# CD Bioparticles Announces New PLGA-Based Drug Delivery Systems for In Vitro and In Vivo Applications

*CD Bioparticles has recently launched its new line of PLGA-based drug delivery systems for in vitro and in vivo applications.*

NEW YORK, UNITED STATES, June 15, 2023 /EINPresswire.com/ -- With years of experience in the pharmaceutical and life science sectors, CD Bioparticles has recently launched its new line of PLGA-based drug delivery systems for in vitro and in vivo applications, including biocompatible and biodegradable PLGA nanoparticles with different surface modifications (e.g., COOH groups, methoxy PEG, and PEG-azide).

In recent years, the development of nanotechnology has had a tremendous impact on the development of novel nano-drug delivery systems. Various organic or inorganic materials have been used to prepare nano-drug delivery systems for safe and effective cancer therapy. PLGA-based drug delivery systems have attracted great interest because they can transport different types of drugs, such as hydrophilic or hydrophobic small or large molecules, and protect them from degradation and uncontrolled release. These drug delivery systems can enhance the interaction with biological materials and conjugate to specific target molecules to reach specific tissues or cells by modifying their surface properties. In addition to showing great promise in image-guided cancer therapy, PLGA-based drug delivery systems are widely used for other therapeutic applications such as vaccination or treatment of neurological disorders, inflammation and other diseases.

CD Bioparticles now offers customers a range of PLGA nanoparticles with excellent biocompatibility and biodegradability, including Streptavidin Coated PLGA Nanoparticles, Functionalized PLGA Nanoparticles, and Functionalized Fluorescent Magnetic PLGA Nanoparticles. These monolayer PLGA nanoparticles form nanostructures with a hydrophobic core encapsulated within a hydrophilic shell, and magnetic nanoparticles and dye molecules can be encapsulated within the hydrophobic core.

In addition, CD Bioparticles supplies PLGA nanoparticles with various surface modifications, including COOH groups, methoxy-PEG, and PEG-azide, which can be used for EDC/NHS-based bioconjugation, in vivo blood half-life enhancement, and covalent binding of biomolecules, respectively. CD Bioparticles also provides PLGA nanoparticles covalently linked to streptavidin proteins on the surface for a variety of applications, such as dual-labeled fluorescent and

magnetic nanoparticles for in vivo targeting.

For example, DiagPoly™ Streptavidin Coated Fluorescent Magnetic PLGA Nanoparticles, DiO, 120 nm (Cat.No. CDPLN-01) are labeled with DiO as a fluorescent dye, and form nanostructures with a hydrophobic core wrapped in a hydrophilic shell that can be pulled down by magnetic forces for applications in dual fluorescence, MRI imaging, and delivery of proteins and small molecules. These Streptavidin Coated PLGA Nanoparticles are made from FDA-approved PLGA polymers, and allow for easy loading of antibodies, proteins and small molecules via streptavidin-biotin interaction.

CD-Bioparticles' PLGA Nanoparticles are versatile and effective tools for the delivery of therapeutic agents that can be tailored to the specific needs of each application. If you have any further questions or would like to know more about these nanoparticles, please visit the CD Bioparticles website at https://www.cd-bioparticles.com/products/plga-based-drug-delivery-system-for-in-vitro-and-in-vivo-applications.html.

About CD Bioparticles

CD Bioparticles is a leading manufacturer and supplier of various nanoparticles, microparticles, and coatings for R&D as well as commercialization across different application areas, including in vitro diagnostics, biochemistry, cellular analysis, cell separation, and immunoassay. The company also offers various custom services, including chemical surface-functionalization, fluorescent modification, antibody immobilization, as well as nucleic acid and oligo conjugation to meet client specifications.

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