

7th International Conference on

Proteomics & Bioinformatics

October 24-26, 2016 Rome, Italy

Sensitive, selective and accurate response of plasmonic bead platforms in high-throughput biomarker screening

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A prompt, sensitive and accurate response of analytical techniques to resolve health issues such as low limit identification in a special biological environment (that is, complex mixtures of proteins) remains being a key aspect in modern proteomic. Recently, this quest for improved and highly sensitive detection methodologies has led to the development of alternative approaches as optically encoded nanosystems which include local enhancements of Raman scattering signals of molecules in close proximity to metallic nanostructures. Their outstanding performance envisages them as robust and versatile support to developing analytical strategies for high-throughput biomarker screening in complex matrices. This presentation will show the specificity, sensitivity and selectivity of the method.

Biography

Nekane Guarrotxena has obtained her PhD from the University of Complutense, Spain and Post-doctorate at the Ecole Nationale Supérieure d'Arts et Métiers (ENSAM), France and the University of Science II, France. She was Visiting Professor in the Department of Chemistry, Biochemistry and Materials at the University of California, Santa Barbara, USA and the CaSTL at the University of California, USA. She is currently a Research Scientist at the Institute of Polymer Science and Technology (ICTP), CSIC, Spain. Her research interest focuses on the synthesis and assembly of hybrid nanomaterials, nanoplasmonics and their uses in nanobiotechnology applications (bioimaging, biosensing, drug delivery and therapy).

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