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C-CIT Sensors to provide biosensors for Zurich Project Liver4Life

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The challenging aim of the Liver4Life project at Wyss Zurich is to extend the viability of liver tissue outside of the body (ex-vivo) up to five days and allow its growth.



Liver4Life is a project of Wyss Zurich, a joint research and development center of the ETH Zurich and the University of Zurich in the fields of Regenerative Medicine and Robotics. The project is aiming at developing a liver perfusion device. C-CIT Sensors AG supplies single-use biosensors for applications in the field of normothermic ex-vivo organ perfusion.

The challenging aim of the Liver4Life project at Wyss Zurich is to extend the viability of liver tissue outside of the body (ex-vivo) up to five days and allow its growth. The perfusion system will provide necessary nutrients and oxygen supply and is monitoring the functional capacity of the liver. Putting one focus on the glucose metabolism is important for the overall mission's success.

As a company with its main competence in electrochemistry and in developing and manufacturing single-use sensors for the in-situ and continuous measurement of metabolically relevant parameters in aqueous solutions such as blood, cell culture media or sweat, C-CIT Sensors contributes an important feature to the Liver4Life perfusion machine.

Because the glucose metabolism is an important task of the liver, the team around Professor Philipp Rudolf von Rohr successfully evaluated C-CIT Sensors' glucose monitoring technology as part of an artificial pancreas within the Liver4Life system.

“We are happy about the latest achievements we made together with C-CIT Sensors and to continue our innovation process in this exciting field of liver regeneration”, said Professor Rudolf von Rohr. “C-CIT Sensors’ single-use in-situ glucose sensor technology is a valuable tool for identifying the optimal process parameters to allow extended organ perfusion under normothermic conditions. Continuous information on changing blood glucose levels help stabilize the organ on the machine."

Dr Andreas Koch, Business Development Manager with C-CIT Sensors is looking forward to continuing this experimental phase together with Liver4Life. “The results obtained so far are highly encouraging and confirm the broad applicability of our technology within different fields of Biopharmaceutical production, Cell Therapy and Regenerative Medicine.”