

## 2<sup>nd</sup> International Conference and Exhibition on **Physical Medicine & Rehabilitation**

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### Diabetes mellitus type 2 cure using low level laser

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This is an experimental study done on animals to treat type 2 diabetes mellitus. The idea depends upon the base that the low level laser (LLL), (635 nm used in this study) clinically used in the field of physical medicine has a biological effect on the cells, theories and experiments proved that LLL has the ability to stimulate mitosis by delivering photons to the cell. These photons are received at the mitochondrial level. The research idea uses the effects of laser that were proved to increase DNA replication, cytochrome c oxidase enzyme production, cellular metabolism and ATP production, also its effects on reactive oxygen species mechanism, all of these factors leads to mitosis, the idea is to use the laser on the living beta cells of the type 2 diabetic patients to magnify their production of insulin by increasing their numbers and so decrease the need of hypoglycemic agents and insulin, thus treating the cause of the disease. A sample of 50 rats was included in an experiment. An upper abdominal surgery was made at the level of the pancreas low level laser was delivered at the following parameters; energy=2.7 joule, number of phases=1 wave length=635 nm for 15 minutes, blood glucose level was tested pre and post-operative which was significantly decreased after the treatment indicating an increase on the insulin level on these samples in both post prandial and fasting tests. The vision is to use laser on humans to enter their pancreas using laser needles bilaterally on the level of T12 vertebrae where pancreas is located, this will allow cellular reproduction in beta cells and magnify insulin production and so treating diabetes. This is done by using the right parameters after I developed an equation that will help the clinicians using LLLT to know whether they have reached the targeted area they want to treat or not.

### Biography

Islam Medhat Mahmoud is a Student at the faculty of physical therapy, Cairo University and finished his high school degree in Victory College International School in Alexandria in 2011. He was nominated to represent Egypt in the national physiotherapy students conference which was held in Muscat, Oman in the 3rd and 4th of April 2013. He was also invited to present his paper after its acceptance in the international physiotherapy conference which was held in Cairo, Egypt. Now he is completing his experiments on animals to reach 350 samples by the next year. He has been hired as a research team Leader in a union of Medical faculties in Egypt called 'The Core Medical Society including faculties of Medicine, Pharmacy and Physical Therapy'.

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