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Synthesis and characterization of nano-micellar formulation of polyphenolic fraction

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Speaker/Student Image:

Abstract (Limit 600 Words):

Janus dendrimers (JDs) has attracted a lot of attention thanks to their totally different structures and properties to the standard bilateral forms. The broken symmetry of JDs offers the chance to make advanced self-assembled materials, and presents new sets of properties that area unit presently unthinkable for consistent or symmetrical dendrimers. Thanks to their distinctive options, JDs have a promising future in pharmaceutical and medicine fields, as seen from the recent interest in their application in conjugating multiple medications and targeting moieties, forming supramolecular hydrogels, enabling micellar delivery systems, and making ready nano-vesicles, referred to as dendrimersomes, for drug encapsulation. The current paper is that the 1st review, with a stress on varied rising applications of JDs, within the drug delivery and medicine field according up to now. Additionally, the paper describes totally different artificial strategies for manufacturing JDs which will guide the look of latest biocompatible forms with medical specialty activities, which have the potential to be nano drug delivery vehicles. Moreover, future studies to optimize the applications of JDs in drug delivery sciences and medicine field to understand their potential to treat varied malady conditions area unit known and highlighted. Overall, this review identifies this standing of JDs in terms of their synthesis and applications, yet because the future analysis for his or her translation into macromolecules for clinical applications to unravel health issues. It highlights the longer term combined efforts required to be taken by dendrimer chemists, formulation soul and microbiologists to develop novel antibacterials and nanomedicines from JDs. The formation of micelles in a very solvent that's selective for one amongst the blocks is one amongst the foremost vital and helpful properties of block copolymers. we have a tendency to had synthesized copolymers of polythene glycol and varied dimethyl esters, that self-assemble into nano micellar aggregates in liquid media. Within the gift work, we've used these nano micelles for the encapsulation of carbofuran, [2,3–dihydro-2,2-dimethylbenzofuran-7-yl methylcarbamate], a general insecticide-nematicide, for the event of controlled unharness formulation.

Importance of Research (Limit 200 words):

Nanoscience is the study of the properties of matter at the nanoscale; in particular, it focuses on the unique, size-dependent properties of solid-state materials. In other words, nanotechnology is the ability to manipulate a single nanoscale object. So essentially, nanoscience is studying nanomaterials and their properties and nanotechnology is using those materials and properties to create something new or different. Nanoscience and nanotechnology have the potential to reshape the world around us. Nanotechnologies is being used in a range of energy areas to improve the efficiency and cost-effectiveness of solar panels, create new kinds of batteries, improve the efficiency of fuel production using better catalysis, and create better lighting systems. A strand of human DNA is 2.5 nanometers in diameter. There are 25,400,000 nanometers in one inch. A human hair is approximately 80,000-100,000 nanometers wide. A single gold atom is about a third of a nanometer in diameter.

Biography (Limit 200 words):

Dr. Yasin Celikok joined the faculty of The University of Memphis as an Assistant Professor in the Department of Health and Sport Sciences in 2004, having held prior positions at Duke University

Medical Center and Wake Forest University. He holds the rank of Professor and serves as the Dean of the College of Health Sciences & R. Brad Martin Student Wellness Center. He also serves as the Director of the Cardiorespiratory/ Metabolic Laboratory and the Center for Nutraceutical and Dietary Supplement Research. He maintains an active research agenda, having received external funding as principal investigator for close to 60 research projects

Institute Information (Limit 200 words):

Bezmialem Vakıf University, originating from the roots of Gureba-i Müslimin, the first modern hospital of the Ottoman Empire that was founded in 1845 by Bezmiâlem Mother Sultana, was transformed into a university in 2010. Bezmialem is one of the first thematic research universities in Health and Life Sciences in Turkey and also a non-profit foundation university which aims to make progress in education, research and health care. It provides education to about 3,500 students and clinical services to 8,000 patients daily with its two main hospitals and three outpatient clinics on both continents of Istanbul. The university aspires to keep alive a heritage that is over 175-years old. It aims to be a reference institution on a worldwide level with its four faculties: Medicine, Dentistry and Physiotherapy.

Institute / University / Lab Photograph:

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