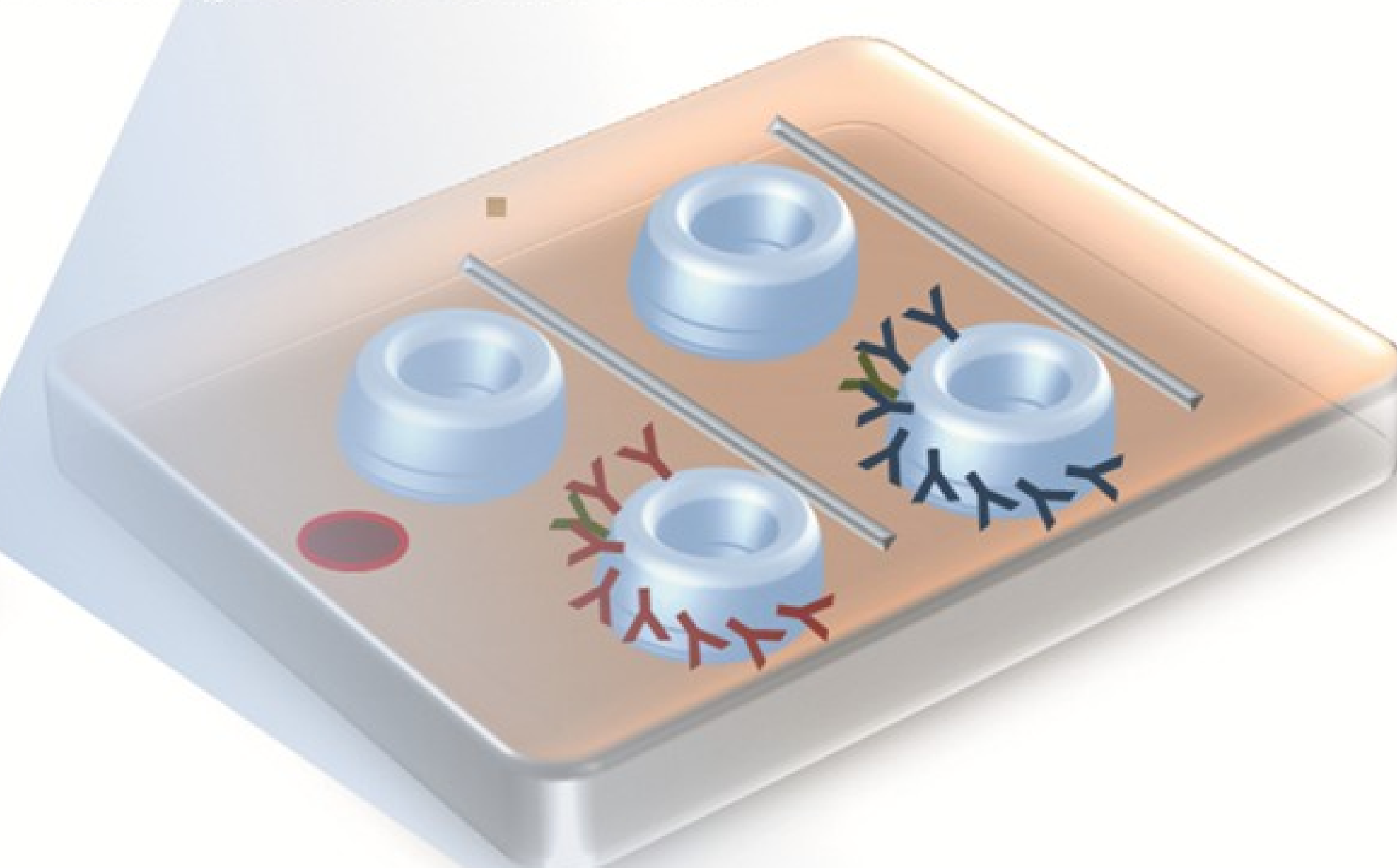


Glass-Laser Multiplexed Biosensor (GLAM) project is developing a device to:

monitor and diagnose genitourinary cancers

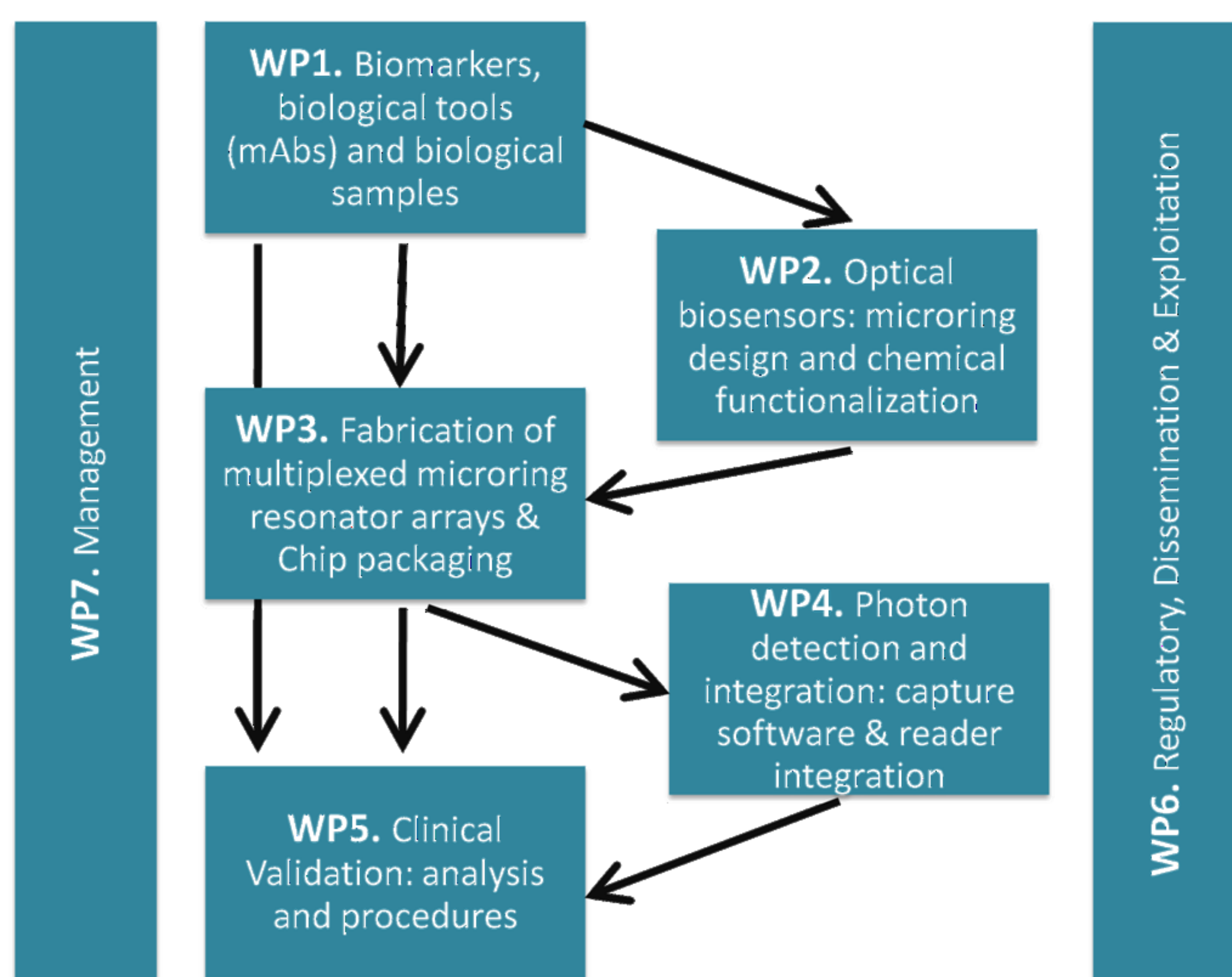
The objective of GLAM is to develop a new diagnostic tool to detect biomarkers from biofluids, obtained in a “non invasive” manner, specifically in urine and focusing on genitourinary cancers, enabling oncologists to take better treatment decisions.

To this end, GLAM project will develop an integrated device based on label-free photonic biosensors with ultra-sensitivity, simplicity of use, portability, multiplexing and low cost by simply applying a drop of urine and reading 10 biomarker levels.

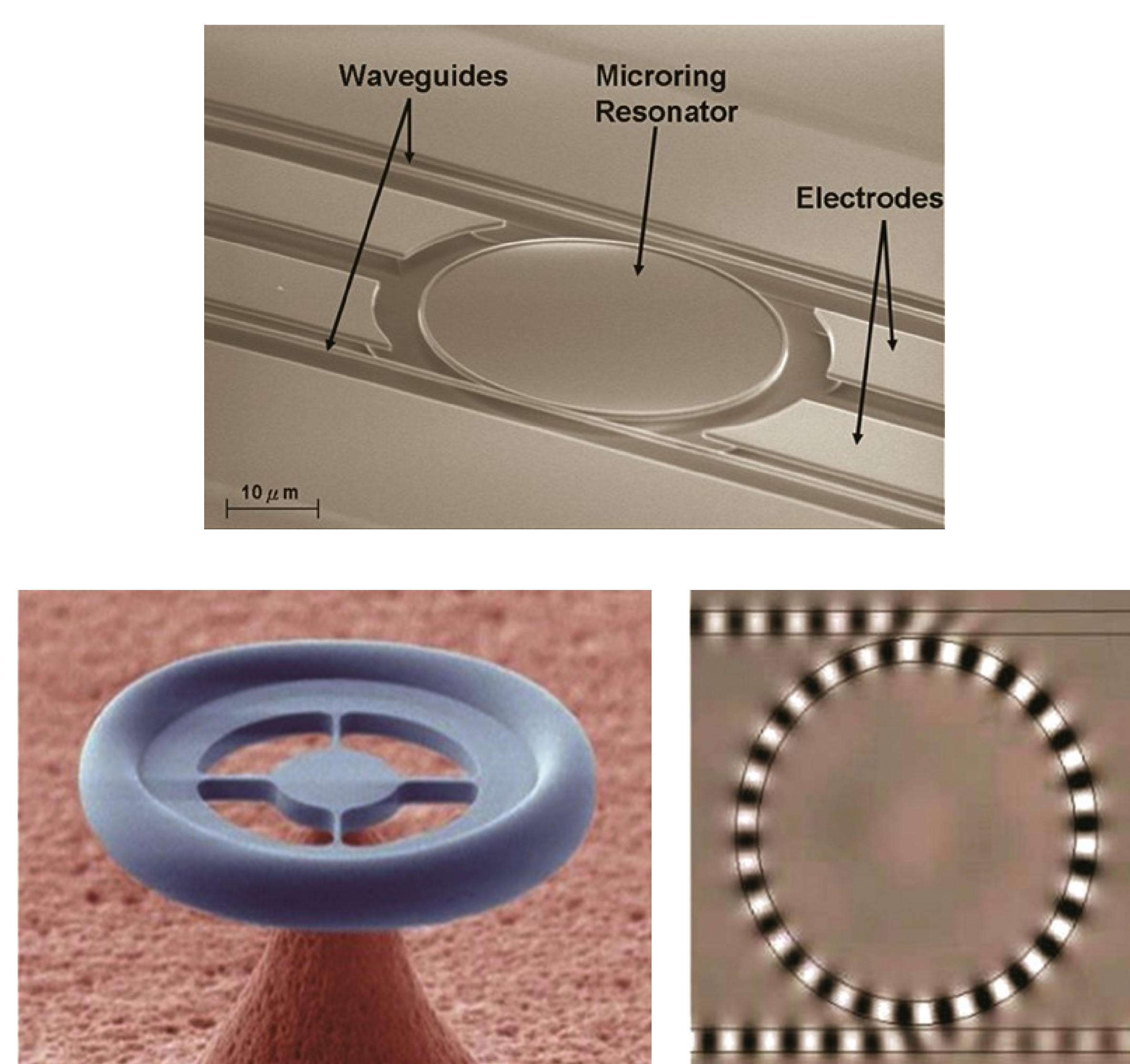


- To develop a novel photonic biosensors based on microring lasers functionalized with biomarker-detection antibodies. Label-free, ultra-sensitive photonic detection system will allow physicians to monitor soluble key biomarkers without labeling, washing, or amplification steps.
- To set up a tuned multiplexed platform to allow the detection of up to 10 different biomarkers that will enable and guide clinical personalized treatment decisions from just a single small biological sample.
- To integrate all the components in a small, easy-to-use and single-step diagnostic device to be used in point-of-care settings.
- To experimentally validate the final biosensor with preclinical and clinical samples.

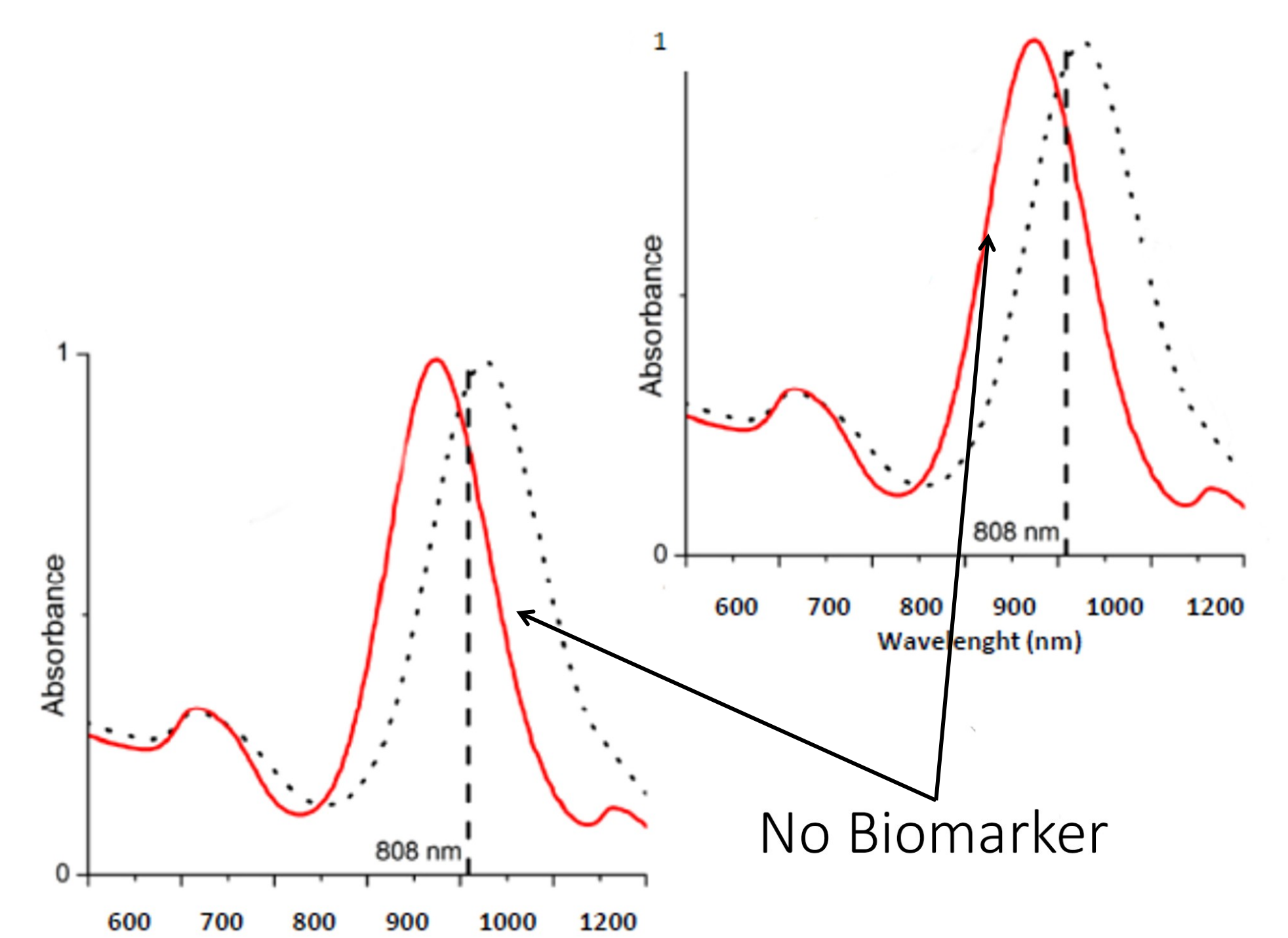
Project organization



Photonic microring



Biomarker read out



Brief

The GLAM project is running for 12 months and 36 months left to complete. Currently, all the building blocks for the device are being generated from monoclonal antibodies up to microelectronics and microrings according to schedule to finally deliver a cutting edge technology platform. GLAM unique technology will make the device also usable with other biofluids and might also be used to help physicians with other biomarker driven diagnostics.



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