

"Biotech is yet to receive the respect it deserves in the country"

18 April 2013 | Views | By BioSpectrum Bureau

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I received the GATE scholarship for MTech in industrial biotechnology from the National Institute of Technology (Karnataka). Improving on my theoretical and analytical skills along the way, I was fortunate enough to work with Panacea Biotec as a research associate. I am responsible for the bioanalytical testing and bioassay development for the pipeline products and vaccine candidates.

Choosing a career is one of the most important decisions. For me, biotechnology was a clear choice given its multidisciplinary approach and the fascinating applications, innovation and technology driven impetus for increasing the quality of life. Fueled with the economic growth in our nation, the past two decades has been witnessing a steady growth in biotechnology in research, academia and industry. Biotechnology has not only raised the market value, but has also made a major impact on all domains of human welfare, ranging from food processing, protecting the environment, agricultural sector, biofuels to human health.

On a daily basis, biotechnology companies are working to solve the greatest challenges that our society is facing- be it finding a remedy for cancer, protecting against bioterror threats, or creating renewable energy sources. Despite these novel benefits, biotechnology as a career choice is often seen with apprehension. It can be argued that with the right amount of support and skill training there can be ample opportunities for aspirants. Several government bodies like Department of Biotechnology, Department of Science and Technology, Indian Council of Medical Research, and Council of Scientific and Industrial Research are now focusing to cater these needs with regular reforms. This gives a platform for PhD aspirants. But, I strongly feel that a good experience, particularly in the industry, enhances the skills and provides a broader understanding. For the very reason that biotech industry primarily translates research into products and reaching to the masses, its application and utility is undoubtedly crucial. Indian biotech sector holds immense potential for growth and expansion. It is emerging as a hub for contract manufacturing for vaccines, generic drugs, biopharmaceuticals, clinical trials and drug discovery. This definitely opens a wide scope for creating manpower and training to meet the demands.

Broadly, an Indian biotech company has grown in leaps and bounds ever since the inception of this industry. It offers a wide range of jobs in research and development, production/manufacturing, regulatory affairs, quality control and assurance, and intellectual property rights. Conversely, those with experience can choose to diversify in project management, business development, and corporate affairs. A new wave of entrepreneurial biotechnology ventures are supported by government. However, to keep up the pace with developed economies, India should consider increasing funding opportunities to innovative R&D novel product development projects, new infrastructure/facility projects for platform technologies, so that this domain can become the backbone of next generation as it can be the booming industry of future India. Strong academia-industrial tie ups would give a fresh breath to innovation-based projects. Even after being the culmination of both biosciences and technological sciences, biotech is yet to receive the respect it deserves in the country.

Nevertheless, the satisfaction and passion of working in research labs as a student to a researcher painstakingly and diligently, solving the complex biological challenges is an experience that is truly accomplishing. To excel in the biotech field, the 3 "P" mantra is- patience, perseverance and most importantly positive attitude.

Reaching the mark of perfection may not be attainable, but I continue to strive for it with each click and keystroke. For I always remember- "Ladder of success is best climbed by stepping on the rungs of opportunity".