

DIABETES GENE THERAPY USING NUTRIENTS-REGULATING PROMOTER

TECHNOLOGY DESCRIPTION

This technology is for the production of the therapeutic plasmid nanoparticles for pure L cells that are able to produce insulin synthetically or exogenously.

TECHNOLOGY FEATURES

In this technology, the nanocarrier that used to deliver the plasmids are from carbohydrate based chitin source or chitosan which is non-toxin for long term consumption. The epithelium cells are sloughed out every 72 hours thus making sure the fresh supplies of plasmid and avoid the possibility of mutation if gene is alternatively incorporated in the genome cells for good. These plasmids can be used for type 1 and type 2 diabetes gene therapy. It also can be used for other nutrients and in particular glucose metabolism disorder treatment. Patients suffering from diabetes do not need to prick their finger to tailor suit the dose required insulin intake at different occasion.

ADVANTAGES

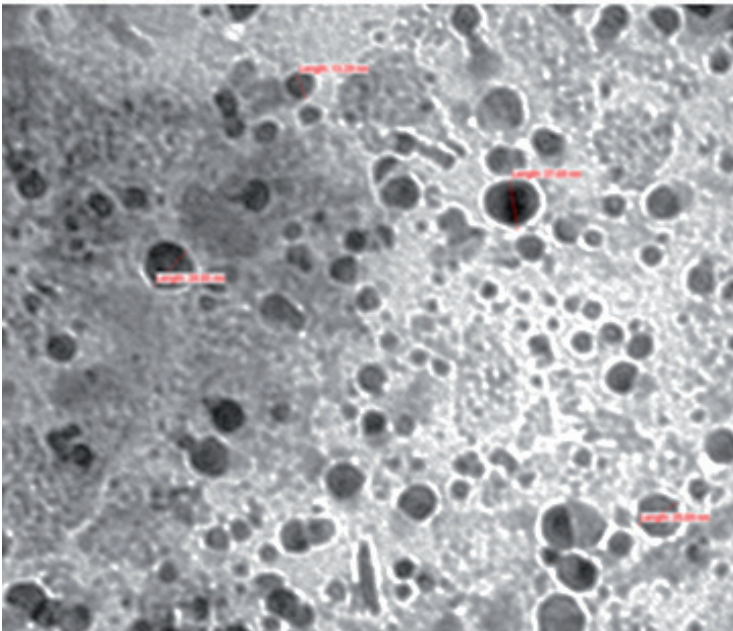
- Can be taken orally
- Easy
- No side effect

INDUSTRY OVERVIEW

Prospect: Diabetes Patience/Medical Doctor/ Biotechnological and/or Pharmaceutical Company

World Health Organisation (WHO) has projected that Malaysia will have 2.48 million people with diabetes by 2030. Statistics indicate that 2.6 million Malaysians aged 30 and above are diabetic. About 5-10% of diabetics have type 1-diabetes while the remaining 90-95% of patients has type 2-diabetes. The overall diabetes drugs market will t achieve strong growth to 2013, especially from 2013 to 2017. The global market for products in the management of diabetes currently stands at \$41 billion and is on pace to grow to over \$114 billion by 2018. A new report by Visiongain predicts the world market for diabetes medications will reach \$55.3bn in 2017. The anti-diabetic medicines industry generated \$35.6bn in 2012, and its revenues will show strong growth to 2023. Oral anti-diabetics were the leading category of drugs in 2010 and showed a growth rate of 6.3% from the total global sales.

Potential prospects are diabetes patients, medical doctors and pharmaceutical company. It can be distributed via several channels based on the target customers. Personal selling methods can be done with hospitals and pharmaceutical companies by contacting them directly with the sample. Also, the product can also be distributed directly to the patience via registered pharmacy.



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