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The cover page contains a figure from the article of Prof. Sankar K. Guchhait

EDITORIAL

Needle-free injection technology has received a lot of interest in recent years as a safer and more convenient alternative to traditional hypodermic needle injections. The authors discussed the future of injectable therapy and the role that needle-free injection technology will play in advancing medical treatment and increasing patient outcomes. Needle-free injection technology has the potential to transform the way we receive injections, making medical care safer, more convenient, and less unpleasant. As technology advances, we expect it will play an important role in improving the delivery of injectable medicines. This technology may transform the delivery of many biologics, and poorly bioavailable drugs and more importantly the delivery of vaccines and anti-diabetic drugs like Insulin. There is a great scope for all academic and industry partners to contribute to the advancement of this technology to improve the delivery and therapeutic performance of a wide range of therapeutic agents with much-improved patient compliance. The Needle-free injection technology may avoid issues associated with injectables such as anxiety or discomfort associated with old injection procedures.

Drug development is a multi-step process that necessitates innovative methods and cutting-edge technologies. Scaffold hopping has emerged as a viable strategy in drug development in recent years, providing new chances for pharmaceutical companies and university researchers to identify new, effective, and affordable therapies for a wide range of ailments. Scaffold hopping allows scientists to swiftly explore new chemical space and develop novel compounds with similar or enhanced activity by exploiting current molecules as a starting point. This method is very beneficial for discovering drugs for conditions when present therapies are either unavailable or inefficient. Scaffold hopping is positioned to play a crucial role in developing affordable medicines and may contribute immensely to improving patient outcomes because of its capacity to minimize time and cost as well as its potential to uncover new classes of medications.

The Grignard reaction is a powerful and versatile organic chemistry synthetic technique for forming new carbon-carbon bonds between reactive organometallic reagents and organic substrates. In recent years, the Grignard reaction has received attention as a safer and cleaner alternative in the continuous flow synthesis of active pharmaceutical ingredients (APIs).

In continuous flow synthesis, the Grignard reaction is a potential technique for the synthesis of active medicinal components, giving better safety, decreased waste, and improved process control. As technology advances, we expect it will play an important role in improving the impurity profiles of the wide range of APIs. We must continue to invest in new and creative technologies that enhance healthcare outcomes and make medical treatment available to everyone.

Dr Chandraiah Godugu

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