

**DEPARTMENT OF ZOOLOGY  
RAJKIYA MAHAVIDYALAYA BAZPUR  
(GOVERNMENT P. G. COLLEGE BAZPUR)**

To,  
The Principal,  
Rajkiya Mahavidyalaya  
Bazpur

Date: 04/07/2020

**Subject:** Seeking permission for organizing academic activities.

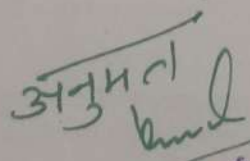
**Respected Madam,**

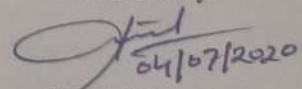
Department of has recently organized Online Invited Lecture Series in Biological Science. The programme was highly appreciated by students and faculty. Keeping in view the feedback of the programme from students, faculty members of Department of Zoology has planned more such programmes in near future. Proposed events and their tentative dates are as follows

Proposed Event	Tentative schedule	Organizing Committee	Association
Invited Lecture Series On Biological Science	20 July 2020 To 24 July 2020	Convenor: Dr. Adarsh Pandey, Organizing Secretary: Dr. Atul Upreti CO-Organizing Secretary: Dr. Jaya Kandpal, Rapporteur: Dr. Nirupama Dalakoti	Society for Research in Biological Science S.S. College Shahjahanpur (U.P.)
International E-Conference "Recent Trend in Life Science Research: Challenges & Promises"	8 August 2020	Convenor: Dr. Adarsh Pandey, Organizing Secretary: Dr. Atul Upreti Rapporteur: Dr. Nirupama Dalakoti	Society for Research in Biological Science S.S. College Shahjahanpur (U.P.)
Skill Development Programme On Online Tools	27 July 2020 to 31 July 2020	Course Director: Dr. Atul Upreti Convener: Dr. Adarsh Pandey (Shahjahanpur) Organizing Secretary: Dr. Jaya Kandpal	Society for Research in Biological Science S.S. College Shahjahanpur (U.P.)
Invited Lecture Series On Biological Science	24 Aug to 28 Aug 2020	Convenor: Dr. Adarsh Pandey, Organizing Secretary: Dr. Atul Upreti Rapporteur: Dr. Nirupama Dalakoti	Society for Research in Biological Science S.S. College Shahjahanpur (U.P.)

All the programmes mentioned above will be organized online. Kindly note that apart from expenses on print and stationery there is no cost involved in organizing these events. I believe that these events will be much beneficial for students and teachers of life science stream. Kindly approve the above-mentioned schedule, organizing committees and associations and give necessary permission to organize these events. We also request you to provide necessary man power for the event.

Thanking you  
Wisth best regards

  
प्राचार्य  
राजकीय स्ना० महाविद्यालय  
बाजपुर (ऊर्सि० नगर)

Your Sincerely  
  
04/07/2020  
Dr. Atul Upreti  
Assistant Professor and In-charge  
Department of Zoology  
Government P. G. College Bazpur

DEPARTMENT OF ZOOLOGY  
RAJKIYA MAHAVIDYALAYA BAZPUR  
(GOVERNMENT P. G. COLLEGE BAZPUR)

EVENT REPORT  
INVITED LECTURE SERIES ON BIOLOGICAL SCIENCE (ILSBS)  
20 July 2020 to 24 July 2020

To,  
THE PRINCIPAL  
RAJKIYA MAHAVIDYALAYA BAZPUR

Dated: 13/08/2020

**SUBJECT: Event Report of Invited Lecture Series On Biological Science 20 July 2020 to 24 July 2020**

Respected Madam

Please find bellow the event report of above stated event.

Due to high demand of students and faculty members a 5 Days long lecture series was organized soon after the first series. In this series speakers from U.P. Uttarakhand, M.P. and Mizorem delivered talk. This lecture series too was highly appreciated by students and teachers.

**Event: Invited Lecture Series On Biological Science: ILSBS:2020(2)**

**Duration:** 5 Days

**Dates:** 20 July 2020 to 24 July 2020

**Organizing Committee: Convenor:** Dr. Adarsh Pandey,

**Organizing Secretary:** Dr. Atul Upreti

**CO-Organizing Secretary:** Dr. Jaya Kandpal (Bazpur), Dr. Ramesh Chandra (Shahjahanpur)

**Rapporteur:** Dr. Nirupama Dalakoti

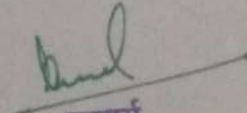
**Details of Lectures:**

Name of speaker	Institute	Date of lecture	Topic
Dr. Sunita Verma Associate professor	Christ Church College Kanpur U.P.	20 July 2020	Herbs and their medicinal uses
Dr. Jaya Singh Director	Research Institute of Biodiversity Conservation and Rural Biotechnology Centre (BCRBC), Jabalpur (M.P.)	21 July 2020	Spawn production for the mushroom industry: The basic facility for value chain development of mushrooms
Dr. Shankar Mondal Assistant professor	LSM Government Postgraduate College, Pithoragarh	22 July 2020	Vaccine Development: From Laboratory to Mass Immunization
Dr. Garima Singh Research scholar	Pachhunga University College, Aizawl, Mizoram,	23 July 2020	Location effect on the bioactive potential and chemical composition of some medicinal plants
Dr. Shalini Saxena Assistant professor	Bareilly College Bareilly.	24 July 2020	Genetic code-genetic information of living organism

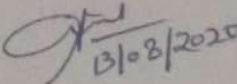
Please find attached detailed Report/Souvenir of the event. Kindly note that scanned signatures were added in the attached report/ Souvenir, certificate etc with consent of person concern.

Thanking You

With best regards

  
प्राचार्य  
राजकीय स्ना० महाविद्यालय  
बाजपुर (ऊ०सि० नगर)

Your Sincerely

  
31/8/2020

Dr. Atul Upreti  
Incharge,  
Department of Zoology

# SOUVENIR & LECTURE ABSTRACTS

INVITED LECTURE SERIES ON  
BIOLOGICAL SCIENCE: 2020(2)

ILSBS:2020(2)

20-24 July 2020

ORGANIZED BY:



**Government P. G. College Bazpur  
U.S. Nagar Uttarakhand**



**Society  
for  
Research in  
Biological Sci-  
ence**



**S. S. College  
Shahjahanpur  
Uttar Pradesh**

**INVITED LECTURE SERIES  
ON BIOLOGICAL SCIENCE:2020 (2)  
ILSBS:2020(2)**

**20 —24 JULY 2020**

**SOUVENIR & LECTURE ABSTRACTS**

**Compiled by:  
Dr. Atul Upreti  
Dr. Adarsh Pandey**



**GOVT, P.G. COLLEGE  
BAZPUR  
U.S. NAGAR  
Uttarakhand India**



**SOCIETY FOR RESEASH  
IN BIOLOGICAL SCIENCE  
(S.R.B.S.)**



**S. S. College  
Shahjahanpur  
Uttar Pradesh**





अनेकसंशयोच्छेदि, परोक्षार्थस्य दर्शकम् ।  
सर्वस्य लोचनं शास्त्रं, यस्य नास्त्यन्ध एव सः ॥

It blasts many doubts, foresees what is not obvious |  
Science is the eye of everyone, one who hasn't got it, is like a blind ||



**GOVERNMENT POST GRADUATE COLLEGE BAZPUR**  
**U. S. NAGAR UTTARAKHAND**



**PRINCIPAL**

**MESSAGE**

It was not long ago when Government P. G. College Bazpur organized first series of invited lectures in Biological science. I am happy that just within a month of grand success of that series the college is organizing second series of invited lectures in biological science ILSBS:2020(2) in association with SRBS and S. S. College Shahjahanpur U.P.

Online lecture series are a very thoughtful and well conceptualized idea as it gives our students a chance to interact with students, eminent teachers and scientists from across the country.

I thank Dr. A. K. Mishra Principal S. S. College Shahjahanpur U.P. for supporting our cause.

I extend my compliments to entire organizing committee for their hard work and convey best wishes for the grand success of this event.

**Prof. Kamla Chanyal**

**19 July 2020**

## S. S. COLLEGE SHAHJAHANPUR U. P.



**PRINCIPAL**

### MESSAGE

I am very happy to know that an Invited Lecture Series related to Biological Science is being organized between 20 July to 24 July under the joint aegis of Government Post Graduate College, Bajpur, SS College Shahjahanpur and Society for Research in Biological Science. Organizing such lecture series related to online education is a very important step in the era of Covid-19. I congratulate in advance to all of you and wish for a grand success of the event. I believe that organizing such lecture series for students through online education will prove to be very fruitful in the coming time and it will benefit them in future. I again send my best wishes in advance to all the organizers including Dr. Adarsh Pandey and Dr. Atul Upreti and SRBS.

**Good Luck !**

**Prof A K Mishra**

**Principal**

**19.07.2020**

## SCHEDULE OF INVITED LECTURES

DATE	SPEAKER	TOPIC
20 JULY 2020	DR. SUNITA VERMA	Herbs and their medicinal uses
21 JULY 2020	DR. JAYA SINGH	Spawn production for the mushroom industry: The basic facility for value chain development of mushrooms
22 JULY 2020	DR. SHANKAR MONDAL	Vaccine Development: From Laboratory to Mass Immunization
23 JULY 2020	DR. GARIMA SINGH	Location effect on the bioactive potential and chemical composition of some medicinal plants
24 JULY 2020	DR. SHALINI SAXENA	Genetic code-genetic information of living organism





## LECTURE 1

Dated 20 July 2020

### Herbs and Their Uses

Dr. Sunita Verma

Christ Church College Kanpur U.P.

The history of medicinal plants is intimately connected with the history of botany . Primitive man lived at mercy of nature in constant terror of diseases. This theory of demoniacal possession lasted for centuries and also exist now in some primitive areas . According to this superstitious doctrine all plants possessed some sign, given by the creator, which indicated the use for which they were intended . Decoction of mandrake roots either in boiling water or in wine had a reputation of producing sleep. It was perhaps the first true anesthesia. Later in 1889 found to contain a mixture of pain deadening alkaloids

Ancient medical system of India, Ayurveda, is a holistic system that uses medicinal plants and herbs for healing of the human body. Herbs are of any plant type that lacks the woody tissue characteristic of shrubs or trees. The lecture gives a brief description of journey of medicinal plants in different belief systems and also discusses importance of medicinal plants in modern drug system



**Dr. Sunita Verma**

**Dr. Sunita Verma** Associate Professor at Department of Botany Christ Church College Kanpur U.P. Dr. Sunita Verma has more than 20 years of teaching and research experience. She has published 25 research papers in journals of national and international repute. She has contributed chapters in several books and delivered invited lectures in important forums of education and research .

## LECTURE 2

Dated: 21 July 2020

### Spawn production for the mushroom industry: The basic facility for value chain development of mushrooms

Dr. Jaya Singh

Research Institute of Biodiversity Conservation and Rural Biotechnology Centre (BCRBC), Jabalpur (M.P.)

Mushrooms are nutritious, medicinal and functional food. It contains low calories, high protein, dietary fiber, vitamins, and minerals. It is very promising in its agribusiness trend, but has a constraint low shelf life. Mushroom value chain is classified into input suppliers, producers, traders, processors and consumers. Spawn suppliers played the major role in the distribution of inputs, collection and marketing of the produce. The produce has to be modified to more durable products, thus adding value to mushroom. Women empowerment and lack of time for cooking also increased demand for convenient products of mushrooms. In India value addition of mushroom represents approximately 7% which is lower than some developing countries. Hence there is a need to improve the value chain system and increase value addition. Many novel value-added products can be prepared with mushrooms like soup powder, pickles, chips, paste, ketchup, noodles, pasta, biscuits, nuggets

**Dr. Jaya Singh** is Woman Scientist at ICAR DWR and Director of Research Institute of Biodiversity Conservation and Rural Biotechnology Centre (BCRBC), Jabalpur (M.P.) . She received her Ph.D. from Rani Durgawati University Jabalpur M.P. in the field of applied microbiology. She has worked as woman Scientist (Post Doctorate Fellow ) in UGC project. She has been associated with Rani Durgawati University Jabalpur M.P. at a faculty member. Dr, Jaya singh has published 49 research papers in journals of national and international repute. She has authored a book entitled "Ecofriendly management of prahenium". She has contributed 4 chapters in different books. Dr. Jaya Singh has won four national awards for her outstanding contribution in the area of applied science.



**Dr. Jaya Singh**

## LECTURE 3

DATED: 22 JULY 2020

### Vaccine development: from laboratory to mass immunization

Shankar Mondal<sup>1\*</sup> and Vinita Sharma<sup>2</sup>

Department of Zoology, LSM Government Postgraduate College, Pithoragarh

Edward Jenner [1798] is considered as father of modern immunology due to discovery of first vaccine against small pox virus. Since then, many vaccines have been developed against deadly human pathogenic viruses and bacteria, notably, rabbies, varicella, polio, Japanese encephalitis, meningococcus, pneumonia, yellow fever, plague, measles, tetanus, hepatitis, cervical cancer etc. to name a few. Vaccine development is a long process. Traditionally, it involves preclinical and clinical trials stages before mass immunization. However, current global scenario of Corona Virus Disease 2019 [Covid-19] has presented an unprecedented challenge of faster development of vaccines to save the millions of lives across the globe. The current review is aimed to understand the process of vaccine development through traditional approaches like attenuation, heat killed organism, toxoid, conjugates and modern approaches like DNA vaccines in laboratory and its mass immunization strategies.

**Dr. Shankar Mondal** is Assistant Professor of Zoology at L.S.M. P.G. College Pithoragarh, Uttarakhand. He received his Doctorate from All India Institute of Medical Sciences (AIIMS) where he studied antimicrobial and immunomodulatory effects of Tulsi. Dr. Mondal has 9 years of research and teaching experience. He has received many reputed awards and fellowship like National Talent Fellowship and U.K. India Science Bridge Fellowship from University of Nottingham. Work of Dr. Mondal has been published in renowned journals of international repute like International Society for Horticulture Sciences, Belgium, Royal Pharmaceutical Society of Great Britain, Wiley Blackwell publication U.K. His most famous research publication is on Reducing Cardiovascular Diseases Risk Factors with Double Blinded Randomized control Trials.



**Dr. Shankar Mondal**

## LECTURE 4

Dated: 23 July 2020

### Evaluation of Bioactive Potential of selected medicinal plants from Mizoram, Northeast India

Dr. Garima Singh

<sup>1</sup>Department of Botany, Pachhunga University College, Aizawl, Mizoram,

As we know India has a long history and strong base for Ayurveda, ancient traditional herbal medical system. Plants play important role in preventing and treating human diseases. They are natural reservoir of pharmacologically active biochemical constituent like alkaloids, phenols, polyphenols, saponins, steroids, flavonoids etc. Bioactive compounds impart biological activity to fight against various diseases. Thousands of phytoconstituents are already been isolated and developed into drugs to cure human illness and support good health. We selected around 14 medicinal plants from Mizoram based on local traditional practice to evaluate their anticancer, antimicrobial and antioxidant potential. We found that *Bidens pilosa* plant extract was most active against AGS (human gastric adenocarcinoma) cell lines with EC<sub>50</sub> 15.79 µg/ml of plant concentration whereas *Helichrysum luteoalbum* was effective against heLa (human cervical cancer) cell line with EC<sub>50</sub> value 15.79 µg/ml. *Bidens pilosa* and *helichrysum luteoalbum* also showed very good free radical scavenging potential with DPPH and ABTS free radical cation assay. *Helichrysum luteoalbum* showed highest antibacterial activity against *S. aureus* (14.5 mm) whereas; *B. pilosa* indicated maximum antibacterial activity against *P. aeruginosa* (16.5 mm) at the concentration of 20 mg/mL by using agar well diffusion method. By using UPLC-ESI-MS/MS we detected Gallic acid, Kaempferol, Catechin, Paclitaxel and Ferulic acid for the first time from methanolic extract of *B. pilosa* plant. Thus our study has authenticated the medicinal properties of medicinal plants used by the local peoples based on their traditional knowledge.

#### References

- Singh G, Passari AK, Singh P, Leo VV, Subbarayan S, Kumar B, Singh BP, lalhlenmawia H and Kumar NS (2017). Pharmacological potential of *Bidens pilosa* L. and determination of bioactive compounds using UHPLC-QqQLIT-MS/MS and GC/MS. BMC Complementary and Alternative Medicine, December 2017, 17:492
- Sharma HK, Chhangte L, Dolui AK (2001). Traditional medicinal plants in Mizoram, India. Fitoterapia. 72:146-161.
- Newman DJ, Cragg GM (2012). Natural products as sources of new drugs over the 30 years from 1981 to 2010. J Nat Prod. 2012 Mar 23;75(3):311-35. doi: 10.1021/np200906s. Epub 2012 Feb 8.
- Wegiera M, Smolarz HD, Jedruch M, Korczak M, Koproń K (2012). Cytotoxic effect of some medicinal plants from Asteraceae family on J-45.01 leukemic cell line--pilot study. Acta Pol Pharm. Mar-Apr;69(2):263-8.

Dr. Garima Singh has completed her doctorate in 2018 from Mizoram University, India in plant sciences. She has worked on the pharmaceutical potential of selected traditional medicinal plants collected from Northeast India. Dr. Singh has 5 years of research experience and has published several research papers in national and international journals having high impact factor like Scientific reports, BMC complementary and alternative medicine, Frontiers in plant sciences, etc. Dr. Singh has been awarded for her work by several agencies while presenting her research work in India and abroad.



Dr. Garima Singh



## LECTURE 5

Dated: 24 July 2020

### GENETIC CODE-GENETIC INFORMATION OF LIVING ORGANISM

Dr Shalini Saxena  
Assistant Professor  
Bareilly College Bareilly

The central dogma of molecular biology describes how genetic information flows from DNA to proteins. It is a two step process -In the first step DNA transcribes its genetic information to mRNA molecule. This process is called transcription and in the second step RNA translates its genetic information to proteins. This process is called translation. DNA and RNA contain genetic information in form of codons. There is a co-linearity between the specific sequence of nitrogenous bases and specific sequence of amino acids in a protein. Language of RNA is in the form of codons. There are total 64 codons in a living organism. Each codon consists of three nucleotide units. Each codon codes for a single amino acid. The codons are read in sequence having starting signal and ending with stop signal . Genetic code is triplet, comma less, non overlapping, degenerate, non ambiguous and universal.

Dr. Shalini Saxena is Assistant Professor in Department of Botany Bareilly College Bareilly . She received her Ph.D . From Rohilkhand University Bareilly. She has qualified Qualified CSIR NET, JRF, and SRF life sciences. Dr. Shalini Saxena has over 15 years of teaching and research experience. She has published 12 research papers in journals of national and international repute and has contributed two book chepters . She has presented papers in 22 national and international



Dr. Shalini Saxena

# PRESS COVERAGE



DANIK JAGRAN 25 JULY 2020 U.S.NAGAR PAGE 5



HINDUSTAN 25 JULY 2020 U. S. NAGAR

विद्या चाविद्या च यस्तद्वेदोभ्य सह ।  
अविद्यया मृत्युं तीर्त्वा ऽमृतमुश्नुते ॥

vidyam cavidyam ca yastadvedobhya saha ।  
avidyaya mṛtyuṃ tīrtvā'ṁṛtamuśnute ॥

One who knows both, the material science as well as the spiritual science, transgresses fear of death by the former, i.e. by proper bodily and mental efforts, and attains salvation by the latter, i.e. by purity of mind and soul.

Source: Isha Upanishad - 11



**Prof. Kamla Chanyal, Principal,  
G.P.G.C. Bazpur, Uttarakhand  
PATRON**



**Prof. A. K. Mishra  
Principal, S. S. College Shahjahanpur U.P.  
PATRON**



**Convener:  
Dr. Adarsh Pandey  
Head, Department of Botany  
S. S. College, Shahjahanpur U.P.  
(PRESIDENT SRBS)**



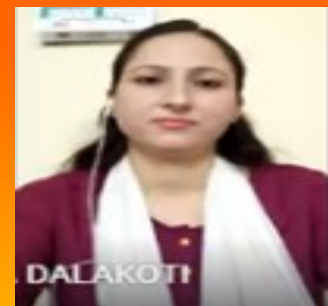
**Organizing Secretary:  
Dr Atul Upreti, Asstt. Prof.  
G.P.G.C. Bazpur,  
Uttarakhand**



**Co Organizing Secretary:  
Dr Jaya Kandpal, Asstt. Prof.  
G.P.G.C.  
Uttarakhand**



**Co Organizing Secretary:  
Dr. Ramesh Chandra  
Head, Department of Botany  
S. S. College Shahjahanpur U.P.**



**Rapporteur:  
Dr. Nirupama Dalakoti, Lecturer  
G.P.G.C. Bazpur, Uttarakhand**

## **INVITED LECTURE SERIES ON BIOLOGICAL SCIENCE, ILSBS:2020(2)**

**20-24 JULY 2020**

Link of Videos of Lectures Delivered

Videos are uploaded in official you tube channel of college website

Lecture	Link
Lecture 1	<a href="https://youtu.be/HTaf-FYEx_4">https://youtu.be/HTaf-FYEx_4</a>
Lecture 2	<a href="https://youtu.be/9M4RNEc7EXQ">https://youtu.be/9M4RNEc7EXQ</a>
Lecture 3	<a href="https://youtu.be/DTI8qWAVzyY">https://youtu.be/DTI8qWAVzyY</a>
Lecture 4	<a href="https://youtu.be/wTjqW9xu8Sg">https://youtu.be/wTjqW9xu8Sg</a>
Lecture 5	<a href="https://youtu.be/TzVjD_08vI4">https://youtu.be/TzVjD_08vI4</a>