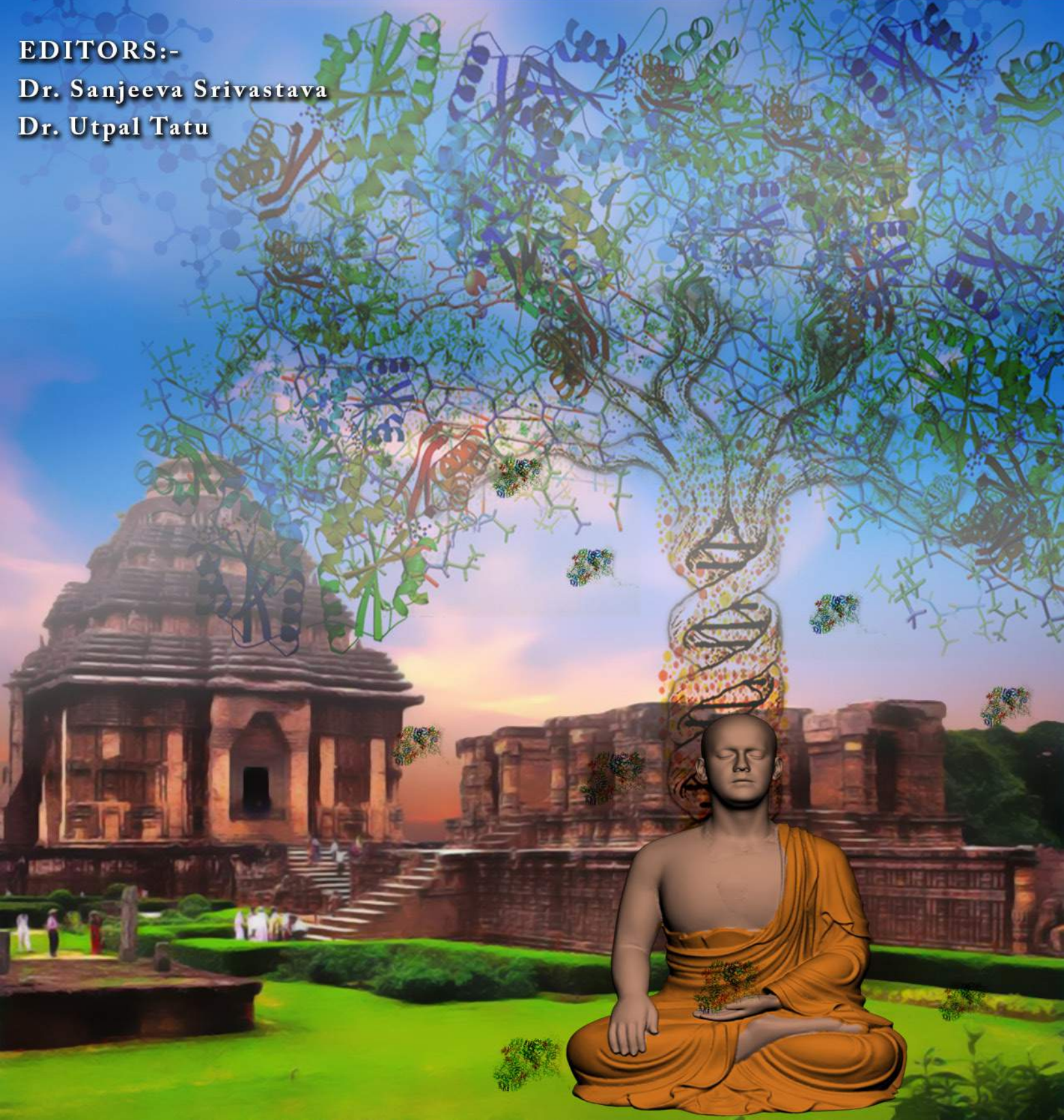


PROTEOMICS SOCIETY INDIA (PSI)

EDITORS:-

Dr. Sanjeeva Srivastava

Dr. Utpal Tatu



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GREETINGS FROM THE PRESIDENT PSI

Dear friends,



Welcome to this new edition of the PSI news letter being release in the Proteomics Day. This is not only the first news letter of 2018 but also the first NL in the tenth year since the inception of PSI. Yes, PSI is going to complete 10 years of successful functioning in March 2018!

One of the important achivements of PSI that coincides with a decade of our operation is that our society journal, namely JPP, is now being adopted by Springer Press. The first issue of the Springer supported issue will come out later this year. This is a momentous occassion for all of us and I want to congratulate and whole heartedly thank Prof. Suman Kundu for single mindedly pursuing this goal in a selfless manner over the years.

There are several important events and developments lined up during this impportant year. In addition to the usual wokshops taking place at various insitutions where PSI executinve committee members are situated we will also have the 10th annual meeting ofthe PSI organmized by Dr. Shrikant Rapole in December 2018 at NCCS Pune.

Another important update I have from the EC of PSI is that at the last EC meeting of the PSI held in Bhubaneshwar, we have extensively discussed the possibility of proviing a PSI facilitated proteomic technology support to the scientific community in India. We are working to develop a portal that will soon allow you to access the best technology from the country to support your science in a convenient and cost effective manner. Please look out for further updates on this topic in the subsequent Nls in the next few months.

Finally I want to thank all our EC members for making PSI a vibrant and academically exciting platform to popularize and disseminate concepts in Proteomics and Metabolomics technologies at national level.

I hope you will enjoy reading this NL.

With warm regards,
Utpal Tatu

PSI EXECUTIVE COMMITTEE

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Dr. Debasis Dash



9th Annual Meeting of Proteomics Society, India (PSI)

International Conference on Proteomics in Health and Disease (PSI-2017) held at Institute of Life Sciences (ILS), Bhubaneswar from November 30-December 02, 2017



International Conference on Proteomics in Health and Disease was held along with 9th Annual Meeting of Proteomics Society, India (PSI) at Institute of Life Sciences (ILS), Bhubaneswar from November 30-December 02, 2017. The PSI-2017 congress was a gathering of national and international eminent scientists working in the field of proteomics for Health and Diseases covering human, animal and plant biology. Around 250 delegates including eminent scientists / faculties from different universities, medical colleges and research institutes, post-doctoral researchers and PhD scholars had participated in this conference. The PSI-2017 conference was inaugurated by Guest of Honour, Shri Pratap Jena, Hon'ble Minister of Health & Family Welfare and Law, Government of Odisha in presence of chief guest Dr. M. Radhakrishnan Pillai, Director, RGCB, Thiruvantapuram, Dr. Utpal Tatu, President-PSI and Dr. Ajay Parida, Director, ILS, Bhubaneswar. Inaugural ceremony concluded with vote of thanks by Dr. Amol Suryawanshi, Convenor, PSI-2017. The theme of conference was "Proteomics in Health and Disease" with mainly focused in the area of Global and Targeted proteomics, Interaction proteomics & protein networks, Disease proteomics & Biomarker Discovery, Post-translational modifications (PTMs), Metabolomics and Integration of Omics, Proteogenomics and Big Data Analysis, Human Proteome Project-CHPP/B-DHPP etc. A well thought out scientific program of the conference was included with plenary lectures, keynote lectures, Invited lectures, Panel discussion, Poster sessions and other opportunities to interact. During proceeding of the conference, around 35 national and international renowned scientists delivered oral talks and presented their work. Few young scientists and research scholars having meritorious work were encouraged by giving opportunity to present their work as an oral presentation and around 80 delegates were presented their work as a poster presentation. The inaugural scientific session started with inaugural plenary talk on "Discovery Proteomics may not translate easily to Clinical Proteomics" by Dr. M. Radhakrishna Pillai which was followed by another plenary talk on "Molecular features of glioblastoma: the continuing tale" by Dr. Ravi Sirdeshmukh. Subsequently key note talks were delivered by Dr. Niranjana Chakraborty on proteomic profiling of chickpea plasma membrane and Dr. Shantanu Sengupta on vitamin B12 deficiency-Need of the hour.



First session was themed on "Global and Targeted Proteomics" and all the talks in this session mainly covered use of Global and Targeted Proteomics approach in various fields such as plant biology, reproductive health, animal sciences, understanding defect in translation initiation, fishery sciences etc. Second session was themed on "Disease proteomics and biomarker discovery" and the talks mainly covered Hsp40 in *P. Falciparum* infected human erythrocytes, plasma proteomics in coronary artery disease, proteomics analysis of outer membrane vesicles of bacteria, use of saliva as a diagnostic fluid, application of quantitative proteomics in health and disease, proteomics analysis of multiple myeloma, estrus associated protein identification in animal saliva etc.

Second day began with plenary talk by Dr. D. R. Mani on “Proteogenomics analysis of Breast cancer”. This was followed by a session themed on “Proteogenomic and Big Data Analysis” and most of the talks in this session were focused on use of proteogenomics as an approach in various fields. In another session themed on “metabolomics and integration of omics”, talks mainly covered work of showing how integration of multiple omics is helpful to study various aspects disease biology. Session five was focused on “Post-Translational Modifications (PTMs) which include talks on different PTMs such as glycosylation, glycation, and phosphorylation. This was followed by next session entitled as “Human Proteome Project-CHPP/B-DHPP”. This was mainly a panel discussion on “HPP: Missing proteins and beyond” and Panellist includes Dr. Ravi Sirdeshmukh who co-ordinated the discussion, Dr. Gil Omenn, Dr. Sanjeeva Srivastava, Dr. Sanjeev Shukla, Dr. Srikanth Rapole, Dr. Mahesh Kulkarni and Dr. Debasis Dash. In this discussion, first present status of HPP and missing proteins was discussed and then more thought was given on what should be next focus in this regard. This was concluded with a message that Indian proteomics community should increase their participation in HPP. Protein isoforms, splice variants is one of potential area along with other areas which need to explore further. Plenary talk on Proteomics for Patients ‘From protein biomarker discovery to the development of diagnostic tests’ was delivered by Dr. Stephen Pennington which elaborated about Proteomics for clinical studies. The day ended up with cultural program which was comprised of classical Odissi dances and Sambalpuri Folk dance.

The last day of the conference started with the plenary talk by Dr. Akhilesh Pandey on “Dissecting interactomes using proximity-dependent biotinylation”. This was followed by session on “Interaction Proteomics and Protein Networks”. Apart from these, some of talks covering advancement in proteomics technology were also presented during this conference.

The conference ended up with valedictory function. During this, various awards including best poster awards for poster presentation and PSI travel awards were awarded to selected participants. Dr. Srikanth Rapole, Convener of PSI2018 announced next PSI meeting at NCCS, Pune and invited all to join for the same. Similarly Dr. Steve Pennington invited all for HUPO2018 meeting at Orlando, Florida, USA. Conference and valedictory function was concluded with a vote of thanks by Dr. Amol Suryawanshi, Convenor. On behalf of organising committee, he thanked all the eminent speakers, session chairs, all the participants, industry partners and media partners for making this conference successful.



Along with this, one day Education day program entitled, “Proteomics and Its Applications for Biological Research” was organised as pre-conference event on November 29, 2017. Eminent scientists were delivered a class room talks mainly focused on understating advanced proteomics technology and their various applications. More than 90 delegates which includes young scientist/faculties from different universities and institutes, post-doctoral and PhD scholars and PG students had participated in this program. Overall, this scientifically rich conference achieved to cross a milestone for PSI and this added a feather in cap of PSI. It is a great pleasure to express my sincere thanks to Director, ILS, organising team members, all the student volunteers, and colleagues at ILS, KIIT, NISER, CIFA and PSI councils who made this event a huge success.

Dr. Amol R. Suryawanshi
 Convener, PSI-2017 Conference
 Institute of Life Sciences (ILS),
 (An Autonomous Institute of Dept. of Biotechnology, Govt. of India),
 Nalco Square, Chandrasekharapur, Bhubaneswar-751023, Odisha, India



Report of Education day held on November 29, 2018 during 9th Annual Meeting of Proteomics Society, India (PSI) & International Conference on Proteomics in Health and Disease (PSI-2017) held at Institute of Life Sciences (ILS), Bhubaneswar

The spectacular advancements being progressed in the field of Proteomics and many scientist and scholars wish to use these advanced proteomics technology in their research work. Every year, Proteomics Society, India supports “Education Day” as a preconference event with different theme during their annual meeting. This year during 9th



Annual Meeting of Proteomics Society, India (PSI), Education day themed on “Proteomics and its application for Biological Research” was conducted on November 29, 2018 at Institute of Life Sciences (ILS), Bhubaneswar. The aim of this one day Education program was to provide a bird’s eye view of the various techniques and their use in some of the areas of science. This scientifically enriched program was planned and coordinated by Dr. Surekha



Zingde, Ex-President PSI and Dr. Srikanth Rapole, EC Member, PSI. More than 90 delegates which includes young scientist/faculties from different universities and institutes, post-doctoral and PhD scholars and PG students had participated in this program.

The programme started with the welcome address by Dr. Amol R. Suryawanshi, convenor, PSI2017 who welcomed all the participants and briefed about the theme of Education Day Program. This was followed by inaugural address by Dr. Ajay Kumar Parida, Director, ILS and Dr. Mahesh Kulkarni, General Secretary of Proteomics Society, India.

The Education day was planned in two sessions wherein eminent scientists were delivered a classroom talks. First session was mainly focused on understanding of latest proteomics technologies which covered the overview of proteomics in biological research, gel based and gel free proteomics, mass spectrometry based quantitative proteomics, understanding of FDR in shotgun proteomics, role of chromatography in proteomics, Targeted proteomics and PTMs identification etc. These talks were delivered by eminent scientists including Dr. Srikant Rapole, Dr. Debasis Dash, Dr. M. A. Vijayalakshmi, Dr. Mahesh Kulkarni and Dr. Abhijit Chakrabarti. Session concluded with interactive discussion with participants. Second session was on proteomics application in biological research covering few applications in different areas such as Plant science, Reproductive health, Animal

science, Biomarker validation etc. These talks were delivered by eminent scientist including Dr. Geetanjali Sachdeva, Dr. Ashok Mohanty, Dr. D. R. Mani, Dr. Subhra Chakraborty and Dr. Sanjeeva Srivastava. The first scientific session chaired by Dr. B.P. Shaw and Dr. Avinash Sonawane while second session chaired by Dr. J. Dandapat and Dr. Abhijit Chakrabarti. This was followed by ILS Proteomics facility tour wherein demo session was carried out for the participants by Dr. Amol R. Suryawanshi and his team with help of Dr. Dipankar Malakar. At the end, session concluded with interactive discussion with participants where several queries of the participants were addressed by all these eminent speakers.

Program was concluded with a vote of thanks by Dr. Amol Suryawanshi. On behalf of organising committee, he thanked all the eminent speakers, session chairs, all the participants and co-ordinators who have given their valuable time to make this programme a huge success.

Lastly, The Education Day Programme is an opportunistic platform for the students that provide an exploration to various emerging and evolving areas in the field of Proteomics and would be definitely beneficial for those wish to use this technologies in near future.

Ms. Suchismita Behera, PSI-2017 Conference Organising team member &
Dr. Amol R. Suryawanshi, Convener, PSI-2017 Conference
Institute of Life Sciences (ILS),
(An Autonomous Institute of Dept. of Biotechnology, Govt. of India),
Nalco Square, Chandrasekharapur, Bhubaneswar-751023, Odisha, India



TPWIS-2018

Targeted Proteomics Workshop & International Symposium
Department of Biosciences & Bioengineering
Indian Institute of Technology Bombay, Mumbai, India
February 24th to 28th, 2018

TARGETED PROTEOMICS INTERNATIONAL SYMPOSIUM

February 25th 2018



INTERACTOMICS

February 24th to 28th 2018



grian

TARGETED PROTEOMICS

February 24th to 27th, 2018

MS WORKSHOP

February 24th to 27th, 2018



PROTEOMICS BOOT CAMP

.....& many more speakers.....

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Targeted Proteomics Workshop & International Symposium- 2018



Advancements in proteomics have been phenomenal over the last decade with several promising high-throughput technologies emerging at the forefront of various applications. Owing to the rapid advancements in state-of-the-art proteomics technologies, continuous expansion of our scientific understanding, and challenges associated with “omics” research, it has become essential to keep up with current trends and advances in proteomics research. In this light, we have conducted PROTEOMICS BOOTCAMP: Targeted Proteomics Workshop and International Symposium (TPWIS-2018), where a series of parallel workshops from 24th to 28th February 2018 were conducted at IIT Bombay. Eminent scientists and researchers from

India and abroad shared their knowledge and expertise to train the participants and familiarized them to the vast applications of proteomics. Detailed of each workshop is provided below.

Thanks,

Sanjeeva

Targeted Proteomics Workshop- 2018

The TPWIS 2018 workshop on targeted proteomics was a four-day event comprising of enthusiasts from varied backgrounds- academia and industry alike, coming from different parts of the country. The course was conducted by four instructors - Mr. Brendan MacLean, Dr. Cristina Chiva, Dr. Eva Borrás and Dr. Nathalie Selevsek and included a series of lectures, hands-on sessions and tutorials.

The workshop started with Mr. MacLean's talk focussing on the growth of the skyline community and how it continues to grow stronger every year. Dr. Borrás then talked about SRM and PRM providing a clear base for the sessions to follow. Hands-on sessions on skyline

and tutorials coverings the use of skyline in setting PRM and SRM methods, Parallel Reaction Monitoring and data analysis and DIA data analysis in Skyline by the instructors were also a part of the workshop.



At the last day of workshop, interested participants were given an opportunity to present slides on their work for inputs from the instructors. This was a very interactive and useful session as the presenters received key inputs from the instructors and fellow participants alike. The last activity by the group involved an exciting and challenging quiz session with the top three performers getting a chance to attend a one-day MS workshop at the MASSFIITB facility

free of cost.

Thus, the four-day workshop culminated with each participant and instructor walking back with a heavy heart yet satisfying learning experience filled with unforgettable memories. The organising team TPWIS-2018 thanks all the participants and instructors for making this event a grand success.



The Mass Spectrometry Workshop -2018

The MS-Workshop at the TPWIS-2018 was scheduled from 23rd – 28th Feb, 2018. The course was structured to accommodate only 6 participants each day, to give them more personalized training right inside the newly established mass spectrometry facility at IIT Bombay (MASSFIITB). The participants were acquainted with the basics of mass spectrometry, sample run and analysis. LC-MS based technologies has created waves in the field of clinical and application based proteomics and the workshop was aimed to acquaint them with the latest applications and use of Orbitrap Fusion MS technology. The participants were trained to inject samples in the instrument, they were also taught about the quantitative technique namely the TMT and iTRAQ-based LC-MS approach which has helped in understanding the quantitative proteomics and how it could be used to address various biological questions.



The workshop also equipped the participants with the basic workflow and know-how of the Proteome Discoverer® the software that aids in the analysis of the identified proteins. Basics of MS-based proteomics were taught by Prof. Sanjeeva Srivastava. The live sessions were conducted by Sandip Kumar Patel from Proteomics Lab, IIT Bombay, data analysis sessions were handled by Sandip and Dr. Akshay Bhat (Post Doc. Fellow). Mr. Pratip



Saha from Thermo Fischer Scientific was also present to give the students hands on training in the facility. Overall the participants received an up-close and personal exposure to the MS facility which they can later incorporate in their own research.

Interactomics workshop

The Interactomics course held at IIT Bombay was approved by the Global Initiative of Academic Networks (GIAN). The course was conducted from 24th to 28th February 2018 by Dr. Sanjeeva Srivastava from IIT Bombay and Dr. Joshua LaBaer from Arizona State University as the course co-ordinators. The five-day long course was filled with intensive lectures delivered by the course co-ordinators, in addition to talks by several national scientists and industry personnel; followed by hands-on/demo sessions on each day. Around 50 participants were a part of this course, which included undergraduate and graduate students, post-doctoral fellows and some faculty members as well.



The course was officially inaugurated by Dr. Ravindra Gudi, the co-ordinator for GIAN at IIT Bombay, wherein he explained the participants about the initiative and objectives of GIAN in further detail. Dr. Sanjeeva Srivastava gave an overview of the course and also explained the participants about 'Interactomics'. This was followed by various lectures and hands-on sessions covering important topics of interactomics including Microarray, Reverse Phase Protein Arrays, Cell-free expression arrays, basics of Nucleic Acid Programmable Protein Arrays (NAPPA) Technology, Immunoprecipitation etc.



ic Acid Programmable Protein Arrays (NAPPA) Technology, Immunoprecipitation etc.

The participants were given a short quiz based on the topics covered in the course. The winners were felicitated by Dr. Sanjeeva Srivastava and all the participants were presented a certificate by Dr. Joshua LaBaer. The course was concluded by closing remarks from course co-ordinators- Dr. Sanjeeva Srivastava and Dr. Joshua LaBaer.

International symposium

The Targeted Proteomics International Symposium was held on 25th February, 2018 at IIT Bombay. It was envisaged with the aim of bringing together proteomics researchers from around the world, so that the young students and college teachers can be updated with latest developments in the field of quantitative and targeted proteomics. The event was divided into five broad sessions in which several national and international scientists, well-established in the field of proteomics educated the young audience with the multifarious dimensions of proteomics applications. The event started off with the opening remarks by the convener, Prof. Sanjeeva. First session titled "Proteomics from discovery to function" mainly focused on quantitative proteomics applications. The next



session dealt with several interactomics studies & other functional proteomics studies and a plenary talk by Dr. Joshua LaBaer. The highlight of the symposium was the panel discussion on the opportunities and challenges involved in extrapolating proteomics research to routine clinical practices from the existing laboratory conditions. This discussion consisted of joint participation from clinicians and research scientists. These were followed by various talks on mass spectrometry-based proteomics applications, and need for stringent validation and sensitive quantification leading to the development of targeted approaches were discussed in the next session. It was followed by a short, thought-provoking quiz for the participants which showed quite good performances revealing a high degree of proteomics understanding by the attendees.

At the end there was a stimulating cultural event in which a few eminent artists showed their talent by giving mind blowing performances.



Cultural evening

The cultural event was initiated with “Tell me a science story” by an impromptu act, narrated by Ms. Subhra (Chief Editor of Nature India, NPG group) and performed by Shri Girish Dalvi (a renowned Kathak dancer, part of Nrityanjali). Ms. Subhra talked about the importance of communicating science to the public by scientists. She also mentioned perceived risks and benefits of taking science out of the lab to the masses. Followed by other modes of spreading knowledge in the age of social media and blogging. The importance of country scientists’ proactive participation in the process of informing the public about science, raising awareness of their scientific disciplines and inspiring a next generation of researchers.



Talele sisters performed Bharatnatyam performance on “Ek dantaye vakratundaye”. Then another

wonderful performance was by Suleiman, a 14 year flutist, who is also the winner of a reputed talent show “India’s Got Talent-2016”. He won everybody’s heart with his magical flute performance. Finally, after an



amazing performance by Suleiman with the flute, Dr. Tushar Guha, Anonna Guha and team from Nrityanjali performed on two different regional dance forms, one of these was traditional West Bengali folk dance, Baul followed by another performance by his group and this was on the popular Maharashtrian folk dance, Koli. This peppy performance was thoroughly appreciated by the audience and the performers were sent off stage with a standing ovation from the crowd.

Cultural event was concluded by felicitation of all the artists by Dr. Sanjeeva Srivastava, Mr. Brendan MacLean and Dr. Joshua LaBaer.



Upcoming Events

*10th Annual meeting of Proteomics Society, India (PSI) &
International Conference on Proteomics for Cell Biology and Molecular Medicine
(12-14 December 2018)*

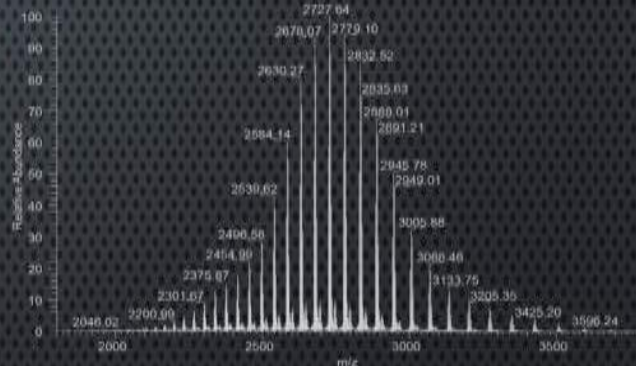
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THEMES



- Proteomics in Cell Biology
- Emerging trends in Proteomics technologies
- Metabolomics, Lipidomics & Disease biomarkers
- Proteo-genomics & Systems Biology

- Clinical Proteomics
- Plant & Microbial Proteomics
- Interaction proteomics & Cell Signalling
- PTMs & Protein Degradation
- Proteomics in Structural Biology & Bioinformatics

Convener:

Dr. Srikanth Rapole

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Proteomics Society, India
(Regd.No.286/2009, Registrar of Societies, RR(East) Dist., A.P., India)

national centre for cell science

An Autonomous Institution of the Department of Biotechnology, Govt. of India

Cancer Proteogenomics

Indo-US Training Program on Cancer Proteogenomics

6th – 11th Dec 2018

IIT Bombay

Cancer proteogenomics majorly focuses on detecting tumor-specific changes in the proteome, which may lead to tumor initiation and progression, helping to follow the link between the cancer genome and clinical phenotype.

Indo-US Training Program on Cancer Proteogenomics



Dr. D. R. Mani



Dr. Henry Rodriguez



Dr. Steven A. Carr

6th Dec 2018 - Basics in Genomics and Proteomics



Dr. Bing Zhang



Dr. Karl Clauser



Dr. Karsten Krug

7th Dec 2018 - Statistics and Machine Learning

8th Dec 2018 - PROTEOGENOMIC ANALYSIS:
Application in breast cancer

9th Dec 2018 - Correlation, Clustering and
Pathways Analysis

10th Dec 2018 - Big Data & Multi-Omics
Analysis

11th Dec 2018 – Satellite symposium



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September 30 – October 3, 2018 • Orlando, Florida

HPP Post-Congress Day • October 4, 2018