



Indian pharma adopts green initiatives with eco-friendly manufacturing processes to save environment

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The Indian pharmaceutical industry is adopting green initiatives with eco-friendly manufacturing processes, renewable energy sources, optimizing packaging to minimize waste to mitigate its environmental impact. This is because this industry inherently encounters environmental implications from sourcing of raw materials to manufacturing processes, distribution, and disposal. Issues such as water and air pollution, deforestation, and greenhouse gas emissions are constantly addressed. Moreover, these concerns are crucial for sustainable development and ensuring the long-term viability of the industry.

Regulatory agencies are increasingly focusing on environmental sustainability within the pharmaceutical industry. Companies face stricter regulations regarding waste management, emissions control, and environmental impact assessments. Compliance with these regulations is essential to maintain public trust and avoid reputational damage, said a section of pharma companies.

Noting that the pharmaceutical industry is at a crossroads, Sibaji Biswas, chief financial officer and executive director, Syngene International said that while the need for innovative medicines continues to grow, so too does the urgency to address environmental concerns. Sustainable drug development requires not only creating cutting-edge technologies but also doing so in a way that protects our planet. This is where green chemistry comes in.

Green chemistry emphasizes designing chemical products and processes that minimize waste, energy consumption, and hazardous substances. In the context of drug discovery and development, this translates to creating active pharmaceutical ingredients (APIs) through more sustainable methods. Syngene, a contract research development and manufacturing organization (CRDMO), is at the forefront of this movement. It recognizes that green chemistry is not just a buzzword, but a vital approach for the future of drug development, he added.

Also traditional small molecule API synthesis often relies on multi-step processes that use large quantities of solvents, reagents, and energy. This can lead to waste generation, air and water pollution, and safety hazards. Green chemistry offers a solution by replacing solvents with greener in nature, hazardous or volatile chemicals with safer and biodegradable alternatives. Syngene is actively implementing green chemistry principles throughout its API development and manufacturing processes, Biswas said.

The future of small molecule API synthesis is undeniably green. As environmental concerns continue to rise, the pharmaceutical industry is embracing greener practices. This shift towards green chemistry is not just about environmental responsibility; it also presents economic benefits. By reducing waste and energy consumption, CRDMOs like Syngene can create more efficient and cost-effective manufacturing processes, said Biswas.

Hyderabad-based Dr Reddy's Labs said that as a company with over two decades of leadership in sustainability in Indian pharma, it is a responsibility to set the bar high. The company said that a distinctive aspect of its approach is that its sustainability agenda is embedded in business strategy.

We have robust energy conservation and waste management initiatives at all our manufacturing facilities. Five of our manufacturing facilities are certified under Indian Green Building Council (IGBC). This shows our commitment to sustainability in infrastructure which is more environment friendly. Besides this, we use renewable power & biomass of rice husk, briquette, etc. in our operations in place of fossil fuels, thus reducing our impact on the environment. In 2022, our largest manufacturing facility in Bachupally joined the Global Lighthouse Network (GLN) of the World Economic Forum, a community of over 100 manufacturers that demonstrated leadership in applying Industry 4.0 to drive productivity, workforce engagement, sustainability and supply chain resilience. In FY'23, we worked on 16 products incorporating green chemistry principles that help make processes more sustainable, said Dr Reddy's spokesperson.