Alumni Lecture 1:



BHAIRAB GANGULY COLLEGE

(GOVERNMEST-AIDED) NAAC ACCEPTEEP GRADE 'A' COLLEGE FEEDEL ROAD, BELGHARIA, KOLKATA-DE, WEST BENGAL, INDIA

DEPARTMENT OF CHEMISTRY

Alumni Lecture Series

TOPIC: METHOD OF ISOLATION & STRUCTURAL ELUCIDATION OF PHYTO COMPOUNDS FOR MEDICINAL PURPOSES

ALUMNI SPEAKER:



Mr. Sourav Pakrashy
SRF
Indian Invitale of Chemical Biology



CHIEF PATRONS

Prof. (Dr.) Subbranil Son Principal



EVENT COORDINATOR:

Sast, Maxidipa Banerjee Anaciste Notestor Department of History



MODERATOR:

Dr. Suparna Guña Assistam Professor, Depe of Chemistry



DEPARIMENT In-Charge:

Ds Rajon Koner Ant. Prof. Dept. of Chemistry

Date - 20th May, 2021 Time - 4:00 PM - 5:00 PM

NUMBERS IN THE PARTY PAR

Meeting Link:

https://miet.goode.com/oic wzrz-mów

> Registration Link: https://forms.gle/ ai86yeoKGU:HkxNxS

Email: sguha@phairsbgangstycollege.ac.in

Website: thairabsangulycollege.ac.in

Alumni Lecture Series: Department of Chemistry

Speaker: Sourav Pakrashy, SRF, IICB, Kplkata, Alumni of Dept of Chemistry, Bhairab Ganguly College

Title of Lecture: Method of Isolation and Structural elucidation of phyto-compounds for medicinal purpose

Date: 20.05.2021

Meeting Link: https://meet.google.com/oic-wzrz-mdw

Registration Link: https://forms.gle/aiB6yroKGUzHkxNx5Report:

An Alumni lecture, organized by Department of chemistry, Bhairab Ganguly College in association with Alumni Association, Bhairab Ganguly College, was held on 20th May 2021 from 4pm onwards. Mr. Sourav Pakrasky, senior research fellow at Indian Institute of Chemical Biology, delivered the lecture via Google Meet for about 1 and half hour. The Google Meet was attended by about eighty participants; most amongst them were existing students of Bhairab Ganguly College who have Chemistry as their core or general subject. The title of the lecture was 'Method of Isolation and Structural elucidation of Phyto Compounds for Medicinal Purposes'. The speaker delivered an interesting presentation. He explained about primary and secondary metabolites, extraction of compounds from natural sources, their purification and characterization. He explained in detail the various methodologies of characterization of compounds like NMR and Mass spectroscopy and structural elucidation from spectroscopic data. The topics he explained were very much related to the syllabus of CEMA COR Sem-V and Sem-VI. The session was very interactive. Many students and faculties asked relevant questions and the speaker answered each of them in detail. On attending this lecture, the students have acquired knowledge about methods of isolation and characterization of various phytocompounds and got a glimpse of current research scenario of chemistry. They are highly motivated on seeing an ex-student of the department pursuing career in higher studies. They felt specially interested on current topics of chemistry like drug designing and spectroscopic analysis. The department looks forward to organize more such lectures in future.





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WEST BENGAL, INDIA

Letter of Appreciation



Mr. Sourav Pakrashy SRF INDIAN INSTITUTE OF CHEMICAL BIOLOGY

Bhairab Ganguly College (BGC) pays its gratitude for your eminent presence in the Invited Talk on the topic *Method of Isolation & Sructural Elucidation of Phyto Compounds for Medicinal Purpose* under the aegis of Alumni Lecture Series on Wednesday, 20th May, 2021 held at BGC, Kolkata, West Bengal, India.

It was a matter of immense pleasure for us to have you as the **Guest Speaker** for the event. Your vision was fruitful to the participants of this lecture, which shall serve every objective of the event.

We appreciate the time you took out of your busy schedule and thank you for your contribution.

Submanil Som

Prof. (Dr.) Subhranil Som Principal, Bhairab Ganguly College Dr. Rajesh Konar

Dr. Rajesh Konar In-Charge, Dept. of Chemistry



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DEPARTMENT OF GEOGRAPHY

Alumni Lecture Series

TOPIC: HOW TO MAKE IT EASIER: COURSE AND CAREER

ALUMNI SPEAKERS:



Mr. Soumitra Giri WBCS

Joint Commissioner of Revenue.

Government of West Bengal.



Ms. Kanika Das. SACT Ramakrishna Sarada Mission Vivekananda Vidyabhavan



CHIEF PATRON:

Prof. (Dr.) Subhranil Som Principal



MODERATOR:

Dr. Ajit Sil Associate Professor, Dept of Geography



EVENT COORDINATOR:

Smt. Manidipa Banerjee Department of History



DEPARTMENT IN-CHARGE:

Smt. Madhumita Mandal In-Charge, Dept. of Geography

Date - 22nd May, 2021 Time - 3:00 PM - 5:00 PM

NO REGISTRATION FEES

E-CERTIFICATES FOR ALL STUDENT PARTICIPANTS

Meeting Link:

https://meet.google.com/gkmpbei-fyq

Registration Link:

https://forms.gle/ GeY6tCMiUYsBqjhz9

Email: aksil@bhairabgangulycollege.ac.in

Website: bhairabgangulycollege.ac.in

Alumni Lecture Series: Department of Geography

Speaker1: Soumitra Giri

Speaker 2: Kanika Das

Title of Lecture: How to make it easier" and course and Sarrieet

Date: 22.05.2021

Meeting Link: https://meet.google.com/oic-wzrz-mdw

Registration Link: https://forms.gle/aiB6yroKGUzHkxNx5Report:

Report:

How to make it easier: course and career' was the topic of webinar in the Alumni lecture organised by the department of geography in association with Alumni Association of the college, on 22nd May. 2021.

The contents of discussion was aimed to provide a comprehensive guideline to the students, ex- students of geography honours and post- graduation of how to pursue future career and prepare for different competitive examinations not only in the field of geography but also in the civil service sectors.

Smt. Kanika Das, SACT, Ramkrishna Sarada Mission Vivekananda Bidyabhaban, Kolkata spoke particularly on the future prospects in the field of social science in higher studies and services. Mr. Soumitra Giri, WBCS Jt. Commissioner, Revenue department, govt of West Bengal, had delivered his lecture on the prospects of geography students in the civil services through competitive examinations.

The webinar accommodated 251 participants from the college and also from other institutions.

The webinar was chaired by Prof (Dr.) Subhranil Som and the Event Co-ordinator was Prof Manidipa Banerjee





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WEST BENGAL, INDIA

Letter of Appreciation



Mr. Soumitra Siri WEST BENGAL CIVIL SERVICE JOINT COMMISSIONER OF REVENUE GOVT. OF WEST BENGAL

Bhairab Ganguly College (BGC) pays its gratitude for your eminent presence in the **Invited Talk** on the topic *How to Make it Easier: Course and Career* under the aegis of **Alumni Lecture Series** on Wednesday, 22nd May, 2021 held at BGC, Kolkata, West Bengal, India.

It was a matter of immense pleasure for us to have you as the **Guest Speaker** for the event. Your vision was fruitful to the participants of this lecture, which shall serve every objective of the event.

We appreciate the time you took out of your busy schedule and thank you for your contribution.

Submanil Som

Prof. (Dr.) Subhranil Som Principal, Bhairab Ganguly College Smt Madhumita

Smt. Madhumita Mandal In-Charge, Dept. of Geography





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WEST BENGAL, INDIA

Letter of Appreciation



MO. Kanika Das State Aided College Teacher Ramakrishna Sarada Mission Vivekananda Vidyabhaban

Bhairab Ganguly College (BGC) pays its gratitude for your eminent presence in the **Invited Talk** on the topic *How to Make it Easier: Course and Career* under the aegis of **Alumni Lecture Series** on Wednesday, 22nd May, 2021 held at BGC, Kolkata, West Bengal, India.

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We appreciate the time you took out of your busy schedule and thank you for your contribution.

Submanil Som

Prof. (Dr.) Subhranil Som Principal, Bhairab Ganguly College A.W.

Smt. Madhumita Mandal In-Charge, Dept. of Geography



BHAIRAB GANGULY COLLEGE (GOVERNMENT-AIDED) FEEDER ROAD, BELGHARIA, KOLKATA-56, WEST BENGAL, INDIA DEPARTMENT OF PHYSICS

National Webinar

on

Career Opportunities in Physics

TITLE: PROSPECTS OF UNDERGRADUATE PHYSICS LEARNING

Alumni Lecture Series

ALUMNI SPEAKER:



Dr. Nilanjan Halder

Associate Professor (Senior Scale)
Department of Physics
(School of Basic Sciences)
Manipal University, Jaipur

CHIEF PATRON:



Prof. (Dr.) Subhranil Som Principal

EVENT COORDINATOR:



Smt. Manidipa Banerjee Department of History

MODERATOR:



Dr. D. Bhadra In-Charge Department of Physics

KEY BENEFITS:

- α. Know about the opportunities for a Physics graduate
- β. How to prepare for Competitive Exams
- y. Where to pursue your Masters Degree
- δ . Job opportunities in Industry
- ε. Pursue higher studies abroad

Date - 24th May, 2021 Time - 7:30 PM



https://meet.google.com/ pzd-dppy-ohw

NO REGISTRATION FEES

E-CERTIFICATES FOR ALL STUDENT PARTICIPANTS

Email: physdb@bhairabgangulycollege.ac.in

Website: bhairabgangulycollege.ac.in

Report



Alumni Lecture Series organized by the Department of Physics held on 24.05.21 via Google Meet from 7.30 pm onwards Invited Alumni Speaker:

Dr. Nilanjan Halder

Associate Professor, Department of Physics, Manipal University Jaipur

It is always a moment of pride for an institution of higher education when its alumnus makes his name in society and returns to give back to his alma mater. On 24th May, 2021, such an event was hosted by the department of Physics in association with "Abahaman" Alumni Association of Bhairab Ganguly College. Under the able leadership of Principal Prof. (Dr.) Som and the initiative taken by Smt. M. Bandopadhyay, Convenor, Alumni Association, the college has been hosting a series of informative and insightful lectures thereby facilitating an interaction of the present faculty and students with the alumni of the college.

Dr. Nilanjan Halder was a student of the department from 1996-99. He completed his M.Sc from SMIT and Ph.D from University of Calcutta and has been teaching at the Department of Physics, Manipal University Jaipur for the last ten years. He was a generous contributor to the "Alumni-speak" section of the Golden Jubilee souvenir of the college (pub. 2018). Dr. Halder expressed his gratitude to his alma mater and reminisced about the inspirational faculty of the department.

The event started with a welcome note by the In-Charge. The Principal welcomed the alumni speaker and addressed the audience. He chose to speak on a topic which is of immediate currency and relevance for the students of the department. The title of his lecture was "Prospects of Undergraduate Physics learning". Dr. Halder highlighted the pathways for doing Masters degree Program (M.Sc./M.Tech) in India. He mentioned the different entrance examinations for pursuing integrated Ph.D programme across the nation. He elucidated different job opportunities after completion of postgraduate studies. Thereafter, he went on to discuss vividly the fellowships given for Ph.D programmes in Europe and USA. Students from different UG & PG colleges affiliated to West Bengal State University & University of Calcutta participated eagerly. The attendance of the session was 100. Dr. Halder's meticulously prepared presentation and lucid talk encouraged a very lively and fruitful Q&A session. On behalf of the college, Smt. Bandopadhyay presented the letter of appreciation to the alumni speaker. The session ended with the Vote of Thanks by the departmental In-Charge.

The event was a resounding success. The college looks forward to collaborating with Dr. Halder in our future endeavours.

Signature of In-Charge Dr. Debabrata Bhadra





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WEST BENGAL, INDIA

Letter of Appreciation



Or. Nilanjan Halder ASSOCIATE PROFESSOR (SENIOR SCALE) DEPARTMENT OF PHYSICS (SCHOOL OF BASIC SCIENCES) MANIPAL UNIVERSITY JAIPUR

Bhairab Ganguly College (BGC) pays its gratitude for your eminent presence in the **Invited Talk** on the topic *Prospects of Undergraduate Physics Learning* under the aegis of **Alumni Lecture Series** on Monday, 24th May, 2021 held at BGC, Kolkata, West Bengal, India.

It was a matter of immense pleasure for us to have you as the **Guest Speaker** for the event. Your vision was fruitful to the participants of this lecture, which shall serve every objective of the event.

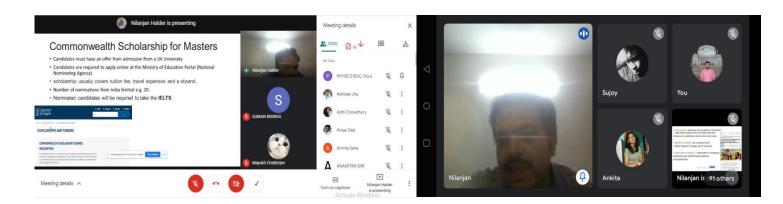
We appreciate the time you took out of your busy schedule and thank you for your contribution.

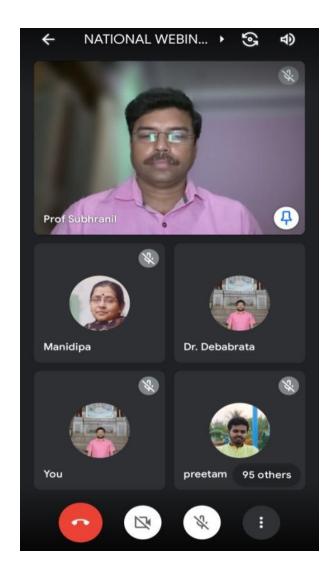
Submanil Som

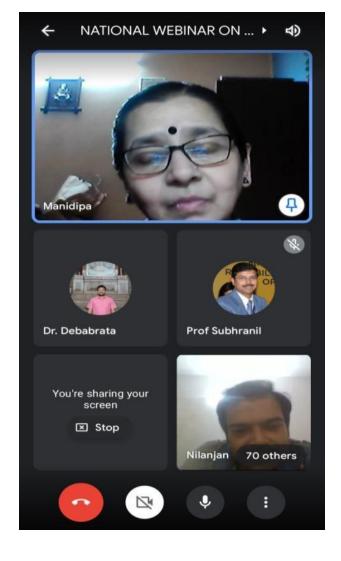
Prof. (Dr.) Subhranil Som Principal, Bhairab Ganguly College Shorm

Dr. D Bhadra In-Charge, Dept.of Physics

A glimpse of Dr. Halder's presentation









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DEPARTMENT OF HISTORY

Alumni Lecture Series

SPEAKER:

TOPIC: CAREER OPPORTUNITIES IN HISTORY



Dr. Ajoy Ghosh
Assistant Professor
Department of Education
St.Xaviers College (Autonomous),
Kolkata

TOPIC: FROM HISTORY TO PHARMA:

Journey



CHIEF PATRON:

Prof. (Dr.) Subhranil Som Principal



EVENT COORDINATOR:

Smt. Manidipa Banerjee Associate Professor Department of History



MODERATOR:

Mr. Sk. Makhleswar Rahaman Associate Professor, Department of History



DEPARTMENT IN-CHARGE:

Mr. Sri Krishanu Ghosh Asst. Prof., Dept. of History



Date - 27th May, 2021 Time - 3:00 PM - 4:30 PM

Sun Pharma Laboratories Ltd.

NO REGISTRATION FEES

E-CERTIFICATES FOR ALL STUDENT PARTICIPANTS

Meeting Link:

https://meet.google.com/rxmnizw-bzq

Registration Link:

https://forms.gle/ p5A5XhLPjsNFEott9

Email: kghosh@bhairabgangulycollege.ac.in Website: bhairabgangulycollege.ac.in

Report on Invited Talk organized by the Department of History under the aegis of Alumni Lecture Series

The Department organized Invited Talk in Alumni Lecture Series on 27th May, 2021 at 3 pm. The Department invited its two alumni, Dr. Ajoy Ghosh, Assistant Professor, Department of Education, St. Xaviers College (Autonomous), Kolkata and Sri Sumit Kumar Das, Territory Sales Executive, Sun Pharma Laboratories Ltd., to give online lectures in this series.

The Principal and the Chief Patron of the Alumni Lecture Series of the College, Prof. (Dr.) Subhranil Som inaugurated the session. The Event Coordinator, Smt. Manidipa Banerjee, Associate Professor, Department of History, Bhairab Ganguly College gave her speech on this occasion. The session was moderated by Sk. Makhleswar Rahaman, Associate Professor, Department of History, Bhairab Ganguly College.

Dr. Ajoy Ghosh gave lecture on 'Career Opportunities in History', highlighting several career pathways for History students after graduation. It was an excellent talk, which was evident from very positive response from the students of the Department.

Sri Sumit Kumar Das, in his talk on 'From History to Pharma: A Journey' shared his experience in pharmaceutical industries and encouraged the students to take pharma jobs. This was also a wonderful talk, appreciated by the students.

It was an excellent session, participated by all teachers and 250 students of the Department. At the end of the session, Sri Krishanu Ghosh, In-Charge and Assistant Professor, Department of History, gave vote of thanks.





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Letter of Appreciation



Mr. Sumit Kumar Das TERRITORY SALES EXECUTIVE SUN PHARMA LABORATORIES LTD.

Bhairab Ganguly College (BGC) pays its gratitude for your eminent presence in the **Invited Talk** on the topic *From History to Pharma: A Journey* under the aegis of **Alumni Lecture Series** on Thursday, 27th May, 2021 held at BGC, Kolkata, West Bengal, India.

It was a matter of immense pleasure for us to have you as the **Guest Speaker** for the event. Your vision was fruitful to the participants of this lecture, which shall serve every objective of the event.

We appreciate the time you took out of your busy schedule and thank you for your contribution.

Subhanil Som

Prof. (Dr.) Subhranil Som Principal, Bhairab Ganguly College Krishamu Ghosh

Mr. Sri Krishanu Ghosh Asst, Prof., Dept. of History





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WEST BENGAL, INDIA

Letter of Appreciation



Dr. Hjoy Ghosh

ASSISTANT PROFESSOR
DEPARTMENT OF EDUCATION
ST. XAVIERS COLLEGE (AUTONOMOUS)
KOLKATA

Bhairab Ganguly College (BGC) pays its gratitude for your eminent presence in the **Invited Talk** on the topic *Career Opportunities In History* under the aegis of **Alumni Lecture Series** on Thursday, 27th May, 2021 held at BGC, Kolkata, West Bengal, India.

It was a matter of immense pleasure for us to have you as the **Guest Speaker** for the event. Your vision was fruitful to the participants of this lecture, which shall serve every objective of the event.

We appreciate the time you took out of your busy schedule and thank you for your contribution.

Subtravil Som

Prof. (Dr.) Subhranil Som Principal, Bhairab Ganguly College Knishanu Ghosh

Mr. Sri Krishanu Ghosh Asst, Prof., Dept. of History



Bhairab Ganguly College (Government-Aided) NAAC Accredited Grade 'A' College Feeder Road, Belgharia, Kolkata-56 West Bengal India

Alumni Lecture Series

Importance of Botany in the Monitoring and Management of the Environment

ALUMNI SPEAKER



Dr. Misha Roy, Assistant Professor, Environmental Science, Vidyasagar University, Midnapore, W.B.

> Date: 31st May 2021 Time: 12:00 – 1:00 PM

No Registration Fee E-certificates for all student participants

Meeting Link: https://meet.google.com/cqu-qkyk-bjn Registration Link: https://forms.gle/mdnPQA6k1X2VT9nm6

DEPARTMENT OF BOTANY

CHIEF PATRON:



Prof. (Dr.) Subhranil Som, Principal

EVENT COORDINATOR:



Smt. Manidipa Banerjee Dept. of History

DEPARTMENT IN-CHARGE:



Dr. Rumdeep Kaur Grewal In-charge, Dept of Botany

Email: rkaur@bhairabgangulycollege.ac.in Website: bhairabgangulycollege.ac.in

Report: Alumni Lecture Series - Department of Botany, Bhairab Ganguly College

Title: Importance of Botany in the Monitoring and Management of the Environment

Invited Speaker – Dr. Misha Roy, Assistant Professor of Environmental Science, Vidyasagar University, Midnapore, West Bengal.

Date and time: 31st May, 2021, 12:00 noon

Registration Link: https://forms.gle/mdnPQA6k1X2VT9nm6

Google Meet Link: https://meet.google.com/cqu-qkyk-bjn

"Abahaman" Alumni Association of Bhairab Ganguly College initiated an Alumni Lecture Series under the dynamic leadership of Principal Prof. (Dr.) S. Som. Smt. Manidipa Banerjee, Convenor, Alumni Association is the Co-ordinated this series. The college has been hosting a series of informative and insightful lectures thereby facilitating an interaction of the present faculty and students with the alumni of the college. The fifth lecture in the series was organized by Department of Botany on 31st May 2021 at 12:00 noon through video conferencing.

Dr. Misha Roy complete her graduation in 2005 from Botany department of our college. She completed her MSc and MPhil from Environmental Science Department of University of Kalyani and then her PhD from University of Kalyani and Saha Institute of Nuclear Physics. Presently she is serving as Assistant Professor of Environmental Science, Vidyasagar University, Midnapore, and the Coordinator of the Centre for Environmental Studies, Vidyasagar University. She is associated with the Central Government's "Namami Ganga Project" and is a member of several research organizations and NGOs working on different environmental problems. She has published around 60 research papers and book chapters and has received awards and accolades from both at the national and international levels for her academic contributions.

The event started with a welcome note by the In-Charge. The Principal welcomed the alumni speaker and addressed the audience. Dr M. Roy spoke about her research highlighting the different scopes and recent developments in the subject of Environmental Science. She elaborated the relevance of botanists in Environmental Studies, she informed the audience of different professional opportunities and certification programs available after completion on MSc in Environmental Science. The attendance of the session was 101. Dr. Roy's meticulously prepared presentation and lucid talk encouraged a very lively and fruitful Q&A session. On behalf of the college, Smt. Banerjee presented the letter of appreciation to the alumni speaker. The session ended with the Vote of Thanks by the departmental In- Charge.

The event was a resounding success. The college looks forward to collaborating with Dr. M. Roy in our future endeavors.

Dr. Rumdeep Kaur Grewal In-charge, Department of Botany

Regrewal





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WEST BENGAL, INDIA

Letter of Appreciation



Or. Misha Roy

Assistant Professor
Environmental Science, Vidyasagar University
Midnapore, West Bengal

Bhairab Ganguly College (BGC) pays its gratitude for your eminent presence in the Invited Talk on the topic Importance of Botany in the Monitoring and Mangement of the Environment under the aegis of Alumni Lecture Series on Monday, 31st May, 2021 held at BGC, Kolkata, West Bengal, India.

It was a matter of immense pleasure for us to have you as the **Guest Speaker** for the event. Your vision was fruitful to the participants of this lecture, which shall serve every objective of the event.

We appreciate the time you took out of your busy schedule and thank you for your contribution.

Subhanil Som

Prof. (Dr.) Subhranil Som Principal, Bhairab Ganguly College Akgrewal

Dr. Rumdeep Kaur Grewal In-Charge, Dept. of Botany

Alumni Lecture 6

ALUMNI LECTURE SERIES



BHAIRAB GANGULY COLLEGE (Government-Aided) NAAC Accredited Grade 'A' College Feeder Road, Belgharia, Kolkata-56 **West Bengal India**

TOPIC - NEXT GENERATION

SEQUENCING



Suvam Sarkar Project Assistant, ICMR COVID 19 Project **Chittaranian National Cancer Institute** Kolkata W.B.

> Date: 12th June 2021 Time: 4:00 - 5:00 PM

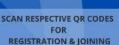
No Registration Fee E-certificates for all student participants

Meeting Link

https://meet.google.com/maw-qibx-rse



Registration https://forms.gle/cVrgFvjkkm8TRxaJ9 Link





DEPARTMENT PHYSIOLOGY



Prof. (Dr.) Subhranil Som, Principal **Event Coordinator**



Smt. Manidipa Banerjee **Dept. of History** Department In-Charge



Dr. TarasankarMaiti In-charge, Dept of Physiology

For any queries Contact

Email: tmaiti@bhairabgangulycollege.ac.in Website: bhairabgangulycollege.ac.in

REPORT OF ALUMNI LECTURE SERIES: Department of Physiology

Title of Lecture : NEXT GENERATION SEQUENCING

Speaker: Suvam Sarkar, Project Assistant, CNCI, Kolkata, West Bengal

Alumni of Physiology Session 2013 to 2016

Registration link: https://forms.gle/cVrgFvjkkm8TRxaJ9

Google Meet Link: https://meet.google.com/maw-qibx-rse

Date and Time: 12th June 2021, 4.00 pm

Alumni Association of Bhairab Ganguly College initiated an Alumni Lecture Series under the dynamic leadership of Principal Prof. (Dr.) S. Som. Prof Manidipa Banerjee, Convenor, Alumni Association is the Co-ordinated this series. The college has been hosting a series of informative and insightful lectures thereby facilitating an interaction of the present faculty and students with the alumni of the college. The sixth lecture in the series was organized by Department of Physiology on 12th June 2021 at 4.00 pm through video conferencing.

Suvam Sarkar did his B.Sc. (Hons) in Physiology from Bhairab Ganguly College. He obtained first class first in Physiology from West Bengal State University in 2016. Suvam Sarkar completed M.Sc. in Physiology in 2018. He had qualified UGC NET for LS in 2018. After that he joined in Personalized Medicine Institute Pvt. Ltd as project fellow. Here he was isolating DNA & RNA from different samples and also performed Next Generation Sequencing Using Oxford Nanopore. In 2020 he joined in Chittaranjan National Cancer Institute as project assistant in ICMR COVID19 Project. He is busy in performing COVID 19 diagnostic test from nasopharyngeal swab of SARS CoV 2 infected person using RT PCR. Mr Sarkar has basic knowledge to use many software like Pymol, Rasmol, and Molinspiration for visual investigation of 3D molecular structure of protein and nucleic acids and their interaction each other and with ligands.

The event started with a welcome note by the In-Charge. Principal Prof. (Dr.) S. Som welcomed the alumni speaker and also Prof Manidipa Banerjee, event coordinator, welcomed the alumni speaker and addressed the audience.

Next-generation sequencing (NGS) is a technology for determining the sequence of DNA or RNA to study genetic variation associated with diseases or other biological phenomena. Introduced for commercial use in 2005, this method was initially called "massively-parallel sequencing", because it enabled the sequencing of many DNA strands at the same time, instead of one at a time as with traditional Sanger sequencing by capillary electrophoresis (CE).

Each of these technologies has utility in today's genetic analysis environment. Sanger sequencing is best for analyzing small numbers of gene targets and samples and can be accomplished in a single day. It is also considered the gold-standard sequencing technology, so NGS results are often verified using Sanger sequencing. NGS enables the interrogation of

hundreds to thousands of genes at one time in multiple samples, as well as discovery and analysis of different types of genomic features in a single sequencing run, from single nucleotide variants (SNVs), to copy number and structural variants, and even RNA fusions. NGS provides the ideal throughput per run, and studies can be performed quickly and cost-effectively. Additional advantages of NGS include lower sample input requirements, higher accuracy, and ability to detect variants at lower allele frequencies than with Sanger sequencing.

The speed, throughput, and accuracy of NGS has revolutionized genetic analysis and enabled new applications in genomic and clinical research, reproductive health, and environmental, agricultural, and forensic science.

NGS workflow

A typical NGS experiment shares similar steps regardless of the instrument technology used (Figure 1).

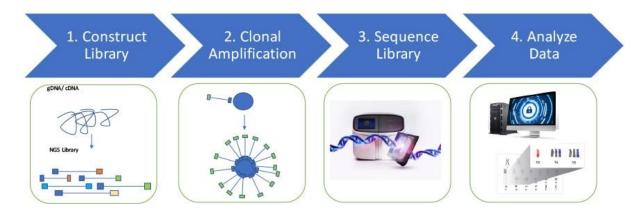


Figure 1. NGS workflow steps

1. Construct library

A sequencing "library" must be created from the sample. The DNA (or cDNA) sample is processed into relatively short double-stranded fragments (100–800 bp). Depending on the specific application, DNA fragmentation can be performed in a variety of ways, including physical shearing, enzyme digestion, and PCR-based ampilfication of specific genetic regions. The resulting DNA fragments are then ligated to technology-specific adaptor sequences, forming a fragment library. These adaptors may also have a unique molecular "barcode", so each sample can be tagged with a unique DNA sequence. This allows for multiple samples to be mixed together and sequenced at the same time. For example, barcodes 1-20 can be used to individually label 20 samples and then analyze them in a single sequencing run. This approach, called "pooling" or "multiplexing", saves time and money during sequencing experiments and controls for workflow variation, as pooled samples are processed together.

In addition to fragment libraries, there are two other specialized methods of library preparation: paired-end libraries and mate-pair libraries. Paired-end libraries allow users to sequence the DNA fragment from both ends, instead of typical sequencing which occurs only in a single direction. Paired-end libraries are created like regular fragment libraries, but they have adaptor tags on both ends of the DNA insert that enable sequencing from two directions. This methodology makes it easier to map reads and can be used to improve detection of genomic rearrangements, repetitive sequence elements, and RNA gene fusions or splice variants. However, improvements in modern library prep methods and analysis tools have made it possible to detect these features with single direction sequencing as well.

Mate-pair libraries are more complex to create than fragment or paired-end libraries and involve much larger-sized DNA inserts (over 2 kb and up to 30 kb). Sequencing of mate-pair libraries generates two reads that are distal to each other and in the opposite orientation. Using the physical information associated between the two sequencing reads, mate pair sequencing is useful for de novo assembly, large structural variant detection, and identification of complex genomic rearrangements.

2. Clonal amplification

Prior to sequencing, the DNA library must be attached to a solid surface and clonally amplified to increase the signal that can be detected from each target during sequencing. During this process, each unique DNA molecule in the library is bound to the surface of a bead or a flow-cell and PCR amplified to create a set of identical clones. In the case of Ion Torrent technology, a process called "templating" is used to add library molecules to beads.

3. Sequence library

All of the DNA in the library is sequenced at the same time using a sequencing instrument. Although each NGS technology is unique, they all utilize a version of the "sequencing by synthesis" method, reading individual bases as they grow along a polymerized strand. This is a cycle with common steps: DNA base synthesis on single stranded DNA, followed by detection of the incorporated base, and then subsequent removal of reactants to restart the cycle.

Most sequencing instruments use optical detection to determine nucleotide incorporation during DNA synthesis. Ion Torrent instruments use electrical detection to sense the release of hydrogen ions, which naturally occurs when nucleotides are incorporated during DNA synthesis.

4. Analyze data

Each NGS experiment generates large quantities of complex data consisting of short DNA reads. Although each technology platform has its own algorithms and data analysis tools, they share a similar analysis 'pipeline' and use common metrics to evaluate the quality of NGS data sets.

Analysis can be divided into three steps: primary, secondary, and tertiary analysis (Figure 2). Primary analysis is the processing of raw signals from instrument detectors into digitized data or base calls. These raw data are collected during each sequencing cycle. The output of primary

analysis is files containing base calls assembled into sequencing reads (FASTQ files) and their associated quality scores (Phred quality score). Secondary analysis involves read filtering and trimming based on quality, followed by alignment of reads to a reference genome or assembly of reads for novel genomes, and finally by variant calling. The main output is a BAM file containing aligned reads. Tertiary analysis is the most challenging step, as it involves interpreting results and extracting meaningful information from the data.



The speaker delivered an interesting presentation. The invited talk on "**NEXT GENERATION SEQUENCING**" under Alumni Lecture held on 12th June, 2021, was a grand success and created itself a milestone for the history of Department of Physiology. With the presence of 86 audiences, including students and teachers, it was a knowledge elevating session for all of them. The session ended up with the vote of thanks by the moderator Dr. Tarasankar Maiti (In-charge, Dept. of Physiology).

Dr. Tarasankar Maiti

In-charge, Department of Botany







NAAC AACCREDITED GRADE 'A' COLLEGE AFFILIATED TO WEST BENGAL STATE UNIVERSITY FEEDER ROAD, BELGHARIA KOLKATA - 700056 WEST BENGAL, INDIA.

LETTER OF APPRECIATION



MR. SUVAM SARKAR

PROJECT ASSISTANT,

ICMR COVID 19 PROJECT

CHITTARANJAN NATIONAL CANCER INSTITUTE

KOLKATA W.B.

We deeply appreciate the time and effort Mr. Suvam Sarkar has put in delivering an invited talk on the topic "Next Generation Sequencing" under the aegis of Alumni Lecture Series on Saturday 12th June 2021 held at the BGC, Kolkata, West Bengal.

Subhanil Som
PROF (DR.) SUBHRANU SOM

PROF. (DR.) SUBHRANIL SOM,
PRINCIPAL

Dr. TarasankarMaiti In-charge, Dept of Physiology

Alumni Lecture 7



Bhairab Ganguly College (Government-Aided) NAAC Accredited Grade 'A' College Feeder Road, Belgharia , Kolkata-56 West Bengal India

Alumni Lecture Series

Automation in Finance: The Future of Accounting

ALUMNI SPEAKER



CMA Mousam Roy, Team Leader-Accounting & Tax Advisor, Infosys BPM Ltd.

Date: 19th June, 2021 Time: 1:00 - 2:00 PM

No Registration Fee E-certificates for all student participants

Meeting Link: https://meet.google.com/hcz-duop-nnr
Registration Link: https://meet.google.com/hcz-duop-nnr
Registration Link: https://meet.google.com/hcz-duop-nnr

DEPARTMENT OF COMMERCE

CHIEF PATRON:



Prof. (Dr.) Subhranil Som, Principal

EVENT COORDINATOR:



Smt. Manidipa Banerjee Dept. of History

DEPARTMENT IN-CHARGE:



Rozy Lasker In-charge, Dept. of Commerce

Email: rlasker@bhairabgangulycollege.ac.in

Website: bhairabgangulycollege.ac.in

ALUMNI LECTURE SERIES- DEPT. OF COMMERCE-WRITE UP

LECTURE TOPIC: Automation in Finance: The Future of Accounting

GUEST SPEAKER (ALUMNI): CMA Mousam Roy

DATE OF LECTURE: 19th June, 2021

AUDIENCE PRESENT: 250

SUMMERY:

The session started with the welcome speech by the Honorable Principal of the college, Prof.(Dr.) Subhranil Som followed by Smt. Manidipa Banerjee, Associate Professor, Dept. of History, the Event coordinator. The Guest Speaker, CMA Mousam Roy, enumerated the different areas of automation in the present arena of financial sectors under Alumni Lecture Series. How the different soft wares have replaced the orthodox finance functions, have been well explained by the Invited Speaker. He also shared the footsteps he have taken towards his professional goals. He have poured the presence inquisitive students his knowledge about the other professional field like CA,CS, MBA. He also encouraged the students to explore the different periphery of professional life in stock market and startups. His thought provoking and knowledge augmenting session would have helped the students a lot to build up their career and to reach to the crescendo of success. The invited talk on *Automation in Finance: The Future of Accounting* under Alumni Lecture held on 19th June, 2021, was a grand success and created itself a milestone for the history of Department of Commerce. With the presence of 250 audiences, including students and teachers, it was a knowledge elevating session for all of them. The session ended up with the vote of thanks by the moderator Ms. Rozy Lasker (In-charge, Dept. of Commerce).



(GOVT.-AIDED)

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AFFILIATED TO WEST BENGAL STATE UNIVERSITY
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WEST BENGAL, INDIA

Letter of Appreciation



CMH Mousam Roy
TEAM LEADER-ACCOUNTING
&
TAX ADVISOR, INFOSYS BPM LTD.

Bhairab Ganguly College (BGC) pays its gratitude for your eminent presence in the **Invited Talk** on the topic *Automation in Finance: The Future of Accounting* under the aegis of **Alumni Lecture Series** on Saturday, 19th June, 2021 held at BGC, Kolkata, West Bengal,India.

It was a matter of immense pleasure for us to have you as a **Guest Speaker** for the event.

We appreciate the time you took out from your busy schedule and thank you for your contribution.

Submanil Som

Prof.(Dr.)Subhranil Som

Miss. Rozy Lasker

Principal, Bhairab Ganguly College

In-Charge, Dept. of Commerce

Alumni Lecture 8



Bhairab Ganguly College

Government -Aided) NAAC Accredited Grade 'A' College Feeder Road, Belgharia, Kolkata- 56, West Bengal, India.

Department of English

Alumni Lecture Series

Topic:

"Laugh-out-Loud: (Un) Masking Congreve's Gendered World in *The Way of the World*"



<u>Speaker:</u>

Swapna Roy,

State Aided College Teacher, Amdanga Jugal Kishore Mahavidyalaya

> Date: 21st June 2021, Monday Time: 4 pm

Google Meet Link: https://meet.google.com/byg-tkfp-oqq

Registration Link: https://forms.gle/rmLqQncukSWcPynq6



Chief Patron:

Prof (Dr.) Subhranil Som, Principal



Event Coordinator:

Smt. Manidipa Banerjee, Associate Professor,

Department of History



Department In-Charge:

Mr. Laki Molla, Assistant Professor,

Department of English

No Registration Fees

E-certificates for all student participants

Email: l.molla@bhairabgangulycollege.ac.in Website: bhairabgangulycollege.ac.in

ALS Report: Department of English Bhairab Ganguly College 29th June 2021

On 21st June 2021, the Department of English, Bhairab Ganguly College has arranged a lecture as part of the Alumni Lecture Series Programme, at 4:30pm via Google Meet platform.

Swapna Roy, Guest Speaker of this lecture (SACT faculty in the Department of English of Amdanga Jugal Kishore Mahavidyalaya) has presented on "Laugh-outloud: (Un)Masking Congreve's Gendered World in *The Way of the World*".

The lecture session was inaugurated by the valuable speech by respectedPrincipal Pof. (Dr.) Subhranil Som of Bhairab Ganguly College. Professor Manidipa Bannejee has honoured this event by her courageous rola as an Event Coordinator of ALS. Departmental In-charge Professor Laki Molla has actively monitored the entire event. Participation of students and teachers of this college was around 145 in number. The entire programme was moderated by Professor Janki Singh with the assistance of Professor Sukla Kisku of the same department. Student participants were provided ecertificates for their enthusiastic engagement in the programme.

Reported by-Ms. Sukla Kisku, Assistant Professor, Department of English, Bhairab Ganguly College.



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NAAC Accredited Grade 'A' College

Affiliated to West Bengal State University

Feeder Road, Belgharia, Kolkata- 700056.

West Bengal, India.

Letter of Appreciation



SWAPNA ROY,
State Aided College Teacher,
Amdanga Jugal Kishore Mahavidyalaya

It gave us immense pleasure to have *Ms. Swapna Roy* as the Guest Speaker for the Alumni Lecture Series on Monday 21st June 2021 held at Department of English, Bhairab Ganguly College, Kolkata, West Bengal. Her presentation ("Laugh-out-Loud: (Un) Masking Congreve's Gendered World in *The Way of the World*") was quite innovative and elaborative in its manner. We hope that her presence in the event will definitely encourage our students to dream a better future ahead. Wishing her all the best for her future.

Submanil Som

Prof (Dr.) Subhranil Som Principal, Bhairab Ganguly College boni Mokes

Mr. Laki Molla Assistant Professor, Department of English

Alumni Lecture 9



Bhairab Ganguly College (Government-Aided) NAAC Accredited Grade 'A' College Feeder Road, Belgharia, Kolkata-56 West Bengal, India

Alumni Lecture Series

PROPERTIES OF CONTINUOUS FUNCTION

ALUMNI SPEAKER



Sri Sanjib Das, SRF, Dept. of Mathematics, University of Burdwan, West Bengal, India.

Date: 31st July 2021 Time: 12:00 Noon – 1:00 P.M

No Registration Fee E-certificates for all student participants

Meeting Link: http://meet.google.com/ksw-xcgn-sii Registration Link:

https://docs.google.com/forms/d/e/1FAIpQLSdu3HN0OX6l3cH4PGj6 MLujR87-NafN_baLVu8jpbmkHSBs7g/viewform?usp=sf_link

DEPARTMENT OF MATHEMATICS

CHIEF PATRON:



Prof. (Dr.) Subhranil Som, Principal

EVENT COORDINATOR:



Smt. Manidipa Banerjee Dept. of History

DEPARTMENT IN-CHARGE:



Dr. Dhananjoy Halder In-charge, Dept Mathematics

Email: dhalder@bhairabgangulycollege.ac.in

Website: bhairabgangulycollege.ac.in

Report

Alumni Lecture Series organized by Department of Mathematics held on 31st July 2021 via Google Meet at 12:00 noon

Invited Speaker: Sri Sanjib Das, SRF, Dept. of Mathematics,

University of Burdwan, West Bengal, India.

It is always a moment of pride for an institution of higher education when its alumnus makes his name in society and returns to give back to his alma mater. On 31st July 2021, such an event was hosted by the department of Mathematics in association with "Abahaman" alumni association of Bhairab Ganguly College. Under the able leadership of Principal Prof. (Dr.) Subhranil Som and theinitiative taken by Smt. Manidipa Banerjee, Associate Professor of History and Convener of AlumniAssociation, the college has been hosting a series of informative and insightful lectures thereby facilitating an interaction of the present faculties and students with the alumni of the college.

Mr. Sri Sanjib Das was a student of the department from 2014-2017. He completed his M.Sc from WBSU pursuing Ph.D (Presently SRF, Dept. of Mathematics, University of Burdwan, West Bengal, India).

The event started with a welcome note by the departmental In-Charge. The Principal welcomed the alumni speaker and addressed the audience. He chooses to speak on a topic which is of immediate currency and relevance for the students of the department. The title of his lecture was "Properties of continuous function" The attendance of the session was 85. Mr. Das meticulously prepared presentation and lucid talk encouraged a nice fruitful question and answer session. On behalf of the college, Smt. Banerjee presented a letter of appreciation to the alumni speaker. The session ended with the Vote of Thanks by the departmental In-Charge. The event was grand success.



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Belgharia , Kolkata-700056West Bengal, India

Letter of Appreciation



SRF, Dept. of Mathematics, University of Burdwan, West Bengal, India.

Bhairab Ganguly College pays its gratitude for your eminent presence in the **Invited Talk** on the topic **Properties of Continuous Function** under the aegis of **Alumni Lecture Series** on Saturday, 31st July 2021 held at Bhairab Ganguly College, Kolkata, West Bengal, India.

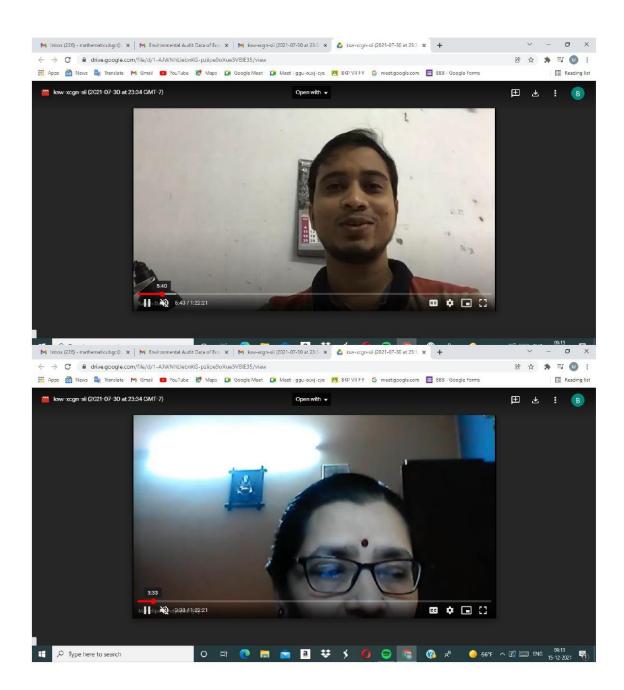
It was a matter of immense pleasure for us to have you as a Guest Speaker for the event. Your vision was fruitful to the participants of this lecture, which shall serve every objective of the event.

We appreciate the time you took out of your busy schedule and thank you for your contribution.

Subhravil Som

Prof. (Dr.) Subhranil Som Principal, Bhairab Ganguly College Helds

Dr. Dhananjoy Halder In-Charge, Dept. of Mathematics



Alumni Lecture 10



ALUMNI LECTURE SERIES

BHAIRAB GANGULY COLLEGE (Government –Aided) NAAC Accredited Grade 'A' College

Date : 9th December 2021 Time : 5.00 – 6.00 PM

TOPIC:

 ${\bf Metting\ Link:} \underline{https://meet.google.com/kya-zwda-zkh}$ Registration Link: https://tinyurl.com/yc429fb8

Should cryptocurrency be banned? Or should it be made legal tender?



Chief Patron



Prof. (Dr.) Subhranil Som Principal Bhairab Ganguly College

Event Coordinator



Smt. Manidipa Banerjee Associate Professor Dept. of History

Department In-Charge



Dr. Santanu Chakraborty In-charge, Dept. of Economics

Moderator



Mr. Satchidananda Sardar Assistant Professor Dept. of Economics

For any enquiry Contact: schakraborty@bhairabgangulycollege.ac.in ssardar@bhairabgangulycollege.ac.in

A Report on Alumni Lecture

Department of Economics

The Department of Economics did its first Alumni lecture on 9th of December, Thursday, 2021. In online mode (meeting link: https://meet.google.com/kyazwda-zkh) this event has been started at 5 pm on that day. Our notable alumni Sri Debjit Hore Roy, now is the student of Masters in Economics in North Bengal University, was the speaker of that event. His topic was "PROS AND CONS OF USING CRYPTOCURRENCY - Should cryptocurrency be banned? Or should it be made legal tender?" In this august gathering more than fifty (50) students were present. Some of the students of North Bengal University also present there.

This delightful event inaugurated by our respected Principal Sir, Professor Dr. Shuvronil Som by his welcome address. After that, Smt. Manidipa Benerjee, Coordinator of the event explain the relevance of this program. Following her, Dr. Santanu Chakraborty, In-Charge of the Department welcome all participants on behalf of the department. After that, Sri. Asutosh Murmu, Assistant Professor in the Department of Economics introduced Sri. Debjit Hore Roy with the audience.

After this formality, Sri. Debjit Hore Roy, started his lecture on this thought-provoking topic. More than forty-five minutes he mesmerized audience with his slides. Afterwards, Question-Answer session began. This session was conducted by Dr. Probir Karar, Associate Professor in this Department. Certainly, a number of hands raises for questions in this debatable issue. Due to paucity of time, Dr. Karar took some questions which were most relevant to the topic. Sri Debjit, nicely handled all the questions.

At the end of the session, Smt. Manidipa Banerjee, read the 'Letter of Appreciation' towards Debjit from the college end. This remarkable program ended with the formal vote of thanks by Sri. Manabes Majumder, Associate Professor and senior most faculty of the Department.

The total programme has been moderated by Sri. Satchidananda Sardar, Assistant Professor of the Department of Economics.



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NAAC Accredited Grade 'A' College Feeder Road, Belgharia , Kolkata-700056 West Bengal, India

Letter of Appreciation



Sri Debjit Hore Roy
P.G Student in Economics
(NBU)

Bhairab Ganguly College pays its gratitude for your eminent presence in the Invited Talk on the topic "PROS AND CONS OF USING CRYPTOCURRENCY - Should cryptocurrency be banned? Or should it be made legal tender"? under the aegis of Alumni Lecture Series on Thursday, 9th December 2021 held at Bhairab Ganguly College, Kolkata, West Bengal, India.

It was a matter of immense pleasure for us to have you as a **Guest Speaker** for the event. Your vision was fruitful to the participants of this lecture, which shall serve every objective of the event.

We appreciate the time you took out of your busy schedule and thank you for your contribution.

Prof. (Dr.) Subhranil Som

Dr. Santanu Chakkaborty