

الآية

بسم الله الرحمن الرحيم

قال تعالى:

خَيْرَ نَفْسٍ خَيْرٌ لَكَ مِنَ الْأَنْفُسِ وَالَّذِينَ
يُعْطِيكَ رَبُّكَ فَتَرَىٰ ضَىٰ

صدق الله العظيم

سورة الضحى الآية (4-5)

Dedication

This work is dedicaTed To:

My lovely mother (AyAt el mAnsour).



Dear uncle (Omer el mansOur).



Lovely brothers (MohaMed & el sedig &isrra).



All my family.



Acknowledgment

Thanks and praise first and foremost to Allah almighty forgives me strength to complete this work.

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For all of them respect and gratitude

Abstract

There is an urgent need to develop technology for continuous in vivo glucose monitoring in subjects for diabetes mellitus. Problems with existing devices based on electrochemistry have encouraged alternative approaches to glucose sensing in recent years, and those based on fluorescence intensity and lifetime have special advantages, including sensitivity and the potential for non-invasive measurement when near infrared light is used. In this research twelve sample of blood with different concentrations of glucose have been employed to detect the fluorescence that induced using nitrogen laser. Plasma was separated from the twelve blood samples then it was exposed to nitrogen laser with wavelength 337.3 nm, power 0.04 mW, and periodic time is 100 msec. The fluorescence was collected using the fluorescence spectrometer.

The results showed that when the concentration of glucose increased, the levels or intensity of albumin and globulin exponentially decreased. At the low concentrations of glucose less than 150 Mg|Dl , the levels or intensity of protein (albumin and globulin) was very high; more than 3000 and when a concentration of glucose greater than 150, the level of protein (albumin and globulin) decreases .until reach low levels or intensity 200 At high concentrations of glucose 545 Mg / DL. Decreasing the level of protein (albumin and globulin) indicated to attribute to a decrease in the body's insulin.

المستخلص

هناك حاجة ماسة لتطوير تكنولوجيا للرصد المستمر للجلوكوز في الجسم لمرضى السكري. وقد شجعت مشاكل الأجهزة الموجودة القائمة على الكيمياء الكهربائية طرق بديلة لإستشعار الجلوكوز في السنوات الأخيرة، وتلك التي تعتمد على شدة الفلورة والعمر الزمني لها مزايا خاصة، بما في ذلك الحساسية وإمكانية القياس غير الغازي عند إستخدام الأشعة تحت الحمراء القريبة. أستخدمت اثنتي عشر عينة من الدم بتراكيز مختلفة من الجلوكوز للكشف عن الفلورة المنتجة بإستخدام ليزر النيتروجين. فصلت البلازما من عينات الدم الاثني عشر ثم عرضت لليزر النيتروجين ذو الطول الموجي 337.3 نانومتر ، والطاقة 0.04 ميغاوات ، وزمن تكرار 100 ميلي ثانية. جمعت أشعة الفلورة بإستخدام مطياف الفلورسنت .

أظهرت النتائج أنه عند زيادة تركيز الجلوكوز يقل مستوى بروتيني الألبومين والغلوبلين ؛ عند التراكيز الأقل للجلوكوز يكون مستوى البروتينين (الألبومين والغلوبلين)عالي جدا؛ أكبر من 3000 وعند زيادة تركيز الجلوكوز أكثر من 150 يقل مستوى البروتينين (الألبومين والغلوبلين) حتى يصل إلى أقل قيمة له 200 عند التراكيز العالية 545 جم /ديسلتر .

قد يشير نقصان مستوي مستوى البروتينين (الألبومين والغلوبلين) إلى نقصان الأنسولين في الجسم .

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