as output ports. Light injected into any of the ports may appear at one of the output ports or both in some ratio. The light splitting ratio owes to the coupling geometry frozen during fabrication, and also to the wavelength of operation. By controlling the process parameters, various characteristic coupling structures and resulting device properties of the basic coupler can be achieved, a fact that led to realization of several components for communication networks.



# Fishery Science

## Title: Management of Fish Health

Date: 20th May 2022

Mode: Offline. Department of Fishery Science

Our department arranged a special lecture “Management of Fish Health” for the benefit of our students on 20.05.2022. The company personals of Alltech Biotechnology Pvt. Ltd., a Bangalore based company (Animal health Products), visited our University to interact with our students. Dr. Sudhakar Gobindam, Regional Business Manager and Mr. Ashesh Chakraborty, Sales Associate (Aqua Division, West Bengal), Alltech Biotechnology Pvt. Ltd., Bangalore delivered a lecture on the above topic. This lecture was very much engaging and interactive to students and this may create a linkage of our University with the company. This was celebrated as a part of 75 years Indian Independence of Ajadi ka Mohatsab programme.



# GEOGRAPHY

Date: 28-29 January 2022  
Mode: Online

## Title: Problems and Issues in Urbanisation in India

### List of Speakers:

**Dr. Nachiketa Acharya, Assistant Research Professor,**  
**Department of Meteorology and Atmospheric Science, Penn State University**  
**Prof. Anuradha Banerjee, Prof at the Centre for the Studies of**  
**Regional Development, School of Social Sciences, Jawaharlal Nehru University**

Urbanization and climate change are two emerging issues and need a deeper understanding of governing physical equations and statistical learning. With each new version of the global climate model's output, we embark on a new understanding of why uncertainty in the model's output is higher for some areas and lower for others. Additionally, the application of AI/ML and its recent advances has opened up a new opportunity to improve the GCMs or RegCMs output, with a specific focus on downscaling the global climate model as well as forecasting the weather parameters at different space-time scales. On the other hand urbanization, Urbanization and associated land-use change is one of the major sources of cumulative greenhouse gas emissions and has become a serious concern for climate change and environmental degradation.

75 Azadi Ka Amrit Mahotsav

DEPARTMENT OF GEOGRAPHY  
VIDYASAGAR UNIVERSITY,  
MIDNAPORE

Online Platform

Google Meet

meets.google.com/jgd-zkfk-ech

28th Jan Link

CLICK HERE

meets.google.com/axv-xpjo-bzv

29th Jan Link

CLICK HERE

On The occasion of celebrating  
*Seventy-five years of independence of India*  
Date: 28.01.2022 Time 7:30 p.m.  
29.01.2022 Time 12:00 p.m.

Speaker:  
Prof. (Dr.) Anuradha Banerjee  
Theme: Urban Issues in India

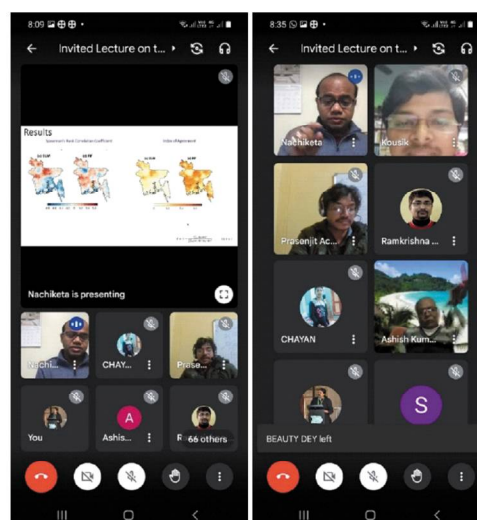
Inaugural speech:  
Prof. Sibaji Pratim Basu

Speaker:  
Dr. Nachiketa Acharya  
Theme: Statistical Climatology

Centre for the Study of Regional  
Development,  
School of Social Sciences  
Jawaharlal Nehru University  
New Delhi, India

Vice-Chancellor  
Vidyasagar University  
Midnapore, West Bengal,  
India

Assistant Research Professor, Center for Earth System  
Modeling,  
Atmospheric Science  
Associate, Earth & Environmental Systems Institute,  
Pennsylvania State University, USA



# Mathematics

## Title: Fuzzy Sets and Rough Sets

**Date:** 24th May, 2022. **Time:** 11 A.M

**Mode:** Offline. **Asutosh Mukherjee Hall, Gallery II, Classroom of Applied Mathematics.**

**Speaker:** Prof. Mihir Chakraborty, **Visiting Professor in School of Cognitive Science, Jadavpur University & Honorary Visiting Professor in Centre for Soft Computing Research, Indian Statistical Institute.**

A special talk is conducted on 24th May, 2022 "On the Occasion of 75th Years of Indian Independence" in the Dept. of Applied Mathematics, Vidyasagar University.

Prof. Mihir Chakraborty, Visiting Professor in School of Cognitive Science, Jadavpur University & Honorary Visiting Professor in Centre for Soft Computing Research, Indian Statistical Institute & also Former Professor and Head, Department of Pure Mathematics, University of Calcutta has enlightened this department by his glorious presence as special guest in this seminar. Prof. Chakraborty has delivered his valuable speech on the on the Occasion of 75 Years of Indian Independence to encourage our PG students and Research Scholars in purview of celebrating 'Azadi Ka Amrit Mahotsav'.

It is our immense pleasure to have the kind presence of the Honourable Vice Chancellor during this session, also delivered a short introducing speech after recapitulating the previous friendship with the speaker Prof.. Chakraborty. This session was chaired by the HOD of this department Prof. Sankar Kumar Roy. Prof. Roy, welcomed the speaker and then a welcoming speech has been delivered by the HOD to enthuse all the audiences. Thereafter, Prof. Madhumangal Pal, Senior Professor has also provided a powerful speech at the commencement of this programme.

Prof. Mihir Chakraborty discussed about different applications of Rough Set Theory, informed the students regarding the real life applications of Fuzzy and Rough Set theory. He also taught the students about the meaning of Rough Set theory geometrically in the class board. A presentation has been discussed that has prepared in collaboration with Prof. Mahua Banerjee, IIT Kanpur on Rough Set Theory. Prof. Mihir Chakraborty shares his experience with his friend L.A Zaedh who is the founder of Fuzzy Set. He also discussed the difference of Fuzzy and Rough Set theory, informed us that he defines various operations of Rough Set theory in 19th Century. Inspire us by informing that his various application on fuzzy set are now the interest area of Research work of the students of Kolkata ISI. Also mentioned about the quality features of reading mathematics in higher studies like Post Doctorate and also acknowledge us. He dramatically mentioned an appeal to the department to do something for the development Mathematics as Hon'ble Vice Chancellor.



# Microbiology

Date: 21st January 2022

Link if online: <https://meet.google.com/ypo-ebyr-egc>

## Title:

## Development of Microbial Biotechnology in the Pre and Post-independent Era of India

## List of Speakers:

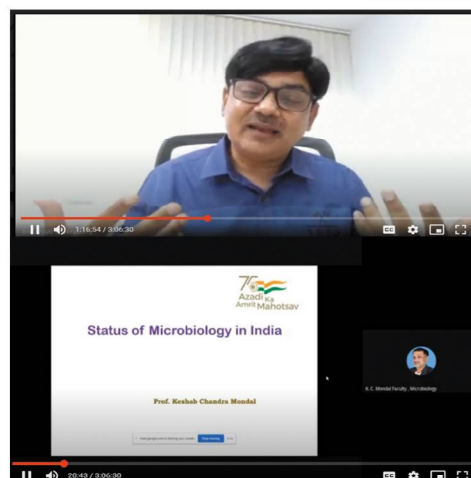
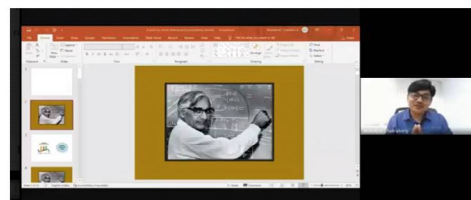
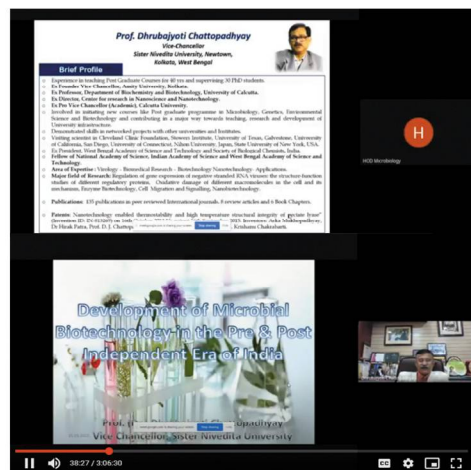
a) Prof. Dhrubajyoti Chattopadhyay, Vice-Chancellor, Sister Nivedita University, Kolkata, West Bengal

b) Dr. Bedadyuti Chakraborty

Director of RxCella & Visiting Scientist Dr. Reddy's Institute of Life Sciences, Hyderabad.

No. of participants: 110 from West Bengal, Odisha

National level Webinar entitled "Development of Microbial Biotechnology in the Pre and Post-independent Era of India" was organized by Department of Microbiology, Vidyasagar University, West Bengal on 21.01.2022 as a part of the celebration of "Azadi ka Amrit Mahotsav" of Vidyasagar University. Dr. Nandini Ghosh, Assistant Professor & Head (Officiating), Department of Microbiology, Vidyasagar University welcomes the delegates in the webinar. Prof. Satyajit Saha, Dean, Faculty of Science inaugurated of the webinar and delivered inaugural speech in this auspicious occasion. Prof. Keshab Chandra Mondal, Department of Microbiology, Vidyasagar University delivered the key note address. Eminent Microbiologist Prof. Dhrubajyoti Chattopadhyay, Vice-Chancellor, Sister Nivedita University, Kolkata lucidly described the Global timeline of development of different arenas of Microbial Biotechnology in 20th and 21st century emphasizing the development in India in pre and post independent time. Renowned Scientist Dr. Bedadyuti Chakraborty who is the Director of RxCella & Visiting Scientist Dr. Reddy's Institute of Life Sciences, Hyderabad deliberated '5 breakthroughs in Biopharma Space by Indian Organizations at post-independence era of India' through interactive way with the participants. More than 100 delegates from different institute and organization were participated in the webinar.



# Physics

Date: 11th May, 2022

Mode: Online

## One Day Webinar on “Looking into the progress of Science”

**Professor Palash Baran Pal,**

Emeritus Professor, Calcutta University, Former Professor of Saha Institute of Nuclear, Physics (SINP), Kolkata

Lecture topic: Moulou kona

**Professor Parthasarathi Majumdar,**

Honorary Professor, Indian Association for the Cultivation of Science (IACS), Kolkata, Former Professor of Saha Institute of Nuclear Physics (SINP), Kolkata and The Institute of Mathematical Sciences (IMSc), Chennai.

The Department of Physics, organized a one day webinar on “Looking into the progress of Science” on the 11th of May 2022 as a part of Azadi Ka Amrit Mahotsav at Vidyasagar University, Midnapore. The organization of the webinar was encouraged by our Honourable Vice-Chancellor, Professor Sibaji Pratim Basu.

The webinar was hosted in a blended mode. The participants included a large number of students and faculty members from the University as well as Colleges. They were seated in the S.N.Bose-seminar hall of the Department. Many of the colleges arranged live streaming of the webinars in their respective seminar/conference halls. For the program two eminent physicists were invited as speakers. For the benefit of our students from the university and colleges, the distinguished speakers had delivered their lectures in Bangla.

**75**  
Azadi Ka  
Amrit Mahotsav

**VIDYASAGAR UNIVERSITY**  
MIDNAPORE

*Celebrating 75 years of Indian Independence*

Organised by Department of Physics, Vidyasagar University

**Inaugurator :**   
**Prof. Sibaji Pratim Basu**  
Hon'ble Vice-Chancellor  
Vidyasagar University

**Speaker 1:**   
**Prof. Palash Baran Pal**  
Emeritus Professor, Calcutta University  
(Ex-Professor, SINP), Kolkata  
Title of the lecture: মৌল কণা

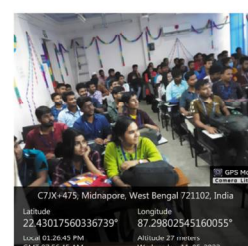
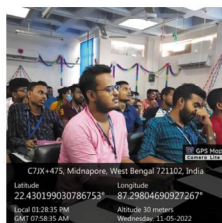
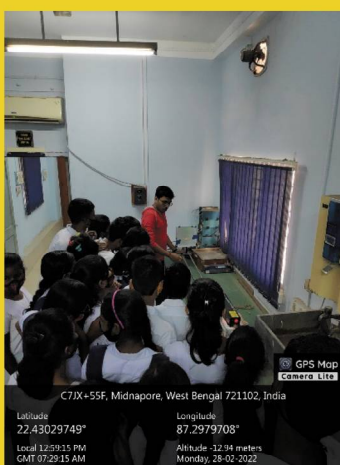
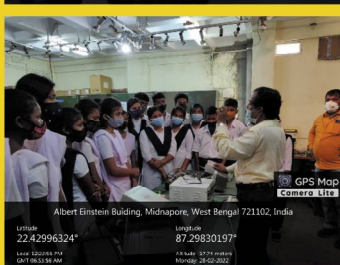
**Speaker 2 :**   
**Prof. Parthasarathi Majumdar,**  
Professor (Hony), IACS, Kolkata  
Title of the lecture: Black holes in water and in sand

**Date: 11/05/2022**  
**Time: 12 Noon (IST)**

**Onwards**

Watch the webinar live at:  
<https://meet.google.com/azi-oygp-uyn>

# Physics



Title of the program

## “A Day with School Children” National Science day Celebration - 2022

Date : 28th February 2022, 11.00 – 16.00 hrs.  
Mode : Offline. Department of Physics

National Science Day (28th February) of this year was celebrated as “A Day with School Children” in the Dept. of Physics under Azadi Ka Amrit Mahotsav taking 25 participants (23 students of Class IX & X and 2 teachers) from Khairullachak Netaji Vidyamandir, Midnapore with great éclat and enthusiasm. There were different sessions with the students, namely Display & Demonstration session, Interactive session, Documentation and Classroom session. The students were inquisitive and interactive and they were completely engulfed in an atmosphere of scientific marvels. The day ended with the spark-on-their-eyes of tender minds and that was the success of the event.

No. of participants : 25 from Khairullachak Netaji Vidyamandir,, Midnapore, West Bengal

# Physiology

Date: 25.01.2022

Mode: Online

## Title: Post-Independence Era of Research in Health Sciences in India

### List of Speakers:

1. Prof. Debi Prasad Sarkar, FNA, FNASc, FASc, FAScT, INSA Fellow, JC Bose National Fellow (DST) Recipient of Shanti Swarup Bhatnagar Award for Science and Technology in Biological Science Senior Professor, Department of Biochemistry, University of Delhi South Campus Former Director, IISER, Mohali

### Title of the talk:

"Inspiring Influence of Pre-Independence Scientific Role Models in the Fruition of Present Glorious Achievements: An Era of Health Research in India"

2. Prof. Amitabha Chattopadhyay, FTWAS, FRSB, FRSC, FNA, FNASc, FASc CSIR Bhatnagar Fellow, Former Outstanding Scientist (Director Level), Center for Cellular and Molecular Biology, Hyderabad Founding Dean and Emeritus Professor, Biological Sciences, Academy of Scientific and Innovative Research (AcSIR)

### Title of the Talk:

Role of Host Membrane Cholesterol in Pathogen Entry: A Tale of Two Pathogens


3. Dr. Manoj Kumar Chakrabarti, FAScT, FNASc ICMR Emeritus Medical Scientist, Former Scientist G and Director (I/C), National Institute of Cholera and Enteric Diseases (NICED) (ICMR), Kolkata Former General President, Indian Science Congress

The Webinar was organized as a part of the celebration of 75 Years of Indian Independence and it is just prior to the celebration of 73rd Republic Day of India, another glorious occasion for our nation.

Health Sciences attracts major attention and top priority in Academics and Research all over the globe as Health is a Fundamental Right of an individual. Health Sciences include cooperative approach of a number of disciplines to provide healthcare to living beings through the application of knowledge of Science, Engineering, and Technology. Since 2020 due to COVID pandemic Research in Health Sciences has reached a height of prominence all over the world, India is not an exception to that.

# Physiology

Research in Health Sciences tends to acquire scientific high-quality knowledge for promoting, restoring and maintaining health status in population, managing pathological conditions, curing diseases, and overall, improving quality of life. This branch of science encourages the study of the processes of life, the prevention and treatment of disease, and the genetic and environmental factors related to disease and health. It includes a large number of disciplines dedicated for delivery of healthcare to humans and animals through the application of knowledge of science, engineering, and technology. Here, knowledge/data is obtained from scientific research and other associated sources, and applied for practical purposes and clinical practices. The extent of research in health sciences is perpetual, that spans from conventional modern medicine to traditional, pertaining also to folk medicine.



**Department of Human Physiology**  
**Vidyasagar University, Midnapore, West Bengal**  
*cordially invites you in*  
**One-day National Webinar**  
*On*

**Post-Independence Era of Research in Health Sciences in India**

**Date: 25<sup>th</sup> January, 2022 Time: 12 pm Onwards**  
*in celebration of*  
**Azadi Ka Amrit Mahotsav**  
*to be*  
**Inaugurated**  
*by*



**Prof. Sibaji Pratim Basu**  
Hon'ble Vice-Chancellor, Vidyasagar University

❖ **Eminent Speakers**

**Prof. Debi Prasad Sarkar**  
PhD, FNA, FNAsc, FASc, FAScT INSA Fellow, JC Bose National Fellow (DST),  
Recipient of Shanti Swarup Bhatnagar Award for Science and Technology in Biological Science,  
Senior Professor, Department of Biochemistry,  
University of Delhi, South Campus, New Delhi.



**Prof. Amitabha Chattopadhyay**  
PhD, FTWAS, FRSB, FRSC, FNA, FNAsc, FASc,  
CSIR Bhatnagar Fellow,  
Former Outstanding Scientist (Director Level),  
Center for Cellular and Molecular Biology, Hyderabad,  
Founding Dean and Emeritus Professor, Biological Sciences,  
Academic of Scientific and Innovative Research (AcSIR).



**Prof. Manoj Kumar Chakrabarti**  
PhD, FAScT, FNAsc, FISC,  
Sir Ashutosh Mookherjee Fellow (DST-ISCA),  
Former ICMR Emeritus Medical Scientist,  
Former Scientist G and Director (IC),  
National Institute of Cholera and Enteric Diseases (NICED) (ICMR), Kolkata,  
Former General President, Indian Science Congress.



**Web Platform: Google Meet**

**Free Registration**  **Registration Link** <https://forms.gle/3npRExTBC6e2rxBy7>

# Zoology

## **Title: Zoological Research with threatened higher chordates: Emphasis on Chelonians** *In collaboration with* **TURTLE SURVIVAL ALLIANCE (TSA) – India**

Date: 19th January 2022

Mode: Online. YouTube link: <https://youtu.be/0Eh1ihCj8l0>

### **List of speakers**

1. Mr. Nathan Haislip, Former Facilities Manager and Lead Keeper, Turtle Survival Center, Tennessee, United States
2. Dr. Jayaditya Purakayastha, General Secretary, Help Earth, Guwahati
3. Tiasa Adhya, Joint Secretary, Muman and Environment Alliance League

“The services and economic value that species provide are irreplaceable and essential to our well-being. Unless we live within the limits set by nature, and manage our natural resources sustainably, more and more species will be driven towards extinction. If we ignore our responsibility we will compromise our own survival.” – Dr. Jane Smart

The main motto of the webinar is to spread awareness among people and specially the youth of India, to rise above the narrow thoughts and step forward for welfare in a wider dimension via the peaceful existence of the entire biosphere. Citizens should become fully responsible for giving equal rights to animals for their survival. Our nation's independence must include not only the freedom of living of humans but also that of precious animals inhabiting the ecologically versatile country with priority to that of the fauna that are on the brink of extinction. Since conservation is a highly specific but an enormously collective effort, we planned to take up the issue of animals batch by batch, starting with endangered higher vertebrates in this instance.

# Zoology

As per IUCN (2004) global assessment, 25% of mammals and 13% of birds are threatened. The situation may be even graver than the numbers suggest, since too little is known about 23% of amphibian species to make a threat assessment. Although reptiles have not been a major focus of Red List assessment activity to date, the rapidly deteriorating status of tortoises and freshwater turtles in Southeast Asia has resulted in many important changes in the listings of these species.

As one gains more insight about how to protect endangered wildlife, he will become more capable of conveying that knowledge to other people, and ultimately fulfil the true meaning of 'freedom'.

25% of Mammals Threatened

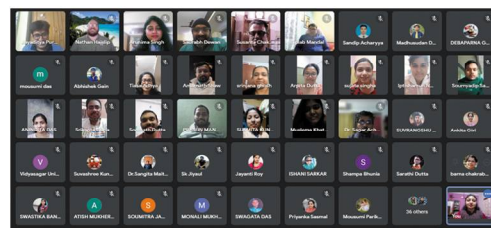
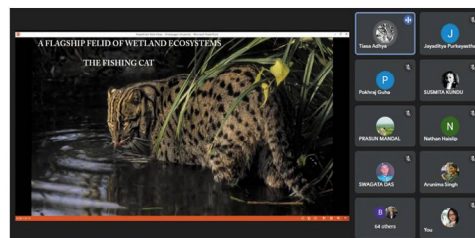
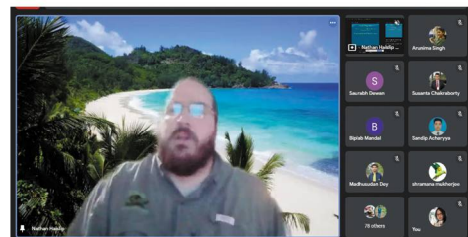
13% of Birds Threatened

42%

IUCN Red List (2004)

23%

*Only when the last of the animals horns, tusks, skin and bones have been sold, will mankind realize that money can never buy back our wildlife*  
~ Paul Oxtou





# Vidyasagar University



**Midnapore, West Bengal  
721102**

**Participation in NIRF**



**National Institutional Ranking Framework**  
Ministry of Education  
Government of India



## India Rankings 2022: University (Rank-band: 151-200)

Institution list in alphabetical order

Name	City	State
Acharaya Nagarjuna University	Guntur	Andhra Pradesh
B. S. Abdur Rahman Crescent Institute of Science and Technology	Chennai	Tamil Nadu
Central University of Haryana	Mahendergarh	Haryana
Central University of Rajasthan	Kishangarh	Rajasthan
Centurion University of Technology and Management	Paralakhemundi	Odisha
Charotar University of Science & Technology	Changa	Gujarat
Dharmsinh Desai University	Nadiad	Gujarat
Dhirubhai Ambani Institute of Information and Communication Technology	Gandhinagar	Gujarat
Dr. Vishwanath Karad MIT World Peace University	Pune	Maharashtra
Fakir Mohan University	Balasore	Odisha
Galgotias University	Gautam Budh Nagar	Uttar Pradesh
Glocal University	Saharanpur	Uttar Pradesh
ICFAI Foundation for Higher Education, Hyderabad	Hyderabad	Telangana
Integral University	Lucknow	Uttar Pradesh
J. C. Bose University of Science and Technology, YMCA	Faridabad	Haryana
Jawaharlal Nehru Technological University	Anantapur	Andhra Pradesh
Jaypee University of Information Technology	Solan	Himachal Pradesh
JSS Science and Technology University	Mysuru	Karnataka
Kannur University	Kannur	Kerala
Karpagam Academy of Higher Education	Coimbatore	Tamil Nadu
KLE Technological University	Dharwad	Karnataka
Maharani Cluster University	Bengaluru	Karnataka
MGM Institute of Health Sciences, Navi Mumbai	Navi Mumbai	Maharashtra
Mohan Lal Sukhadia University	Udaipur	Rajasthan
Nagaland University	Zunheboto	Nagaland
North Bengal University, Darjeeling	Darjeeling	West Bengal
North Maharashtra University	Umavinagar	Maharashtra
PES University	Bengaluru	Karnataka
Pravara Institute of Medical Sciences, Ahmednagar	Ahmednagar	Maharashtra
Pt. Ravishankar Shukla University	Raipur	Chhattisgarh
Punjabi University, Patiala	Patiala	Punjab
Rabindranath Tagore University	Raisen	Madhya Pradesh
Rajiv Gandhi University	Itanagar	Arunachal Pradesh
RK University	Rajkot	Gujarat
Sambalpur University, Sambalpur	Sambalpur	Odisha
Sant Longowal Institute of Engineering & Technology	Longowal	Punjab
Sikkim University	Gangtok	Sikkim
Sri Chandrasekharendra Saraswathi Vishwa Mahavidyalaya	Kancheepuram	Tamil Nadu
Sri Devraj Urs Academy of Higher Education and Research	Kolar	Karnataka
Sri Krishnadevaraya University	Anantapur	Andhra Pradesh
Sri Padmavathi Mahila Viswavidyalayam	Tirupathi	Andhra Pradesh

Name	City	State
Sri Siddhartha Academy of Higher Education	Tumkur	Karnataka
Suresh Gyan Vihar University	Jaipur	Rajasthan
The Gandhigram Rural Institute	Gandhigram	Tamil Nadu
The Northcap University	Gurugram	Haryana
The Rashtrasant Tukadoji Maharaj Nagpur University	Nagpur	Maharashtra
University of Lucknow	Lucknow	Uttar Pradesh
University of Science and Technology	Ribhoi	Meghalaya
Uttaranchal University	Dehradun	Uttarakhand
Vidyasagar University	Midnapore	West Bengal

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# Vidyasagar University



**Midnapore, West Bengal**

**721102**

**Collaborative quality initiatives with other institution(s)**

Phone : (03463) 262-751  
to  
262-756  
E mail : vbplanning46@gmail.com

# Visva-Bharati

FOUNDED BY  
RABINDRANATH TAGORE



SANTINIKETAN  
PIN- 731 235  
WEST BENGAL  
INDIA

## A.K. Dasgupta Centre for Planning and Development

Ref. No.....

Date.....

Ref.: AKD/RP/001/2021-22

Date: 16.08.2021

To

Dr. Sumahan Bandyopadhyay  
Professor, Department of Anthropology  
Vidyasagar University  
Midnapore, West Bengal

Sub: Acceptance of Research Proposal for Working Papers.

Sir,

With reference to your submission of Research Proposal for Working papers, A.K.Dasgupta Centre, Visva-Bharati is please to inform you that your research proposal entitled "*Economy and Livelihood of the Folk Artisan Patua Community in Purba and Paschim Medinipur districts of West Bengal under the impact of COVID 19: Survival Strategies, Impact of Pandemic and Need for Future Plans*" has been accepted. You are requested to initiate and carry out the research work as soon as possible.

Title of the Research Proposal: *Economy and Livelihood of the Folk Artisan Patua Community in Purba and Paschim Medinipur districts of West Bengal under the impact of COVID 19: Survival Strategies, Impact of Pandemic and Need for Future Plans*

Principle Investigator: *Dr. Sumahan Bandyopadhyay, Professor, Department of Anthropology, Vidyasagar University, West Bengal*

The Principle Investigator needs to inform the Centre about the progress of the study and the study should be completed within the scheduled time period.

With best wishes,

Daya Shankar Kushwaha  
Secretary to Chair Professor  
A.K.Dasgupta Centre, Visva-Bharati



MUSEUM OF INTERNATIONAL  
**FOLK ART**

706 Camino Lejo  
Santa Fe, New Mexico, USA 87505

Dr. Sumahan Bandyopadhyay  
Professor, Department of Anthropology  
Director, Centre for Adivasi Studies and Museum  
Vidyasagar University  
Midnapore, West Bengal

May 6, 2021

Dear Dr. Bandopadhyay,

Thank you for your continued collaboration in our project about creative responses to the global coronavirus pandemic. Your research contribution has made it possible to include rural artisans, such as the patua community of West Bengal, in the project. Your ethnographic interviews with the artisan Anwar Chitrakar are especially valuable to our project as it adds contextual information and personal experience to our understanding of his paintings. You have been instrumental in our access to the artwork, and to the artisans. We do not speak Bengali, so your contribution as a translator has been essential. Finally, your collaboration in coordinating video calls, communication, and shipping make it possible to represent rural Bengali folk art in our museum project.

While your collaboration has already been instrumental, we ask for your continued cooperation with forwarding funds to the abovementioned rural artisan, Anwar Chitrakar. Our International Folk Art Foundation is providing Anwar Chitrakar an honorarium for paintings we would like to acquire for the Museum of International Folk Art's non-commercial, educational and documentary Asian folk art collection. The Foundation's Bank is unable to conclude a wire transfer directly to Mr. Chitrakar due to lack of a SWIFT or BIC code. Therefore, we ask if we may send the wire transfer to you and for you to then send or transfer the funds on to Mr. Chitrakar. Please forward INR 53,000 from the International Folk Art Foundation to Mr. Anwar Chitrakar.

We again thank you so much for your continued collaboration and cooperation. Please let me know if there are any questions."

Kind regards,

Felicia Katz-Harris  
Senior Curator / Curator of Asian & Middle Eastern Art  
505.476.1221

Nuremberg University of Music • Veilhofstraße 34 • 90489 Nuremberg

Department Musiktheorie/Musikwissenschaften  
und Schlüsselqualifikationen

Dr. Lisa Herrmann-Fertig  
E-Mail [lisa.herrmann-fertig@hfm-nuernberg.de](mailto:lisa.herrmann-fertig@hfm-nuernberg.de)

Nuremberg, 28 March 2022

**Subject: Invitation to the class “Musics of India“/project “Musics Crossing Borders“; Nuremberg University of Music, Germany**

Dear Professor Sumahan Bandyopadhyay,  
dear Sir or Madam,

Referring to our previous exchange via email and Zoom, which was initiated by Professor Indranil Acharya in the context of the international conference “Connecting Germany and South Asia - The Future of Higher Education and Research Cooperation“ (October 2021; organised by the *German Academic Exchange Service*), and with many thanks for your efforts as well as interest, I would like to kindly invite you, your colleagues, students and musicians related to the Vidyasagar University, West Bengal and the *Centre for Adivasi Studies and Museum* to the class “Musics of India“ that I am currently teaching at the Nuremberg University of Music, Germany.

The class is taught in a hybrid format in summer semester 2022 (from mid-March to mid-July 2022) on Thursdays from 16:15 to 17:45 (CET), which means that in addition to the participation in the classroom in Nuremberg, the possibility to participate via Zoom exists. The hybrid format will be supported by additional online tools which we are currently evaluating (e.g., *Moodle, Nextcloud, Camtasia, Open Music Academy, Conceptboard*). Please find attached a list that contains the exact dates and the preliminary planning of the class in summer semester 2022 (Curriculum).

I would like to kindly invite you to participate in the class “Musics of India“ in the form of guest lectures, research discussions and/or musical performances on two Thursdays in summer semester 2022 and, therefore, to take part in active discussions that transcend—and enable all of us to go beyond—academic disciplines, generations and continents. In order to realise a joint participatory format, I furthermore would like to offer you, your students of the Vidyasagar University and affiliated musicians to participate in the class “Musics of India“ during several sessions that I will teach, in which students of the Nuremberg University of Music will probably perform musics, and in sessions which several guest lecturers from further Indian institutions will arrange. All of these sessions will be taught and discussed in English and I am happy to issue your students written confirmations of participation (no fees; no ECTS credits).

Your participation would be of great interest for us, a great pleasure for all of our participants, and we would gain a lot from your expertise, as it is a matter very close to my—an ethnomusicologist's—heart to make Ethnomusicology, Multispecies Studies and Human-Animal Studies accessible to students and colleagues of the Nuremberg University of Music, to sensitise all of us for these topics. At the same time, it is a concern of the class "Musics of India" and of the entire project "Musics Crossing Borders" to overcome species boundaries in and with the help of musics, as well as to consciously transcend established patterns of thinking, listening and acting, which would be greatly enriched by your expertise and the exchange with you, your colleagues, students and musicians.

I consider the following points to be our common mission in the context of a first exchange, which we intend to continue in winter semester 2022/23 (mid-October 2022 to mid-February 2023) in the context of an online symposium with concerts on stages in Germany and India, which will be organised and supported by a team of the Nuremberg University of Music, as well as in the context of an excursion to India:

- to make minority voices—human and/or other-than-human—audible in music research and practice;
- to discuss them from different perspectives;
- to sensitise students, colleagues and musicians for established concepts and understandings of music; to point out their potentials as well as limits in academic, artistic and pedagogical contexts;
- to increase the consideration of folk musics and musics that are not classified as European art music;
- to initiate and deepen intercultural as well as multidisciplinary exchange between the Nuremberg University of Music and the Vidyasagar University as well as the *Centre for Adivasi Studies and Museum*.

I am already looking forward to your reply and wish to thank you very much in advance for your kind efforts.

Yours sincerely,



Dr. Lisa Herrmann-Fertig

(Research Assistant in Music Research and Human-Animal Studies)



भारत सरकार

विज्ञान और प्रौद्योगिकी मंत्रालय  
विज्ञान और प्रौद्योगिकी विभाग  
टेक्नोलॉजी भवन, नया महरौली मार्ग  
नई दिल्ली-110 016

GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF SCIENCE AND TECHNOLOGY  
TECHNOLOGY BHAVAN, NEW MEHRAULI ROAD  
NEW DELHI-110 016

दूरभाष / Tel : 26962819, 26567373,  
26562134, 26562122 (EPBAX)  
फैक्स / Fax : 26569908, 26515637,  
26863847, 26862418  
वेबसाइट/website: www.dst.gov.in

File No. DST/INT/SL/P-25/2016

Dated: 25.06.2021

To,

Dr. Braja Gopal Bag  
Professor of Vidyasagar University  
Department Of Chemistry and Chemical Technology  
Midnapore, West Bengal -721102.

Sub: - Project extended up to 31.12.2021 in respect of Indo-SL joint research project entitled  
"Renewal chemicals from the plants of Indian subcontinent: Isolation, self-assembly and  
utilization in drug delivery, medicines and catalysis" Reg

Sir,

I am directed to refer to your letter dated 28.02.2021 and to inform you that your request for  
extension of the project has been considered by Competent Authority of this Department and the  
project/duration has been extended up to 31.12.2021 without any additional cost for the project.

*Charu*  
*21/6/2021*  
(Dr. Charu Agarwal)  
Scientist - 'C'

International Cooperation Division, DST

डॉ. चारु अग्रवाल/Dr. CHARU AGARWAL  
वैज्ञानिक 'सी' / Scientist 'C'  
अंतर्राष्ट्रीय सहयोग / International Cooperation  
विज्ञान और प्रौद्योगिकी विभाग  
DEPTT. OF SCIENCE & TECHNOLOGY  
भारत सरकार / GOVT. OF INDIA  
नई दिल्ली

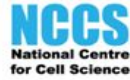
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@IndiaDST or [www.twitter.com/IndiaDST](http://www.twitter.com/IndiaDST)



**HOLISTIC  
REPRESENTATION OF  
HUMAN BODY**



## Certificate of Participation

**Dr. Sandip Kumar Sinha**

Participated in '**Manav Faculty Level Survey** on scientific reading practices, capabilities and challenges of undergraduate and postgraduate students' conducted by **Project Manav**.

**16th - 27th December 2021**

A handwritten signature in blue ink, appearing to read "M. V. Krishna Sastry".

**Prof M. V. Krishna Sastry**  
Project Co-Ordinator & Principal  
Investigator, Scientist G  
NCCS, Pune

A handwritten signature in blue ink, appearing to read "Nagaraj Balasubramanian".

**Dr. Nagaraj Balasubramanian**  
Principal Investigator,  
Associate Professor,  
IISER, Pune

A handwritten signature in blue ink, appearing to read "Anamika Krishanpal".

**Dr. Anamika Krishanpal**  
Principal Investigator,  
Senior Domain Specialist,  
Persistent LABS, Pune



Revathy Vishwanath  
Deputy Director  
RP Division Incharge  
Tel #011-26716690  
E-mail: rpsicssr@gmail.com

1925

Indian Council of Social Science Research  
(Ministry of Human Resource Development)  
JNU Institutional Area, Aruna Asaf Ali Marg  
New Delhi – 110067  
Website: [www.icssr.org](http://www.icssr.org)

SANCTION ORDER

F.No. G-24/2021-22/ICSSR/RP

Dated: 21-03-2022

The Registrar,  
Vidyasagar University,  
Medinipur-721102, West Bengal

Subject: Sanction of Research Programme entitled "Lives and Livelihoods of Migrant Workers from West Bengal : Aftermath of the spread of COVID-19" to Dr. Tarak Nath Sahu, Associate Professor, Vidysasagr University, Medinipur-721102, West Bengal.

Dear Sir,

1. The Indian Council of Social Science Research (ICSSR) considered the above Research Programme project submitted by Dr. Tarak Nath Sahu, Associate Professor, Vidyasagar University, Medinipur-721102, West Bengal. Co-Project Directors of the study are: -1. Dr. Sudarshan Maity, Deputy Director, The Institute of Cost Accountants of India, 12- Sudder Street, Kolkata, -700016, West Bengal.
2. The study, as proposed by the researcher, is to be located at and financially administered by your institution as per the guidelines of this award.
3. The ICSSR has sanctioned a grant-in-aid of Rs.15,00,000 (Rupees Fifteen lakh only) for the above research project and the grant will be released as follows:

First instalment @40% :	Rs. 6,00,000/-
Second instalment @ 20%:	Rs. 3,00,000/-
Third instalment @ 10% :	Rs. 1,50,000/-
Fourth Instalment @10% :	Rs. 1,50,000/-
Final instalment @15%:	Rs. 2,25,000/-
Publication Grant* @ 5-6% :	Rs. 75,000/-
<b>Total</b>	<b>Rs. 15,00,000/-</b>
Overhead charges over and above 5% or maximum Rs.1,00,000 :	Rs. 75,000/- **

(\* to be retained by the ICSSR. ICSSR would publish it subject to the recommendation by the expert and relevant Committees for the purpose, from the overall budget, so to be retained by the ICSSR).

\*\*will be released on successful completion of project after evaluation.

(The break-up budget approved by the ICSSR of Rs.15,00,000/- is enclosed.)

Finance Department, V.U.

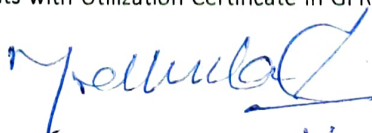
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Diary No. 25, Date 01/04/22

Time 3:52 Signature

*[Handwritten Signature]*

1. The **First** instalment of the approved grant-in-aid will be released after receiving the grant-in-aid bill duly filled in, stamped and signed by the Project Director as well as the affiliating organization. (GIB already received).
2. In case, the study involves survey research, the finalized schedules/questionnaires (2 copies) designed to elicit information should be sent to the ICSSR as per the following schedule:
  - a) If the schedule /questionnaire for eliciting information is as per standard questionnaire, these will have to be sent to ICSSR immediately,
  - b) If the schedule /questionnaire for eliciting information are to be designed afresh keeping in view the requirements of the project, these will have to be sent to the ICSSR within a period of six months in any case.
6. The **Second** instalment will be released after receiving a satisfactory six/nine/ twelve months Progress Report (depending on the duration of the programme), simple statement of account of first instalment, published peer reviewed journal, signed minutes of the Advisory Committee approving progress made by the Project Director and recommending release of second instalment along with grant-in-aid bill towards the second instalment.
7. The **Third** instalment will be released will be released after receiving second Progress Report (depending on the duration of the programme), simple statement of accounts of the second instalment, signed minutes of the Advisory Committee approving progress made by the Project Director and recommending release of third instalment along with grant-in-aid bill towards the third instalment.
8. The **fourth** instalment will be released after receiving book length Final Report in soft copy (both word and PDF format), Executive Summary of Final Report in soft copy (both word and PDF format), 500 words abstract of the Final Report in soft copy, research papers published in peer reviewed journals duly acknowledging ICSSR, similarity index score sheet, simple statement of accounts of third instalment along with grant-in-aid bill towards the fourth instalment. Project Director is required to submit hard copies of the Final Report only after the confirmation from the ICSSR after incorporating the suggested changes. Such data or information relating to the research project as may be asked for by the ICSSR for preservation in its Data Archives should be given by the scholar.
9. The **publication grant** will be retained by the ICSSR & will be spent by the ICSSR Publication Division if the Final report is found publishable by an Expert Committee constituted by the ICSSR.
10. The scholar shall acknowledge support of ICSSR in all publications resulting from the project output (Research Paper, Books, Articles, Reports, etc.) and should submit a copy of the same to the ICSSR during its course and after completion.
11. **Final instalment** will be issued after receipt of recommendation of the expert for acceptance of the Final Report, Audited statement of accounts (AC) in prescribed format with utilization certificate (UC) in GFR-12A form for the entire approved project amount duly signed by the Finance Officer/Registrar /Director of the affiliating Institution, verification of all documents and decision on retaining of equipment and books etc. The institutions of which the accounts are not audited by CAG/AG, their utilisation certificate will be signed by the Finance Officer and a chartered accountant.
12. The **Overhead Charges** to the affiliating institution will be released after the Final Report has been accepted and documents verified by the ICSSR. The ICSSR reserves the right to change the affiliation if it is found that the affiliating institute is not co-operating with the scholar and it is not facilitating timely completion of the study.
13. The Project Director will ensure that the expenditure incurred by him conforms to the approved budget heads and relevant rules. Audited Statement of accounts with Utilization Certificate in GFR of 12A form is for the entire project amount approved for the project.



14. The University/Institution of affiliation will provide to the scholar office accommodation including furniture, library and research facilities and messengerial services. For this, the ICSSR shall pay to the University/Institution of affiliation **overhead charges @5%** over and above or maximum Rs.1,00,000 of the total expenditure incurred on the project only after successful completion of the project.
15. The Contingency Grant may be utilized for research and office assistance, books, stationary, computer cost, research assistance and the field work expenses of Project Director, Co-Project Directors and research personnel connected with the research work.
16. The overhead charges to the affiliating institution over and above @ 5% or maximum Rs.1,00,000 will be released only after successful completion of the project after evaluation. The accounts and the Utilization Certificate will be signed by the Finance Officer/Registrar/Principal/Director in the case of accounts of the institution are audited by CAG/AG. Otherwise, they need to be signed by the Finance Officer and the Chartered Account.
17. The Director of the research project will be **Dr. Tarak Nath Sahu** who will be responsible for its completion within **24 Months** from the date of commencement of the project, which is **07 March 2022**, as intimated by the scholar.
18. In case, the Project Director does not submit the periodic / final project report as per schedule with adequate justification, the scholar may be debarred from availing all future financial assistance from ICSSR.
19. All grants from ICSSR are subject to the general provision of GFR 2017.
20. The Project Director will ensure that the expenditure incurred by him conforms to the approved budget heads. The grant-in-aid is subject to all the conditions laid down in the Indian Council of Social Science Research (ICSSR) **Research Projects available in the ICSSR website [www.icssr.org](http://www.icssr.org)**
21. The expenditure on this account is debatable to the **Budget Head-ICSSR (Scheme Code 0877); OH 31.09 Research Projects.**
22. All project instalments will be transferred through **Public Finance Management System (PFMS)** and ICSSR shall implement the EAT module for ensuring transparency of expenditure at all levels and to ensure that there is no parking of funds.
23. As per MoE (Ministry of Education) instruction, the amount of grant sanctioned herein is to be utilized by **the end of the project duration**. Any amount of the grant remaining unspent shall be refunded to the ICSSR immediately after the expiry of the duration of the project. If the grantee fails to utilize the grant for the purpose for which the same has been sanctioned/or fails to submit the audited statement of expenditure within the stipulated period, the grantee will be required to refund the amount of the grant with interest thereon @ 10% per annum.
24. Any instalment release is subject to availability of grant, and satisfactory progress report of the scholar. Mere award of the study does not entitle the scholar for the release of any of the instalments.

Yours faithfully,

  
(Revathy Vishwanath)

For MEMBER-SECRETARY

Encl: as above.

Copy to:

1. Dr. Tarak Nath Sahu,  
Associate Professor, Vidyasagr University,  
Medinipur-721102, West Bengal
2. Dr. Dr. Sudarshan Maity,  
Deputy Director, The Institute of Cost Accountants of India,  
12- Sudder Street, Kolkata, -700016, West Bengal
3. Finance Branch, ICSSR, New Delhi
4. Record file

  
(Revathy Vishwanath)

For MEMBER-SECRETARY

Title: " Lives and Livelihoods of Migrant Workers from West Bengal : Aftermath of the spread of COVID-19"

By: Dr. Tarak Nath Sahu

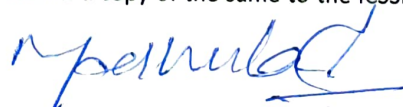
S.No	Heads of Expenditure	Value (Rs.)
1	Project Director/Co-PD	
2	Research Staff: Full time/part time/Hired services	Not exceeding 45% of the total budget.
3	Field work	Not exceeding 35%
4	Equipment and study material	Not exceeding 12%
5	Contingency	Not exceeding 5%
6	Publication of report -	approx.5-7%
	<b>Grand Total</b>	ICSSR will finally make it 100%
	Affiliating Institutional overheads over and above the grand total	(Affiliating Institutional overheads @ 5% of the approved budget, subject to a maximum upper limit of Rs.1,00,000/-)

\* The five percent (5-7%) publication amount will be spent by the ICSSR Publication Division if the Final report is found publishable by an Expert Committee constituted by the ICSSR.

➤ **Remuneration and Emoluments of Project Staff**

(a) Project staff could be engaged by the Project Director on a full/ part-time basis during the research work and the duration/consolidated monthly emoluments of their employment may be decided by the project director within the limits of the sanctioned financial allocation and as per the ICSSR rules (b) Research Associate @Rs.25, 000/- p.m. (Qualification – Post graduate in any social science discipline with minimum 55% marks and NET/SLET /M.Phil/Ph.D)(c)\Research Assistant @Rs.20, 000/- p.m.(Qualification-Ph.D./M.Phil./ Post graduate in social science discipline with minimum 55% marks(d) Field Investigator @ Rs.15, 000/-p.m. (not exceeding 6 months) (Qualification- Post graduate in any social science discipline with minimum 55% marks)(e).Retrospective payment for work already done is not permissible.

- **Re-appropriation:** The Project Investigator may with the permission of the Institution, re-appropriate expenditure from one sub-head to another, subject to a maximum of 5-7 % of the particular budget heads. If the study necessitates re-appropriation beyond 7%, it may be done only after the approval of the ICSSR
- **Selection of Research Staff** should be done through an advertisement and a selection committee consisting of (1) Project Director; (2) One outside Expert (other than the institute where the project is located); (3) a nominee of the Vice Chancellor/Head of the Institution and (4) Head of the Department)/Dean of relevant faculty duly approved by the competent authority.
- **For all field work related expenses** of Project Director, Co-Director and project personnel, rules pertaining to affiliating institutes shall be followed.
- **All equipment and books** purchased out of the project fund shall be the property of the affiliating institutions. On completion of the study, the Project Director shall submit an undertaking in this regard. The ICSSR, however, reserves the right to take charge of equipment and books, if it thinks it fit in a case.
- **Purchase of equipment/ assets** for the research Project is permissible only if it is originally proposed and approved by the ICSSR and does not exceed the permissible amount.
- **The scholar should acknowledge the support of ICSSR** in all publications resulting from the programme output (Research Paper, Books, Articles, Reports, etc.) and should submit a copy of the same to the ICSSR during its course and even after completion.





**Art History and World**

**Art Studies**

School of Art, Media and American Studies

University of East Anglia

Norwich, NR4 7TJ, UK

Direct Dial: 01603 592816

Email: D.Rycroft@uea.ac.uk

24th March 2022

Dear Prof Acharya,

**Regarding:**

**Academic Cooperation between Vidyasagar University (Department of English)  
and the University of East Anglia (India Dialogue)**

Following a number of fruitful meetings between our two groupings, which we have found to be of immense interest value, especially in terms of our broad and shared agenda to implement Academic Social Responsibility as an integral component of education for sustainable development, I am pleased to write with the express intention of formalising this cooperation.

We hereby propose that four members of UEA's 'Humanities in India' partnerships programme - namely Prof Jon Cook, Dr Victoria (Tori) Cann, Prof Ralph Yarrow, and myself - commit to working with like-minded faculty members of the Department of English, with a view to our formulating and co-teaching a number of postgraduate classes in the coming months and years.

We would be very grateful if you could facilitate this process at your Department, and also to help us to organise the workings and timings of the classes. I would like to assure both yourself and your seniors that we would also like to commit to finding ways to involve student-to-student exchanges and field-based learning opportunities too.

For the upcoming phase of collaboration, we propose the following.

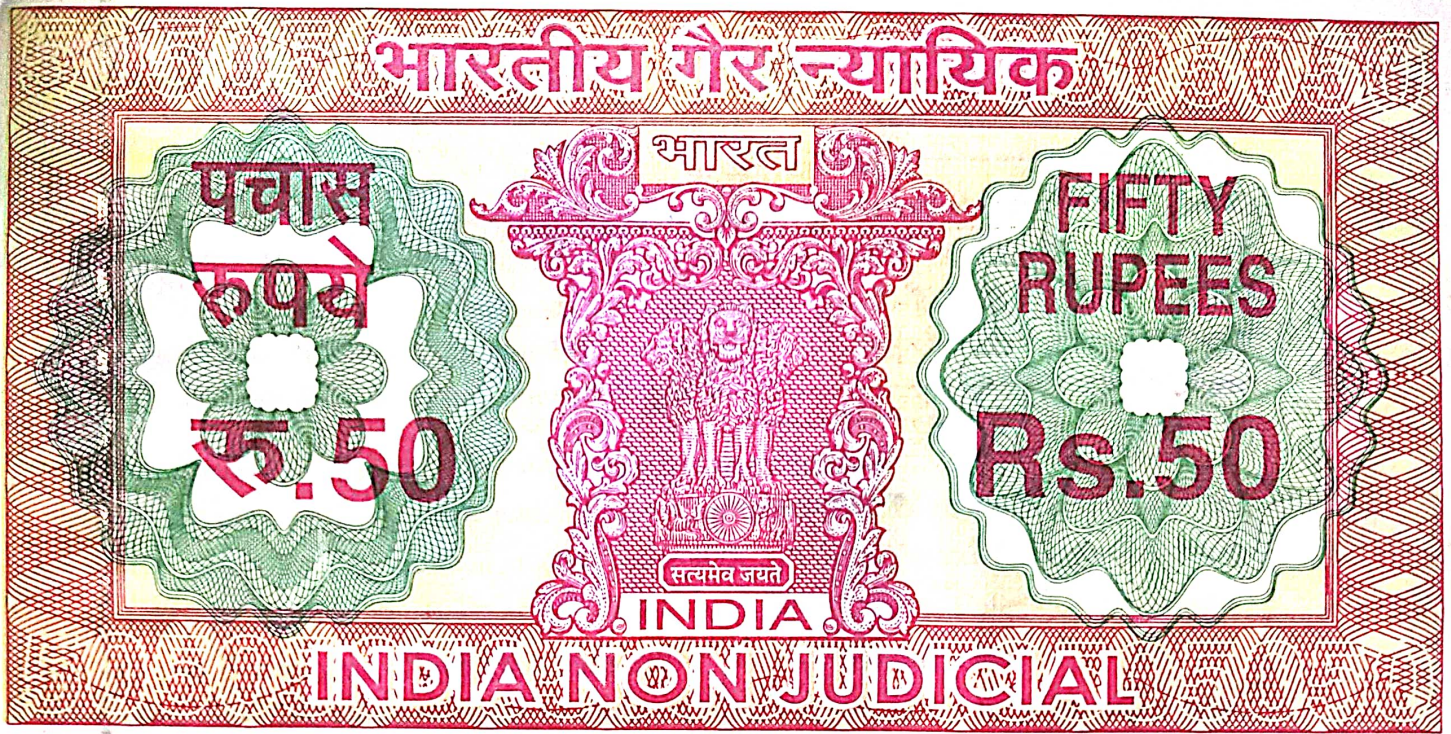
- Jon Cook: to either lead or co-teach a session on the poem entitled 'Looking Out' by Arvind Mehrotra, published in his Collected Poems (2014), concerning issues of decolonisation, translation, and perception.
- Ralph Yarrow: to either lead or co-teach a session on the work of Jana Sanskriti in India and of the Theatre of the Oppressed, with a view to understanding local experiences of activism and the process of writing and performing new social texts.
- Dan Rycroft: to either lead or co-teach a session on Adivasi Studies and anthropology in India, focusing on the resistance movements of Santal activists in the mid-nineteenth century and the memory of resistance in modern-day Jharkhand.

- Tori Cann: to contribute to a session to be devised and chaired by Dr Jolly Das on issues concerning gender equality.

We will be pleased to share further details about these plans for joint teaching, and to discuss these with the Department at the earliest opportunity. We thank you in advance for your consideration, look forward to further opportunities to engage these topics in view of your Department's own evolving pedagogy and our own series of Dialogues on Decolonisation.

Yours sincerely,

Dr Daniel J. Rycroft  
Associate Professor, Arts and Cultures of Asia  
Chair, India Dialogue (UEA)



पश्चिमबङ्ग पश्चिम बंगाल WEST BENGAL

AC 332789

**Memorandum of Understanding (MoU)**

**Between**

**ICAR-Central Inland Fisheries Research Institute, Barrackpore, West Bengal  
(An Unit of Indian Council Of Agricultural Research, New Delhi)**

**And**

**Department of Fishery Sciences  
Vidyasagar University, Midnapore, West Bengal**

This Memorandum of understanding (MoU) is made on this 23<sup>rd</sup> day of the month of December in the year 2021 by and between the ICAR-Central Inland Fisheries Research Institute, (ICAR-CIFRI) having its Head Office at Barrackpore, Kolkata-700120, West Bengal is the ONE PART and Department of Fishery Sciences, Vidyasagar University, Midnapore, West Bengal is the OTHER PART.

In accordance with the mutual consent to promote cooperation both the Institute and the University enter into a formal statement of collaboration in the form of Memorandum of Understanding (MoU) for the purpose of academic interaction as under:

## 1. Parties to the MoU

### ICAR — Central Inland Fisheries Research Institute, Barrackpore

ICAR-Central Inland Fisheries Research Institute, Barrackpore under ICAR, a premier research Institute in the field of inland open water fisheries research, training and extension encompassing lacustrine, riverine, reservoir and floodplain environments, enhanced and culture-based fisheries, etc. besides conducting studies on aquatic pollution, behavior and migration of fishes and environmental impact assessment related to various developmental projects.

With the growing food scarcity in the country during and after the World War II, the need was felt for organizing fisheries research covering the entire country for harnessing the cultivable waters for fish production. This gave birth to Central Inland Fisheries Research Station (CIFRS) in March, 1947, at old Mint House, Strand Road, Calcutta. The present institution at Barrackpore, the oldest cantonment of India was formally declared open by Dr. B. C. Roy, the first Hon'ble Chief Minister of West Bengal on June, 17 in 1959. The administrative control of the CIFRI was transferred from the Ministry of Food and Agriculture, Government of India to the Indian Council of Agricultural Research with effect from October 01, 1967. The research programme of the Institute was thoroughly re-oriented and was re-drawn into priority laid and problem oriented projects during 1967.

The Institute has scientific cadre strength of 85 scientists working in inter-disciplinary mode in 5 full-fledged Divisions and two sections. In addition, the Institute has 4 Regional Centres and two Research Stations. The mandate of the Institute as approved by the ICAR is as follows:

- Basic and strategic research for sustainable management of inland openwater resources.
- Develop protocols for productivity enhancement in reservoirs and wetlands and aquatic ecosystems health management.
- Act as repository of information on inland open water fisheries resources.
- Human resource development through training, education and extension.

ICAR-CIFRI, Barrackpore is the Center of Excellence for research and innovation in the field of inland fisheries. This organization has a proven record for advance in researches in the field of fisheries science including riverine fisheries, fish breeding, population dynamics, climate change, health of aquatic ecosystems like river, wetland, reservoirs, lakes, tanks etc. on vital issues and other focused area covered under broader domains of advanced fish biology. Bio-informatics, molecular biology, disease diagnostics, econometrics and modeling beside this, Institute has expertise in enclosure culture and culture-based fisheries.

In order to encourage and facilitate best quality research, education and extension in inland openwater fisheries research and natural resource management in the country, ICAR— CIFRI, Barrackpore is keen to share its world class resources through collaborating with the universities/ organizations in this endeavor as per ICAR rules and guidelines.

### **Department of Fishery Sciences, Vidyasagar University (VU), Midnapore, West Bengal**

Vidyasagar University is a State University and was established for enhancing academic environment of the rural areas of Medinipur and adjacent areas. Vidyasagar University came in to existence on 29<sup>th</sup> September, 1987 under the West Bengal State Universities (Amendment) Act, 1981 (West Bengal Act- 1/1981), and is presently functioning from Midnapore 721102. The Department of **Fishery Sciences** starts its journey in the year 2003 to fulfill the demand of different UG students of Vidyasagar University as well as Industrial Fish & Fisheries (IFF) of different state university. The department has crossed around 18 years of its academic journey producing more than 500 Post Graduate students and most of them have recruited in different corporate jobs including Government sectors. The Department of Fishery Sciences offers Master of Science (M.Sc.) and Doctor of Philosophy (Ph.D.) degree in Fisheries Science.

### **2. Scope of cooperation**

The broad scope of work (but not limited to) are assisting Vidyasagar University in formulation of different Fisheries courses to create projects which can contribute to the development of the fisheries sector, the most vibrant sector under Agricultural domain through the acquired knowledge and skills and earned values while the students involved in such projects be engaged in public service or as an entrepreneur. On the other hand Department of Fishery Sciences, VU will assist **ICAR-CIFRI** in demonstration and conducting field trials of various technologies and tools including river ranching in Ganga and other rivers.

More specifically, ICAR-CIFRI and Department of Fishery Sciences, Vidyasagar University will extend cooperation in the following areas:

1. Capacity building of faculty members through in-service training in their specialized fields related to inland fisheries.
2. That the students of post-graduation and PhD Course registered with the Department of Fishery Sciences, Vidyasagar University will be allowed to undergo research programmes of specified duration with approval of both the Institutions and on payment of nominal charges (ICAR guidelines) as specified by ICAR-CIFRI, Barrackpore.

3. That the number of such students will be based on ICAR-CIFRI research agenda and availability of ICAR-CIFRI scientist's time to guide the students.
4. Identification of collaborative research programmes and field trials to be taken up.
5. Assisting in organizing study tours to the visiting faculty members and students and making them familiar with research and extension activities during their visit to CIFRI or its station or other research project sites.
6. Assisting in identification of potential in land fisheries intervention sites and lining them up for the Student Ready programme through on-site training and attachment to such sites.
7. Assisting in providing services of faculty members for the delivery of selected specialized courses and visits as and when required.
8. Collaboration in organizing joint seminars/ workshops.
9. Collaboration in conducting field trials of management practices, technologies and tools developed by ICAR-CIFRI, wherever appropriate
10. Development and demonstration of various forms of culture-based fisheries under community management
11. Both ICAR-CIFRI and Department of Fishery Sciences, VU will undertake jointly agreed student research programmes.

### **3. General Terms & Conditions**

The MoU will be subject to the following terms and conditions between ICAR-CIFRI, Barrackpore and Department of Fishery Sciences, VU, Midnapore:

- I. The technical programme of research of the student will be decided by the Advisory committee in consultation with the Co-Guide/ Major Principal Guide of ICAR-CIFRI and Department of Fishery Sciences, VU as the case maybe.
- II. For guiding post-graduate and Ph. D. student as a major advisor/guide or co-guide in case of aforementioned joint programmes, staff members of the ICAR-CIFRI shall be accredited as faculty member by the university.
- III. The Department of Fishery Sciences, Vidyasagar University shall recognize the

ICAR Institute (ICAR-CIFRI, Barrackpore) and specific disciplines/ divisions/ departments as Centres for conducting research work for the award of post-graduate/ Doctoral degrees.

- IV. That the scientist/Officers of the ICAR-CIFRI, Barrackpore on their individual merit and in accordance with the UGC guidelines and University rules and regulations shall be recognized by Vidyasagar University as Supervisor/Co-supervisors/Guide/Co-guides/External supervisors for guiding research.
- V. That the Scientists and the Research Fellows/Young Professionals of the ICAR\_CIFRI shall be allowed to register for Doctoral programs run by the Vidyasagar University. The scientists of the ICAR-CIFRI, Barrackpore may be incorporated in the Departmental Research Committee (DRC) as an expert in the relevant subject/field.
- VI. That the Department of Fishery Sciences, Vidyasagar University may invite ICAR-CIFRI Scientists/ Experts as visiting faculty members to deliver lectures as per requirement of the University in various courses. However, TA and DA may be borne by University; Suitable honorarium may also be given to concerned scientist as per University rules.
- VII. The programme of research duly approved by the Director ICAR-CIFRI and Dean/Principal Post-Graduate studies of Vidyasagar University pertaining to partial fulfillment of degree shall be termed as joint programme.
- VIII. For components of the teaching programme that require maintenance of academic record (attendance, conduct of examination, marks submission of results, etc.) of students, the concerned scientists shall ensure to maintain and submit the required records as per academic calendar and schedule of each other Institutions.
- IX. The student will be bounded by the rules and regulations of both the Institutions
- X. The implementation and regulation of MoU shall be monitored and discussed by the HOD/TIC, Department of Fishery Sciences, VU and the Director, ICAR-CIFRI from time to time and in case any interim modification/alternation that may be felt necessary shall be brought into force.
- XI. Any violation in aforesaid terms and conditions of the MoU may lead to termination of MoU after mutual discussion of the HOD/TIC, Department of Fishery Sciences, VU and the Director, ICAR-CIFRI.
- XII. Any dispute will be resolved amicably by holding discussions between the appropriate authorities of both the Institutions authorized by the respective Vice Chancellor/ Director. In all cases, the decision of the Vice-Chancellor/ Director of the Institute will be final and binding upon all concerned.

#### 4. Intellectual Property Rights

i) That it is agreed that all outcomes of the ICAR-CIFRI, Barrackpore/Vidyasagar University, Midnapore pertaining to joint research activities, including all intellectual property rights (IPR), shall be jointly owned by both the parties.

ii) The University will be expected to ensure protection of Intellectual Property Rights generated or likely to be generated during the students' research work. The ICAR as the first applicant and the University shall be the joint applicants for IPRs and the students and involved scientific staff shall be included as the inventor/author. The "ICAR Guidelines for Intellectual Property Management and Technology Transfer/ Commercialisations" shall be the reference for exploitation of the generated intellectual property, and whose benefits sharing shall be mutually decided in each case.

iii) That, the research findings as a result of this collaborative work will be published in public interest after mutual agreement of both the parties. Any publication (s) resulting from the post-graduate research work must be processed jointly by the scientists/supervisors at ICAR-CIFRI, Barrackpore and the faculty at VU and explicitly recognize that work has been at ICAR-CIFRI, Barrackpore and VU, Medinipur. The norms already existing for publishing student's research at VU and that at ICAR-CIFRI, Barrackpore shall be followed. Research findings published by either party will give due credit to other party's contribution, but the publishing party shall be entirely responsible for flaw less conclusions and interpretations reported.

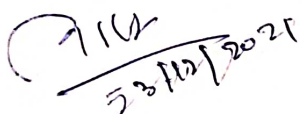
#### **5. Effective Time Period**

This agreement will be-in-effect from the date of signing this MoU by both the parties for five years and renewed further if mutually agreed. However, either party may terminate the agreement by written notification signed by the appropriate official of the Institution initiating the notice. Such notice must be received by the other party six months prior to the effective termination date. However, obligations and commitments already contracted shall be honored and continued by both the parties until such commitments are over. These commitments under agreement may be amended/modified/deleted after mutual agreement by means of exchange of letters between the Institute and the University. Once approved by both the parties, such amendment shall also become part of this Memorandum of Understanding (MoU).

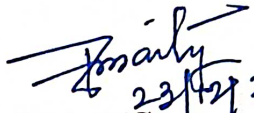
**6. IN WITNESS HEREOF**, the Parties through their duly authorized representatives, hereby agree to the provisions of this Memorandum of Understanding drawn up in two originals.

BY SIGNING BELOW, the parties, acting by their duly authorized officers, have caused this Memorandum of Understanding to be executed, effective as of the day and year first above written

Signed on behalf of First party

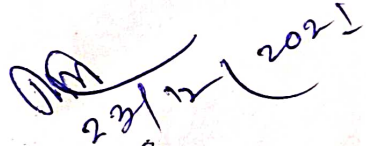
  
Director  
ICAR-Central Inland Fisheries Research Institute,  
Barrackpore, Kolkata WB  
(Dr. B.K. Das)

Signed on behalf of Second Party

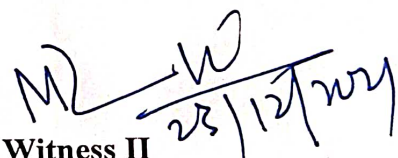
  
HOD/TIC  
Department of Fishery Sciences  
Vidyasagar University (VU)  
Midnapore 721102, WB  
Teacher-in-Charge  
Dept. of Fishery Sciences,  
VIDYASAGAR UNIVERSITY  
Midnapore-721102, W.B., India  
Dr. Joydev Mandal

Countered Signed

Witness I

  
Witness I (DR. BASUDEV MANDAL)

Witness II

  
Witness II  
(Dr. Manoj K. Pati)

105/106

Administrative  
App. No. ENV/2017/29

No. BT/PR25092/NER/95/1009/2017  
GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE & TECHNOLOGY  
DEPARTMENT OF BIOTECHNOLOGY

Block 2, 6-8th Floors  
CGO Complex, Lodhi Road,  
New Delhi- 110 003  
Dated: 23/09/2019

**ORDER**

Sanction of the President is hereby accorded, under Rule 18 of the Delegation of Financial Powers Rules, 1978, for the implementation of the project entitled: "**Cloning and expression of amylases from the microbes associated with hot springs niche and application of recombinant amylase for the production of 'limit dextrins' from starchy bioresources of Sikkim**" for a period of 3 Year 0 Month at a total cost of **Rs. 6269240** (Rupees Sixty Two Lakhs Sixty Nine Thousand Two Hundred and Fourty Only) on the terms and conditions detailed here under:-

**2 The Project :**

**2.1 Title :** "Cloning and expression of amylases from the microbes associated with hot springs niche and application of recombinant amylase for the production of 'limit dextrins' from starchy bioresources of Sikkim"

**2.2 Details of the Investigators:**

**Project Coordinator**

**Dr. Nagendra Thakur**

Assistant Professor  
Department of Microbiology, Sikkim University,  
6th Mile, Tadong, Gangtok, Sikkim, 737102

**Principal Investigators:**

**Dr. Nagendra Thakur**

Assistant Professor  
Department of Microbiology, Sikkim University,  
6th Mile, Tadong, Gangtok, Sikkim, 737102

**Dr. Keshab Chandra Mondal**

Associate Professor  
Microbiology  
Department of Microbiology Vidyasagar University  
Midnapur, West Medinipur, West Bengal, 721102

*Vaishali*

### 2.3 Objectives:

#### Sikkim University:

1. To investigate the microbial diversity of hot-springs of Sikkim in different seasons using both culture-dependent and culture-independent techniques
2. To screen, isolate and characterize amylase producing thermophilic bacteria from the Hot Springs of Sikkim.
3. Isolation, screening and characterization of endoamylase related genes from the metagenome of Hot Springs of Sikkim.
4. Cloning of recombinant vector into suitable expressible host and Production of recombinant endoamylase.

#### Vidyasagar University, Midnapur

1. Scale-up for amylase production from recombinant organisms and Purification and characterization of recombinant endoamylase.
2. Optimization of reaction environment of free and immobilized enzyme for production of limit dextrans from raw starchy ingredients.
3. Isolation and characterization of limit dextrans.

### 2.4 Time Schedule:

The duration of the project is 3 Year 0 Month from the date of this sanction order.

### 2.5 Project Cost:

The total cost of the project is Rs. **6269240/-** (Rupees Sixty Two Lakhs Sixty Nine Thousand Two Hundred and Forty Only) as per details given below :

Institute	Year I	Year II	Year III	Total Cost(Rs.)
1. Sikkim University	2106760	1051760	703600	<b>3862120</b>
2. Vidyasagar University, Midnapur	1021760	666760	718600	<b>2407120</b>
<b>Total (Rs.)</b>	<b>3128520</b>	<b>1718520</b>	<b>1422200</b>	<b>6269240</b>

#### Institute wise details are:

Budget Head	Year I	Year II	Year III	Total(Rs.)
<b>1. Sikkim University</b>				
Equipment	955000.00			<b>955000.00</b>
Manpower	401760.00	401760.00	453600.00	<b>1257120.00</b>
Overhead	50000.00	50000.00	50000.00	<b>150000.00</b>
Travel	50000.00	50000.00	50000.00	<b>150000.00</b>
Consumables	600000.00	500000.00	100000.00	<b>1200000.00</b>
Contingency	50000.00	50000.00	50000.00	<b>150000.00</b>
<b>Total (Rs.)</b>	<b>2106760.00</b>	<b>1051760.00</b>	<b>703600.00</b>	<b>3862120.00</b>
<b>2. Vidyasagar University, Midnapur</b>				
Equipment	300000.00			<b>300000.00</b>
Manpower	401760.00	401760.00	453600.00	<b>1257120.00</b>
Overhead	35000.00	30000.00	35000.00	<b>100000.00</b>
Travel	50000.00	50000.00	50000.00	<b>150000.00</b>
Consumables	200000.00	150000.00	150000.00	<b>500000.00</b>
Contingency	35000.00	35000.00	30000.00	<b>100000.00</b>
<b>Total (Rs.)</b>	<b>1021760.00</b>	<b>666760.00</b>	<b>718600.00</b>	<b>2407120.00</b>

Vaindali

### 2.6 Equipment:

The details of the equipment sanctioned for the implementation of the project at Annexure-I

### 2.7 Manpower:

The details of the manpower sanctioned for the implementation of the project at Annexure-II

### 3. Head of Account:

The Non-Recurring expenditure involved is debitale to:

Demand No. 87	Department of Biotechnology
3425	Other Scientific Research 2019-2020
3425.60	Others (Sub Major Head)
3425.60.200	Assistance to other Scientific Bodies (Minor Head)
3425.60.200.29	Biotechnology Research and Development
3425.60.200.29.17	Assistance for Research and Development
3425.60.200.29.17.35	Grants for creation of capital assets

The Recurring expenditure involved is debitale to:

Demand No. 87	Department of Biotechnology
3425	Other Scientific Research 2019-2020
3425.60	Others (Sub Major Head)
3425.60.200	Assistance to other Scientific Bodies (Minor Head)
3425.60.200.29	Biotechnology Research and Development
3425.60.200.29.17	Assistance for Research and Development
3425.60.200.29.17.31	Grants -in-Aid General

### 4. Terms & Conditions:

Additional Terms and Conditions, specific for Twinning R and D program for NER  
a. Both NER and Rest of India (RoI), Institutions scientists should work together for the objectives stated in the sanction of the project and any deviation from this would attract closure of the project at any point of time.

b. In the project review meetings, both the PIs from NER and RoI Institutions should participate and make presentation.

c. The outcomes of the project such as research papers, patents, copy rights etc. should be made jointly.

d. The NER Scientists are to be trained at the collaborating institute appropriately to empower the NER Scientists.

e. The project personal such as Research Associate, JRF or SRF, Research Assistant are also to be trained at least once in the collaborating national institute.

f. The collaborating institute scientist should visit NER institutions more frequently to guide NER scientists in design and conduct of experiments.

*Vaishali*

g. The Non-Recurring items must be procured and installed within 18-months of the sanction of the project, failing which the PIs have to return the remaining/unutilized Non Recurring grant with 10% of Interest.

h. In case the amount of grant-in-aid is refunded, the whole or a part amount of the grant, with an interest at 10% per annum there on shall be recovered.

- 4.1 The other terms and conditions governing this sanction are attached at Annexure- III.
- 4.2A Memorandum of Agreement (MoA) will be signed between the Department of Biotechnology and the grantee institution on Non-Judicial stamp paper Rs. 100/- in the enclosed format and the second release/installment will be made only after signing of MoA between the grantee institutions and DBT. In case of NGO's and Private Institution's, execution of MOA is mandatory before first release. A format of the MoA is enclosed in Annexure-IV
- 4.3 The Institute/Agency will keep the whole of the grant in a Bank Account earning interest, and the interest so earned should be reported to DBT in the Utilisation Certificate and Statement of Expenditure. The Interest so earned will be treated as created to the institute/Agency and shall be adjusted towards further installment of the grant and or at the time of Final Settlement of Accounts.
- 5.No International Travel will be undertaken from the sanctioned project grant unless specified otherwise.
- 6.The Registrar, Sikkim University, Gangtok, Sikkim and The Registrar, Vidyasagar University, Midnapur, West Bengal would be responsible for submission of Statements of Expenditure (SoE), utilization certificates (UC), Assets Certificates, Manpower staffing & expenditure details in prescribed DBT formats to DBT in respect of grants released in this project from time to time.
- 7.PI's of DBT sponsored projects can consider appointment of JRF from Category-II merit list of DBT-BET exam so that candidates can be paid fellowships at par with NET/GATE/BET qualified candidates as per DST OM No. A.SR/S9/Z-09/2012 dated on 21 Oct 2014. However, there is no compulsion on PI's to select candidates for JRF in their projects from Category-II of DBT-BET.
- 8.As per Rule 236 (1) of GFR 2017, the accounts of all Grantee Institutions or Organisations shall be open to inspection by the sanctioning authority and audit, both by the Comptroller and Auditor General of India under the provision of CAG(DPC) Act 1971 and internal audit by the Principal Accounts Office of the Ministry or Department, whenever the Institution or Organisation is called upon to do so.
- 9.If the Research Project involves biological resources, the obligations under the Biological Diversity Act 2002 as applicable shall be complied with by the Project Investigator, the details of such obligations can be accessed at [www.nbaindia.org](http://www.nbaindia.org)
- 10.If this project works requires any Statutory Clearance (such as Ethical Committee Clearance, Informed Consent, Animal Ethics Committee Clearance, Institutional Bio-safety Committee Clearance, National Biodiversity Authority approval etc.), Project investigator(s) and Host Institution(s) shall compulsorily comply the same before undertaking such activities.
- 11.This issues under the power delegated to this Department and with the concurrence of IFD vide their SAN No.102/IFD/SAN/1937/2019-2020 dated September, 21 2019.
- 12.This sanction order has been noted at serial no. 105, 106 in the Register of Grants.



(Dr. Vaishali Panjabi)  
Scientist 'E'

डॉ. वैशाली पंजाबी / Dr. VAISHALI PANJABI  
वैज्ञानिक 'ई' / Scientist 'E'  
बायोटेक्नोलॉजी विभाग / Deptt. of Biotechnology  
विज्ञान और प्रौद्योगिकी, मंत्रालय / Mo Science & Tech.  
भारत सरकार, नई दिल्ली Page No. 14. 7/hi

To,

The Pay & Accounts Officer,  
Department of Biotechnology,  
New Delhi - 110 003.

**Copy to:**

- 1 The Principal Director of Audit (Scientific Departments), DACR Building, New Delhi- 110 002.
- 2 Dr. Nagendra Thakur (Project Co-ordinator), Department of Microbiology, 6th Mile, Tadong, Gangtok, Sikkim. 737102
- 3 The Registrar, Sikkim University, 6th Mile, Samdur, P. O. : Tadong, Gangtok - 737102, Sikkim
- 4 The Registrar, Vidyasagar University, Midnapur, West Medinipur - 721102, West Bengal
- 5 Dr. Keshab Chandra Mondal, Associate Professor, Department of Microbiology Vidyasagar University Midnapur - 721102, West Bengal
- 6 Dr. Nagendra Thakur, Assistant Professor, Department of Microbiology, Sikkim University, 6th Mile, Tadong, Gangtok - 737102, Sikkim
- 7 Cash Section, DBT (2 copies).
- 8 Sanction Folder.
- 9 File Copy.

*Vaishali*

**(Dr. Vaishali Panjabi)**  
**Scientist 'E'**

डॉ. वैशाली पंजाबी / Dr. VAISHALI PANJABI  
वैज्ञानिक 'ई' / Scientist 'E'  
बायोटेक्नोलॉजी विभाग / Deptt. of Biotechnology  
विज्ञान और प्रौद्योगिकी मंत्रालय / M/o Science & Tech.  
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

Annexure -I

Details of the Equipment sanctioned for the implementation of the project entitled "Cloning and expression of amylases from the microbes associated with hot springs niche and application of recombinant amylase for the production of 'limit dextrins' from starchy bioresources of Sikkim":

<b>Sikkim University</b>			
<b>SNo.</b>	<b>Name of Equipment</b>	<b>No.</b>	<b>Cost(Rs.)</b>
1.	Nanodrop Spectrophotometer	1	587000.00
2.	SDS Midi Gel Electrophoresis	1	368000.00
<b>Total</b>			<b>955000.00</b>
<b>Vidyasagar University, Midnapur</b>			
<b>SNo.</b>	<b>Name of Equipment</b>	<b>No.</b>	<b>Cost(Rs.)</b>
1.	PCR machine	1	300000.00
<b>Total</b>			<b>300000.00</b>

*Vaishali*

**(Dr. Vaishali Panjabi)**  
**Scientist 'E'**

डॉ. वैशाली पंजाबी / Dr. VAISHALI PANJABI  
वैज्ञानिक 'ई' / Scientist 'E'  
बायोटेक्नोलॉजी विभाग / Dept. of Biotechnology  
विज्ञान और प्रौद्योगिकी मंत्रालय / M/o Science & Tech.  
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

**Annexure -II**

Details of the manpower sanctioned for the implementation of the project entitled "**Cloning and expression of amylases from the microbes associated with hot springs niche and application of recombinant amylase for the production of 'limit dextrins' from starchy bioresources of Sikkim**":

Head	No. of Position	Year I	Year II	Year III	Total (Rs.)
<b>1. Sikkim University</b>					
JRF/SRF (1) (JRF @ Rs. 31000/- + 8 % HRA for the 1st & 2nd yr SRF @ Rs 35000/- + 8 % HRA for 3rd yr)	1	401760	401760	453600	1257120
<b>Total(Rs.)</b>		<b>401760</b>	<b>401760</b>	<b>453600</b>	<b>1257120</b>
<b>2. Vidyasagar University, Midnapur</b>					
JRF/SRF (1) (JRF @ Rs. 31000/- + 8 % HRA for the 1st & 2nd yr SRF @ Rs 35000/- + 8 % HRA for 3rd yr)	1	401760	401760	453600	1257120
<b>Total(Rs.)</b>		<b>401760</b>	<b>401760</b>	<b>453600</b>	<b>1257120</b>

Emoluments detail of research personal(s) mentioned in table(s) of Annexure-II shall be applicable only if candidate(s) met educational qualification and eligibility criteria as per DST OM No. SR/S9/Z-08/2018 dated 30.01.2019.



**(Dr. Vaishali Panjabi)**  
**Scientist 'E'**

डॉ. वैशाली पंजाबी / Dr. VAISHALI PANJABI  
वैज्ञानिक 'ई' / Scientist 'E'  
बायोटेक्नोलॉजी विभाग / Deptt. of Biotechnology  
विज्ञान और प्रौद्योगिकी, मंत्रालय / Mo Science & Tech.  
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi



----- Forwarded message -----

From: **Katz-Harris, Felicia, DCA** <Felicia.Katz-Harris@state.nm.us>

Date: Tue, 25 Aug 2020 at 01:55

Subject: request for research collaboration

To: Sumahan Bandyopadhyay <sumahan.b@rediffmail.com>, sumahan Banerjee <sumahan.b@gmail.com>

Dr. Sumahan Bandyopadhyay

Associate Professor

Department of Anthropology

Vidyasagar University

Midnapore-721102, W.B.

India

Dear Dr. Bandyopadhyay,

I was given your contact information by our mutual colleague, Dr. Frank Korom.

I am the senior curator and curator of Asian folk art at the Museum of International Folk Art in Santa Fe, New Mexico, USA. We are preparing a small exhibition on folk artists' response to the global coronavirus pandemic. We are focusing on the creation and representations of face masks. I am writing to request your collaboration on research and also to help us acquire a Bengali patua scroll painting, by Svarna Chitrakar.

Our museum has worked with Svarna Chitrakar in the past, through Dr. Korom, who guest curated an exhibition on Bengali patas, and coordinated a program involving Svarna Chitrakar and other patuas who travelled to Santa Fe to demonstrate their craft. I recently saw Svarna's video of her performing a new scroll about coronavirus, depicting face mask wearing. It is this type of painting we would like to commission. We would request your help in contacting the artist and helping us coordinate the commission of her artwork. If it is possible, and with strict covid-safe practices in place, we would like to include a video of the artist singing and performing her scroll.

I recognize that this is asking for your time and we would like to offer a modest honorarium to you for your help. Of course we are happy to credit you for your role and for your help with interpreting and translating communications and the scroll's story, as I do not read or speak Bengali.

I look forward to being in touch.

Many thanks, and all the best,  
Felicia Katz-Harris

.....  
Felicia Katz-Harris, Senior Curator | Curator of Asian Folk Art

Museum of International Folk Art

706 Camino Lejo | Santa Fe, New Mexico, USA | 87505

Telephone + (505) 476-1221 | fax + (505) 476-1300

felicia.katz-harris@state.nm.us | www.internationalfolkart.org



\*\*\*\*\*

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**DISCLAIMER**

Any views or opinions presented in this email are solely those of the author and do not necessarily represent those the University.

## Letter of intent for collaborative research program

### Data of professional cooperative partner:

*Name of the organization* : Maharaja Sriram Chandra Bhanja Deo University (MSCB University), Department of Biotechnology

*Address* : Takatpur, Baripada, Mayurbhanj, Odisha-757003, India

*Authorized representative* : Dr. Hrudayanath Thatoi, Professor

### Data of Lead Partner :

*Name of the organization* : Vidyasagar University, Department of Microbiology

*Address* : Midnapore, West Bengal – 721102, India

*Authorized representative* : Dr. Keshab Chandra Mondal, Professor

### The content of proposed collaboration

The above mentioned partners express their interest for collaborative research, student exchange and publications in the field of microbial biotechnology.

Vidyasagar University, May 16, 2020



**Prof. Hrudayanath Thatoi**

Principal researcher of MSCB University

Prof. (Dr.) H.N. Thatoi  
Department of Biotechnology  
Maharaja Sriram Chandra Bhanja Deo University  
Takatpur, Baripada-757003



**Prof. Keshab Chandra Mondal**

Principal researcher of Vidyasagar University

Professor  
Department of Microbiology  
Vidyasagar University  
Midnapore, 721102  
West Bengal, India

### To Whom It May Concern

A linkage between Prof. G. Muhiuddin, Department of Mathematics, University of Tabuk, Saudi Arabia & his group and Prof. Madhumangal Pal, Department of Applied Mathematics, Vidyasagar University, India & his group have been created.

We have been working in different fields of fuzzy mathematics for the last five years, and from July 2021 to June 2022, the following papers have been jointly published.

- 1) Muhiuddin, G., Pramanik, T., Alanazi, A.M. *et al.* Independent Fuzzy Graph: A New Approach. *Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci.* **92**, 373–389 (2022). <https://doi.org/10.1007/s40010-022-00769-w>
- 2) Sk. Amanathulla, G. Muhiuddin, D. Al-Kadi and M. Pal, Multiple Attribute Decision-Making Problem Using Picture Fuzzy Graph, *Mathematical Problems in Engineering* Volume 2021, Article ID 9937828, 16 pages <https://doi.org/10.1155/2021/9937828>
- 3) Chiranjibe Jana, G. Muhiuddin, Madhumangal Pal, and D. Al-Kadi, Intuitionistic Fuzzy Dombi Hybrid Decision-Making Method and Their Applications to Enterprise Financial Performance Evaluation, *Mathematical Problems in Engineering* Volume 2021, Article ID 3218133, 14 pages <https://doi.org/10.1155/2021/3218133>
- 4) Sk Amanathulla, G. Muhiuddin, D. Al-Kadi, and Madhumangal Pal, Distance Two Surjective Labelling of Paths and Interval Graphs, *Discrete Dynamics in Nature and Society* Volume 2021, Article ID 9958077, 9 pages <https://doi.org/10.1155/2021/9958077>
- 5) Jana, C., Muhiuddin, G. & Pal, M. Multi-criteria decision making approach based on SVTrN Dombi aggregation functions. *Artif Intell Rev* **54**, 3685–3723 (2021). <https://doi.org/10.1007/s10462-020-09936-0>
- 6) Chiranjibe Jana, G. Muhiuddin, Madhumangal Pal, and D. Al-Kadi, Intuitionistic Fuzzy Dombi Hybrid Decision-Making Method and Their Applications to Enterprise Financial Performance Evaluation, *Mathematical Problems in Engineering* Volume 2021, Article ID 3218133, 14 pages <https://doi.org/10.1155/2021/3218133>

Signature of collaborators with stamp



(Prof. G. Muhiuddin)

University of Tabuk



(Prof. Madhumangal Pal)

Professor Madhumangal Pal  
Department of Applied Mathematics  
Oceanology and Computer Programming  
VIDYASAGAR UNIVERSITY  
Midnapore-721102, W.B.



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संशोधन आयोग अनुसंधान परिषद  
स्वास्थ्य अनुसंधान विभाग, स्वास्थ्य एवं परिवार  
कल्याण मंत्रालय, भारत सरकार

Indian Council of Medical Research  
Department of Health Research, Ministry of Health  
and Family Welfare, Government of India

File no. AMR/Adhoc/241/2020-ECD-II

Dated: 7/10/2020

To

The Registrar,  
Vidyasagar University, Midnapore  
West Bengal - 721102

**Sub:** Sanction and budget allotment for the New Schemes entitled “Molecular tracking of difficult-to-control carbapenem resistance among Enterobacteriales (Enterobacteriaceae) clinical isolates in West Bengal, India: Focusing on in vitro diagnostics for antimicrobial resistance (AMR) towards the optimization of antimicrobial and infection prevention stewardship program” under Dr. Surojit Das, Assistant Professor, Department of Bio-Medical Laboratory Science and Management, Vidyasagar University, Midnapore

Dear Sir,

The Director General of the Council sanctions the above mentioned research scheme initially for a period of **Three years** from 15.10.2020 subject to extension up to the total duration specified in para 3 below:

The Director General of the Council also sanctions the budget allotment of **Rs. 10,36,813/- (Rupees Ten Lakh Thirty Six Thousand Eight Hundred Thirteen Only)** as detailed in the attached statement for the period w.e.f. 15.10.2020 year ending on 14.10.2021 during 2020-21.

The grant in aid will be given subject to the following conditions:

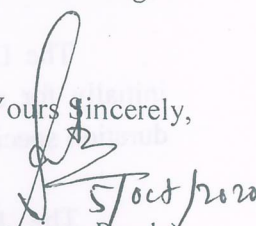
1. The payment of the grant will be made in lump sum to the Head of the Institute. The first Installment of the grant will be paid generally as soon as report regarding the commencement of the project and appointment of the staff is received by the Council. The demand for payment of the subsequent installment of the grant should be placed with the Council in prescribed format attached.
2. The staff appointed on the project should be paid as indicated in the budget statement attached.

o/c

3. The approved duration of the research scheme is **Three Years**. The annual extension will be given after review of the work done on the research scheme during the previous years.
4. Fifteen copies of the annual progress report of work done be submitted to the Council every year after completion of ten months of the project. Failure to submit the report in time may lead to termination of the project.
5. The Institute will maintain a **Separate Saving Bank Account** of the receipts and expenditure incurred on the research scheme and will furnish a utilization certificate and an audited statement of the accounts pertaining to the grant.
6. **The grant shall be utilized after following provision laid down in GFR-2017 and TA rules.**
7. The other terms & condition are indicated in the website of ICMR ([www.icmr.nic.in](http://www.icmr.nic.in)) for "Guidelines" for operation of projects for Grantees of ICMR's Extramural Research Projects". The receipt of the letter may please be acknowledged.
8. You are advised to seek concurrence of the council before disseminating the findings to journal, media or repositories

o/c

Yours Sincerely,

  
(Dr. Samiran Panda)  
Head ECD, ICMR

**No. AMR/Adhoc/241/2020-ECD-II**

Copy forwarded for information to: -

1. PI. Dr. Surojit Das, Assistant Professor, Dept. of Bio-Medical Laboratory Science and Management, Vidyasagar University, Midnapore-721102.
2. **Accounts Section V, ICMR** with two copies of the budget statement for information and necessary action.
3. **Finance Section, ICMR** with two copies of budget statement for compilation of the Council's budget.
4. IRIS Cell (2020-4919).
5. Mrs. Vandana, Sr. T.O.-II

  
Head ECD, ICMR

**Budget Statement for 1<sup>st</sup> Year**  
**Period from 15.10.2020 to 14.10.2021**

S.No.	Head	1 <sup>st</sup> Year
1	Staff (One JRF) @ 31000/-pm + 8%HRA= 33480/-	4,01,760/-
2	Contingencies	
	Recurring (supplies, materials, consumables, etc.)	6,00,000/-
3	Travel	5,000/-
4	Overhead Charges (3%)	30,053/-
	<b>Grand Total</b>	<b>10,36,813/-</b>

**Grand Total = Rs. 10,36,813/-**

**(Rupees Ten Lakh Thirty Six Thousand Eight Hundred Thirteen Only)**

o/c

  
5/oct/2020  
(Dr. Samiran Panda)  
HEAD ECD, ICMR



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भारतीय आयुर्विज्ञान अनुसंधान परिषद  
स्वास्थ्य अनुसंधान विभाग, स्वास्थ्य एवं परिवार  
कल्याण मंत्रालय, भारत सरकार

Indian Council of Medical Research  
Department of Health Research, Ministry of Health  
and Family Welfare, Government of India

File No. AMR/Adhoc/241/2020-ECD-II  
e-File No. 113315

Dated:.....

**Subject:-** Payment of 1<sup>st</sup> and final installment of 1<sup>st</sup> year grant-in-aid for the research scheme titled, “**Molecular tracking of difficult-to-control carbapenem resistance among Enterobacteriales (Enterobacteriaceae) clinical isolates in West Bengal, India: Focusing on in vitro diagnostics for antimicrobial resistance (AMR) towards the optimization of antimicrobial and infection prevention stewardship program**” under **Dr. Surojit Das**, Assistant Professor, Department of Bio-Medical Laboratory Science and Management, Vidyasagar University, Midnapore

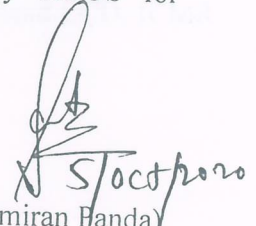
### MEMORANDUM

The Director General, ICMR sanctions the payment of **Rs.10,36,813/- (Rupees Ten Lakh Thirty Six Thousand Eight Hundred Thirteen Only)** as the 1<sup>st</sup> and final installment of the 1<sup>st</sup> year grant for incurring expenditure in connection with the above mentioned research scheme. The amount of Rs.10,36,813/- may be debited from the provision of **Rs. 10,36,813/-** made for the above research scheme for the current financial year 2020-21.

A formal bill for **Rs. 10,36,813/-** is sent herewith for payment by RTGS for **Rs.10,36,813/-** to “**Vidyasagar University**”.

The amount may be debited to ICMR grant under ADHOC head.

*o/c*

  
(Dr. Samiran Panda)  
Head ECD, ICMR

Accounts Section V, ICMR.  
Copy to:-

1. The Registrar, Vidyasagar University, Midnapore, West Bengal - 721102.
2. PI. Dr. Surojit Das, Assistant Professor, Dept. of Bio-Medical Laboratory Science and Management, Vidyasagar University, Midnapore, West Bengal-721102.
3. IRIS Cell (2020-4919).
4. Mrs. Vandana, Sr. T.O-II

  
Head ECD, ICMR



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भारतीय आयुर्विज्ञान अनुसंधान परिषद  
स्वास्थ्य अनुसंधान विभाग, स्वास्थ्य एवं परिवार  
कल्याण मंत्रालय, भारत सरकार

Indian Council of Medical Research  
Department of Health Research, Ministry of Health  
and Family Welfare, Government of India

File No. AMR/ADHOC/241/2020-ECD-II  
e-File No. 113315

Dated: 15/06/2022

**Subject:-**Payment of 1<sup>st</sup> & Final installment of 2<sup>nd</sup> year grant-in-aid for the research scheme titled, “Molecular tracking of difficult-to-control carbapenem resistance among Enterobacterales (Enterobacteriaceae) clinical isolates in West Bengal, India: Focusing on in vitro diagnostics for antimicrobial resistance (AMR) towards the optimization of antimicrobial and infection prevention stewardship program” under Dr. Surojit Das, Assistant Professor, Department of Bio-Medical Laboratory Science and Management, Vidyasagar University, Midnapore.

### MEMORANDUM

The Director General, ICMR sanctions the payment of **Rs.11,04,744/- (Rupees Eleven Lakh Four Thousand Seven Hundred Forty Four Only)** as the 1<sup>st</sup> & Final installment of the grant for 2<sup>nd</sup> Year for incurring expenditure in connection with the above mentioned research scheme. The provision of **Rs.11,04,744/-** made for the above research scheme for the current financial year 2022-23.

A sum of **Rs.11,003/-** is lying with the PI as unspent balance from the grant released during last year. A formal bill for **Rs.11,04,744/-** is sent herewith (i) for adjustment of **Rs.11,003/-** (ii) for payment of **Rs.10,93,741/-** by RTGS to “Vidyasagar University”.

**The amount may be debited to ICMR grant under ADHOC head.**

*Ved Prakash*  
15/06/2022  
(Ved Prakash)  
Administrative Officer

**Accounts Section V, ICMR.**

Copy to:-

1. The Registrar, Vidyasagar University, Midnapore, West Bengal - 721102.
2. PI, Dr. Surojit Das, Assistant Professor, Dept. of Bio-Medical Laboratory Science and Management, Vidyasagar University, Midnapore, West Bengal-.
3. IRIS Cell (Division of P&I, ICMR, IRIS No. 2020-4919)
4. Mrs. Vandana, Sr. T.O-II

Administrative Officer



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भारतीय आयुर्विज्ञान अनुसंधान परिषद  
स्वास्थ्य अनुसंधान विभाग, स्वास्थ्य एवं परिवार  
कल्याण मंत्रालय, भारत सरकार

Indian Council of Medical Research  
Department of Health Research, Ministry of Health  
and Family Welfare, Government of India

No. AMR/ADHOC/241/2020-ECD-II

Dated: 15/06/2022

To

The Registrar,  
Vidyasagar University, Midnapore  
West Bengal - 721102

Subject:- Continuation for the 2<sup>nd</sup> year for project entitled, **“Molecular tracking of difficult-to-control carbapenem resistance among Enterobacterales (Enterobacteriaceae) clinical isolates in West Bengal, India: Focusing on in vitro diagnostics for antimicrobial resistance (AMR) towards the optimization of antimicrobial and infection prevention stewardship program”** under **Dr. Surojit Das**, Assistant Professor, Vidyasagar University, Midnapore.

Sir,

The Director-General of the Indian Council of Medical Research sanctions an allotment for **Rs.11,04,744/- (Rupees Eleven Lakh Four Thousand Seven Hundred Forty Four Only)** as detailed in the attached budget statement for the above mentioned project for the year **01/01/2022 to 31/12/2022** during the year **2022-23** subject to the following conditions:

1. The grant will be released to the head of the Institution in 1<sup>st</sup> and final installment of 2<sup>nd</sup> year during the financial year on receipt of the demand in the prescribed form as indicated below:-

**1<sup>st</sup> & Final installment of 2<sup>nd</sup> Year grant = Rs.11,04,744/-**

While asking for the release of the installment it may be ensured that the amount for the pay and allowances of the staff who are actually in position is included. The unspent balance available out of the funds paid during the year 2020-21 should be intimated. This will be adjusted against the current year's grant.

2. A separate account for the grant received and expenditure incurred shall be maintained. The account will be subjected to audit by the authorized auditors of the Institutions. In case, facilities are not available for such auditing, the account will be audited by the Council's own internal auditors. Latest by the end of December, following the financial year for which the grant is paid, and audit certificate from the auditors to the effect that the accounts have been audited and that the money was actually spent on the objects for which it was sanctioned shall be submitted to the Council along with a list of non-expendable articles purchased out of the grant during the year. Any unspent balance would be refunded to the ICMR on termination of the scheme.

Further grants will be stopped unless audited statements of accounts and utilization certificate are received within a period of the year after the end of the financial year for which grant was sanctioned. Further grants will be stopped unless audited statements of accounts and utilization certificate are received within a period of the year after the end of the financial year for which grant was sanctioned.

3. The last installment of the grant will be paid on receipt of the audited certificate which should include all the liabilities of last year, expenditure incurred before but defrayed after termination of the scheme. The period to which the expenditure pertains should be shown clearly.

4. The grant will not be regarded as a subvention, towards the normal work of the Institution but should be exclusively utilized for the Research activity for which it has been sanctioned.

5. Expenditure should on no account exceed the allotment sanctioned for the enquiry. Expenditure incurred over and above the sanctioned amount against one or more subheads of expenditure such as pay allowances, contingencies, etc. shall be met without reference to the ICMR by re-appropriation of savings under remaining sub-heads provided that the total expenditure incurred during the financial year. No expenditure shall however, be incurred by re-appropriation of savings on items not sanctioned by the Council i.e. non-consumable equipment, stores not sanctioned by the Council Savings shall also not be re-appropriated for meeting on incurring expenditure on staff that has not been sanctioned by the Council.

6. The grant paid by the Council shall be refunded in full by the institution if and when the grantee concerned discontinues a scheme midway or does not follow the detailed technical programme laid down and approved.

7. Receipt, realized by the project officer on behalf of ICMR project, if any, will be remitted to the Council as miscellaneous receipts and not utilized for meeting expenditure of the project.

8. All facilities for conduct of the research scheme basic equipment and ordinary laboratory chemicals, glassware, furniture and other assistance, as may be required, for the smooth working of the research scheme shall be provided by the Institute.

9. The stores purchased out of the grant of the Council shall be entered in the property stock register and presented auditors for check and endorsement. The usual forms used for these registers and all purchases made in accordance with the procedure in vogue in your institution.

10. Only such equipment for which provision has been made in the budget shall be purchased.

11. All the non-expendable articles purchased out of the funds of the Council will be the property of the Council and will not be disposed of without their concurrence.

#### **STAFF**

12. The staff employed on the on the research schemes will not be the Council's employee but for all purposes be treated as employees of the Institute and will be subject to the rules and administrative control of the Institute and will be accordance with the normal recruitment's rules and procedures of the Institute. The scale of pay, allowances etc. applicable to the staff of the schemes will be the same as admissible under the rules of the grantee Institution. Prior approval of the Council will however be necessary if pay higher than that admissible under the rules of the Institution is sought to be given e.g. by grant of advances increments or ad-hoc increase.

13. The Council will not be liable to bear any expenditure pension provident fund contribution and or leave salary contribution incurred or committed by the grantee and person appointed on deputation from any other organization.

#### **Report of Work Done**

14. The grant is being sanctioned on the condition that reports on the progress of work done on the research scheme will be submitted by you to the Council as and when called for. Normally a progress report of work done on the enquiry is to be submitted to the Council as and when required, the enquiry maybe discontinued immediately unless there is sufficient justification for non-submission of the report of work done on the research scheme.

### Publication

15. The financial assistance rendered by the Council will be acknowledged in any published account of work which the grant is given.

16. A list of papers published based on the work carried out on enquiry under the auspices of the ICMR shall be obtained before publication of any such paper in a foreign journal.

### Patents

17. The Council shall have the right to take out patent in respect of invention/discoveries made under scheme protect financial by the Council. The Officer-in-charge or the staff employed on. ICMR scheme shall not apply or obtain patents for any invention/discovery made by them without prior approval of the Council.

18. All the patents will be registered in the name of the Indian Council of Medical Research.

### Termination of Research Scheme

19. Prior permission of the Council shall obtained if the investigator desires to discontinue the research scheme. The reasons for discontinuing the scheme should invariably be stated.

20. A final report is required to be submitted within one month from the date of termination of the research scheme.

21. A list (in duplicate) of non-expendable and expendable articles together with property registers and suggestions for disposal of the articles should be sent to the Council within a month from the date of termination of the research scheme.

22. The Institute will maintain a **separate saving bank account** of the receipts and the expenditure incurred on the research scheme and will furnish a utilization certificate and an audited statement of the account pertaining to the grant.

The grant will be utilized after following provision laid down in GFR-2017 and TA rules.

The receipt of this letter may kindly be acknowledged.

Yours faithfully,

*Ved Prakash*  
15/06/2020

(Ved Prakash)

Administrative Officer

### File No.AMR/ADHOC/241/2020-ECD-II

Copy together with a copy of the budget statement forwarded for information to :-

1. PI, Dr. Surojit Das, Assistant Professor, Dept. of Bio-Medical Laboratory Science and Management, Vidyasagar University, Midnapore-721102.
2. Copy together with two copies of the budget statement forwarded to the **Accounts Section V, ICMR** for information and necessary action.  
**RFC No. (P-66)/ECD/Adhoc/26/2020-21, Dated:26/09/2020**
3. IRIS Cell (Division of P & I), ICMR. **IRIS No. 2020-4919**
4. Mrs. Vandana, Sr. TO-II

Administrative Officer

**Budget for 2<sup>nd</sup> Year**  
**Period 01.01.2022 to 31.12.2022**

Sr. No.	Head	2 <sup>nd</sup> Year
1.	<b>Staff</b> One JRF @ 31000/-pm + 9% HRA= 33,790/-	4,05,480/-
2.	<b>Contingencies</b>	
	Recurring (supplies, materials, consumables, etc.)	5,50,000/-
3.	<b>Travel</b>	10,000/-
4.	<b>Overhead Charges (3%)</b>	28,664/-
	<b>Total</b>	<b>9,94,144/-</b>

**Additional Budget for Field Laboratory Attendant (01.06.2022 – 31.12.2022)**

Sr. No.	Head	2 <sup>nd</sup> Year (for 7 months)
1.	<b>Staff</b> Field Lab. Attendant-1@ 15,800/- PM	1,10,600/-

**Grand Total = 9,94,144 + 1,10,600 = 11,04,744/-/-**

**(Rupees Eleven Lakh Four Thousand Seven Hundred Forty Four Only)**

*Ved Prakash*  
*15/06/2022*

(Ved Prakash)  
Administrative Officer



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कल्याण मंत्रालय, भारत सरकार

Indian Council of Medical Research  
Department of Health Research, Ministry of Health  
and Family Welfare, Government of India

No. AMR/ADHOC/241/2020-ECD-II

Dated: 02/03/2023

To

The Registrar,  
Vidyasagar University, Midnapore  
West Bengal - 721102

Subject: - Continuation for the 3<sup>rd</sup> year for project entitled, **“Molecular tracking of difficult-to-control carbapenem resistance among Enterobacterales (Enterobacteriaceae) clinical isolates in West Bengal, India: Focusing on in vitro diagnostics for antimicrobial resistance (AMR) towards the optimization of antimicrobial and infection prevention stewardship program”** under **Dr. Surojit Das**, Assistant Professor, Vidyasagar University, Midnapore.

Sir,

The Director-General of the Indian Council of Medical Research sanctions an allotment for **Rs. 9,85,034/- (Rupees Nine Lakh Eighty Five Thousand Thirty Four Only)** as detailed in the attached budget statement for the above mentioned project for the year **01/01/2023** to **31/12/2023** during the year **2022-23** subject to the following conditions:

1. The grant will be released to the head of the Institution in two installments during the financial year on receipt of the demand in the prescribed form as indicated below:-

1 <sup>st</sup> installment	= Rs.8,86,531/-
2 <sup>nd</sup> installment	= Rs. 98,503/- (Second/Final Installment will be release on receipt of SOE/Audited Statement & final report of the project)
<b>Total</b>	<b>= Rs.9,85,034/-</b>

While asking for the release of the installment it may be ensured that the amount for the pay and allowances of the staff who are actually in position is included. The unspent balance available from previous year should be intimated. This will be adjusted against the current year's grant.

2. A separate account for the grant received and expenditure incurred shall be maintained. The account will be subjected to audit by the authorized auditors of the Institutions. In case, facilities are not available for such auditing, the account will be audited by the Council's own internal auditors. Latest by the end of December, following the financial year for which the grant is paid, and audit certificate from the auditors to the effect that the accounts have been audited and that the money was actually spent on the objects for which it was sanctioned shall be submitted to the Council along with a list of non-expendable articles purchased out of the grant during the year. Any unspent balance would be refunded to the ICMR on termination of the scheme.

Further grants will be stopped unless audited statements of accounts and utilization certificate are received within a period of the year after the end of the financial year for which grant was sanctioned. Further grants will be stopped unless audited statements of accounts and utilization certificate are received within a period of the year after the end of the financial year for which grant was sanctioned.

3. The last installment of the grant will be paid on receipt of the audited certificate which should include all the liabilities of last year, expenditure incurred before but defrayed after termination of the scheme. The period to which the expenditure pertains should be shown clearly.
4. The grant will not be regarded as a subvention, towards the normal work of the Institution but should be exclusively utilized for the Research activity for which it has been sanctioned.
5. Expenditure should on no account exceed the allotment sanctioned for the enquiry. Expenditure incurred over and above the sanctioned amount against one or more subheads of expenditure such as pay allowances, contingencies, etc. shall be met without reference to the ICMR by re-appropriation of savings under remaining sub-heads provided that the total expenditure incurred during the financial year. No expenditure shall however, be incurred by re-appropriation of savings on items not sanctioned by the Council i.e. non-consumable equipment, stores not sanctioned by the Council Savings shall also not be re-appropriated for meeting on incurring expenditure on staff that has not been sanctioned by the Council.
6. The grant paid by the Council shall be refunded in full by the institution if and when the grantee concerned discontinues a scheme midway or does not follow the detailed technical programme laid down and approved.
7. Receipt, realized by the project officer on behalf of ICMR project, if any, will be remitted to the Council as miscellaneous receipts and not utilized for meeting expenditure of the project.
8. All facilities for conduct of the research scheme basic equipment and ordinary laboratory chemicals, glassware, furniture and other assistance, as may be required, for the smooth working of the research scheme shall be provided by the Institute.
9. The stores purchased out of the grant of the Council shall be entered in the property stock register and presented auditors for check and endorsement. The usual forms used for these registers and all purchases made in accordance with the procedure in vogue in your institution.
10. Only such equipment for which provision has been made in the budget shall be purchased.
11. All the non-expendable articles purchased out of the funds of the Council will be the property of the Council and will not be disposed of without their concurrence.

#### **STAFF**

12. The staff employed on the on the research schemes will not be the Council's employee but for all purposes be treated as employees of the Institute and will be subject to the rules and administrative control of the Institute and will be accordance with the normal recruitment's rules and procedures of the Institute. The scale of pay, allowances etc. applicable to the staff of the schemes will be the same as admissible under the rules of the grantee Institution. Prior approval of the Council will however be necessary if pay higher than that admissible under the rules of the Institution is sought to be given e.g. by grant of advances increments or ad-hoc increase.
13. The Council will not be liable to bear any expenditure pension provident fund contribution and or leave salary contribution incurred or committed by the grantee and person appointed on deputation from any other organization.

#### **Report of Work Done**

14. The grant is being sanctioned on the condition that reports on the progress of work done on the research scheme will be submitted by you to the Council as and when called for. Normally a progress report of work done on the enquiry is to be submitted to the Council as and when required, the enquiry maybe discontinued immediately unless there is sufficient justification for non-submission of the report of work done on the research scheme.

### Publication

15. The financial assistance rendered by the Council will be acknowledge in any published account of work which the grant is given.

16. A list of papers published based on the work carried out on enquiry under the auspices of the ICMR shall be obtained before publication of any such paper in a foreign journal.

### Patents

17. The Council shall have the right to take out patent in respect of invention/discoveries made under scheme protect financial by the Council. The Officer-in-charge or the staff employed on. ICMR scheme shall not apply or obtain patents for any invention/discovery made by them without prior approval of the Council.

18. All the patents will be registered in the name of the Indian Council of Medical Research.

### Termination of Research Scheme

19. Prior permission of the Council shall obtained if the investigator desires to discontinue the research scheme. The reasons for discontinuing the scheme should invariably be stated.

20. A final report is required to be submitted within one month from the date of termination of the research scheme.

21. A list (in duplicate) of non-expendable and expendable articles together with property registers and suggestions for disposal of the articles should be sent to the Council within a month from the date of termination of the research scheme.

22. The Institute will maintain a **separate saving bank account** of the receipts and the expenditure incurred on the research scheme and will furnish a utilization certificate and an audited statement of the account pertaining to the grant.

The grant will be utilized after following provision laid down in GFR-2017 and TA rules.

The receipt of this letter may kindly be acknowledged.

Yours sincerely,

*search*  
*23/7/2023*  
(Ved Prakash)

Administrative Officer

### Copy to:-

1. PI, Dr. Surojit Das, Assistant Professor, Dept. of Bio-Medical Laboratory Science and Management, Vidyasagar University, Midnapore-721102.
2. Copy together with two copies of the budget statement forwarded to the **Accounts Section, ICMR** for information and necessary action.  
**RFC No : (P-66)ECD/Adhoc/26/2020-21 dt. 26/09/2020.**
3. Copy together with two copies of the budget forwarded to the **Finance Section, ICMR** for compilation of the Council's budget.
4. IRIS Cell (Division of P & I), ICMR IRIS No. 2020-4919
5. Sr. T.O.-II

Administrative Officer

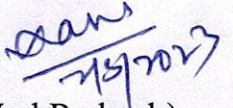
**Budget for 3<sup>rd</sup> Year**  
**Period from 01.01.2023 to 31.12.2023**

Sr. No.	Head	3 <sup>rd</sup> Year
1.	<b>Staff</b> One SRF @ 35000/-pm + 9% HRA= 38,150/- PM	4,57,800/-
2.	<b>Contingencies</b> Recurring (supplies, materials, consumables, etc.)	3,00,000/-
3.	<b>Travel</b>	10,000/-
4.	<b>Overhead Charges (3%)</b>	22,734/-
	<b>Total</b>	<b>7,90,534/-</b>

**Additional Budget for Field Laboratory Attendant (01.01.2023 – 31.12.2023)**

Sr. No.	Head	3 <sup>rd</sup> Year (10% increment for last 7 months)
1.	<b>Staff</b> Field Lab. Attendant-1@ 15,800/- PM	1,94,500/-

**Grand Total = 7,90,534 + 1,94,500 = 9,85,034/-**  
**(Rupees Nine Lakh Eighty Five Thousand Thirty Four Only)**

  
(Ved Prakash)  
Administrative Officer



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कल्याण मंत्रालय, भारत सरकार

Indian Council of Medical Research  
Department of Health Research, Ministry of Health  
and Family Welfare, Government of India

File No. AMR/ADHOC/241/2020-ECD-II

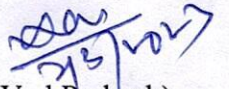
Dated: 02/03/2023

Subject: - Payment of 1<sup>st</sup> installment of 3<sup>rd</sup> year grant-in-aid for the research scheme entitled, "Molecular tracking of difficult-to-control carbapenem resistance among Enterobacterales (Enterobacteriaceae) clinical isolates in West Bengal, India: Focusing on in vitro diagnostics for antimicrobial resistance (AMR) towards the optimization of antimicrobial and infection prevention stewardship program" under Dr. Surojit Das, Assistant Professor, Vidyasagar University, Midnapore.

**MEMORANDUM**

The Director-General, ICMR sanctions the payment of **Rs.8,86,531/- (Rupees Eight Lakh Eighty Six Thousand Five Hundred Thirty One Only)** as the 1<sup>st</sup> installment of the 3<sup>rd</sup> year grant for the period from 2022-23 for incurring expenditure in connection with the above mentioned research scheme. The amount **Rs.8,86,531/-** may be debited in the provision of **Rs.9,85,034/-** made for the above mentioned research scheme for the current financial year.

A sum of Rs.23,552/- is lying with the PI as unspent balance from the grant released during last year. A formal bill for **Rs.8,86,531/-** is sent herewith for (i) adjustment of **Rs.23,552/-** (ii) for payment of **Rs.8,62,979/-** by RTGS to "Vidyasagar University".

  
(Ved Prakash)  
Administrative Officer

**Accounts Section, ICMR**

Copy to: -

1. The Registrar, Vidyasagar University, Midnapore, West Bengal - 721102.
2. PI, Dr. Surojit Das, Assistant Professor, Dept. of Bio-Medical Laboratory Science and Management, Vidyasagar University, Midnapore, West Bengal-721102.
3. IRIS Cell (P & I) Section, ICMR, IRIS No. **2020-4919**.
4. Mrs. Vandana, Sr. T.O.-II

Administrative Officer

**Letter of intent for joint research proposal  
(FP8, HORIZON 2020)**

**based on the project concept**

***„In-silico detection of human mycotic traits arising out of Horizontal Gene Transfer and analysis from systems biology perspective.”***

**Data of Professional Cooperative Partner:**

*Name of the organisation:* **Vidyasagar University, Department of Microbiology**

*Address:* **Midnapur - 721102 West Bengal, India**

*Authorized representative:* **Dr. Keshab Chandra Mondal, Associate Professor**

**Data of Lead Partner:**

*Name of the Organisation:* **University of Szeged**

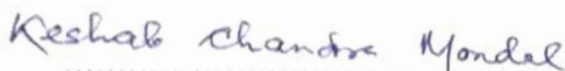
*Address:* **Szeged, Dugonics tér 13. H-6720, Hungary**

*Authorized representatives:* **Prof. Dr. Gábor SZABÓ, Rector; Dr. Zoltán MAJÓ, Economic and Financial Director**

**The content of the proposed cooperation**

The above mentioned partners, in connection with the content and aims of the abovementioned project concept, express their interest to work out and submit research proposal(s) within the European Union Framework Programme 8 (HORIZON 2020).

**Szeged, May 05, 2020**



**Dr. Keshab Chandra Mondal**

Principal researcher of partner


**Prof. Dr. Csaba Vágvolgyi**

Principal researcher of University of Szeged

University of Szeged  
Faculty of Science and Informatics  
Department of Microbiology  
6726 Szeged, Közép fasor 52.  
Hungary



**Letter of intent for joint research proposal  
(FP8, HORIZON 2020)**

**based on the project  
„Green Energy Higher Educational Cooperation”  
(TÁMOP-4.1.1.C-12/1/KONV-2012-0012)**

**Data of Professional Cooperative Partner:**

*Name of the organisation:* **Vidyasagar University, Department of Microbiology**  
*Address:* **Midnapur - 721102 West Bengal, India**  
*Authorized representative:* **Dr. Keshab Chandra Mondal, Associate Professor**

**Data of Lead Partner:**

*Name of the Organisation:* **University of Szeged**  
*Address:* **Szeged, Dugonics tér 13. H-6720, Hungary**  
*Authorized representatives:* **Prof. Dr. Gábor SZABÓ, Rector; Dr. Zoltán MAJÓ,  
Economic and Financial Director**

**The content of the proposed cooperation**

The above mentioned partners, in connection with the content and aims of the **TÁMOP-4.1.1.C-12/1/KONV-2012-0012** project, express their interest to work out and submit research proposal(s) within the European Union Framework Programme 8 (HORIZON 2020).

**Szeged, May 05, 2020**

*Keshab Chandra Mondal*

**Dr. Keshab Chandra Mondal**  
Principal researcher of partner

*CSABA VÁGVÖLGYI*



**Prof. Dr. Csaba Vágvölgyi**  
Principal researcher of University of Szeged

**University of Szeged**  
Faculty of Science and Informatics  
Department of Microbiology  
6726 Szeged, Közép fasor 52.  
Hungary





**MINUTES OF COOPERATION MEETING  
RELATED TO THE SPECIAL ACTIVITY OF  
TÁMOP-4.1.1.C-12/1/KONV-2012-0012**

*held at Department of Microbiology, FSI, University of Szeged, Szeged, May 05, 2020, starting at 9.00 h and finished at 13.00 h.*

Persons present at the meeting:

From Hungary (University of Szeged):

- Prof. Dr. Csaba Vágvolgyi
- Dr. Tamás Papp
- Dr. László Kredics
- Dr. Miklós Takó

From India (Vidyasagar University,  
Department of Microbiology, Midnapur -  
721102 West Bengal):

- Dr. Keshab Chandra Mondal

During the cooperation meeting, Hungarian and Indian participants

- started to discuss the possible joint scientific and administrative activities in the future based on the aims, activity and potential results of the TÁMOP-4.1.1.C-12/1/KONV-2012-0012 project
- discussed about the planned steps required for the successful cooperation
- overviewed the educational and scientific connections between the institutes of participants

The minutes of the meeting were prepared in 2 exemplars.

The attendance list is part of the minutes.

Szeged, May 05, 2020

Dr. Keshab Chandra Mondal  
Researcher, Associate Professor

Prof. Dr. Csaba Vágvolgyi  
Head of Department

  
.....  
  
.....  
  
University of Szeged  
Faculty of Science and Informatics  
Department of Microbiology  
6726 Szeged, Közép fasor 52.  
Hungary



**Letter of intent for joint research proposal  
(FP8, HORIZON 2020)**

**based on the project concept**

***„Strain development, validation and scale up for production of cellulase, hemicellulase and ligninase from fungal consortia and there application in the bioethanol production from lignocellulosic feedstock.”***

**Data of Professional Cooperative Partner:**

*Name of the organisation:* **Vidyasagar University, Department of Microbiology**  
*Address:* **Midnapur - 721102 West Bengal, India**  
*Authorized representative:* **Dr. Keshab Chandra Mondal, Associate Professor**

**Data of Lead Partner:**

*Name of the Organisation:* **University of Szeged**  
*Address:* **Szeged, Dugonics tér 13. H-6720, Hungary**  
*Authorized representatives:* **Prof. Dr. Gábor SZABÓ, Rector; Dr. Zoltán MAJÓ, Economic and Financial Director**

**The content of the proposed cooperation**

The above mentioned partners, in connection with the content and aims of the abovementioned project concept, express their interest to work out and submit research proposal(s) within the European Union Framework Programme 8 (**HORIZON 2020**).

**Szeged, May 05, 2020**

*Keshab Chandra Mondal*

**Dr. Keshab Chandra Mondal**  
Principal researcher of partner

*Prof. Dr. Csaba Vágvolgyi*

Principal researcher of University of Szeged  
University of Szeged  
Faculty of Science and Informatics  
Department of Microbiology  
6726 Szeged, Közép fasor 52.  
Hungary



To  
The Registrar,  
Vidyasagar University  
Midnapore

Date: 31.07.2019

**Sub: Act as Joint Supervisor of Ph.D. Research Scholar**

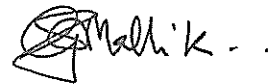
Respected Sir,

In connection with the earlier letter dated 02-04-2019 and the approval of the Hon'ble Vice-Chancellor I would like to supervise the doctoral research work (Ph.D.) of **Shantanu Ghosh** and **Nidhi Agarwala** jointly with Dr. Tarak Nath Sahu, Assistant Professor in Commerce, of your University.

I hope this collaborative will create a better research environment and the research scholars will be benefited. Please do the needful to make this endeavour success.

Thanking you,

Yours Sincerely,



(Dr. Girijasankar Mallik)

Western Sydney University  
School of Business  
169 Macquarie Street  
Parramatta 2150  
NSW, Australia



Sl. No.

331

# VIDYASAGAR UNIVERSITY

বিদ্যাসাগর বিশ্ববিদ্যালয়

Midnapore- 721 102 ✪ West Bengal

Registration No. 331...../ Ph.D. (Arts/  Com./  Sc.)

To : Sri/Smt. NIDHI AGARWALA

C/o- Mr. Binode Agarwala, Kerani tola  
Station Road, Midnapore - 721101

Date 24.07.2021

Dear Sir/ Madam,

I am directed to inform you that you have been granted Registration with effect from 20.04.2021 for the Ph. D. Degree of this University in Commerce in accordance with the UGC Regulation, 2016.

Title "Country Specific Factors, Firm Attributes and Environmental Sustainability: A Cross-Country Analysis"

Name of the Supervisor (s)

1. Dr. Tarak Nath Sahu

2. Dr. Gurusankar Mallik

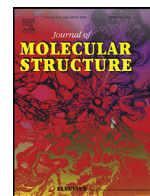
3. \_\_\_\_\_



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# Seq12, Seq12m, and Seq13m, peptide analogues of the spike glycoprotein shows antiviral properties against SARS-CoV-2: An *in silico* study through molecular docking, molecular dynamics simulation, and MM-PB/GBSA calculations

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## ABSTRACT

At the very beginning of the new decade, the COVID-19 pandemic has badly hit modern human societies. SARS-CoV-2, the causative agent of COVID-19 acquiring mutations and circulating as new variants. Herein, we have found three new antiviral peptides (AVPs) against the SARS-CoV-2. These AVPs are analogous to the spike glycoprotein of the SARS-CoV-2. Antiviral peptides, *i.e.*, Seq12, Seq12m, and Seq13m, can block the receptor-binding domain (RBD) of the SARS-CoV-2, which is necessary for communicating with the angiotensin-converting enzyme 2 (ACE2). Also, these AVPs sustain their antiviral properties, even after the insertion of 25 mutations in the RBD (Rosetta and FoldX based). Further, Seq12 and Seq12m showed negligible cytotoxicity. Besides, the binding free energies calculated using MM-PB/GBSA method are also in agreement with the molecular docking studies. The molecular interactions between AVPs and the viral membrane protein (M) also showed a favorable interaction suggesting it could inhibit the viral re-packaging process. In conclusion, this study suggests Seq12, Seq12m, and Seq13m could be helpful to fight against SARS-CoV-2. These AVPs could also aid virus diagnostic tools and nasal spray against SARS-CoV-2 in the future.

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## 1. Introduction

At present, the entire World is facing challenges to handle the COVID-19 pandemic [1]. SARS-CoV-2 is the causative agent of COVID-19, and it is new to the scientific community. Therefore, in-depth monitoring of all aspects of the COVID-19 is ongoing. For example, signs and symptoms [2], mode of transmission [3], WHO-solidarity trials [4], contact tracing by mobile apps such as “Arogya Setu” by India [5], CRISPR based rapid diagnostic of SARS-CoV-2 [6], and also monitoring daily cases by crowd-sourcing (<https://www.covid19india.org/>). Besides, recent reports

suggest that repurposing known antiviral drugs [7], drugs [8], different phytochemicals [9] against COVID-19 could be fruitful. However, none of them has reached a final definitive clinical treatment for COVID-19. Indeed to address the urgent need for a safe and efficacious vaccine against the COVID-19 several vibrant initiatives have been started as never before. For example, vaccine manufacturing front-runner come-up with mRNA vaccines [10], viral vector vaccine [11], classical attenuated vaccine *etc.* [12]. However, reports showed COVID-19 vaccines would not be a silver bullet for the immunization of a community.

Furthermore, alternatives to traditional therapeutics would be necessary for the long run as before [13,14]. Moreover, SARS-CoV-2 acquires new mutations in its genome in a concise time frame [15], for instance, B.1.1.7, B.1.351, P.1, B.1.427, and B.1.429, *etc.* [16].

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## Composition, functionality and structural correlates of mixed lipid monolayers at air-water interface



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### ARTICLE INFO

#### Keywords:

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Langmuir trough  
Monolayer  
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### ABSTRACT

Physicochemical properties of lipid monolayer depend on its composition where a blend of lipids exhibit superior behaviour than the individual component. Surface pressure ( $\pi$ ) – area ( $A$ ) isotherms of mixed monolayer ( $PC_{mix}$ ) formed by dipalmitoylphosphatidylcholine (DPPC), palmitoleylphosphatidylcholine (POPC), soyphosphatidylcholine (SPC) and hydrogenated soy phosphatidylcholine (HSPC) in combination with 30 mole % cholesterol (Chol) were obtained by using Langmuir trough. Effects of dipalmitoylphosphatidylethanolamine (DPPE) on its mutual miscibility at the air-water interface with DPPC + Chol, POPC + Chol, HSPC + Chol and SPC + Chol were also investigated separately, followed by studying the effects of DPPE and dipalmitoylphosphatidylglycerol (DPPG) to  $PC_{mix}$  + Chol and  $PC_{mix}$  + DPPE + Chol respectively. Lift-off area, minimum molecular area, excess molecular area, collapse pressure, Gibbs free energy of interfacial mixing, compressibility moduli values were evaluated by analyzing the isotherms. Deviations from the ideal mixing behaviours were dependent on the composition of the lipid blends. Surface dilatational rheology studies could assess monolayer elasticity, whereas the film morphologies were analysed by Brewster angle microscopic (BAM) studies. DPPE induced formation of condensed monolayer, whereas film rigidity was increased with the incorporation of DPPE and DPPG into mixed systems. Interactions among the lipid components of the investigated mixed systems were thoroughly discussed from the point of view of polar head and acyl chain saturation and obtained results follow the sequence:  $PC_{mix}$  + DPPE + DPPG + Chol >  $PC_{mix}$  + DPPE + Chol > individual PC + DPPE + Chol which could be translated into the bilayer studies. Such investigation of mixed lipid is important for class of its own composition and combined results are expected to contribute in better understanding the interaction of selected lipid in proposed blend.

### 1. Introduction

Cellular membrane is complex, in nature that comprises a variety of charged and uncharged lipids with varying degree of unsaturation [1,2]. Phosphatidylethanolamine (PE) and phosphatidylcholine (PC) are the major zwitterionic phospholipids found in natural cell membrane [3]. Desired membrane fluidity, by virtue of the presence of unsaturated phospholipids, facilitate the regulation of a variety of key cellular processes like diffusion of molecules, cellular signalling, adhesion [4],  $Na^+/K^+$  balance transport [5,6] and ion pumping, [1,6] to mention a few. Functional properties of membrane, viz., fluidity, rigidity and

permeability are governed by its composition [3,7].

A blend of lipid monolayers at the air-water interface can be considered as a more generalized and simplified form of the single leaflet of membrane bilayer. Surface pressure ( $\pi$ ) - area ( $A$ ) isotherm of lipids, considered to be the major components of membrane, in their pure form or in the form of single and binary mixtures are well documented in the literature [8,9]. Isotherms of lipid blends comprising all the components are considered to provide important information in formulating efficient drug delivery systems, e.g., liposomes. However, such comprehensive studies are not so common in the literature. Blend of phospholipids like phosphatidylcholine (PC), phosphatidylethanolamine (PE),

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RESEARCH

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# Nutritional and immunization status of under-five children of India and Bangladesh

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## Abstract

**Background:** The nutritional and immunization status of children can play an important role in determining their future health status of a particular country. The aim of the present study is to investigate the nutritional and immunization status of under-five children in India and Bangladesh, and to find the difference in the status between these two countries.

**Methods:** We have used the National Family Health Survey data, 2015–2016 of India and Bangladesh Demographic Health Survey, 2017–2018 datasets. The sample sizes are 222,418, among them 8759 and 8759 children for India and Bangladesh respectively. The nutritional status of under-five children is measured by standard anthropometric indicators of height-for-age (HAZ) and weight-for-age (WAZ). Regarding child immunization status, only BCG, DPT, polio and measles vaccinations are considered for the present study. Multiple binary logistic model has been used for analysing the data.

**Results:** This study reveals that the prevalence of stunting and underweight of under-five children in India are higher than Bangladeshi children. Secondary and higher educated mothers are more likely of having normal HAZ and WAZ children than up to primary educated mothers for both countries. Chances of having normal HAZ and WAZ are higher among non-poor category for both countries. The present study also shows that immunization status of Bangladeshi children is better than Indian children except measles. Religion of mother also shows influence on immunization status of children in India whereas Bangladesh shows no significant results regarding religion. Mother's educational attainment and wealth index show influence on immunization status among children for both countries.

**Conclusions:** The study concludes that a remarkable number of under-five children are suffering from under nutrition for both countries, however Bangladeshi children have better nutritional and immunization status compared to Indian children. Higher wealth index, better educational attainment and lower unemployment of Bangladeshi mothers may be the causes for better nutritional and immunization status of children. Mother's socio-economic factors have significant impact on determining the child's health status. Our findings can help to government of Indian and Bangladesh for taking health policy to improve under-five children nutritional and immunization status.

**Keywords:** BCG, DPT, Polio, Measles, Underweight, Stunting

## Background

Malnutrition is the silent killer that affects human development and economy of any country. Children of today are citizens of tomorrow, so children's nutritional status plays an important role in determining the future of our country and should be prioritized. Child height and

weight are considered as important indicators of population health and human capital [1, 2]. United Nations Children's Fund pointed out that globally 165 million children under the age-5 years are found to be stunted (low- height-for -age), 101 million children are underweight (low weight for age) and 52 million children are wasted (weight for height) [3]. According to WHO 2002 estimated that in developing countries, 60% of the 10.9 million deaths that occurs annually among children aged less than 5 years are association with under nutrition,

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Manoranjan Pal and Premananda Bharati are retired professor.

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# An Image Authentication and Tampered Detection Scheme Exploiting Local Binary Pattern Along with Hamming Error Correcting Code

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## Abstract

Local Binary Pattern (LBP) has been widely used for texture analysis, feature extraction, visual investigation, pattern matching, and image authentication. It is essential to investigate the effectiveness of LBP, for tamper detection, tamper localization, and ownership identification of a watermarked image, which are highly desirable in many human-centric applications like health-care, military communication, remote sensing, and law enforcement. In this article, a Reversible Watermarking Technique has been introduced to verify image integrity, authenticity and error correction using LBP and Hamming codes. The LBP values have been calculated from  $(2 \times 2)$  original pixel block of the cover image. Then the watermark is inserted within the Least Significant Bit of the interpolated pixels. Here, LBP operator is used to solve image authentication and tamper detection problem whereas Hamming code is used to detect and correct the error in the extraction phase. Some standard NIST recommended steganalysis have been performed to evaluate the robustness and imperceptibility. It is observed that the proposed scheme is secure and robust against various attacks. It can also detect tampered locations and can verify the ownership of an image. Experimental results are compared with the existing watermarking schemes to demonstrate the superiority of the proposed scheme. It also shows good perceptible quality with a high payload and less computational cost.

**Keywords** Reversible watermarking · Linear Binary Pattern (LBP) · Tamper detection · Image authentication · Hamming code

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# Wideband monopole antenna with dual band rejection characteristics

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Sushanta Sarkar<sup>2</sup>, Partha Pratim Sarkar<sup>2</sup>

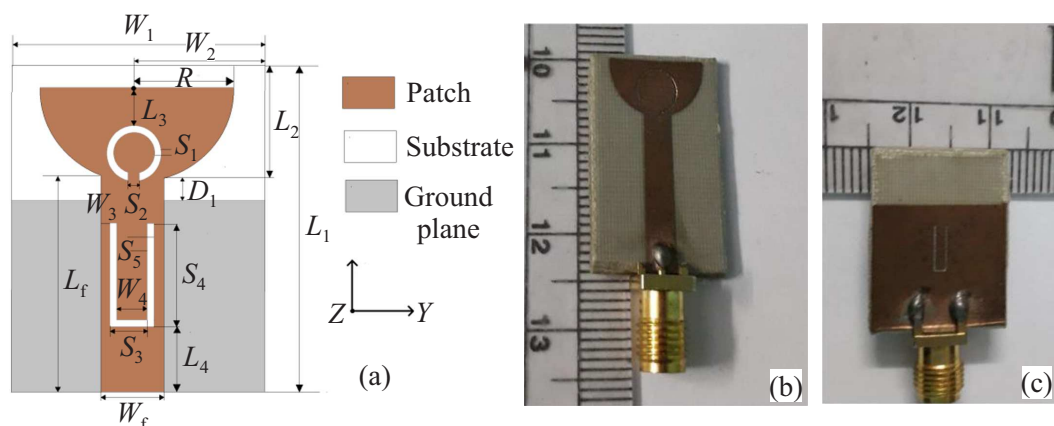
A wideband printed monopole antenna with two rejection bands is proposed in this article. The antenna provides a wideband from 5.4 GHz to 17.2 GHz with two rejection bands covering 6.9 to 7.4 GHz and 8.3 to 9.2 GHz with two peak notch frequencies of 7.2 GHz and 8.6 GHz respectively. Tested peak gain at two peak notch frequencies of 7.2 GHz and 8.6 GHz are 2.5 dBi and -1.5 dBi respectively. These two rejection bands are effectively used to avoid undesired intrusion from the C band and the X band. The lower rejection band has been realized by cutting an open ring circular slot on the metal patch whereas U like slot has been inserted on the ground plane just beneath the feed line to achieve the upper rejection band. Simulated and tested  $S_{11}$  parameter, gain, radiation efficiency, E-H radiation patterns, and surface currents of the antenna are presented here. The antenna uses small dimensions and it is very simple to design. The proposed antenna confirms that it is useful for short-range and fast data communication systems.

**Key words:** printed monopole antenna, two rejection bands, radiation efficiency, radiation patterns

## 1 Introduction

The demand for miniaturized broadband antennas with band rejection characteristics increases day by day. To avoid interferences of existence different wireless application bands (like WLAN, WiMAX, C band, X band, etc). with the broadband applications, an antenna with band rejection characteristics is of high demand. A very popular and easy way to achieve band rejection characteristics is to introduce different shapes of slots, parasitic elements, strips, and resonators on the radiating patch and also the ground plane of the antenna which were previously reported in various articles.

Two notch bands have been achieved by embedding four circular stubs on the metal patch and two open circular rings on the ground plane are reported in [1]. Two W-type slots are used for two band notches in [2]. U-like monopole antenna uses two T slots on the two sides of the U patch and two rectangular SRR (split-ring resonator) placed at two sides of the feed line to obtain two-notch frequencies covering WiMAX and WLAN band in [3]. A new technique of sticking a patch on the available substrate to obtain two notch bands in WLAN and ITU band is reported in [4]. A co-planar waveguide feed circular patch antenna was suggested for two rejection band applications in [5]. It consists of a stub and a parasitic element to achieve two-band notches in the WLAN and



**Fig. 1.** Showing: (a) – details of the proposed antenna, (b) and (c) – snapshots of the proposed antenna

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OPEN

## Micro-structural investigations on oppositely charged mixed surfactant gels with potential dermal applications

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Dicarboxylic amino acid-based surfactants (*N*-dodecyl derivatives of -aminomalonate, -aspartate, and -glutamate) in combination with hexadecyltrimethylammonium bromide (HTAB) form a variety of aggregates. Composition and concentration-dependent mixtures exhibit liquid crystal, gel, precipitate, and clear isotropic phases. Liquid crystalline patterns, formed by surfactant mixtures, were identified by polarizing optical microscopy. FE-SEM studies reveal the existence of surface morphologies of different mixed aggregates. Phase transition and associated weight loss were found to depend on the composition where thermotropic behaviours were revealed through combined differential scanning calorimetry and thermogravimetric studies. Systems comprising more than 60 mol% HTAB demonstrate shear-thinning behaviour. Gels cause insignificant toxicity to human peripheral lymphocytes and irritation to bare mouse skin; they do not display the symptoms of cutaneous irritation, neutrophilic invasion, and inflammation (erythema, edema, and skin thinning) as evidenced by cumulative irritancy index score. Gels also exhibit substantial antibacterial effects on *Staphylococcus aureus*, a potent causative agent of skin and soft tissue infections, suggesting its possible application as a vehicle for topical dermatological drug delivery.

Formation of gels and different liquid crystalline phases by oppositely charged mixed surfactant systems depend on the composition, surfactant chain length, salinity, temperature, pH and external field, etc.<sup>1–5</sup>. Artificial gels possess regulated super-structure<sup>6–10</sup>, where the properties of the fabricated liquid crystals depend on electrostatic, hydrogen bond, hydrophobic, and van der Waals interactions among the components<sup>11–13</sup>. Gels are associated with two independent transitions, viz., the sol–gel transition of the gelator and anisotropic–isotropic transition of the liquid crystals<sup>9,10,14–18</sup>. Gelatinous property, structure, and shape of surfactant aggregates largely depend on the molecular architecture of the aggregating species<sup>14,19,20</sup>.

Gels have versatile applications in tissue engineering<sup>21</sup>, hemostasis bandages<sup>22–26</sup>, photo-patterning<sup>17,27–30</sup>, 3D-printing<sup>31,32</sup>, electrochemistry<sup>33</sup>, pharmaceutical formulation<sup>5,34–36</sup>, and regenerative medicine<sup>10,37–39</sup>, etc. Recent advances in the design and synthesis of dicarboxylic amino acid-based surfactants (AAS) have opened up their wide range of applications as chelator in metal extraction<sup>40</sup>. Due to its “green nature”, aggregation behaviour of AAS in combination with HTAB have been studied in detail where some mixed surfactants can form gel<sup>16</sup>. This has encouraged the present research group to undertake further investigations on such aggregates at higher concentrations to explore the possibility of using those for topical dermatological drug delivery.

The main aim of the present work is to undertake physicochemical investigations on different types of aggregates formed by AAS + HTAB. While HTAB shows antimicrobial activities, AASs are biocompatible<sup>41</sup>. Because

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## Article

# A New Group Decision-Making Technique under Picture Fuzzy Soft Expert Information

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**Abstract:** As an extension of intuitionistic fuzzy sets, the theory of picture fuzzy sets not only deals with the degrees of rejection and acceptance but also considers the degree of refusal during a decision-making process; therefore, by incorporating this competency of picture fuzzy sets, the goal of this study is to propose a novel hybrid model called picture fuzzy soft expert sets by combining picture fuzzy sets with soft expert sets for dealing with uncertainties in different real-world group decision-making problems. The proposed hybrid model is a more generalized form of intuitionistic fuzzy soft expert sets. Some novel desirable properties of the proposed model, namely, subset, equality, complement, union and intersection, are investigated together with their corresponding examples. Two well-known operations AND and OR are also studied for the developed model. Further, a decision-making method supporting by an algorithmic format under the proposed approach is presented. Moreover, an illustrative application is provided for its better demonstration, which is subjected to the selection of a suitable company of virtual reality devices. Finally, a comparison of the initiated method is explored with some existing models, including intuitionistic fuzzy soft expert sets.

**Keywords:** picture fuzzy set; soft expert set; virtual reality; algorithm; group decision making



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## 1. Introduction

Multi-attribute group decision making (MAGDM) is an efficient procedure that has the ability to provide the rankings for an available finite family of objects based on multiple parameters associated with these objects. A significant problem in practical decision-making processes is how to describe a numeric value to a given alternative more accurately and efficiently. Due to the existence of fuzziness in various complex decision-making real-world problems, it was not possible to describe objects with exact values. To overcome this issue, Zadeh [1] was the first who initiated the notion of a fuzzy set (FS), which is a superset of the classical set. FS actually deals with the conception of partial truth between “absolute true” and “absolute false”. The membership function that delivers the membership values to objects from closed unit interval is very important.

The theory of FSs cannot work properly in some practical situations. For instance, when an expert gives judgment on a piece of information involving non-membership degree of an object that is obtained by considering the standard negation of the membership degree. To deal with such types of difficulties, Atanassov [2] proposed the theory of intuitionistic fuzzy sets (IFSs) as a generalization of FSs. Atanassov [2] modified the definition of FSs

## Article

# Multi-Product Multi Echelon Measurements of Perishable Supply Chain: Fuzzy Non-Linear Programming Approach

Sadia Samar Ali <sup>1,\*</sup>, Haripriya Barman <sup>2</sup>, Rajbir Kaur <sup>3</sup>, Hana Tomaskova <sup>4</sup> and Sankar Kumar Roy <sup>2</sup>

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**Abstract:** The perishable milk products industry has to deal with multiple pressures such as demand forecasting, price fluctuations, lead time, order batching, and inflated orders along with difficulties of climatic and traffic conditions, storage areas and shipment in unfavorable circumstances. The Indian dairy industry faces immense wastage issue due to improper infrastructure for the cold chain storage facilities, resulting in unsatisfied customers. A study is undertaken to comprehend the supply chain framework that handles perishability issues in production and distribution. Researchers propose a multi-objective mixed-integer non-linear supply chain coordination model under uncertain environments to minimize the cost of transportation, offset wastage of products and neutralize the losses due to insufficiencies of transit and storage amenities. The proposed model is meant for managing the delivery with lesser deterioration losses for producers, warehouses, and retailers. The model considers various costs for holding, halting, discounts on purchased cost, transportation cost for truckload policy under regular and unforeseen circumstances of curfew, and identify the rate of deterioration to know the impact on the cost for all players involved in the SCM framework. To handle uncertainty of objective functions, fuzzy set concepts and the defuzzification method are imposed, and fuzzy non-linear programming algorithms are used to get the single objective function from the defuzzified multi-objective functions. Data analysis is done on Lingo 18.0 software. Rate of deterioration is highest for the warehouse, which indicates that efforts should be made to augment warehouse facilities for less spoilage to reduce losses in cost. Finally, the study ends with main findings, conclusions, limitations and future scopes.

**Keywords:** supply chain network; inventory; product's decay and deterioration; fuzzy set; non linear multi-objective optimization



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## 1. Introduction

The challenges posed by deterioration are not new for the supply chain of perishable products, as this phenomenon is a common and ordinary one and accounts for significant losses in terms of cost. Deterioration in the general term refers to a process of decay, damage, expiry, and devaluation of a product with time [1]. Deterioration is a realistic and physical phenomenon, so the formulation of an appropriate strategy for managing the perishability of deteriorating items is established and expected fact. The management of perishable products requires an efficient supply chain coupled with a comprehensive warehouse with a temperature-controlled facility and an uninterrupted cold chain system throughout to keep the rate of deterioration and cost under control. Supply chains for perishable products are complex owing to the perishable nature of the products, as the value of



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## Artemisinin combination therapy fails even in the absence of *Plasmodium falciparum kelch13* gene polymorphism in Central India

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Artemisinin is the frontline fast-acting anti-malarial against *P. falciparum*. Emergence and spread of resistant parasite in eastern-India poses a threat to national malaria control programs. Therefore, the objective of our study is to evaluate the artesunate-sulfadoxine-pyrimethamine efficacy in Central India. 180 monoclonal *P. falciparum*-infected patients received standard ASSP therapy during August 2015–January 2017, soon after diagnosis and monitored over next 42-days. Artemisinin-resistance was assessed through in-vivo parasite clearance half-life ( $PC_{1/2}$ ), ex-vivo ring-stage survivability (RSA), and genome analysis of *kelch13* and other candidate gene (*pfprt*, *pfmdr1*, *pfatpase 6*, *pfdhfr* and *pfdhps*). Of 180 *P. falciparum* positive patients, 9.5% showed increased  $PC_{1/2}$  (> 5.5 h), among them eleven isolates (6.1%) showed reduced sensitivity to RSA. In 4.4% of cases, parasites were not cleared by 72 h and showed prolonged  $PC_{1/2}$  (5.6 h) ( $P < 0.005$ ) along with significantly higher RSA (2.2%) than cured patients (0.4%). None of day-3 positive isolates contained the *pfkelch13* mutation implicated in artemisinin resistance. Parasite recrudescence was observed in 5.6% patients, which was associated with triple *dhfr–dhps* (A<sub>16</sub>L<sub>51</sub>R<sub>59</sub>N<sub>108</sub>I<sub>164</sub>–S<sub>436</sub>G<sub>437</sub>K<sub>540</sub>G<sub>581</sub>I<sub>613</sub>) combination mutation. Emergence of reduced sensitivity to artesunate-sulfadoxine-pyrimethamine, in central India highlighted the risk toward spread of resistant parasite across different parts of India. Day-3 positive parasite, featuring the phenotype of artemisinin-resistance without *pfkelch13* mutation, suggested *kelch13*-independent artemisinin-resistance.

Drug resistant *P. falciparum* is one of the major factors for death in malaria. 445,000 deaths and an estimated 216 million confirmed malaria cases—including an increase of about 5 million cases over and above what was recorded in 2015—were reported in 2016<sup>1</sup>. Malaria transmission in India potentially occurs through either *P. falciparum* or *P. vivax* infection<sup>2,3</sup>. In India, 844,558 malaria cases were reported in 2017, of which 529,530 cases were *P. falciparum* positive<sup>4</sup>. North-eastern states and central Indian states contributed 80% of the total cases<sup>5</sup>. Chhattisgarh, one of the states in central India, contributed the second highest malaria incidence in India over the years<sup>6</sup>. National vector borne disease control program (NVBDCP) had launched artemisinin-based combination therapy (ACT) to wipe-out the burden of chloroquine (CQ) and sulfadoxine-pyrimethamine (SP) resistant malaria in 2009<sup>7–9</sup>. Success of ACT depends on a combination of fast-acting short half-life artemisinin derivatives with late-acting longer half-life 4-aminoquinolines or antifolates<sup>10</sup>. Global mortality and morbidity associated with malaria were considerably reduced after the introduction of ACT, but emergence and subsequent spread of artemisinin-resistant parasites in the Greater Mekong sub-region had seriously threatened the global malaria control and elimination progress<sup>11–14</sup>. Artemisinin resistance is characterized by drug failure reflected in slow parasite clearance as assessed by increased in vivo parasite clearance half-life ( $PC_{1/2}$ ) along with reduced sensitivity of ex-vivo ring-stage parasites to artemisinin<sup>15–17</sup>. Genome based transfection studies proved the

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# Study of the optical properties and frequency-dependent electrical modulus spectrum to the analysis of electric relaxation and conductivity effect in zinc oxide nanoparticles

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## ABSTRACT

In this article, the optical and dielectric properties along with electric relaxation behaviour of the zinc oxide nanoparticles (ZnO NPs) with an average size  $\approx 32.5$  nm were studied. The band gap, and free carrier concentration of the ZnO NPs have been found to be 3.73 eV, and  $\approx 5.55 \times 10^{12}$  per  $\text{cm}^3$ , respectively. Dispersion parameters and nature of dispersion have been studied from optical spectrum. X-ray diffraction investigation revealed that the crystalline phase is hexagonal with atomic fraction  $\approx 75.44\%$ . The overall behaviour of the dielectric constants of ZnO NPs has obeyed Koops model. Relaxation behaviour and defect state response inside ZnO NPs have been observed in the dielectric studies. The relaxation time varies from  $8.0585 \times 10^{-5}$  to  $7.8447 \times 10^{-5}$  s with temperature ( $T$ ) ranges from 323 to 573 K, respectively, calculated from the electric modulus study. The AC conductivity complies the Jonscher's universal power law and the observed hopping of electron is the correlated barrier hopping. The activation energy of the ZnO NPs is found to be  $\approx 93$  meV from the temperature-dependent DC conductivity analysis. The real part of complex impedance showed a negative temperature coefficient of resistance nature with increase the temperature from 473 to 673 K in the low-frequency zone. The equivalent circuit for the complex impedance analysis at  $T = 673$  K has been studied from Cole- Cole equation and Nyquist plot. The observed properties of ZnO NPs are very important for electric storage, sensing and optical semiconductor devices.

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# Multi-item two-stage fixed-charge 4DTP with hybrid random type-2 fuzzy variable

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## Abstract

Parameters of some real-life decision-making problems are simultaneously uncertain, imprecise, and vague. In this paper, for the first time, we introduce two such new hybrid uncertain variables—random type-2 trapezoidal (RT2TF) and gamma fuzzy (RT2GF) variables, their derandomization and defuzzification methods, and applications. Mimicking two-stage public distribution system of the developing countries, breakable multi-item two-stage fixed-charge four-dimensional transportation problems (MITSFC-4DTPs) are formulated and solved. Here, some breakable items are transported from sources to destinations via warehouses using some conveyances, traveling through connecting routes and incurring transportation costs and fixed charges at each stage. The objective is to find suitable conveyances, appropriate travel routes, and corresponding transported amounts at each stage so that total transportation cost is minimum. The model's parameters—transportation costs, fixed costs, availabilities, demands, and conveyances' capacities are considered as RT2TF and RT2GF. The models' random type-2 fuzzy objectives and constraints are first derandomized using expectation and probability chance constraint techniques, respectively. The reduced type-2 fuzzy models are transformed into type-1 fuzzy problems by the CV-based reduction technique (CV-bRT), which are then converted to deterministic ones using two methods—generalized credibility measures (GCM) theory and centroid techniques (trapezoidal fuzzy problem only) separately. All these deterministic models are solved by the generalized reduced gradient (GRG) method using LINGO 12.0 and numerically illustrated. A real-life problem and several particular models under different uncertain environments are solved using some input data. Results from two CV-based methods—CV-bRT-GCM and CV-bRT-centroid for type-2 fuzzy, are compared, and superiority of proposed CV-bRT-GCM is established. In 4DTPs, the importance of multi-routes is numerically illustrated. Some managerial insights are also presented.

**Keywords** Two-stage multi-item 4D transportation problems · Random type-2 trapezoidal and gamma fuzzy variables · CV-based reduction method · Generalized credibility measure technique · CV-centroid method

## 1 Introduction and motivation

Transportation problems (TPs) are designed to minimize the transportation cost of different products from various sources to destinations under some source and destination constraints. The basic/two-dimensional TP (2DTP) was initially developed by Hitchcock (1941) and later modified by Koopmans (1949). This problem is to minimize the transportation cost from sources to destinations with availability and demand constraints. In most real-life situations, products are delivered from sources to destinations by different conveyances like trucks, goods trains, cargo flights, etc. When different choices of conveyances are available in a TP, it is called a solid TP (STP) or three-dimensional TP (3DTP). Haley (1962) introduced the STP, although Shell (1955) first proposed this concept.

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# Probe response of a two-mode cavity with $\chi^{(2)}$ non-linearity, non-reciprocity and slow and fast light

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## Abstract

We analyze optically induced transparency in a two-mode rotating cavity with  $\chi^{(2)}$  non-linearity. The transmission of a weak probe field is studied when the cavity is driven from its right and left sides. The transmission spectra show nonreciprocal behaviour. Both the absorption and dispersion properties are analyzed for different system parameters. Double Fano line-shape profile is observed in the transmission spectrum. The line-shape structures may be tuned via decay rate, hopping strength. The transmission profile exhibits multi-optically transparency windows which is useful for multi-channel optical communications. The phase of the transmitted field shows both normal and anomalous dispersion and this indicates the group velocity is both positive and negative. The present system exhibits slow-to-fast light. Our findings may offer applications in ultrafast signal processing and motion sensing.

## 1 Introduction

Induced transparency with group delay and induced attenuation with group progression in different optical systems have the impact to be used for potential applications, such as power switching, optical sensing, signal progressing, optical modulators, stealth and information technology, ultrabroadband invisibility of large objects and quantum computing etc. [1–10]. Different types of induced transparency are electromagnetically induced transparency (EIT), optomechanically induced transparency (OMIT), optically induced transparency (OIT), plasmon induced transparency (PIT), coupled-mode induced transparency (CMIT) etc. All are quantum interference phenomena, observed in the dynamics of atomic, optomechanical, optical, plasmonic, coupled-mode system, respectively. In different atomic systems single EIT as well as multiple EITs have been extensively studied, such as K-type atomic medium [11], N-type atomic system [12] and Y-type atomic system [13]. The multiple EITs have two or more transparent windows with potential utilities in multi-channel quantum information,

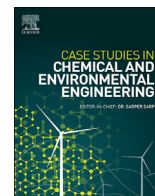
optical communication, signal processing etc. [9, 14–20]. The similar phenomenon is also observed in the dynamics of OMS which is termed as OMIT. This phenomenon has been theoretically described and experimentally demonstrated in different OMSs [21–25]. It has potential utility in charge measurements [26], wavelength conversion [27], single photon router [28], ultra-slow light [29–31] and so on. Slow light has advantages in quantum and optical network [32], quantum memory [33], telecommunication [34] etc. Slow and fast light propagation has been analyzed in detail in different physical systems, such as atomic media [35–37], ultracold gas [38], quantum wells [39, 40], semiconductor quantum dot [41, 42], metamaterial waveguides [43], photonic crystals [44], plasmonic waveguides [45] and so forth.

As different optical cavity systems, such as microspheres, micro-disks, micro-cavities, micro-rings and micro-resonators, provide an attractive platform to study the above phenomenon. The researchers' attention has been fascinated by such systems due to high Q-factor and compact in size—which are relevant for device applications. In this article, we have analyzed the OIT in rotating micro-cavity system. OIT has recently been discussed in the systems, such as in bosonic lasers [46], parity-time-symmetric coupled micro-cavity [47] and four-wave-mixing [48]. In that context, we have also addressed the possibility of nonreciprocal transmission of the input probe field in present system. The optical non-reciprocity has importance in both fundamental studies and applied

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## Natural medicinal plant products as an immune-boosters: A possible role to lessen the impact of Covid-19



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### ABSTRACT

Transmissible Covid-19, caused by novel corona virus since last of 2019 has outspread widely until now. Where, India was the second most affected country and 3rd in mortality rate. In world ancient history, medicinal plants were played a crucial role to cure several diseases. In present study, we show some novel natural medicinal plant metabolites as the potential inhibitors against papain-like protease (PLpro), main protease (Mpro) and RNA-dependent RNA polymerase (RdRp), transmembrane proteinase Serine 2 (TMPRSS2) and angiotensin converting enzyme-2 (ACE-2) of Covid-19. Plant metabolites were having been proven to inhibit SARS-CoVs, which also actively walkable against Covid-19.

### 1. Introduction

Coronavirus disease (Covid-19) is an acute respiratory infectious disease caused by SARS-CoV-2 a novel coronavirus strain that has emerged a pandemic issue and greatly effects public health widely in 2019–20 [1,2,3]. First case of Covid –19 was initially reported in Wuhan capital of Hubei Province of China and then it spread widely in 215 countries [4,5]. The World Health Organization (WHO) declared Covid-19 as a Public Health Emergency of International Concern in 30th January (<https://www.who.int/>), [6]. This disease spread has led to more than 108,153,741 affirmed cases and 2,381,295 passed away around the globe on February 14, 2021, and India was the second most affected country (10,904,940 affirmed cases) and 3rd position in deaths (1,55,642) cases (<https://covid19.who.int/table>) in February 14, 2021. Still to date the number of affected cases in Covid-19 was steadily increasing across the globe, and so far, due to its high mortality rate and rapid transmission by human-to-human connection (WHO, 2020) [7,8,3]. After SARS-CoV in 2002 and MERS-CoV in 2012, Covid-19 ranked third disease epidemic situation in human population during 21st century [9,10,11]. Covid-19 are

identified as  $\beta$ -coronavirus, enveloped, positive ss-RNA viruses with varied genome size ranging from 26 to 32 kilobase pairs and genome sequence similarity with MERS-CoV and SARS-CoV [12,5,3]. Nomenclature of Covid-19 based on its 82% identity to the SARS-CoV genome sequence by the taxonomists Coronavirus Study Group (CSG) under the aegis of International Committee on Taxonomy of Viruses (ICTV) [13]. In Indian subcontinent history, herbal medicinal plants were used to cure various diseases based on health healing systems. It was established that various medicinal plant such as: *Angelica keiskei* inhibit cysteine proteases of SARS-CoV [14], *Ecklonia cava* as a SARS-CoV 3CLpro inhibitor [15], *Salvia miltiorrhiza* effects on cardiovascular system during SARS-CoV [16], *Torreya nucifera (L.)* acts as a SARS-CoV 3CLpro inhibition [17], *Isatis indigotica* an Anti-SARS coronavirus 3C-like protease inhibitor [18] and *Lycoris radiata* have antiviral activities against SARS-associated coronavirus [19] were used for disease cure through ayurveda treatments. It was reported that, different compounds extracted from medicinal plant like steroids, polysaccharides, alkaloids, glycosides, etc have anti-viral, anti-bacterial, anti-fungal, anti-inflammatory, analgesic, anti-diabetic, anti-stress, anti-tumourneuro protective, rejuvenating, cardioprotective and

**Abbreviations:** ACE-2, angiotensin converting enzyme-2; Covid-19, corona virus disease-2019; CSG, Coronavirus Study Group; E, small envelope protein; ICTV, International Committee on Taxonomy of Viruses; N, nucleocapsid protein; M, matrix protein; Mpro, main protease; nsps, non-structural proteins; PLpro, papain-like protease; RBD, receptor binding domain; RdRp, RNA-dependent RNA polymerase; S, spike protein; ST, swine testicular; TMPRSS2, transmembrane proteinase Serine 2; WHO, world health organization; IC, Inhibitory concentration.

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# Plastic waste footprint in the context of COVID-19: Reduction challenges and policy recommendations towards sustainable development goals



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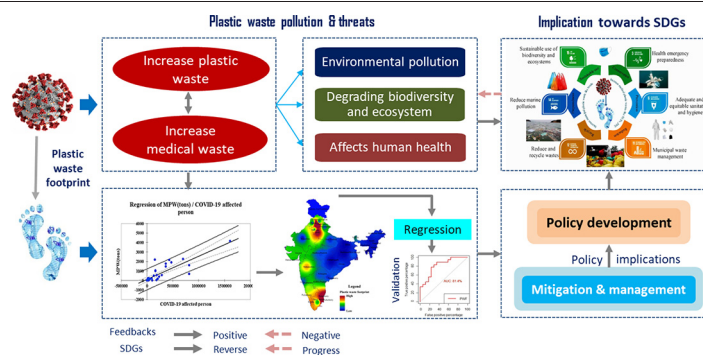
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## HIGHLIGHTS

- Single-use plastics become a new challenge in waste management during the pandemic.
- Bio-medical waste threats throughout India enormously.
- Upsurges medical plastic waste for COVID-19 hampers the sustainable development goals.
- Needs people awareness, strict government regulations, and inclusive research
- Sustainable policy recommendation is needed for plastic waste management in India.

## GRAPHICAL ABSTRACT



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## ABSTRACT


The sudden surge in demand to use plastic products due to COVID-19 pandemic has increased plastic pollution. It has resulted into degradation of a broad range of habitats and ecosystems by destroying natural functions, water quality, and environmental sustainability. However, the government agencies, scientific communities, and the public, have started to give attention to this issue. So, in the present study, we used the correlation methods to check the relationship between COVID-19 affected population with the medical plastic waste (MPW) that has developed a conceptual model of the inter-linkages between the preventive measures of COVID-19 pandemic problems and the reduction challenges of plastic waste during and after pandemic scenarios. Emerging issues in the waste management during and after the COVID-19 are established by reviewing the literature, reports, policy briefs, and information from the website concerning COVID-19. Considering MPW management issues, we selected India as a case study to analyse the plastic waste footprint (PWF) due to COVID-19 pandemic. The correlation results showed COVID-19 affected population and MPW; COVID-19 affected population and PWF have a significant relationship ( $R^2 = 0.60$ ; Area under ROC curve 81.4%). It suggests an urgent need for plastic waste management initiatives. Moreover, substantial plastic products, human awareness, strict government regulations, and inclusive research can check plastic waste footprints in India and worldwide. Then discuss the specific pathways through which the immediate and long-term impacts operate and highlight the issues of hampering the sustainable development goals (SDGs) progress in India and beyond. Finally, call for coordinated assessment, support and appropriate short- and long-term mitigation and the policy measures of plastic waste problems during and after the COVID-19 pandemic.

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## Redox nanomedicine ameliorates chronic kidney disease (CKD) by mitochondrial reconditioning in mice

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Targeting reactive oxygen species (ROS) while maintaining cellular redox signaling is crucial in the development of redox medicine as the origin of several prevailing diseases including chronic kidney disease (CKD) is linked to ROS imbalance and associated mitochondrial dysfunction. Here, we have shown that a potential nanomedicine comprising of Mn<sub>3</sub>O<sub>4</sub> nanoparticles duly functionalized with biocompatible ligand citrate (C-Mn<sub>3</sub>O<sub>4</sub> NPs) can maintain cellular redox balance in an animal model of oxidative injury. We developed a cisplatin-induced CKD model in C57BL/6j mice with severe mitochondrial dysfunction and oxidative distress leading to the pathogenesis. Four weeks of treatment with C-Mn<sub>3</sub>O<sub>4</sub> NPs restored renal function, preserved normal kidney architecture, ameliorated over-expression of pro-inflammatory cytokines, and arrested glomerulosclerosis and interstitial fibrosis. A detailed study involving human embryonic kidney (HEK 293) cells and isolated mitochondria from experimental animals revealed that the molecular mechanism behind the pharmacological action of the nanomedicine involves protection of structural and functional integrity of mitochondria from oxidative damage, subsequent reduction in intracellular ROS, and maintenance of cellular redox homeostasis. To the best of our knowledge, such studies that efficiently treated a multifaceted disease like CKD using a biocompatible redox nanomedicine are sparse in the literature. Successful clinical translation of this nanomedicine may open a new avenue in redox-mediated therapeutics of several other diseases (e.g., diabetic nephropathy, neurodegeneration, and cardiovascular disease) where oxidative distress plays a central role in pathogenesis.

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# Preparation of rice fermented food using root of *Asparagus racemosus* as herbal starter and assessment of its nutrient profile

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## Abstract

The popularity of traditional fermented food products is based on their healthiness. The addition of a starter brings consistent, desirable, and predictable food changes with improved nutritive, functional, and sensory qualities. The addition of a mixture of plant residues as a starter or source of microbes is an age-old practice to prepare traditional fermented food and beverages, and most of the reported data on traditional foods were based on the analysis of the final product. The contribution of an individual starter component (plant residue) is not experimentally substantiated for any traditional fermented food, but this data are very essential for the formulation of an effective starter. In this study, *Asparagus racemosus*, which used as a common ingredient of starter for preparation of rice fermented food in the Indian sub-continent, was used as a starter for the preparation of rice fermented food under laboratory scale, and its microbial and nutrient profile was evaluated. The fermented product was a good source of lactic acid bacteria, *Bifidobacterium* sp., yeast, etc. The food product was acidic and enriched with lactic acid and acetic acid with titratable acidity of 0.65%. The content of protein, fat, minerals, and vitamins (water-soluble) was considerably improved. Most notably, oligosaccharide (G3-matotriose), unsaturated fatty acids ( $\omega$ 3,  $\omega$ 6,  $\omega$ 7, and  $\omega$ 9), and a pool of essential and non-essential amino acids were enriched in the newly formulated food. Thus, the herbal starter-based rice fermented food would provide important macro- and micronutrients. They could also deliver large numbers of active microorganisms for the sustainability of health. Therefore, the selected plant part conferred its suitability as an effective starter for the preparation of healthier rice-based food products.

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# An extract of *Stephania hernandifolia*, an ethnomedicinal plant, inhibits herpes simplex virus 1 entry

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## Abstract

*Stephania hernandifolia* (Nimukho), an ethnomedicinal herb from rural Bengal, has been used traditionally for the management of nerve, skin, urinary, and digestive ailments. Here, we attempted to confirm the antiviral potential of aqueous, methanol, and chloroform extracts of *S. hernandifolia* against herpes simplex virus type 1 (HSV-1), the causative agent of orolabial herpes in humans, and decipher its underlying mechanism of action. The bioactive extract was standardized and characterized by gas chromatography-mass spectroscopy, while cytotoxicity and antiviral activity were evaluated by MTT and plaque reduction assay, respectively. Two HSV strains, HSV-1F and the clinical isolate VU-09, were inhibited by the chloroform extract (CE) with a median effective concentration ( $EC_{50}$ ) of 4.32 and 4.50  $\mu\text{g/ml}$  respectively, with a selectivity index (SI) of 11. Time-of-addition assays showed that pre-treatment of virus-infected cells with the CE and its removal before infection reduced the number of plaques without lasting toxicity to the cell, indicating that the CE affected the early stage in the viral life cycle. The number of plaques was also reduced by direct inactivation of virions and by the addition of CE for a short time following attachment of virions. These results together suggest that modification of either the virion surface or the cell surface by the CE inhibits virus entry into the host cell.

## Abbreviations

ATCC	American Type Culture Collection
$CC_{50}$	Median cytotoxic concentration
CE	Chloroform extract
CPE	Cytopathic effect
DMEM	Dulbecco's modified minimum essential medium
DMSO	Dimethyl sulfoxide
$EC_{50}$	Median effective concentration
FBS	Fetal bovine serum
gB	Glycoprotein B
gC	Glycoprotein C
gD	Glycoprotein D

GC-MS	Gas chromatography-mass spectroscopy
HSV	Herpes simplex virus
MTT	3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyl tetrazolium bromide
PFU	Plaque-forming unit
PRA	Plaque reduction assay
RT-qPCR	Quantitative real-time polymerase chain reaction
SH	<i>Stephania hernandifolia</i>
SI	Selectivity index

## Introduction

Herpes simplex virus (HSV), a very common viral pathogen, usually infects the skin and mucosa and is classified into two types (1 and 2). HSV-1 causes herpes labialis, keratitis, and encephalitis in the upper part of the body, while HSV-2 is the causative agent of herpes genitalis in the lower body parts [1, 2]. The virus is transmitted silently from an infected person through sex, body fluids, cuts, and wounds. HSV is a unique contagious virus due to its ability to cause mild to severe infection, latency in nerve ganglia with asymptomatic shedding, periodic reactivation, and silent epidemic potential with hide-and-seek nature [3]. After entry, HSV

Handling Editor: Graciela Andrei.

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# Vidyasagar University



**Midnapore, West Bengal  
721102**

**Orientation programme on quality issues for teachers and students**

Date: 22/11/2021

NOTIFICATION

All the newly admitted regular PG 3rd semester students are hereby informed that their orientation program will start on and from 23/11/2021 phase wise at Vivekananda Sabhagriha (Auditorium). All of you are requested to ensure your presence as per below schedule by maintaining COVID PROTOCOL.  
Date: 23/11/2021


Time: 12.00 noon onwards

Stream: History, Philosophy, Commerce, Sociology, Santali, Hindi

Time: 1.15 pm onwards

Stream: Anthropology, Botany, Human Physiology, Zoology, Biomedical laboratory Science & Management, Clinical Nutrition & Dietetics, Microbiology, Fishery Science.

This notification is issued with the approval of the competent authority.

  
22/11/21.  
DSW, VU

Ref: VU/DSW/SIP/03/2021 dated: 22/11/2021

*Copy forwarded for information and necessary action to:*

- 1) Dean of faculty concerned
- 2) Registrar
- 3) The Head/TIC of all academic Departments-with a request to circulate the same among all students of his/her department
- 4) The Head of all administrative Departments
- 5) The information Scientist for uploading the notification on the University website.
- 6) The secretary to the Vice-Chancellor for kind information to the Hon'ble Vice-Chancellor.
- 7) Guard File



## Gentle reminder: Orientation Meeting with all faculty members

4 messages

Director IQAC <director.iqac@mail.vidyasagar.ac.in>

Thu, Jun 16, 2022 at 8:54 AM

To: Director IQAC <director.iqac@mail.vidyasagar.ac.in>

Cc: "Dipak Kumar Midya Faculty, Anthropology" <dipakmidya@mail.vidyasagar.ac.in>, "Kaushik Sankar Bose Faculty, Anthropology" <kaushikb@mail.vidyasagar.ac.in>, "Sumahan Bandyopadhyay Faculty, Anthropology" <sumahan\_anthro@mail.vidyasagar.ac.in>, "Amit Kumar Kisku Faculty, Anthropology" <kiskuumit@mail.vidyasagar.ac.in>, "Sovanjan Sarkar Faculty, Anthropology" <sovanjan@mail.vidyasagar.ac.in>, "Shimul Roy Faculty, Anthropology" <royshimul@mail.vidyasagar.ac.in>, "Avick Biswas Faculty, Anthropology" <avickbiswas@mail.vidyasagar.ac.in>, "Bani Ranjan De Faculty, Bengali" <brde@mail.vidyasagar.ac.in>, "Chhanda Ghoshal Faculty, Bengali" <chhanda@mail.vidyasagar.ac.in>, "Monanjali Bandyopadhyay Faculty, Bengali" <monanjali@mail.vidyasagar.ac.in>, "Sujit Kumar Pal Faculty, Bengali" <skpal2009@mail.vidyasagar.ac.in>, "Saroj Kumar Pan Faculty, Bengali" <saroj@mail.vidyasagar.ac.in>, "Maharshi Sarkar Faculty, Bengali" <sarkarmaharshi@mail.vidyasagar.ac.in>, "Debidas Ghosh Faculty, BMLS" <debidas\_ghosh@mail.vidyasagar.ac.in>, "Sandip Chattopadhyay Faculty, BMLS" <sandipdoc@mail.vidyasagar.ac.in>, "Chhanda Mallick Faculty, BMLS" <chhanda\_nutri@mail.vidyasagar.ac.in>, "Surojit Das Faculty, Biomedical Lab. 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## NOTICE

A meeting of the Internal Quality Assurance Cell (IQAC) will be held on **16<sup>th</sup> June 2022 at 2.00 pm** at B.N.Sasmal Hall of the University to discuss the following agenda. All faculty members are requested to attend the meeting.

Agenda:

1. To discuss publication (research paper, book, etc.) in SCOPUS/WoS indexed journals.
2. To create and update VIDWAN and Faculty Information System.
3. To discuss the filing of a patent.
4. To discuss the initiative of skill development/add-on courses.
5. To discuss the outreach program.
6. To discuss filing research projects and consultation projects.
7. To discuss the preparation of e-content (video and e-text) of ILMS.
8. To discuss the recommendations made by NAAC and SWOC.
9. Suggestions from faculty members for improvement of the University.
10. Miscellaneous.

With Best Regards

Prof. Madhumangal Pal

**Director, IQAC**  
**Vidyasagar University**  
phone: 8250002549

On Fri, 10 Jun 2022, 11:31 pm Director IQAC, <director.iqac@mail.vidyasagar.ac.in> wrote:

Date: 10.06.2022

## NOTICE

A meeting of the Internal Quality Assurance Cell (IQAC) will be held on **16<sup>th</sup> June 2022 at 2.00 pm** at B.N.Sasmal Hall of the University to discuss the following agenda. All faculty members are requested to attend the meeting.

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7. To discuss the preparation of e-content (video and e-text) of ILMS.
8. To discuss the recommendations made by NAAC and SWOC.
9. Suggestions from faculty members for improvement of the University.
10. Miscellaneous.

With Best Regards

Prof. Madhumangal Pal  
**Director, IQAC**  
**Vidyasagar University**  
phone: 8250002549

---

**Bidyarthi Dutta Faculty , Library & Inf. Science** <bduddavu@mail.vidyasagar.ac.in>  
To: director.iqac@mail.vidyasagar.ac.in

Thu, Jun 16, 2022 at 8:55 AM

I have received your mail. I'll keep in touch and respond soon.

Regards

--

Dr. Bidyarthi Dutta  
Assistant Professor  
Dept. of Library & Information Sc.  
Vidyasagar University  
Midnapore, West Bengal  
India 721 102

---

**Sandip Kumar Sinha** <sinha\_sandip@mail.vidyasagar.ac.in>  
To: Director IQAC <director.iqac@mail.vidyasagar.ac.in>

Fri, Jun 17, 2022 at 8:04 PM

Dear Sir,  
Unfortunately I am unable to attend this meeting. Actually we are out of station for conducting the 4th sem higher institute (IIT Guwahati) visit from 11th June to 18th June 2022.

Thanking you

[Quoted text hidden]

---

**Director IQAC** <director.iqac@mail.vidyasagar.ac.in>  
To: Sandip Kumar Sinha <sinha\_sandip@mail.vidyasagar.ac.in>

Sun, Jun 19, 2022 at 9:47 AM

Thanks for informing.



# VIDYASAGAR UNIVERSITY

Internal Quality Assurance Cell  
MIDNAPORE - 721102, WEST BENGAL, INDIA

Ref. No - VU/IQAC/ 062/2022

Date: 15/06/2022

To,

The HoDs /T.I.C/ Director

All Academic department & Centre

Dear Sir/ Madam,

All research scholar of our University are hereby informed that one day orientation programme will be organized by IQAC on 21.06.2022 at 11:30 A.M. at B.N. Sasmal hall.

Hon'ble Vice-Chancellor sir will inaugurate this programme.

You are requested to inform research scholars of your department to attend the programme.

With Best Regards,

(Madhumangal Pal)

Director, IQAC

Vidyasagar University

Director  
Internal Quality Assurance Cell  
VIDYASAGAR UNIVERSITY

Copy forwarded for information and necessary action to:

1. The Dean, Faculty of Arts & Commerce, VU.
2. The Dean, Faculty of Science, VU.
3. The Registrar, Ph.D. Cell, V.U.



# VIDYASAGAR UNIVERSITY

Internal Quality Assurance Cell  
MIDNAPORE - 721102, WEST BENGAL, INDIA

## Faculty Orientation Meeting





# VIDYASAGAR UNIVERSITY

Internal Quality Assurance Cell  
MIDNAPORE - 721102, WEST BENGAL, INDIA

## Students Orientation Meeting





# VIDYASAGAR UNIVERSITY

Internal Quality Assurance Cell  
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## Research Scholar Orientation programme

