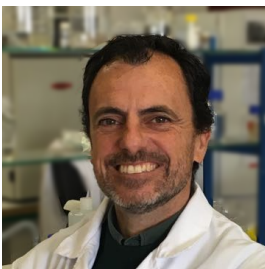


SEMINARIO IMPARTIDO POR PEDRO VIANA BAPTISTA

“Of light and Gold Nanoparticles – from conceptual molecular detection to enhancement of therapeutic strategies”

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We have been using spherical **AuNPs** (10 to 30 nm) with a characteristic localized SPR band around 520 nm, for a range of applications from direct detection of biomolecules of use in diagnostics to more complex structures to modulate fluorescence signaling in their vicinity, to applications in cancer therapeutics.

First, I will discuss the molecular and structural details of a FRET-based two-component molecular beacon capable of in vitro molecular biosensing and currently being tuned towards the molecular discrimination of aberrant transcripts inside living cells.

Then I will discuss how efficient these AuNPs are for light-to-heat conversion. The higher photothermal conversion when compared to other sized and shaped AuNP derives from their absorption corresponds almost totally to their extinction. The use of these spherical AuNPs as photothermal therapy (PTT) agents capable to convert light into heat and increase the temperature of specific tissues, thus triggering the death of cancer cells or enhancing other therapeutic avenues.

**SALA DE CONFERENCIAS, EDIFICIO I+D+i, CAMPUS RIO
EBRO**

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<https://magiccellgene.wixsite.com/magiccellgene>; @MagicCellGene

