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# Biosynthesis of Nanoparticle by Curcumin using Raw Turmeric

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***Abstract:*** *Nanotechnology is a developing field in biotechnology. The synthesis of nanoparticles is an important step in the field of nanotechnology. Overcoming the limitations of traditional methods, a green scheme for synthesizing nanoparticles has emerged. Plants and microorganisms are mainly used for the green synthesis of metal nanoparticles. Some of the nanoparticles showed strong antimicrobial effects against different plant pathogens. Compared with microorganisms, the use of plants to synthesize nanoparticles is on the rise, and has advantages compared with microorganisms, because plants have a wide range of bio molecular variability which can act as blocking agents and reducing agent thereby increasing reduction rate and stability of synthetic nanoparticle. This paper focuses on the use of microbial and plant sources to synthesize nanoparticle and their application in agriculture.*

***Keywords:*** *Nanotechnology, Biosynthesis, Turmeric extract, Curcumin, Green synthesis, Pathogens.*

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## Introduction:

Nanotechnology is an emerging field in area of research, especially in Biotechnology. In nanotechnology the construction management and use of materials range in nano-meters. Nanotechnology refers to the science and technology and benefit from as reported earlier (Rediguieri, 2009).

Nanomaterials are of interest from a fundamental point of view because with new materials, come new properties, which result in new opportunities for technological and commercial development, and applications of nanoparticles have been proposed in areas as diverse as microelectronics, coatings and paints, and biotechnology. From these applications has come the development of nanopharmaceuticals, nanosensors, nanoswitches, and nanodelivery systems (Kanaparthy and Kanaparthy, 2011).

It is commonly attributed for the technology of which matter is controlled in nanoscale materials at nanometre dimension ($10^{-12}$ nm). In the field of herbal medicine and