

SLS Newsletter

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Report of
2nd
Annual
Session of
SLS
Society of Life Sciences



Khajuraho
World Heritage



Sindhore
Mini Mumbai



Pawa
Land of White Tiger

Focused on

Annual

Reports of Society of Life Sciences (Events & Activities)

Dr. Rashmi Singh
Editor-in-Chief

Dr. M.M. Prakash
Dr. Ashwani Kumar Dubey
Executive Editors of this Edition

Dr. Pragya Khanna
Managing Editor

The 2nd Annual Session

of the Society of Life Sciences & National Conference on

“Environmental Degradation and Global Health”

at Hotel Green House, Khajuraho on 1st and 2nd February, 2015 in association with BER Chapter, National Academy of Sciences, India and Society of Life Sciences. The event was sponsored by Madhya Pradesh Council of Science & Technology, Bhopal. The National Conference aims to highlight the translational nature of modern research, with emphasis on both basic and applied environmental science. Presentations were focused on Global health, Environment, Wildlife and Biodiversity Scenario and their possible solutions by Technological Approach.

was organized by the Environment & Social Welfare Society, Khajuraho (M.P.)

The following dignitaries were present in the Inaugural function of the National conference, viz., Padmashree Dr. V.P. Sharma, NASI-ICMR Chair, distinguished Professor (Public Health Res.) at Centre of Rural Development & Technology, Indian Institute of Technology, New Delhi. He emphasized that the Human and Global health should be the first priority for human beings; Dr. Sneh Bhargava, Former Director, AIIMS, New Delhi, said that there is an urgent need to adopt the preventive measures regarding global health; Prof. K.N. Singh Yadava, Vice-Chancellor, Rani Durgavati University, Jabalpur (M.P) stressed on Global Warming, Climate Sensitive Disease and Natural Balance of the Earth, while Dr. S.N. Pandey, Vice Chancellor, Indira Gandhi Technological and Medical Sciences University, Zero Arunachal Pradesh, gave his speech on "Global peace". The Keynote speaker Prof. U.C. Srivastava, Allahabad University, Allahabad, delivered a lecture on "Oxidative stress". Dr. Ashwani Kumar Dubey also emphasized the role of Environment and Social Welfare Society in Environmental Degradation on Global health and it's possible solution by technological Approach. Inaugural function was held with the gracious presence of the Dr. Niraj Kumar, Executive Secretary, National Academy of Sciences India, Allahabad and Special Guests on the occasion were Dr. Rajesh Saxena Principal Scientist, Madhya Pradesh Council of Science & Technology, Bhopal and Dr. Shivesh Pratap Singh, Secretary BER Chapter, Chitrakoot NASI.

Fellows/Members of the Society of Life Sciences & Environment and Social Welfare Society, Khajuraho, and other distinguished guest participants were from various parts of India including Madhya Pradesh, Uttar Pradesh, Odisha, Bihar, Maharashtra, Rajasthan, Uttarakhand, Haryana, Tripura, West Bengal, Karnataka and Gujarat. More than two hundred listeners were present in the conference.

The general topics on Global health, Environment, Wildlife and Biodiversity Scenario and Technological Approach were covered in the Technical sessions of this two days National Conference. ESW Society arranged a cultural event on 1st February followed by dinner.



On the day 2 of the conference, Prof. R.S. Chauhan, Former Director Fisheries, Uttarakhand was the Chief Guest, Ms. Neeta Rathore, Sub Divisional Magistrate, Rajnagar, Dr. Shivesh Pratap Singh, Secretary BER Chapter, Chitrakoot NASI and Prof. Surendra Singh Rani Durgavati University, Jabalpur were the Special Guests, whereas Dr. S.N. Pandey, Vice Chancellor, Indira Gandhi Technological and Medical Sciences University, Arunachal Pradesh presided over the Valedictory Ceremony. Vote of thanks was given by Dr. Shivesh Singh.

Best Paper oral/poster Presentation Awards in each technical session were awarded by dignitaries on the dais to Dr. Varsha Aglawe, Jabalpur (M.P.); Dr. Vani Mishra, Allahabad (U.P.); Dr. Bibhu S. Behera, (Odisha) and Dr. Tumul Singh, Varanasi (U.P.).



Recommendations of the Conference

We should not destroy our forests. Promote plantation and limit the use of pesticides.

We should control pollution because it is affecting our life.

Prevent animal cruelty for bio-diversity conservation.

Conservation of water is major issue for survival of life. Biodiversity must also be conserved.

Remote sensing will be helpful for Environment monitoring.

Electric Crematorium may be helpful for minimizing environmental pollution.

Climate sensitive diseases (Malnutrition, Diarrhoea, and Malaria) are at high risk, there is an urgent need to adopt the preventive methods by strengthening public health and sanitary infrastructure both in developed and developing nations.



Release of Abstract Book by Dignitaries



Dignitaries on the dais in Inaugural Function



Dignitaries on the dais in Valedictory Function

The Society of Life Sciences Medals and Awards - Khajuraho 2015



Dr. Niraj Kumar, Executive Secretary NASI, Allahabad (U.P.)



Dr. R.S. Chauhan, Professor GBPUAT, Pantnagar (Uttarakhand)



Dr. Satyendra Kumar, Head S.N.S. College, Hazipur (Bihar)



Dr. Govind Pandey, Principal Scientist NDVS University Jabalpur (M.P.)



Dr. Suman Kapoor, Associate Professor, Agra College Agra (U.P.)



Dr. Rashmi Singh, Professor, Govt. P.G. College Satna (M.P.)



SLS Fellowship Award to Dr. Ashwani Dubey, Khajuraho



SLS Fellowship Award to Dr. Rajendra B Suryawanshi, Nagaon, Distt. Dhule (M.S.)



SLS Fellowship Award to Dr. Soni Srivastava, Allahabad (U.P.)



Dr. A.K. Pandey, Lucknow
Felicited By
ESW Society, Khajuraho (M.P.)



SLS Fellowship Award to Dr. Tumul Singh, Varanasi (U.P.)



Prof. Baba Jadhav Senior Scientist Award to Dr. A. T. Kalse, Chalisgaon (M.S.)

SLS Medals and Awards - Khajuraho 2015

Name and email ID	Address	Award
Dr. Niraj Kumar e.mail: aes.nasi@gmail.com	Executive Secretary National Academy of Sciences India NASI Allahabad (U.P)	SLS Eminent Scientist Award In the field of Biogeogens and Human Health
Dr. R.S. Chauhan e.mail: rikhichauhan@rediffmail.com	Professor & Head G.B.Pant University of Agriculture & Technology, Pantnagar (Uttarakhand)	SLS Eminent Scientist Award In the field of Aquaculture
Dr. Satyendra Kumar e.mail: drsatyendra.hajipur@gmail.com	Head, Dept. of Zoology S.N.S College Hazipur (Bihar)	SLS Eminent Scientist Award In the field of Parasitology
Dr. Govind Pandey e.mail: drgovindpandey@rediffmail.com	Principal Scientist Nanaji Deshmukh Veterinary Science University Jabalpur (M.P)	SLS Eminent Scientist Award In the field of Veterinary Science & Animal Husbandry
Dr. Pragya Khanna e.mail: pragyajmu2002@yahoo.co.in	Associate Professor Dept. of Zoology Govt. College for Women Jammu (J&K)	SLS Eminent Scientist Award In the field of Cytogenetics
Dr. Suman Kapoor e.mail: sumankapoor4168@gmail.com	Asst. Professor Dept. of Zoology Agra College Agra (U.P)	SLS Eminent Scientist Award In the field of Entomology
Dr. Rashmi Singh e.mail: rashmi2003.rs@gmail.com	Professor and Head Dept. of Botany Govt. P.G. College, Satna (M.P.)	SLS Eminent Scientist Award In the field of Algal Diversity
Dr. A. T. Kalse e.mail: dr.ajit_kalse@yahoo.co.in	Professor and Head Nanasaheb Y.N.Chavan ASC College, Chalisgaon, Dist. Jalgaon (M.S)	Prof. Baba Jadhav Senior Scientist Award 2014
Dr. Tumul Singh e.mail: tumultapan@yahoo.co.in	Asst. Professor Zoology, U.P. College Varanasi (U.P.)	SLS Fellowship Award of Society of Life Sciences
Dr. Ashwani Dube e.mail: ashwanikhajuraho@gmail.com	President ESW Society Khajuraho (M.P.)	SLS Fellowship Award of Society of Life Sciences
Dr. Soni Srivastava e.mail: sonisrivastava.ssk@gmail.com	Asst. Professor Zoology, S.S.Khanna Girls College Allahabad (U.P.)	SLS Fellowship Award of Society of Life Sciences
Dr. Rajendra B Suryawanshi e.mail: rb10suryawanshi@gmail.com	Asst. Professor Zoology, GETs Arts, Comm. & Science College Nagaon Dist. Dhule (M.S.)	SLS Fellowship Award of Society of Life Sciences



Two days National Seminar on

Application of Biological Sciences for Human Welfare

was jointly organized by Govt. Holkar (Model, Autonomous) Science, College, Indore, Society of Life Sciences, Satna and BER Chapter-National Academy of Sciences India, Allahabad (NASI) and Sponsored by Madhya Pradesh Council of Science & Technology, Bhopal.



Inaugural Session : Chief Guest of Inaugural session was Dr. Harish Padh, Vice Chancellor, Sardar Patel University, Vidhya Vallabh Nagar, Gujarat. This session was chaired by Dr. R.K. Tugnawat, Principal, Govt. Holkar Science College, Indore. The Guests of Honor of Inaugural session were Dr. Niraj Kumar, Executive Secretary, National Academy of Science India, Allahabad (U.P.) and Dr. Shivesh Pratap Singh, Secretary BER-Chapter NASI and Society of Life Sciences Satna. Dr. Anis Siddiqui, Director of the Seminar presented the welcome speech. The Chief Guest Dr. Harish Padh delivered a lecture on "Science and Public Welfare" and Dr. Niraj Kumar delivered lecture on "Biogenesis, Nutrition and Blood Groups". In this session respected Guests released an abstract booklet, which included 160 abstracts from all over the India. Dr M. M Prakash, Convener of the seminar extended vote of thanks to the Chief Guest, guests, invitees, speakers, participants, media persons, host, staff and faculty members.



Day One Activity
(30th December, 2015)



Guest Lectures Session

Prof. B. Waykar, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (M.S.), delivered a lecture on "Beekeeping and Bee Products: Boon for Human welfare" Prof. G.K. Kulkarni, Aurangabad (M.S) from the same University delivered a lecture on "Marine Invertebrates Sources of Ethno-medicines for Human health", Dr. A.K. Jha, Hislop College of Nagpur, deliberated on "Effect of Mesofauna on Litter decomposition and Soil carbon Sequestration: A case study from Tectona grandis and Dendrocalamus strictus, Prof. D.K. Belsare of Nagpur spoke on "Modern Lifestyle: Cause of human diseases, Prof. Anand Kar, Dept. of Life Sciences, Devi Ahilya Vishwavidyalya Indore delivered a talk on "Thyroid problems may be controlled by herbs and their active compounds", Dr. Md. Meeraj, Director, Delhi Institute of Health and Management Research (A.I.H.M.S.) presented on "Enhancing our community health using integrated information system" and Dr. S.Ali, Head, Department of Biotechnology, Safia Science College, Bhopal, delivered lecture on "Recent Researches in Biomedical Sciences: Boom for Human Welfare", Prof. V.G. Wankhede, President of Archeological Society of India & Ex. Head, Amravati University, Amravati (M.S) delivered lecture on "Bio-steel for Human Welfare".

The First Technical Session

This session was Chaired by Dr. Shivesh Pratap Singh, Professor and Head, Department of Zoology, Govt. P.G. College, Satna and Co-chaired by Dr. Kishore Panwar, Professor and Head, Department of Seed Technology, Govt. Holkar Science College Indore. The recorder of this session was Dr. Vipul Keerti Sharma, Professor and Head, Department of Bioinformatics, Govt. Holkar Science College, Indore. In this session various scientists presented and discussed their work.

The Second Technical Session

It was organized under the Chairmanship of Prof. D.K. Belsare, renowned Scientist and Ex. Head, Department of Biosciences, Barkatullah University, Bhopal and Co-chaired by Dr. Md. Meeraj, Director, Delhi Institute of Health and Management Research, Delhi. The recorder of this session was Dr. Ram Prajapati, Govt. Holkar Science College, Indore. In this session participants presented and discussed their work.

The Third and Fourth Technical Sessions

Two parallel sessions were organized in the Yashwant hall and in Seminar hall of Department of Zoology. In the Yashwant hall Senior Scientist oral presentation competition was organized. This competition was judged by Dr. D.K. Belsare, Senior Scientist of Nagpur and Dr. G.P. Pandey, Dean, Life Sciences, DAVV, Indore. This session was conducted by Dr. S.Iqbal, Professor and Head, Department of Horticulture, Govt. Holkar Science College, Indore.

In the Seminar hall, Department of Zoology, Young Scientist Oral presentation competition of was organized. The competition of Young Scientists was judged by Dr. A.K. Jha, Hislop College, Nagpur, Dr. Bholeshwar Dubey, Govt. Mata Jija Bai P.G. Girls, College, Indore and Prof. R.S. Maheshwari, Govt. Holkar Science College, Indore. This session was conducted by Dr. A. Bafna, Department of Biochemistry, Govt. Holkar Science College Indore.



The Fifth Technical Session

It was a Poster Session and was inaugurated by Dr. R.K. Tugnawat, Principal, Govt. Holkar Science College, Indore and Dr. G.K. Kulkarni, Ex. Prof. & Head, Dr. Babasaheb Ambedkar, Marathwada University, Aurangabad. The panel of judges included Dr. L.K. Mudgal, Ex. Head, Govt. P.G. Girls College, Motitabla Indore, Dr. Usha Gour, D.A.V.V. Indore and Dr. Sanchita Shrivastava, Department of Botany, Govt. Holkar Science College, Indore.

The Sixth Technical Session

It was organized in Seminar hall, Department of Zoology. This session was conducted by Dr. Rekha Pundir and Dr. Asha Pal, Department of Zoology, Govt. Holkar Science College, Indore. This session was exclusively for paper presentations.



The Valedictory Session

This session was chaired by host college Principal Dr. R.K. Tugnawat, in Yashwant Hall. The Chief Guest of Valedictory function was Dr. N.K. Dhakad, Additional Director, Department of Higher Education, Indore Division, Indore. Dr. Anis Siddiqui, Director of Seminar announced the name of prize winners. Dr M. M. Prakash, Convener of the seminar presented a brief report in front of the audience. In this seminar total 215 faculty members and research scholars from different states of India took part as registered participants and well involved in discussion and deliberation of different session. This session was conducted by Dr. Anjula Poras and vote of thanks was given by Dr. Vibha Dube.



Chief Guest Dr. N.K. Dhakad Addressing Valedictory Session

Total three competitions were organized, (1) Senior Scientist Research Paper Presentation competition (2) Young Scientist Oral Paper Presentation competition and (3) Open Poster Presentation competition. Prize winners were felicitated with Gold (first), Silver (second) and Bronze (third) medals along with certificates. Prizes were given by Society of Life Sciences, Satna, who also offers free subscription of National Journal of Life Sciences & Life Science Bulletin for 2015-2016 to the awardees.



Award Ceremony

Senior Scientist Research Paper Presentation competition

(a) First prize winner was Elangovan Manivannan, School of Pharmacy, Devi Ahilya Vishwavidyalaya, Indore.

(b) Second prize winner was Dr. Prameela S., Govt. Holkar Science College, Indore, (M.P.)

(c) Third prize winner was Ms. Pooja Jain, Govt. Holkar Science College, Indore, and (M.P.).

Young Scientist Oral Paper Presentation competition:

(a) First prize winner was Dr. Pratibha Yadav, Department of School of Studies in Biotechnology, Jiwaji University, and Gwalior (M.P.).

(b) Second prize winner was Ms. Shilpa Khandelwal, Govt. Holkar Science College, Indore (M.P.), and

(c) Third prize winner was Ms. Swati Dubey Mishra, Department of Forensic Science, Govt. Holkar Science College, Indore(M.P.)

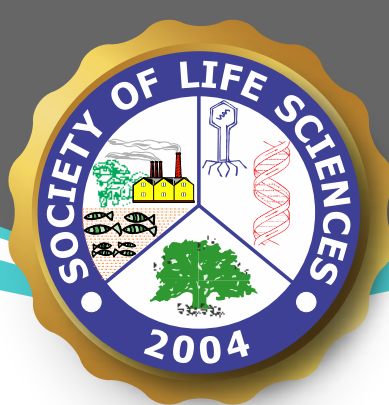
Poster Presentation competition (Open for All)

(a) First prizewinner was Dr. Hema Kochar, Department of Pharmaceutical Chemistry, and Govt. Holkar Science College Indore (M.P.).

(b) Second prize went to Ms. Kritika Sinha, Pacific University, Udaipur, and

(c) Third prize went to Ankit Kumar Jain and Dr. Santosh Gaherwal, Govt. Holkar Science College Indore (M.P.).





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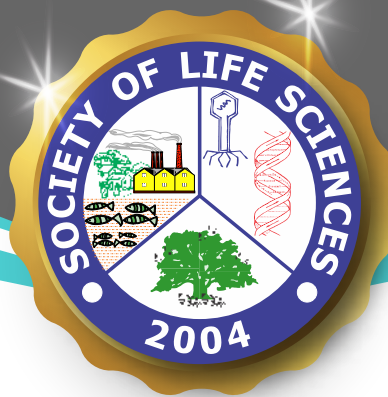
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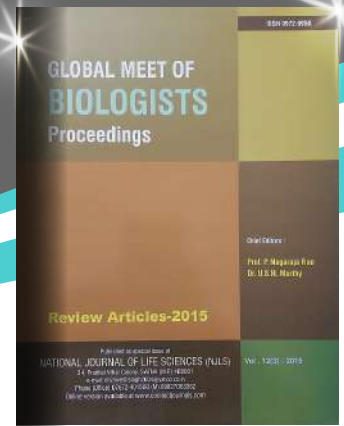
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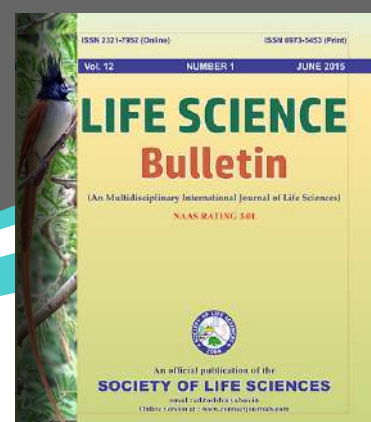
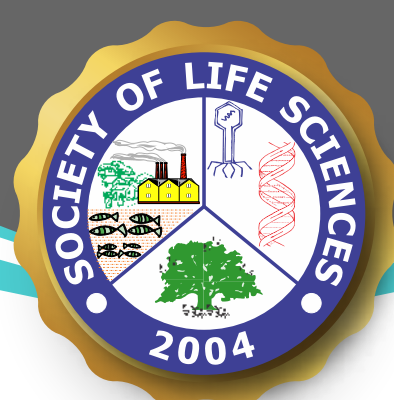
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National Seminar on “Biodiversity Conservation for Human Welfare”

Govt. Autonomous P.G. College,

Satna (M.P)

24-25 May, 2014

Govt. Autonomous P.G. College, Satna (M.P.) organized a two day National Seminar on “Biodiversity Conservation for Human Welfare” in association with BER-Chapter, National Academy of Sciences India (NASI) and Society of Life Sciences Satna, sponsored by M.P. Biodiversity Board, Bhopal (M.P.) from May 24-25, 2014. The National Seminar was inaugurated by Shri Ram Gopal Soni, Member Secretary, M.P. Biodiversity Board, Bhopal (M.P.) in Raman hall of Govt. Autonomous P.G. College, Satna (M.P.). The Special Guests of Inaugural Session were Dr. A.K. Pandey, Principal Scientist, ICAR-NBFG, Lucknow and Prof. Sandeep K. Malhotra (Allahabad University, Allahabad), whereas Dr. Harshvardhan (Principal, Govt. Autonomous P.G. College Satna) presided over the function. In this session dignitaries on the dais released an abstract booklet, which included 169 abstracts from all over the India. Inaugural session was conducted by Dr. Rajeev Tiwari and vote of thanks was given by Dr. Shivesh Pratap Singh, Convenor of National Seminar. The objective of the workshop was to spread awareness among the students of under graduate and post graduate levels, research scholars and faculty members about the conservation of our local biodiversity for human welfare.



Dr. Alka Vyas (School of Studies in Microbiology, Vikram University, Ujjain), Dr. Rajesh Mishra (Centre of Biotechnology, University of Allahabad, Allahabad), Dr. A.K. Pandey (National Bureau of Fish Genetic Resources, Lucknow), Dr. B.K. Sahu (J.N.R Mahavidyalaya, Port Blair, Andaman), Dr. Anees Siddiqui (Govt. Autonomous Holkar Science College, Indore), Dr. Vidyanath Jha (M.R.M College Darbhanga, Bihar), Dr. Prahlad Dube (Govt. College Kota, Rajasthan), Dr. Harish Vyas (Govt. Girls College, Ujjain), Dr. Atul Mishra (D.A.V College, Kanpur), Dr. Naveen Malaviya (Govt. P.G. College Narsinghpur), Dr. K.K. Dube (Govt. Science College, Jabalpur), Dr. Ritesh Kumar Khare (Bipin Bihari P.G. College, Jhansi), Prof. Sandeep Malhotra (University of Allahabad, Allahabad) and Dr. R.L.S Sikarwar (DRI, Arogyadham, Chitrakoot),

SLS Award Ceremony

Medals and Awards - Satna, May-2014



SLS Life Time Achievement Award to Dr. V.S. Singh, Bhopal (M.P.)



SLS Life Time Achievement Award to Dr. K.K. Dubey, Jabalpur (M.P.)



SLS Eminent Scientist Award to Dr. A.K. Pandey, Lucknow (U.P.)



SLS Eminent Scientist Award to Dr. Prahlad Dube, Kota (Raj.)



SLS Eminent Scientist Award to Dr. Anis Siddiqui, Indore (M.P.)



SLS Prof. G.B. Shinde Award 2013 to Dr. S.K. Malhotra, Allahabad (U.P.)

Glimpses of National Seminar



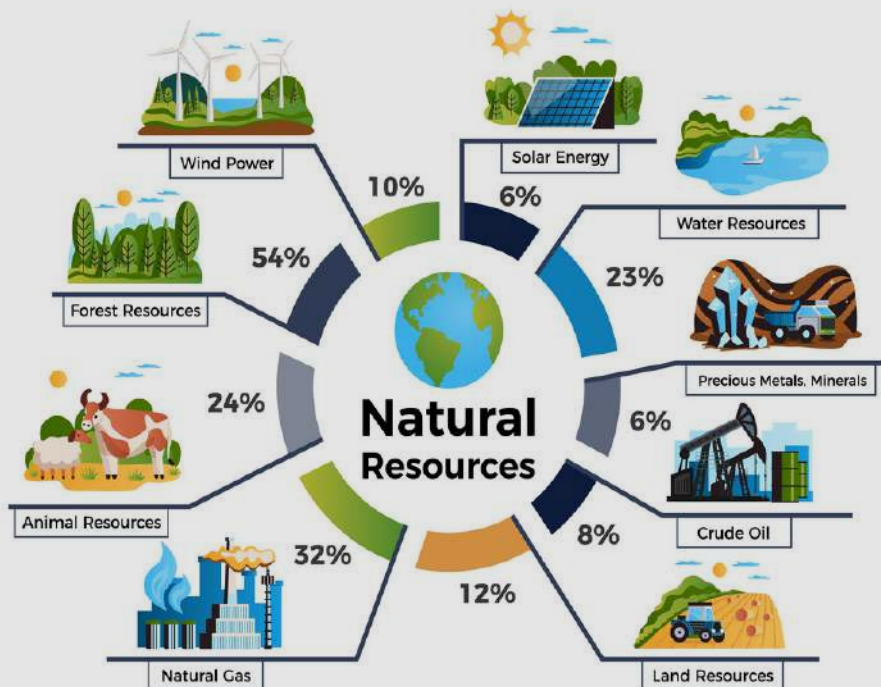
The Society of Life Sciences Medals and Awards - Satna, May-2014

Name and email ID	Address	Award
Dr. V.S. Singh	Retd. Additional Director M.P. Higher Education Bhopal (M.P.)	SLS Life Time Achievement Award
Dr. K.K. Dubey	Retd. Professor Govt. Science College Jabalpur (M.P.)	SLS Life Time Achievement Award
Dr. C. K. Pathak	Retd. Principal Govt. College Nagod (M.P.)	SLS Life Time Achievement Award
Prof. Sandeep K Malhotra	Professor, Dept. of Zoology Allahabad University Allahabad (U.P.)	SLS Prof. G.B. Shinde Award 2013 In the field of Parasitology
Dr. A. K. Panigrahi	Professor Dept. of Environmental Science, Berhampur University Berhampur (Odisha)	SLS Eminent Scientist Award In the field of Environmental Sciences
Dr. A. K. Pandey	Principal Scientist ICAR-NBFGR Lucknow (U.P)	SLS Eminent Scientist Award In the field of Fish Biology
Dr. Prahlad Dube	Associate Professor Dept. of Zoology Govt. College Kota (Rajasthan)	SLS Eminent Scientist Award In the field of Ecology and Biodiversity
Dr. Anisuddin Siddiqui	Professor Govt. Holkar Science College Indore (M.P.)	SLS Eminent Scientist Award In the field of Biotechnology
Mr. Sandeep Kushwaha	Zoological Survey of India, Regional Centre, Jabalpur (M.P.)	SLS Best Poster Presentation Award
Mr. Sushil Kumar Upadhyay	Dept. of Zoology Allahabad University Allahabad (U.P.)	SLS Best Poster Presentation Award



National Seminar on Natural Resource Management Genetic Resource Conservation and Human Welfare

8-9 November 2014
Govt. Girls P. G. College
Rewa (M.P.)



Department of Zoology, Govt. Girls P.G. College, Rewa (M.P.) organised National Seminar on "Natural resource management, genetic resource conservation and Human Welfare" in association with BER Chapter National Academy of Sciences India (NASI), Zoological Society of India (Bodh Gaya) and Society of Life Sciences (Satna) on 8-9 November 2014. National Seminar was sponsored by University Grant Commission, Regional office Bhopal & MPCST, Bhopal.

The National Seminar was inaugurated by Dr. A.K. Saxena, Elected General President of Indian Science Congress Association Kolkata; Dr. B.N. Pandey, President, Zoological Society of India, Bodh Gaya; Dr. G.K. Kulkarni, Ex. Prof. & Head Zoology. Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (M.S) and Additional Director, Higher Education, Rewa Division, Rewa Dr. V.K. Shrivastava were Special guests of Inaugural session.

Dr. Vijay Laxmi Saxena (Kanpur), Prof. M.S. Parihar (Vikram University, Ujjain M.P.), Dr. Alka Parashar (Nutan Girls P.G College, Bhopal), Dr. B.S. Chandel (DBS College, Kanpur), Prof. G.C. Pandey (Faizabad) and Dr. R.K. Singh (Gaya) delivered guest lectures on sub themes of seminar in four technical sessions.

The seminar received an overwhelming response with over 200 college students, who actively participated in various events/ competitions that took place. More than 140 research scholars and faculty members were registered during the two days of this National Seminar from different states of India. Dr. Vinodini Nigam, Convener, Dr. Suman Singh, Organizing Secretary, Dr. Shail Bala Mishra, Joint Organizing Secretary, Dr. Shashi Singh & Dr. Shalni Kuder, Joint Secretary successfully organized the National Seminar on "Natural Resource Management, Genetic Resources Conservation and Human Welfare".



The Society of Life Sciences, Satna (M.P.) awarded a citation to the young research scholars to encourage them for their presentation in Best Oral Presentation and Best Poster Presentation category.

Best Poster Presentation Award

First

Mr. Vikramjeet Singh
Govt. M.S. Golwalkar Collge, Rewa (M.P.)

Second

Mr. Rahul Rupesh Dwivedi & Mr. Shailesh Tiwari
Dept. of Biotechnology, Govt. M.S. Golwalkar Collge, Rewa (M.P.)

Best Oral Presentation Award

First - Ms. Pranjali Anand

Dept. of Biotechnology, A.P.S. University, Rewa (M.P.)

Second - Ms. Tabassum Zafar

Barakattullah University, Bhopal (M.P.)

Third - Mr. Deepak Mishra

Dept. of Biotechnology, A.K.S. University, Satna (M.P.)



Dr. Man Mohan Prakash
Postgraduate Department of Zoology
Govt. Holkar Science College,
Indore (M.P)

Diabetes Introduction

is a very Common disease scientifically known as Diabetes mellitus. Zoologist and Doctors considered this disease as a metabolic disorder. In this disease body either does not make enough insulin or cannot effectively use the insulin it makes. It affects the regulation of insulin hormone required for Glucose uptake in cells. Patient of this disease may complain high blood sugar level, medically known as **Hyperglycemia**.

Key facts about Diabetes

It is considered as a major cause of High blood pressure, Blindness, Kidney failure, Heart attacks, Stroke and Lower limb amputation.

A healthy diet, regular physical activity, normal body weight and avoiding tobacco use are ways to prevent or delay the onset of type 2 Diabetes.

Diabetic patients require regular medication and screening to avoid Complications.

According to WHO, the disease Diabetes is now enter in epidemic stage.

Symptoms

It includes excessive excretion of urine (poly-urea), thirst (poly-dipsia), Constant hunger, weight loss, vision changes and fatigue.

Types of diabetes

Following are the three types of Diabetes -

1) Type 1 diabetes: It is an autoimmune disease that destroys insulin-producing Beta-pancreatic cells.

2) Type 2 diabetes: It is an insulin resistance disease in which bodies ineffectively use insulin that effect on reducing blood sugar.

3) Type 3 diabetes: It is also known as gestational diabetes in which Blood glucose level is above normal value, but below those diagnostic of diabetes. It occurs normally during pregnancy. Women with Gestational diabetes is at an increased risk of complications during pregnancy and at delivery. It is diagnosed through prenatal screening, rather than through reported symptoms.

DIABETES FUTURE REMEDY



Type 1 diabetes -requires insulin injections several times during the day, depending upon meals frequency, quality and quantity.

Type 2 diabetes - Its treatment varies depending on age, the severity

Standard Treatments

of the condition, medical history, and even personal preferences. They can include physical activity and weight loss, Nutritional changes, and either oral or injected medications and/or Insulin. Patients also may need medication for other health problems, such as high blood pressure or high cholesterol, as part of their Diabetes care plan.

Type 3 Gestational diabetes - It often may be managed through healthy food choices and getting regular physical activity. If diet changes do not reduce glucose levels, medications such as insulin or the diabetes drug may be taken during pregnancy.

Future Remedy

Global Scientists are trying hard to find out a treatment that can cure the disease 'Diabetes'. Experiments on so many treatments are in progress. These future treatments can be grouped into following:

Technological (focusing on the delivery of insulin and glucagon via an artificial pancreas etc).

Biological (focusing on organ and cell transplantation).

Pharmacological (focusing on ant diabetic agents).

Future Treatment of Type 1 diabetes

(1) Cell therapy: In this therapy scientists are trying to replace the missing insulin producing cells. In this field scientists are working on following lines-

- Pancreas transplantation.
- Islet transplantation.
- Beta cells replacement.
- Stem cells (from embryonic or adult sources) implantation.
- Killing the immune cells that destroy the pancreas.

(2) Fully automated insulin therapy: Scientists are developing a fully Automated system i.e. 'Artificial pancreas', which measure glucose levels and inject the right amount of insulin into the bloodstream, just like a healthy pancreas.

(3) Computer based therapy: A group of scientists are developing a Microchips that can diagnose diabetes type 1 before the symptoms appear, while another group developing a Microrobotics which will be capable in traveling in the bloodstream where it measure glucose and deliver insulin.

(4) Use of Cheese producing bacteria: Some scientists are of opinion that Cheese producing bacteria are capable to deliver a drug which can stimulate regulator T cells to instruct the immune system not to attack Insulin-producing cells.

(5) Vaccine therapy: Scientists of French based Neovacs Company are developing a vaccine which will be capable to stimulate the immune system to neutralize the specific protein that is being produced in excess in Type I diabetes. This protein is known as interferon-alpha. It attack and destroy insulin producing cells.

(6) Immunotherapy: Object of this therapy is to interrupt the autoimmune process. Incyse Company developing a injectable molecule that modify the system to produce a new type of immune cell that target the cell which kill Beta cells. This therapy is in clinical trials stage.

Future ^{Type 2 Diabetes} Treatments

(1) Stimulating insulin production: For this many pills and injections are available in market. In this category new drugs are in progress which have good glycemic control.

Some in this class are-

- (i) DPR-4 inhibitor
- (ii) GLP-1-agonist (glucagon like peptide)
- (iii) SGLT-2 inhibitor

Actually scientists are searching a drug which control sugar level and reduce blood pressure

(2) Targeting the micro-biome: In recent research scientists observed that the human gut micro-biome has a linked with diabetes. In diabetic patients an unbalanced micro-biome composition has been found i.e. have a less diverse gut micro-biome as compared to healthy people. Researchers used to transfer the micro-biome of a healthy person to the gut of one with Diabetes. In such case they found short-term improvement of insulin resistance in obese patients with type 2 diabetes. Some companies are developing a drug which increasing the microbiome diversity.

(3) The needle-free revolution: In this category following are the development-

- (i) GlucoTrack- measure glucose using electromagnetic.
- (ii) GlucoSense- using laser light to measure sugar levels.
- (iii) MediWise- making use of radio waves.
- (iv) GlucoWise- sensor prototype patches. At the University of Bath, researchers are developing a grapheme patch that could provide greater accuracy in measuring the blood sugar levels.
- (v) Dutch firm NovioSense is developing a tiny device that is placed under the eyelid and would be more affordable than current continuous glucose monitors.

(4) Bariatric surgery: Some time it is called weight loss surgery or metabolic surgery may be significant treatment in type II diabetes.

(5) Targeted ultrasound treatment: In mouse scientist proved that targeted Ultrasound could be an effective, non-invasive, drug free way to boost Insulin level.

(6) New class of drugs: Scientist are busy in developing of new class of drug-

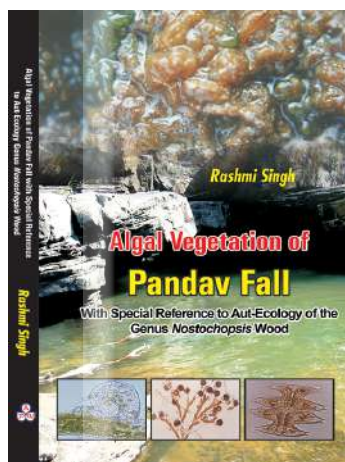
a) DPP-4 inhibitor- This drug is capable in boosting insulin level when blood sugar is too high and directs the liver to cut back on making sugar.

b) SGLT-2 inhibitor- It increases how much glucose leaves the body through Urination and block s the kidneys from reabsorbing glucose.

Conclusion: Worldwide research on cure and treatment of diabetes is in progress. Scientists are working hard to build a future where either Diabetes become a curable disease or can do no harm to human body. Hope in coming decade people will have some better treatment for disease Diabetes.

The Academy of Environmental Biology awarded **Devki Dutta Gold Medal 2015 to Prof. Shivesh Pratap Singh**, Govt. Autonomous P.G. College, Satna (M.P.) for his contributions in the field of Environmental Science and Resource Management by the Chief Guest during Inaugural Session of 35th Annual Session of The Academy of Environmental Biology & International Conference on Climate Change and Sustainability held at Thakur College of Science and Commerce, Kandivli, Mumbai on 21th December 2015. Chief Guest of Inaugural Session was Dr. Madan Koirala, Professor Central Department of Environment Science, Tribhuvan University Nepal & Expert Member of the Climate Change Council of Government of Nepal 2009-2017.





The book entitled “Algal vegetation of Pandav fall with special references to the ecology of genus *Nostochopsis Wood*” (ISBN 978-93-5234-009-5) edited by Dr. Rashmi Singh, published by Ayushman Publication House, New Delhi, released during Inaugural function of National Seminar on "Current Trends in Medicinal plants Research and Herbal Technology" jointly organised by BER-Chapter NASI & Deendayal Research Institute at Chitrakoot on 28-29 November 2015. Prof. Promod Verma, Director General, Madhya Pradesh Science & Technology, Bhopal was Chief Guest and Dr. Rajesh Saxena, Principal Scientist, MPCST-Bhopal (M.P.) was Special Guest of Seminar and Shri Abhay Mahajan, Secretary DRI presided over the Inaugural function. The book is well documented and comprehensive review of significant information on physico-chemical studies in relation to algal vegetation, and the factors governing their growth, distribution and periodicity at Pandav fall.

Inaugural Moment of
“Algal vegetation of Pandav fall
with special references to
the ecology of genus *Nostochopsis Wood*”



Madhya Pradesh is topographically varied, geologically significant and climatically diversified, therefore, needs special attention for understanding the hot spots of biodiversity, spread all over the state. However, more difficult task is to unfold the hidden biome, invisible but intrinsic to other spheres of life; and those are the microorganisms. They are everywhere in all types of niche and diverse type of environmental conditions. But the question is how to explore, especially in the aquatic habitats, which serve as the best medium to give a proper environment to such type of species. It was therefore considered to focus our research endeavour towards digging out a few specific algal flora of Pandav fall, Panna, nearer to our work centre. Algae found in waterfalls include representatives of Cyanophyceae, Chlorophyceae, Bacillariophyceae, Euglenophyceae and Rhodophyceae. It is hoped that the present investigation on algal flora of Pandav fall will add further to the existing knowledge of evolutionary taxonomy of different algal forms, especially the genus *Nostochopsis Wood*.

The present book “Algal vegetation of Pandav fall with special references to the ecology of genus *Nostochopsis Wood*” is well documented and comprehensive review of significant information on physico-chemical studies in relation to algal vegetation, and the factors governing their growth, distribution and periodicity at Pandav fall.

The subject matter of the book has been presented in two parts. The first part deals with algal vegetation of Pandav fall, including the taxonomic considerations and correlation with environmental variables, while the second part deals with growth-behaviour of *Nostochopsis Wood*. Section A of this second part includes general and cultural studies of the genus; and Section B includes its response to different types of nitrogen-compounds and pesticides.

Dr. Rashmi Singh
Editor-in-Chief
SLS Newsletter



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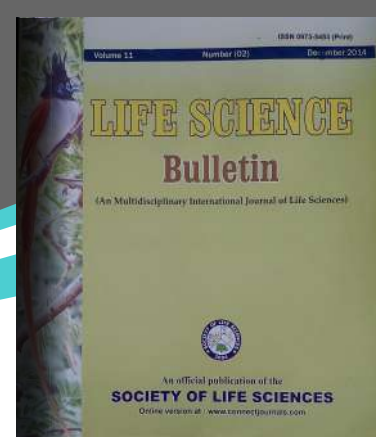
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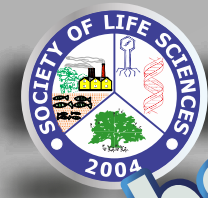
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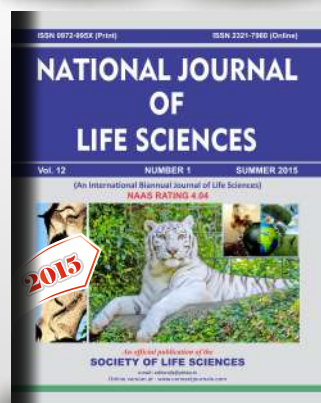
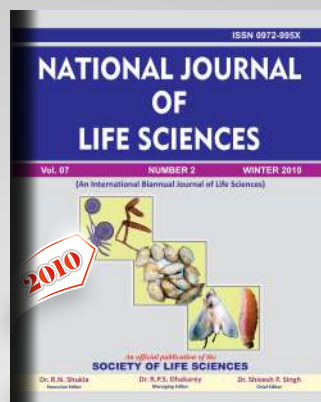
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