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Mewa Singh

Meda Biotech LLC, USA

Hybrid-Nanoengineering™: A new platform for nanomedicine

Nanomedicine, a fusion of nanotechnology and medicine, is an emerging technology ideally suited to the targeted therapies. Nanoparticles overcome the low selectivity of anti-cancer drugs toward the tumor as compared to normal tissue and hence result-in less severe side-effects. Our new technology, Hybrid-Nanoengineering™, uses a new molecule (MR007) in the creation of nanoparticles that not only helps in nanonizing the medicine but also provides synergy to the medicine. The simplified manufacturing process will result in reduced manufacturing costs. Treatment is made more convenient because hybrid nano-medicines can be produced in oral, injectable or transdermal formulations. The manufacturing process uses no protein, oil or detergents. The particle size is below 180 nm with a narrow distribution of size. Importantly, these properties confer great stability of the structure. The formulation does not aggregate in plasma and is stable over a wide range of pH. The final hybrid formulation is stable for at least 18 months as a powder. More than 117 drugs, including paclitaxel, docetaxel, tamoxifen, doxorubicin prednisone, and artemisinin, have been nanonized in water soluble formulations. Preclinical studies on cell cultures of tumors show promising results. Our Hybrid-Nanoengineering™ platform enables the design and development of hybrid nanopharmaceuticals that combine efficacy with tolerability, giving patients hope for both extended overall survival and improved quality of life. I would discuss this new discovery of Hybrid-Nanoengineering™ which targets drug delivery, synergistic and potentiating effects, and barriers of drug delivery and advanced drug delivery systems.

Biography

Mewa Singh heads the Research and Product Development at Meda Biotech LLC., with over 24 years of experience in the field of biopharmaceuticals. He has successfully launched products for diagnostics, vaccines, nutraceuticals and nanomedicines. He has applied five patents and is the Founder of Meda Biotech LLC and Nano Biotech (P) Ltd. He has completed MS in Biochemistry, MPhil in Biochemistry, Microbiology and Immunology and PhD in Microbiology and Immunology. His discovery of Hybrid-Nanoengineering™ could have real significant therapeutic value for patients. Since 2002, his company Meda Biotech has been working to commercialize a technology that could make the treatment of cancer, pain and inflammation, more effective and less harmful to patients.

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