Academies’ sponsored Lecture Workshop on Recent advances in Biology held at the Manipur University, March 28-29, 2011: a report.

Background: most of the universities in North-East India are in a precarious situation on academic front. Because of prevailing extremist problems and lack of sound academic initiatives, many of these universities are ranked below "B" in NAAC assessment. Research has taken back seat and infrastructures in most of these universities are in appalling condition. To uplift and motivate the students, research scholars and teachers, Lecture and Hand on practical workshops are planned in the N-E based Universities. As part of this initiative, a lecture workshop on recent advances in biology was conducted at Manipur University from 28th to 29th March 2011, which was financially supported by the Academies. More than hundred students, research scholars and teachers from different colleges, research centres and university departments in Manipur took part in the workshop (Appendix I). A six member Principal Investigators served as resource persons (Appendix II).

March 28, 2011 (First day)

Inaugural function and First Technical Session

The Academies Sponsored Workshop (ASW) was inaugurated on March 28 at 9 AM by Prof HNK Sharma, Acting VC, Manipur University (MU) at the Senate Hall.

Dr Debananda S. Ningthoujam, Associate Professor, Department of Biochemistry, MU, Coordinator, delivered the Welcome Address. He highlighted the importance of such high-level outreach programs such as ASWs especially for stimulating students’ interests in higher education and research in Science and thanked Dr Upendra Nongthomba and resource persons from IISc and IICB for sparing their valuable time away from their hectic schedules.

Prof K. Muniyappa, Prof HNK Sharma, Prof R K Gartia and Prof L Rupachandra Singh gave their respective speeches as Chief Guest, President and Guests of Honor respectively, again stressing the importance of such programs in raising the standards of MSc and PhD students and Faculty of the University and affiliated colleges in Manipur.

Right after the inaugural function the First technical session started which consisted of 3 interesting lectures on Microbial Pathogens, muscle biology and bioactive secondary metabolites. The first lecture was delivered by Prof K. Muniyappa on Genomics of Microbial Pathogens, stressing on emergence of new antibiotic resistance pathogens and how genomes of these pathogens can be exploited to design new Drugs. Dr UpendraNongthomba, MRDG, IISc, Bangalore presented recent results in his Lab on role of ubiquitination in muscle function and pathogenesis followed by a lecture by Dr DebanandaNingthoujam, Biochemistry Dept., MU on the promise of actinomycetes as a treasure house of bioactive secondary metabolites.

Prof. R.Varadarajan. Dept. of Life Science, MU gave his concluding remarks as Session Chairperson.

Second Session
The day’s second session started with an interesting lecture by Prof Chitra Mandal, IICB, Kolkata on potential of Indian herbal resources for development of future cancer drugs which drew a lot of attention from the participants as Manipur also has rich medicinal bio-resources and there are some groups who are undertaking research in this area.

Prof Mandal’s lecture was followed by Prof. K. Muniyappa’s lecture on implications of telomerase in human health and disease which attracted rapt attention from a large section of the participants. The second session concluded with a lecture on role of sugars in diagnosis and therapy of cancer patients by Prof. Chitra Mandal.

Prof. N. Rajmuhon Singh, Chemistry Dept., MU as Session Chairperson thanked the speakers, highlighted major points of the lectures and presented mementos to the speakers.

March 29, 2011 (second day)

Third Session

The Third technical session started with a lively lecture by Dr Deepak Saini, MRDG, IISc on “Peek-a-view: living cells under the microscope” which generated a lot of excitement among the participants and even senior faculty members in the audience.

This was followed by a wide-ranging lecture on “Expression, characterization, and purification of recombinant proteins” by Prof. Rajan Dighe, MRDG, IISc, Bangalore.

The last lecture of this session was on “Actinobacteria: Prospective bioinoculants for plant growth promotion and biocontrol” by Dr Debananda S. Ningthoujam, Dept. of Biochemistry, MU, who gave an overview of the potential of actinobacteria as biofertilizers and biocontrol agents (BCAs) for agricultural crops and highlighted work in his Lab on development of actinomycete bioinoculants for rice cultivation.

Prof H D Singh, Guest Faculty, Dept. of Biochemistry, MU, Chairperson of the third session liberally thanked the speakers, appreciated the interesting lectures which benefitted the students.

Fourth Session

The fourth and last session of the workshop began with a lecture on cell signalling paradigms by Dr Deepak Saini of IISc, Bangalore.

This was followed by Prof. Rajan Dighe’s lecture on “Glycoprotein hormone-receptor interactions which have a wide-ranging overview of glycoprotein-receptor signalling pathways and mechanisms of hormone action.

The concluding lecture in the last session was by Dr Upendra Nongthomba on “Model organisms and drug discovery” in which he highlighted the potential of zebrafish and drosophila in drug discovery, model organisms in which he has worked extensively.
Prof. L. Rupachandra, Dept. of Biochemistry, MU who was the Chairperson of this Session thanked the esteemed speakers, summarized the main points of the lectures and presented mementos to the speakers.

During tea breaks and at the end of the program, several young participants interacted with resource persons especially Prof. Muniyappa and Chitra Mandal. Some of them expressed the desirability of conducting such workshops more frequently in Manipur and also stressed the feasibility of organising workshops for longer duration, say 3 or 4 days. They also enquired about the possibility of mentorship by eminent faculty of IISc and IICB etc. and also explored the possibility of short-term research work in such premier Institutes.

Prof Muniyappa and other resource persons gave encouraging responses highlighting Academy initiatives and schemes for promotion of higher education and research for the students and scholars and also explained the modalities of seeking help from potential mentors and procedures for availing short-term research studentships in eminent Institutes such as IISc and IICB etc.

Overall the 2-day workshop was a major success. It raised the awareness and enthusiasm levels of the students and scholars in Manipur. It may be pointed out here that this was the first Academy sponsored workshop in Manipur. Such workshops and other outreach programs will indeed go a long way in attracting bright students especially those from ‘under-reached’ places such as Manipur and rest of the North East to a career in Science education and research.