Brief report of the two consecutive workshops:

Two innovative workshops, lasting three full days each, were organized for Graduate students of Govt supported Colleges representing four districts of Haryana viz., Gurgaon, Rewari, Palwal, Faridabad:

WS2. Biosciences for Industry : Biotech, Pharma, Medicine & Informatics (24-26 March 2012)

The aim was to mobilise young minds to look around, critically think, assess, learn to make own decisions, and, to apprise with modern techniques in Biotech, Pharma, Medicine, Informatics sector.

Innovative pedagogy included pranayama, birdwatching n field activities, Live demos in wet / dry labs, GDs, brain storms, group projects of choice, culminating on the last day into ppt presentations by each participant of group projects, & Tea brk with music n dance ! A special interactive career-orientation session was also scheduled at the end. Apart from the inaugural speeches, 3-4 lectures were delivered by eminent visiting scientists (Fellows of Academy) in front line areas bridging Science & Technology and one Lecture on Basic Statistics in each workshop.

Simultaneous Live demos in wet / dry labs accompanied by brief ppt explanations were arranged in 7 separate groups of 5-6 participants each viz., Lab I Bio-Pharmaceuticals Immunodiagnostics, Lab II Molecular Diagnostics, Lab III Analytical tools, Separation techniques, Lab IV Enzymes, Lab V Food Technology Food safety, Lab VI Microbes, Lab VII Bioinformatics & Drug designing

Participants were also familiarized with state-of-the-art Bioinstrumentation including a visit to the ASG Biochem pvt ltd R&D Centre

Both WSs were event-managed entirely by 7 teams comprising ASU Bioscs students from BTech 1st yr to PG (who were being graded I) & PhD fellows in a clock wise precision. We thoroughly enjoyed the experience. And are greatly indebted to Indian Science Academies for making it happen. Thank u.

What did we achieve?
- GDs, brain storms were meant to instill confidence in students which was quite visible.

- Mini research projects were aimed at stimulating the student to think and develop reasoning power. Students in groups of 4-5, were asked to choose questions for projects from field, wet lab or dry lab (computer) according to their interest. The generated data were fed by each group into computers and analysed, n inferences made. It was a most satisfying experience to see students, inhibited initially, to stand up on last day, each
one of the group, with mike in hand, and make presentations with slides they had made themselves! Thanx Education panel, Sci Academies!

- Live demos of frontline techniques constituted a significant exposure for the participating Biotech students who said they hardly get to do any Biotech exercises in their respective colleges. (It indeed is a sad state of affair)

- Only about 20% students were computer-savvy initially, that too sparingly. By day 3 each n every participant was confidently using S/W applications, excel ppt & graphics and most had made their e.mail accounts.

- Thru early morning bird watching they learnt to be conscious of their environment.
List of participants

WS I : Student participants (70)

- DSO College, Gurgaon : 13
- Govt Girls College, Gurgaon : 44
- School of Biosciences, Gurgaon : 13

WS II : Student participants (44)

- KLP College, Rewari : 10
- GGDSD College, Palwal : 5
- Pt JLN Govt College, Faridabad : 15
- School of Biosciences, ASU : 14
Day 1

Session 1
6:00 – 8:30 h (students come n leave on their own each day)

Field Activity in the adjacent Sultanpur Bird Sanctuary
(grp leaders Devinder Kumar, Atul Kathait, Gabriel Hartmann, Pratap Bisht, ACS)

- Pranayam - deep breathing exercise
- Bird watching
- Brainstorm for taking up group-wise research projects. Activity sheets provided fr data generation (science thru environment, behavior, case studies, dry lab, wet lab whatever the kids prefer)

Packed high calorie breakfast on site (hi lite !)
Students transported in grps to School of Bioscs (two Boleros enuf)

Registration
09.00-09.30

Session 2
09:30 – 11:00 h   Inaugural at School of Biosciences, ASU, Gurgaon

Convenors ASU PG students

Lighting the lamp & mantrochharan

Welcome
ASU B Tech student
ASU PG student
About the workshop
Prof KK Dwivedi, Vice Chancellor
Mr Aditya V Berlia, Pro Chancellor
Addresses
Prof K Muralidhar FASc FNA DU*/Prof BC Das FASc, FNA, FAMS, Director
Enzymes n Drugs
ACBR, DU
Prof Mr. C K Chhabra, ASG Biochem Pvt Ltd
Clinical Trials
Prof Shashi Wadhwa FASc, HOD Neuroanatomy AIIMS
Neurobiology
Madam Sushma Berlia, Chief Guest, Chancellor ASU
Blessings
ASU BTech student
Vote of thanks

*Two sets of Resource persons will be involved in inaugural as well as other slots during the 2 workshops

Tea break 11.00-11.15h
Session 3
11.15-12.00 h
Interactive brainstorm to set pace What Why How ?? science n poetry, own self, career etc
Asha Chandola-Sakiani

Session 4
12.00-13.00 h
Interactive sessions with Resource persons
Lunch break : 13.00-14.00

Session 5:
14.00- 16.00 h
Simultaneous Live demos in separate grps
Lab I: Biochemistry Immunology- Hormones, Vitamins, Vaccines, Drugs, Food Contaminants-
Analytical tools n techniques, Chromatography, Electrophoresis, ELISA Assays
Lab II: Genes, GMOs - Molecular biology, DNA Isolation, PCR, Sequencing
Lab III Microbes – Bio pollution, Diseases, Culture techniques
Lab IV: Bioinformatics
Tools, net retrievals, intro to online study resources (Students will be given CDs or online access to
ppts with course material of choice frm their syllabus)

Tea Music Dance
16.00- 17.00 h

Day 2
Session 6
8:00 – 8:30 h
Field Activity in the adjacent Sultanpur Bird Sanctuary

- Pranayam
- Bird watching
- Group-wise project work (data generation continues from last day )

Packed breakfast on site

Session 7
10.00- 12.00
Live demos in separate groups in Labs I-IV continued from last day
Session 8
12.00 – 13.00
Project data compilation and Analysis on Computers
Lunch break
13.00 – 13.30

Session 9
13.30 - 14.30
Data Analysis, Inferences, Ppt preparation (ASU PG n BTech students will help each grp)

Session 10
14.30 – 16.00 h
Ppt presentations of research projects by participants

Session 10
16.00 – 16.15 h
Closing - Thanx n student feed back on short comings
Tea brk : music dance
16.15 – 17.15

Program

Workshop-II 08 – 09 October, 2011

Repeat of Workshop-I with different Resource persons