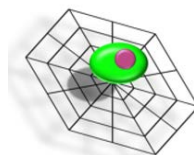


# Newsletter CTCTrap



The EU FP7health sponsored CTCTrap consortium develops technology to isolate and characterize tumor cells circulating in the blood of cancer patients. Realization will enable a real-time liquid biopsy for all cancer patients to be used for the selection of the most appropriate therapy and monitor its effectiveness. The project started September 1, 2012 and is expected to have reached its goals by September of 2016.

All participants joined the project review meeting held on September 25 at the University of Twente. Prior to the meeting personal from five clinical academic institutions were trained on the use of the devices developed for the identification and characterization of enriched CTC.

The development of the CTC apheresis device for trapping circulating tumor cells (CTCTrap) from the blood circuit of cancer patients is progressing nicely. LEUKOCARE established a coating matrix (CTC Trap matrix) to couple EpCAM-specific capture molecules and demonstrated the binding and elution of cells derived from tumor cell lines expressing EpCAM under flow conditions. The CTCTrap device was down scaled to a bench scale size model to perform the cell binding and elution using realistic rheologic parameters. The compatibility of the CTCTrap bench scale model with blood spiked with EpCAM positive cells was demonstrated. Next challenge is to upscale the device to clinical scale and assure safety and biocompatibility in preparation for testing on cancer patients.



*Device training CTCTrap members at Twente University.*

Parallel to this effort AQUAMARIJN is developing a device to capture the eluted cells for identification and characterization of the CTC. The first prototypes for CTC capture on a microsieve along with a staining and analysis protocol were developed and are available for the clinical academic institutions for evaluation of the characteristics of the CTC from prostate and breast cancer patients missed by the CellSearch system. During the course of the project the reagents used to identify and characterize CTC will be provided by ACZON, the first evaluation of NanoParticles conjugated antibodies were successful.

## *CTCTrap consortium*



For more information on CTCTrap please visit our website: [www.tnw.utwente.nl/ctctrap](http://www.tnw.utwente.nl/ctctrap) or contact [mcbp@tnw.utwente.nl](mailto:mcbp@tnw.utwente.nl)

**UNIVERSITY OF TWENTE.**