





- News
- Technology
- : R&D
- : Embedded
- : Communication
- : System design
- : Industry sectors
-  **NEWS**
- : News
- : Educational
- : White Papers
- Sensor Zone 
- Channels
- : Embedded
- : Power
- White papers
- Interviews
- Products
- Tech. Spotlight
- Blogs
- Jobs
- Ezines

Lab on chip research aims to accelerate detection of cancer

03/09/2010  [Email to a friend](#)

Nanoelectronics specialist, **imec** has launched a project to develop an operational lab on chip for the isolation and detection of circulating and disseminated tumor cells in blood.

Currently, the detection analyses of tumor cells are performed in medical laboratories requiring sample processing and cell isolation steps, which can take more than a day. IMEC and its project partners claim that a lab on chip, integrating the many processing steps, would enable a faster, cost effective detection of tumor cells in blood.



The aim of the Miracle Project is to develop a fully automated, lab-on-chip platform to isolate, count and genotype circulating tumor cells.

The research will look at extracting genetic material from cells. Multiple cancer related markers will be amplified based on multiplex ligation dependent probe amplification, followed by their detection using electrochemical sensors. IMEC believes that the resulting lab on chip tumor detection system will be far more advanced than current cancer diagnostics.

Author  
**Chris Shaw**

Supporting Information  
<http://www.imec.be>  
<http://www.miracle-fp7.eu>

This material is protected by Findlay Media copyright 2010.  
See [Terms and Conditions](#).  
One-off usage is permitted but bulk copying is not.  
For multiple copies contact the [sales team](#).

Bookmark this article using:

-  [Del.icio.us](#)
-  [digg](#)
-  [reddit](#)
-  [Facebook](#)
-  [StumbleUpon](#)

Your comments / feedback

Do you have any comments or feedback on this article? Please contact us by filling in the form below.

Name  Hide name

Your Email Address

Comments

Related Companies

[IMEC](#)

Related News

- [BEEAs 2010 shortlist announced](#)
- [MEMS motion sensing technology enables development of portable CPR rescue device](#)
- [Capacitor shortage is 'bellwether' for the industry, says iSuppli](#)
- [UKEA announces second 'Anti Counterfeiting Forum'](#)
- [8bit mcu has 128KB Flash memory in 28pin package](#)

Related Technology

- [Operating under more pressure: Embedded microcontrollers](#)
- [A tale of two cities - UK Electronics England](#)
- [Flower of Scotland - UK Electronics Scotland](#)
- [In good shape - UK Electronics Overview](#)
- [Making a difference - UK Electronics Skills](#)

Related Products

- [Sponsored by RS Components: DesignSpark PCB, a free professional standard PCB design software tool](#)
- [PCIe Medical LAN Card](#)
- [Sponsored by OKW: Ergonomic sloping front aluminium enclosures](#)
- [Digital to analogue converters](#)
- [COM Express small form factor module based on latest Intel Core i7 processor](#)

Related Events

[EMCUK](#)