

Lifecare Achieves Major Breakthrough in the Attempt to Miniaturize the Sencell Glucose Sensor

Lifecare is developing an implantable continuous glucose sensor based on its proprietary osmotic pressure cell technology. One core element of the glucose sensor is a pressure transducer, which translates the glucose-induced osmotic pressure change in the measurement chamber into a transmittable electronic signal. Until now, the size of the pressure transducer prevented further miniaturization of the osmotic pressure chamber and of the final device. Lifecare has partnered with cantiMED, Darmstadt, Germany, a global leader in nanotechnology solutions, to solve the problem. Scientists from both companies are pleased to report that the nanosensor technology has been shown in laboratory experiments to accurately measure pressure changes derived from substantially smaller osmotic pressure chambers. The working prototype laboratory sensor model had only a fourth of the size of the actual version, and further downsizing to less than a tenth is warranted based on the actual results.

"These findings represent a major break-through for our entire glucose sensor development" says Lifecare Chairman of the Board Christian Saure, "We can now continue to significantly down-size our device by miniaturizing the core glucose-sensing element of our device with the smallest pressure sensor of the world, which will ultimately lead to significant competitive advantages for the final product."



Sencell, a novel implantable 3D printed nanosensor



The planned Sencell dimensions are 2*3*6 mm³