



HIGHLIGHTS

- ❑ ILS new website and newsletter issue 2 launch
- ❑ ILS Scientific Advisory Committee meeting 2017
- ❑ Dr. S. Ramachandran Memorial Lecture
- ❑ 71st Independence Day celebration
- ❑ Vigilance Awareness Week



Dr. Damodar Rout, Hon'ble Minister for Agriculture and Farmer's Empowerment, Govt. of Odisha addressing the audience during the ILS website & newsletter launch event.



ILS New Website Launch

Institute of Life Sciences was pleased to declare the official launch of its new look website on July 31, 2017, amongst eminent dignitaries and esteemed guests at the Mayfair Lagoon, Bhubaneswar. The website intends towards maintaining a convenient site for visitors to cite and follow discrete events conducted by ILS. The website was launched in the presence of Dr. Damodar Rout, Hon'ble Minister for Agriculture and Farmer's Empowerment, Fisheries & Animal Resources Development, Public Enterprises, Govt. of Odisha and Shri Badrinarayan Patra, Hon'ble Minister for School and Mass Education, Science and Technology, Govt. of Odisha. Amongst the various features of the website there will be regular update of contents and information for the users. ILS aims at providing a complete updated view of current and upcoming events in the new website.

ILS Newsletter Release

The second edition of Institute of Life Sciences' newsletter was released on July 31, 2017 at Mayfair Lagoon Hotel, Bhubaneswar. The grand event was organized in the presence of Dr. Damodar Rout, Hon'ble Minister for Agriculture and Farmer's Empowerment, Fisheries & Animal Resources Development, Public Enterprises, Govt. of Odisha and Shri Badrinarayan Patra, Hon'ble Minister for School and Mass Education, Science and Technology, Govt. of Odisha. Enthusiastic students, editors of the newsletter, and esteemed scientists of the institute willingly participated making the awareness raising event a grand success.



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Dr. G. H. Syed's Group



Viruses are obligate parasites with limited genome and are completely reliant on the host for their proliferation. Therefore viruses have evolved strategies to use the host machinery and evade the cellular defense mechanisms. Our lab focuses on characterizing this complex virus host interactions and identify potential therapeutic targets to curb viral infections. Mitochondria serve as the hub for many cellular events and play an integral role in cellular homeostasis, metabolism, inflammation and innate immunity. Our major focus is on elucidating the viral strategies that exploit/modulate the mitochondrial signaling and functions and thereby directly or indirectly affect the innate immune and inflammatory signaling pathways. Currently we work with

the Flavivirus such as Dengue, Japanese Encephalitis, Hepatitis C and Alphavirus such as Chikungunya. We also focus on the molecular biology of these viruses and attempt to characterize processes involved in viral genome replication, viral particle assembly and egress.

Dr. Santosh Chauhan's Group



Autophagy is a fundamental catabolic process involved in cellular garbage degradation and recycling, thus maintaining cellular metabolism and homeostasis. It is essential for cellular differentiation and embryonic development in mammals. In addition to these basic functions, autophagy plays several specialized roles in eukaryotic cells including cell-autonomous defence against intracellular pathogens and control of chronic inflammation. Not surprising, defects in autophagy have been linked to several diseases including cancer, neurodegeneration and cardiac pathologies. The key focus of Dr. Chauhan's research group are listed as following.

Major research interests of this group are:

To understand the molecular mechanisms of autophagy regulation.

To understand the mechanisms by which autophagy accomplishes anti-microbial and anti-inflammatory functions.

To understand the mechanisms by which autophagy degrades disease-related misfolded proteins or protein aggregates.

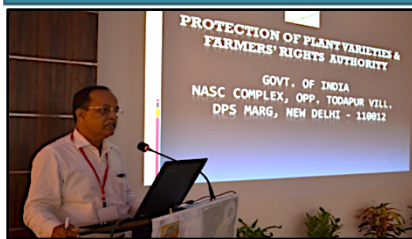
Dr. Amol Suryawanshi's Group



The knowledge about variation in cell function due to qualitative and quantitative changes in proteins present in cell with respect to various biological/disease conditions is very crucial to understand biology and disease pathogenesis to improve it's diagnosis, prognosis, therapies and prevention. Current and emerging advanced mass spectrometry based proteomic technologies have created an opportunity to understand cellular functions and characterize its proteome and variation in it. Our aim is not only to identify and characterise proteins involved in disease pathogenesis using advanced high throughput approaches

such as gel based, non-gel based, labelled- and unlabelled free proteomics, but also to identify post-translational modification (PTM) of proteins, important in biological processes such as cellular recognition, signalling, differentiation, and growth. At present, our laboratory focusses on various viral diseases such as Chikungunya, Dengue, Rabies and also in Nasopharyngeal Carcinoma, and interested to include more such diseases, specially of 'Indian Origin'. Apart from research activities, our lab regularly organise symposium and hands on workshop in various advanced areas of proteomics for students and young faculties.

National Consultation on Bio resources for Sustainable Development



Focusing on the vulnerability of nature and laying emphasis on issues related to conservation of the vast however depleting bio-resource of Odisha the Institute of Life Sciences, Bhubaneswar along with Institute of Bio-resources and Sustainable Development, Imphal organized a two day national consultation on natural bio-resources from July 31 – August 2, 2017. The two day national consultation was held where research and scientific community was urged to pay attention towards agricultural improvement and use of biological resources efficiently. The consultation comprised of talks and discussions on some extremely sensitive biological topics comprising crops, forests, livestock, and fisheries. Dr. Damodar Rout Hon'ble Minister for Agriculture and Farmer's Empowerment, Fisheries & Animal Resources Development, Public Enterprises, Govt. of Odisha stressed on implementation of technological applications for improving agricultural yield natural resource conservation. Importance of biodiversity in healthcare system was addressed by Shri Badrinarayan Patra, Hon'ble Minister for School and Mass Education, Science and Technology, Govt. of Odisha.



Principal Secretary, Agriculture Mr. Manoj Ahuja and Secretary, Science and Technology, V.V.Yadav spoke about the efforts made by the state govt. in this area. Implementing immediate actions towards addressing challenges towards agricultural yield, water shortage, and uncertain natural calamities like rainfall was urged to the researchers and scientific community. Director, Institute of Life Sciences, Dr. Ajay Parida also addressed the program highlighting on significant topics like 'Enhancing and conserving bio-resources in order to uplift the conditions of livelihood in rural and tribal communities'. His talk revolved around two extremely crucial concerns, "Prosperity of Nature" and "Poverty of People" and intervening science and technology for dealing with them. Director, IBSD, Dr. Dinabandu Sahoo pointed out the remarkable similarities in biodiversity richness in Odisha and North East regions. A collaboration between ILS and IBSD would create a positive hope towards conserving the rich bio-resources of both parts. Along with the prominent members there were 60 experts from various research institutions and universities who participated.



Dr. J. Khistwaria, Director, ICAR-CIWA planting a tree on ILS Campus II, Niladri Vihar on the occasion of National Consultation on Bio resources seminar.

Expert Consultation on Improving Productivity of Pulses



Institute of Life Sciences, Bhubaneswar and Department of Biotechnology, Govt. of India organized an expert discussion on improving productivity of pulse crops of specific importance to eastern India and rain fed agriculture system. Pulses play an important role in maintaining soil fertility, contribute to protein nutrition and are an important component of dietary habits of the people. There is a growing concern of shortfall in production of pulses in India as we import large quantities from other countries and the unusual high price. More than 30 experts from all over the country participated in the meeting representing agriculture universities and advanced research institutions of ICAR and DBT. Dr. S. R. Rao, Senior Advisor, Dept. of Biotechnology; Dr. Kuldeep Singh, Director, ICAR-NBPGR; Dr. H. P. Singh, Director, ICAR-IIPR; Dr. K. V. Parbhu, Jt. Director, IARI; Dr. Sabyata Bhatia, NIPGR were among the key participants of this consultation. Dr. Ajay Parida, Director, Institute of Life Sciences mentioned that the pulse crops particularly black gram, green gram, horse gram, rice bean which were widely cultivated earlier is no longer find a place in cropping systems. In the Eastern regions of India and in non-irrigated lands these crops could be profitably cultivated if we could develop drought, salinity and high-temperature resistant varieties with superior productivity and quality traits. The delegates called for a joint and coordinated mission mode program for working in the area of genetic resources, genomics and breeding for improved quality characters.



ILS at India International Science Festival (IISF) 2017



The 3rd IISF was held from 13-16 October 2017, at Anna University, Chennai, Tamil Nadu. To celebrate science, people from all over the world joined in to display their work in this field. IISF had several themes like 'Deep Ocean Research', 'Parliament to Panchayat', and many other conclaves, summits and meetings, under which different universities and institutes participated. ILS being one of them, displayed its on going research and activities with few posters from Cancer, infectious disease, plant and microbial biology, as well as research facilities in ILS.



Dr. Devdas, Dr. Nagaraj, Dr. Soma, with women scientists and some of the PhD scholars represented ILS, there. Scholars helped undergraduates and graduates by explaining them about their activities in ILS and catering to their curious minds. Some very interesting stalls included one from 'Deep Ocean Research' theme, presented by National Institute of Oceanography (NIO), Goa and also by Anna university on the aviation related science. CIMAP, Lucknow and NIUM, Bangalore displayed their self made Unani products on sale. The overall experience to meet and see the different dimensions of science on the move, inspires us to add more to it.

GB and SAC Meeting 2017

The Governing Body and the Finance Committee meeting was organised at the ILS, Bhubaneswar on 4th August 2017. The meeting was chaired by Dr. K. VijayRaghavan, Secretary, DBT and Chairman of the Governing Body, ILS.

A two day Scientific Advisory Committee (SAC) meeting was held at the science outreach center at ILS campus II on August 18 and 19, 2017. Introductory and opening remarks set the high standard of the event followed by presentations by the esteemed scientists of ILS. The presentations were classified into Cancer biology, Genetic and autoimmune diseases, Plant and microbial biotechnology, and Infectious diseases depending on their area of research. Poster sessions were held for students which was reviewed by the SAC jury members. Students were awarded and acknowledged for their work. Also the suggestions for the SAC jury were well taken by the students and scientists for adding more value to their respective research findings. ILS director Dr. Parida made an excellent attempt in bringing the new enthusiastic talents of ILS and the renowned and experienced minds together to achieve the most of this event.



71st Independence Day Celebration



71st Independence Diwas celebrated in great enthusiasm at ILS BBSR campus. Director Dr. Ajay Parida hoisted the National Flag and addressed the staff

and students. Tree plantation was organized as a part of greening the campus in a well planned manner. Dr. Parida encouraged the scholars to plant saplings across the main campus after the flag hoisted was over.

GenomeIndia Initiative

The *GenomeIndia* initiative was officially launched at the Indian Institute of Science in June 2017. The major objective of this initiative is to systematically document the genetic information from whole genome sequencing for thousands of Indian individuals belonging to different geographical location and diverse population groups across the country. This will serve as the reference genome for future genetic studies on Indian population. This will help us to identify complex genetic disease burden of populations, which will have significant implications in improving the healthcare landscape. Institute of Life Sciences is happy to join this nationwide initiative as partner and will focus on studies with diverse population of the state of Odisha.

Hostel Day Celebration at ILS



The scholars of ILS got another opportunity to shed off their bacteria and U.V treated skin to take a break from the continuous exposure to computer radiations, this day. Hostel Day was sure to increase our dopamine levels, since it was combined with the welcoming of Freshmans' of December 2016, as well. The theme of this year's hostel cum Fresher's day was 'RE2017: Research Reuse Recycle', since for the decorations the daily use and throw objects, like plastic bottles, hand gloves used in labs, tissue paper rolls, magazine and newspapers, were used, that not only made the whole room look more beautiful, but also brought out the creative side of us.

The evening gathered many crowds who danced and sang together, re-living their childhood by playing the fun packed games, adding to which the beautiful classical Indian and western dances, group songs, and mimicry made the show, a hit.

The day ended with a delicious feast and by dancing their stress off on the DJ floor while mocktails and camera clicks accompanied from the sides. The day was wrapped up with tired but happy faces bidding farewell and goodnight.

Diwali Celebration by ILS Students

The festival of lights, Deepawali, was celebrated with full enthusiasm even though it was pouring since morning. Where color popping rangolis refreshed our eye cells, the drapes of mini lights and symmetrically placed diyas all over the hostel lightened up our smiles. Decked up and nicely made, we all were festive ready, distributing and enjoying 'motichur ke laddu' and 'samosas' to everyone. Despite of being a rainy day students from first year to final year showed equal enthusiasm on this auspicious occasion of Diwali. A special Diwali dinner organized at ILS mess, made us happily retire for that day.



Hindi Diwas Celebration at ILS

On 14th of September, 1949, Hindi was given the status of being the 'Official language' of India. The need to promote the use of Hindi was seen by the government and so the Indian PM Jawaharlal Nehru decided to celebrate 14th September as the Hindi Diwas.

The year 2017 saw yet another celebration of Hindi diwas at ILS, titled 'Hindi Pakhwada Samaroh' from 1-15th of September. One day open on-stage and off-stage competitions attracted many from staffs to scholars. Hosted by Dr. Anshuman Dixit, the participants in this event enjoyed essay writing, debate and extempore, to the most. The topic of debate was "Bharat ki maujuda videsh neeti safal hai" "Is the foreign policy of India, successful?", that had many for the notion while few of them, against it, keeping forward some interesting points. The topic for essay writing was "Mera pehla din ILS mein" "My first day in ILS", that gave everyone to live their school days again. The 'One minute talk' event was very entertaining not only of the topic, but more of the speakers who made it very interesting. Finally the winners were awarded.





Second Dr. S. Ramachandran Memorial Lecture

ILS was the proud host of the 2nd Dr. S Ramachandran Memorial lecture, held on 18th September 2017. On this occasion a talk was delivered by renowned gastroenterologist and pro-chancellor, KIIT university Padmashri Dr. Subrat Acharya on liver cancer scenario in India. Dr. Acharya mentioned that liver cancer is a fast spreading yet less studied field in this country. He urged the scientific community to work alongside clinicians for developing fast diagnostic and treatment strategies. He also talked about bridging the gap between the scientific community and medical practitioners to create a better healthcare ecology in India.

Guest Seminars

- ❖ *"Imaging Analysis of Tissue-Derived Immune Cells"*, by **Dr. Kartika Padhan**, Vaccine Research Centre, NIAID, NIH, USA, on 23rd August, 2017.
- ❖ *"A force sensitive biochemical pathway protects epithelial integrity and barrier function under mechanical stress"*, by **Bipul R. Acharya, PhD**, Institute for Molecular Bioscience, University of Queensland, Brisbane, Australia, on 22nd September, 2017.
- ❖ *"Using animal models to study pregnancy disorders: challenges and opportunities"*, by **Nihar Ranjan Nayak, DVM, PhD, Associate Professor Co-Director**, Wayne State University, School of Medicine C.S, on 25th September, 2017.
- ❖ *"Inspiration from nature: Far-reaching impact of toxin research"*, by **Prof. R. Manjunatha Kini**, Department of Biological Sciences, Faculty of Science, National University of Singapore, Singapore, on 4th October, 2017.
- ❖ *"Interplay between Metabolism and inflammation : Perspective on cancer dynamics"*, by **ELLORA SEN, PhD, Scientist V & Additional Professor**, National Brain Research Centre, Manesar, Haryana, on 23rd October, 2017.
- ❖ *"Cycloaddition based Strategies towards the total syntheses of some Bioactive Natural Products"* by **Tabrez Khan, Ph.D**, Organic Synthesis Laboratory, School of Basic Sciences, IIT Bhubaneswar, on 8th November, 2017.
- ❖ *"Role of Envelope Protein Glycosylation in Zika Virus Pathogenesis"*, by **Asit K. Pattanaik, Ph.D, Professor**, School of Veterinary Medicine and Biomedical Sciences and the Nebraska Center for Virology, on 10th November, 2017.
- ❖ *"In search of new cancer drugs and relevant model systems"*, by **Sougat Misra, PhD**, Department of Laboratory Medicine, Karolinska Institutet, Division of Pathology, Stockholm, Sweden, on 13th November, 2017.

PhD Awards

- ❖ **Dr. A.Thiruvaimozi**; Immune response Modulation by T Cell Apoptosis (Supervisor – Dr. S. Devdas)
- ❖ **Dr. Sudhanshu Sekhar**; Molecular Characterization of Differential grain filling in Apical and Basal Spikelets of Rice Panicle (Supervisor - Dr. B.P.Shaw).
- ❖ **Dr. Abhishek Kumar** ; Functional Characterization of non-structural protein-2 (nsP2) of Chikungunya Virus with respect to infection (Supervisor - Dr. S. Chattopadhyay).

ISPAT General Hospital Visit



As a part of ILS social welfare initiative a team of scientists headed by Dr. Ajay Parida, Director ILS visited Sundargarh district of Odisha on 8th September, 2017. The team visited the ISPAT General Hospital, Rourkela and interacted with localities. According to Dr. Parida ILS has plans to take up some activities in tribal dominated areas where modern healthcare is not accessible to



The mass. Also the institute is looking for partnership with other organizations having the same goal.

Vigilance Awareness Week

With a theme of "My Vision-Corruption Free India" ("मेरा लक्ष्य - भ्रष्टाचारमुक्त भारत") as suggested by Central Vigilance Commission(CVC) ILS observed the Vigilance Awareness Week from 30th October, to 4th November 2017. All scientists and employees took pledge to keep the institution corruption free at any cost.

Awards won by ILS members

- ❖ **Dr. Ajay Parida, Director, ILS** has been awarded **Prof. M. G. K. Menon Lecture by National Academy of Sciences India**
- ❖ **Dr. SK Das, ILS, Bhubaneswar** invited as a faculty for "South Asia Thematic School in Aquatic Microbial Ecology" from 6-19th Nov, 2017 organised by CIFIPRA & DBT



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