

## Industry-oriented education needed

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The Association of Biotechnology Led Enterprises (ABLE) organized its first Bio-HR meet on November 26, 2005 at Garden City College, Bangalore as an initiative to bring together the academia and industry to assess the human resource requirements of the biotech industry. While the industry speakers put across their concerns on the quality and number of biotech students graduating from colleges, the academicians were equally vocal and defensive on their honest efforts in bringing up their students to meet the industry's needs. However, one point which all agreed upon was that a sound understanding of the basic principles of science was absolutely required in the aspirants.

Prof. MS Thimmappa, vice-chancellor, Bangalore University, who delivered the keynote address, stressed on the need to make professional courses more productive. He felt that universities were now focused on producing a large number of graduates rather than delivering what the industry needs. "Goals have to be set in professional courses by involving parents, students, politicians, bureaucrats, the industry and the university. I look forward to a model of industry-academia partnership giving universities the freedom to set small goals in line with industrial goals," he added.

Dr Balaveera Reddy, vice-chancellor, VTU, felt it was important to train students in line with the industrial requirements and support from the industry in this direction was the need of the hour. "This will support the students to be readily acceptable by the industry," he added. Underlining the strong need to train students to develop entrepreneurship abilities, he said the emphasis should be on relevant technical skills and soft skills.

Stating that inquisitiveness was the primary requisite of science education, Dr S Anand Kumar, director and head, Astra Zeneca Research Foundation, lamented that the element of questioning, experimenting and discussing was missing in education. "Students today should be able to pilot plans and maintain them or design them as science continuously brings in new ideas which should be converted into technology," he stressed.

Commenting on the industry-academia relationship, Dr Mittur N Jagadish, director, Monsanto Research Centre, said, "While academia is in pursuit of basic science, industry is in pursuit of applied science that is involved in developing a product. The mindsets have to come together in a very blendful manner and only then can we produce wonderful products", he said, stressing on the importance of teamwork.

Elaborating further, Dr Mittur said, "The concept of genes and DNA as a genetic material can be applied in four major areas- agriculture and food; health, drug and vaccines; environment; and energy. Biotechnology is a mixture of biophysical sciences, engineering/technology, computer science, biological sciences, biochemical sciences and statistics/mathematics."

Speaking on bioinformatics, Dr Prashanth Naik said it was a growing field and was important to the pharmaceuticals industry, the agricultural industry and other biotech industries. Dr Anand felt, "It is very difficult to initiate people having vast knowledge across various disciplines. Therefore it becomes mandatory to be an expert in one field than contribute to a gamut of several disciplines. So if a person is well trained in one of these disciplines, then we can definitely become a team player and if there is a bioinformatics course as a discipline, there can be a lot of contribution".

Dr Gautam Nadig, director, Metahelix rued that education had been turned into a business. "We need to have good teachers with adequate qualifications and not teachers with simple BScs. We need competent teachers. There is a lack of sufficient incentives for the teachers," he said. "Colleges have to set up high standards for research jobs, academics or industrial works. The industry requires six-eight months to orient candidates but this initiative of orientation should be taken up by colleges themselves," he added.

Dr Joseph VG, chairman, Garden City Education Trust and Mahroq Engineer of Quintiles were among the various academicians and industry leaders present at the interactive meet.