

## Stem Cell Engineering: Future of Cell and Drug Therapies?

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In the 1960's, the pharmaceutical industry focused almost exclusively on small molecule drugs to treat diseases and this approach was dominant until the 1980's. The era of genetic engineering followed, allowing the development of biologics such as monoclonal antibodies and recombinant proteins as well as tools to identify new small molecule drugs. This transformational technology helped start the biotechnology industry. As we enter the "Century of the Cell", the advent of "stem cell engineering" now offers the potential to produce true disease-modifying treatments and cures for many devastating diseases including diabetes and cancer.

Novocell's goal is to develop a renewable source of specialized cells that can be used to treat degenerative diseases. The company is uniquely positioned to exploit stem cell engineered product opportunities using its proprietary cell encapsulation platform. The company's human stem cell and cell encapsulation technology platforms will allow transplantation of large numbers of patients without the use of chronic immunosuppression. In addition, the ability to culture and engineer hESCs provides Novocell with a powerful new drug discovery platform that will allow the discovery of small molecules and biologics for treating diseases such as diabetes and cancer.