

Faster, cheaper and more portable analysis of blood, food and disease

Plasmore is a new molecular recognition technology that uses the latest advances in nanotechnology science to potentially revolutionise standard biosensing techniques, making them cheaper, faster, more comprehensive and – not least important – portable. Biosensing is crucial to a whole host of important fields such as blood analysis, diagnosis of diseases, drug screening, environmental security, homeland security, and food safety. The advanced technology behind Plasmore was first conceived in the laboratories of the European Commission's in-house science service, the Joint Research Centre (JRC), and later developed in partnership with scientists at the University of Pavia, Italy.



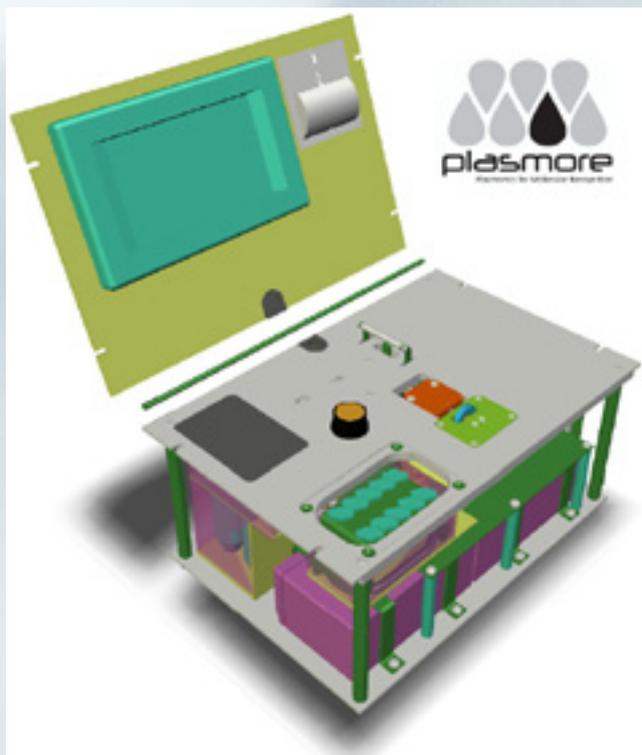
Joint Research Centre (JRC)

– the European Commission's in-house science service

The essential breakthrough is that from now on a patented nanotechnology process can enable the fabrication of nanostructured biochips that are affordable, multiplexed and portable. These biosensors are disposable and engineered with a unique multiplexing surface for the detection of a wider range of complex biochemical components.

This is a useful complement to current methodologies which rely on laboratories with advanced equipment, which require more time and effort and do not always provide for simultaneous detection of several contaminants.

Conventional analytical systems available on the market are often bulky and expensive, making routine use by, for example, inspectors at our ports or in our hospitals or supermarkets very difficult. With this single advance, Plasmore makes on-the-spot analysis of blood or food samples possible. The nanofabrication process also enables low cost production.



Background

Plasmore stands for 'Plasmonics for Molecular Recognition' and is a spin-off company and product, created in 2009, by a former employee of the European Commission's Joint Research Centre. The company is licensed to use molecular recognition technology patented by the JRC's nano-biosciences laboratories and its partners to develop a new range of groundbreaking biosensors. The target market for this new portable product includes medical applications (fast blood analysis, diagnosis of diseases etc.), security, drug screening and basic research in proteomics and genomics.

Did you know?

After Lisalab and Osvision, Plasmore is the third spin-off company created by former JRC scientists.

Since the 1970's, methods for bioanalysis have steadily improved. There have been advances in automation, bar-code labelling, automatic washing and pipetting systems. Nano-biosciences such as the technologies used for Plasmore have the potential to transform analytical science, which in time can make a significant contribution to the world of testing and touch every aspect of our daily lives.