

Improving cancer diagnosis and treatment monitoring

July 17 2015, by Izabel Alfany

There is nothing very glamorous about cancer, but now a new EU-funded project – GLAM – aims to help make monitoring and diagnosis a bit less intrusive and unpleasant.

The [project](#) Glass-Laser Multiplexed Biosensor, GLAM for short, will use groundbreaking technology to develop a device that is a step towards truly personalized medicine. The photonic-based point-of-care device will help oncologists make better treatment decisions according to the patient's needs in a non-invasive manner for [cancer diagnosis](#).

'Most cancer biopsies must be analyzed in specialized laboratories, which involves high costs and long waiting periods, as they require specialised personnel and equipment,' says Izabel Alfany, project coordinator. 'There is therefore a real need and urgency to have new devices that provide diagnosis, prognosis, and data monitoring faster and with exceptional ultra-sensitivity,' says Francesc Mitjans research project director at Leitat Technological Centre.

Specifically, GLAM will design and develop a new diagnostic tool to detect biomarkers from biofluids obtained in a non-invasive manner, focusing on urine and genitourinary cancers. The project will develop an integrated device based on novel label-free photonic biosensors with ultra-sensitivity, simplicity of use, portability, multiplexing and low cost.

Elena Martínez, senior researcher at IBEC says: 'The [device](#) will make use of the unprecedented sensitivity that can be achieved using laser

micro-ring resonators – devices using the same principle as a whispering gallery, but with light instead of sound.'

Lastly, the unique GLAM technology will have the potential to be used with other types of biofluids, opening the way to the diagnosis and monitoring of other kinds of [cancer](#) and many more diseases.

More information: For more information, see glam-project.eu

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