

Explore the Pilot

A workshop on Large Scale Protein Purification Systems

The Proteomics Facility, School of Life Sciences, University of Hyderabad (UoH) along with GE Fast Trak Training & Education, Bangalore (GE Healthcare Life Sciences) jointly organized a technology workshop “**Explore the Pilot**” during 4-6th July 2017. The workshop focused on Large Scale Protein Purification Systems – a unique platform that showcased the latest developments in downstream techniques with *AKTA pilot and FlexStand Benchtop pilot systems*. The workshop is first of its kind to be conducted in University of Hyderabad to foster industrial and academic collaborations. The three-day workshop at School of Life Sciences, UoH provided an exceptional hands-on learning experience and aimed at downstream processing techniques for process development scientists, emerging entrepreneurs, faculty and students.

The chief guest of the inaugural session, Prof. Podile Appa Rao, Vice-Chancellor, UoH inaugurated the workshop on July 4th, 2017 at School of Life Sciences, followed by the welcome address by Prof. P. Reddanna, Dean, SLS, UoH.

Dr. Murali Tummuru, CEO Virchow Biotech, Hyderabad, while inaugurating the workshop, emphasized on the importance of Protein Purification and congratulated the School of Life Sciences for the initiation taken for development of skills required for biopharma industry with real time experiences.

Prof. Channa Reddy, Penn State University, USA delivered the keynote address on "Large-Scale Purification of Recombinant Proteins: Current Status and Future Trends." While emphasizing the importance of the skills in protein purification, he recommended for conduct of similar workshops in other areas of up-stream and down-stream processing technologies.

Prof. S. Dayananda, who was instrumental in setting of the Akta Pilot facility in the School, proposed the vote of thanks during inauguration and valedictory sessions.



Mr.Ashok Govindarajan, Senior Scientist and Ms.Ashwini Chaya co-trainer from Fast Trak GE Healthcare, Bangalore were the resource persons who conducted the three day workshop and trained the participants.

On July 4th 2017, the first day of the workshop held at Proteomics Facility SLS, Mr.Ashok gave the lectures and conducted practicals on hands-on column packing, resin Handling, XK 50 column packing with Sepharose FF resin, UNICORN programming for column testing and concluded the day with troubleshooting strategies.



On July 5th 2017, day 2 Dr. Rajendar Burki, GM, R&D Biological E. Limited, Hyderabad gave a talk about the new insight on Protein Purification Strategies: Academia vs Industry.

Hands-on training on chromatography, column and resin maintenance was given by Mr.Ashok. The purification strategies for Ion Exchange Chromatography were performed .The day concluded by result and discussion on the previous experiments.



On July 6th 2017, day 3 of the workshop, Mr.Ashok and Ms.Chaya highlighted the basics of cross flow filtration, demonstrated the normalized water flux test and process optimization with protein samples.The participants performed UltraFiltration / DiaFiltration with BSA and gluco amylase protein samples by *FlexStand Benchtop pilot system* enthusiastically .The purified proteins were analyzed by MALDI TOF/TOF by Ms.Monica Kannan, Scientific Officer Proteomics facility, SLS. She demonstrated the purity of the proteins by intact mass analysis to the participants. The workshop concluded as Mr. Ashok summarized the three day experiments and trouble shooting.

Prof. Kambadur Muralidhar, JNU Chair Professor, UoH, Prof. P. Reddanna, Dean, Prof. S. Rajagopal, SLS, UOH , Mr. Raghavendra Goud, GE Healthcare, Dr. Dinesh Krishnan, Regional Bioprocess Specialist, GE Healthcare, Mr.Ashok Govindarajan, Senior Scientist, GE Healthcare were involved in panel discussion with participants.

The valedictory address was given by Prof. P. Prakash Babu, Pro-Vice Chancellor, UoH & Secretary General of FABA. The main sponsors of the workshop are Federation of Asian Biotech Associations (FABA) and GE Healthcare.



Few of the participants of workshop shared their experiences and positive feedback about the hands-on sessions. The certificates of participation were distributed to the participants by the panel discussion members. The workshop concluded with the vote of thanks by Prof. Rajagopal.