

NBT Potential for Diabetes Management

A non-invasive breath test could replace the daily finger prick check for diabetics after scientists found a chemical which rises when blood sugar is too low.

BLOOMINGTON, MINNESOTA, USA, November 14, 2018 / EINPresswire.com/ -- A painless and non-invasive breath test could replace the daily finger prick check for diabetics after scientists found a chemical which rises when blood sugar is too low. For some time, dogs have been trained to notice when their owners are about to suffer a hypoglycaemic attack due to low blood sugar, and now researchers have managed to isolate higher levels of the chemical they're sniffing; called isoprene.

Isoprene is one of the most common natural chemicals found in breath. Humans aren't sensitive to its presence, but the discovery of



Doctor making diabetes blood test



heightened production during hypoglycaemic attacks puts another step forward in breath test screening; meaning the 400,000 people in Britain living with Type 1 diabetes would not need to draw blood daily.



Being programmable makes an Ancon Medical NBT device quite versatile. It will be used to screen for diseases like cancer alongside alerts for daily maintenance of diseases such as diabetes" Wesley Baker - CEO of ANCON Medical With stronger data and research methods, nanotechnology in the field of biomarker detection continues to progress and <u>ANCON</u> Medical is one such company aiming to change the lives of millions through non-invasive blood sugar level alerts for diabetics.

Simple to use and affordable, ANCON Medical Nanoparticle Biomarker Tagging (NBT) technology can detect the presence of disease by measuring exhaled breath, and with further development can be used for emergency alert detection.

NBT technology works by utilizing the canine proven biological principle of detecting exhaled breath specific

biomarkers, which are DNA-protein controlled volatile organic compound (VOC) metabolites specific to diseases.

"Researchers have discovered biomarkers for more than 400 diseases, with lung and other cancers among those, and whilst our canine companions are successfully being trained to help with (usually individual) emergency alerts for patients with life-threatening conditions such as

diabetes, the individual training costs and ongoing support can take financial outlay into the thousands for each person." Wesley Baker, ANCON Medical CEO.

"Being programmable makes an Ancon Medical NBT device quite versatile. With funding and further investment, it will be used to screen for diseases like cancer alongside alerts for daily maintenance of diseases such as diabetes." Baker, a member of the Royal Society of Medicine said.

By programming an ANCON Medial NBT device to hunt for these specific molecules, the technology will enable healthcare providers to provide a fast, affordable and non-invasive solution to patients, potentially saving lives with the early diagnosis of disease and medical alerts.

For more information on Ancon Medical's NBT technology research, visit http://anconmedical.com/nbt-technology/.



Wesley Baker - CEO ANCON Medical

Further information:

Diabetes is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces, thereby regulating blood sugar. The number of people with diabetes has risen from 108 million in 1980 to 422 million in 2014.

Hypoglycaemia, or low blood glucose, can occur if too much insulin is administered or if a person eats too little food or engages in too much exercise following the use of insulin. Symptoms of hypoglycaemia may include shakiness; nervousness or anxiety; sweating; irritability or impatience; chills and clamminess; rapid heartbeat; light-headedness; hunger; sleepiness; anger, stubbornness or sadness; lack of coordination; blurred vision; nausea; tingling or numbness in the lips or tongue; nightmares or crying out during sleep; headaches; strange behaviour including delirium, confusion or personality change; seizures; and unconsciousness. Some people are unable to detect when their blood glucose level is dropping and tend to miss the early symptoms of hypoglycaemia. For people with this condition, called "hypoglycaemia unawareness," the first symptom of low blood glucose may be impaired thinking.

WHO facts and figures: http://www.who.int/news-room/fact-sheets/detail/diabetes

Analyzing breath samples of events in type 1 diabetes patients: towards developing an alternative to diabetes alert dogs (Siegel et al, 2017) https://doi.org/10.1088/1752-7163/aa6ac6

Joanna Stephens Ancon Medical +44 1227 811705 email us here Visit us on social media:

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