Free essay on gene knockout using transcription activator-like effector nucleases...

Education, Discipline



The field of study that is under examination and will be a major highlight of this press release is the discipline of biological chemistry. The main are of research and study regarding this discipline will focus on human genetics with an objective of revealing the techniques that implement successful gene manipulation in human beings via the use of specialized technology to aid in achieving this scientific operation

I intend to tackle the queries regarding conducting this experimental approach is viable and will be successful. The research and study I will be conducting is aimed at investigating whether gene knockout using Transcription Activator-like Effector Nucleases (TALENs) is a viable option in revealing if human protein is important for stabilizing the junction between the membrane and matrix arms of complex 1, which is a variant of the human mitochondria.

The background and feasibility study objectively projects a targeted knockout of genes in cultured human cells using TALEN-technology to knockout the nuclear gene encoding. This will offer assistance and ultimately help us see if we can prove that mitochondria can be separately isolated from cells.

While conducting this research, my main and sole reason for tackling the questions at hand will significantly aid my examination in trying proving on how human complex cells can be modified and potentially revolutionize the use of TALEN technology. This tech will be used to mediate gene disruption and eventually conclude on the how the human cell composition of NDUFA9 is vital in this experimentation and its importance in stabilizing the junction between matrix and membrane arms of complex 1.

This research will be entirely based on TALEN design and construction and its procedural introduction and composition in complex cell units in human beings.