**Noble metal nanomaterials for food and medical biosensing – the bumpy road ahead!**

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**Abstract:**

Noble metal nanomaterials have been the champions of biosensing since decades. They supersede many transduction techniques in terms of synthetic procedure, tunability and outstanding optical, chemical and electrochemical properties. The talk aims to summarise some of the convenient, field-applicable sensing platforms for food contaminants and biomedical pathogens developed and being tested by the author using metal nanomaterials. Synthesis and sensor fabrication will also be discussed. Alongside some recent trends in literature will be highlighted for demonstrating the superior functionality of these nanoparticles. Despite of the enormous advantages, the several challenges faced in employing noble metal nanostructures will be presented. The aim will be to envision the future direction in nanosensing – visiting the possible strategies to solve issues regarding analytical range, shape/size/property consistency, specificity and technology translation.

**Biography of presenting author** (should not exceed 100 words)

Dr. Richa Sharma received her gold medal in B.Tech in Biotechnology and studied M.Tech in Industrial Biotechnology in India. She completed her PhD from Central Food Technological Research Institute, India on food bioanalysis. Her work components include bionanotechnology, aptamer-based, enzymatic and chemical sensing techniques for food contaminants using optical and electrochemical methods. She has to her credit 15 research publications and has edited a Springer-Nature book on food engineering. Dr. Sharma has been awarded the INSA Visiting Scientist Fellowship. She is presently working as Newton-Bhabha International Fellow in the University of Edinburgh, Scotland on biomedical sensing and therapy.

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