

inert elements is a better option. Studies on the fabrication of such materials and mechanism of biological pathways should enable synthesis of more safe nanomaterials for gene delivery studies. Another area of cancer research is making scaffolds for growing cancer cells that can mimic tumour growth *invivo*. These 3D cancer cell models should bring down the cost of preclinical cancer drug research before proceeding to expensive animal models for drug testing. Studies using graphene and its derivatives are available for neural stem cell growth and bone cell regeneration. Graphene with its highest tensile strength should be explored for developing preclinical 3D models for cancer cell growth. Additionally, more ecofriendly Graphene nanomaterials synthesized using green nanotechnology for 3D cancer cell growth applications is need of the hour.