

Bioprocess development for production of biopharmaceuticals from plant origin

Prasad A. Wadegaonkar and Varsha P. Wadegaonkar

Sant Gadge Baba Amravati University, India

The recent years have witnessed revival of interest in herbal medicine as more and more people throughout world are turning to use medicinal plant products in healthcare. WHO currently encourages, recommends and promotes traditional herbal remedies in national healthcare programmes. In modern times the issues of quality, safety and efficacy of medicines are interrelated. The quality of drug is of supreme importance as it can affect the issues of efficacy and safety. There are always changes of wide variations with respect to their chemical contents in crude drugs/ raw materials of plant origin due to various reasons such as climate, geographic distribution, source and season of collection etc. Bioprocess engineering has played a successful role in developing and producing pharmaceuticals from fungal and bacterial origin. The principles of this technology have already been exploited for commercial production of vaccines and therapeutic proteins from animal origin. The potential and knowledge of Bioprocess engineering has not yet fully exploited for commercial production of biopharmaceuticals from herbal origin. Scale up of suspension cultures, tissue and organ cultures of medicinal plants can overcome most of the shortcomings of herbal medicines obtained from natural resources. This approach also helps to understand and modulate the pathway for production of desired bioactive compounds *in vitro*.

Biography

Prasad A. Wadegaonkar has done post graduation in Biotechnology from M.S. University Baroda and Ph.D. from R.S.U. Raipur. He has worked as Production Manager at Bharat Immunologicals and Biologicals Corp. Ltd. At present he is working as Associate Professor in Biotechnology at Sant Gadge Baba Amravati University. He has setup Bioprocess Laboratory at Sant Gadge Baba Amravati University for integration of plant cell culture, animal cell culture and bacterial system. He has also established Bioinformatics Infrastructure Facility under BTISNet of DBT, Govt. of India.

wadegaonkar@hotmail.com