

'Prospect of pharmaceutical education and industry in NE

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The Indian pharmaceutical sector is one of the fastest growing markets in the world which produces 20-24% of the world's generic drugs in terms of value and employs thousands of workers directly or indirectly in production, quality control, marketing, drug development and other research-related activities. Multinational companies are also active in the Indian market with 15-20 of the world's largest pharmaceutical companies having their presence in India. The Indian pharmaceutical companies meet various demands for pharmaceutical products from almost all the countries and nearly 70% of the demand for bulk drugs is met by India. The industry is manufacturing practically the entire range of therapeutic products and has been recognized as a low cost producer of quality bulk drugs and formulations. The Indian market before 1970 was dominated by the multinational companies (MNCs), but within a decade of the Patent Act, the Indian firms have begun to dominate the domestic market and gradually the Indian MNCs were born in the pharmaceutical sector and started operating

soon after the post-1991 economic liberalization. The Indian pharmaceutical industry is now mature enough to adjust and participate in the domestic as well as international market place, consolidating existing strength and pursuing new opportunities.

The expected sustained high growth rate of pharmaceutical industry is envisaged from multiple drivers, such as health care delivery trends and large patient base in India, growth in consumption pattern, increasing intensity of newer disease patterns, the outsourcing trend in drug development and discovery processes adapted by the MNCs, drug policy in pricing and trend in health care insurance, etc. Still the Indian pharmaceutical industry has to tackle with many challenges like increasing competitions and ensuring universal access at affordable prices, building up research and development capability, obtaining high quality manpower support, cooperation from health care and related institutions, vigorous marketing drives and building up responsible and dynamic sales organization and most importantly, confronting the menace of spurious

drugs floating in the market. In this perspective, it is necessary that the pharmaceutical sector adopts strategies for participation in contract research, investment in creation of new drugs for local as well as global market, creation of drugs that are off patent or are soon to be off patent and spending sufficient fund on research in design and development of new, versatile drugs. It is to be noted that the research sponsored by the private sector centres around the limited objective of improving revenues.

The future of the pharmaceutical industry is closely related to the state of pharmaceutical education in the country. The rapid growth of the pharmaceutical sector and its internationalization entails the need for trained manpower both in terms of quality and quantity. The need for upgradation of pharmaceutical education is a perceived need felt around the world in the developed as well as the developing countries. The existing pharmaceutical institutions are primarily geared towards academic teaching programmes and not towards extensive research activities, either independently or in collaboration with industry, scientific laboratories (such

as the CSIR laboratories) or similar organizations. In order to acquire a leadership position in drug discovery and development and to continue to excel in formulations, the Central Government has recognized that human resources/talent pool, R&D and innovation are very critical. Keeping in view the increasing demand of skilled manpower in the field of pharmaceutical education and research, the Ministry of Chemicals and Fertilizers, Department of Pharmaceuticals, Government of India established the National Institute of Pharmaceutical Education and Research (NIPER) at Mohali in 1998 by an Act of Parliament with the objective of developing a centre of excellence in education and research in pharmaceutical sciences. Later, the Ministry has started another six other similar institutions with the help of mentor institutes and the NIPER-Guwahati is one among them established in 2008 which is functioning under the mentor institute, the Gauhati Medical College, with the objective of preparing professionals to suit the need of the pharmaceutical industry as well as the academic arena.

The activities planned by the

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NIPER-Guwahati includes nurture and promote pharmaceutical education and research, to develop a multi-disciplinary approach in carrying out research and training of pharmaceutical manpower so that the larger interest of the academia and pharmaceutical industry are better served and pharmaceutical work cultural is evolved by undertaking sponsored and funded research as well as consultancy project which is in tune with the changing world trends and pattern of pharmaceutical education and research, to pay due attention to study adverse drug reaction (ADR) taking into account the socio-economic spectrum of the country. The major thrust area is pharmacy practice, biotechnology, pharmacology and toxicology, natural products, herbal drug technology, standardization of herbal drugs, etc. Since the NE region has high incidence of AIDS, this will be a thrust area for drug design and research along with studies into consumption of narcotic and psychotropic substances of abuse. The North-east region is the hotspot of medicinal plant species and the NIPER-Guwahati can play a leading role in their proper utilization, patenting and related activities.