Nanotechnology for drug delivery:My journey in Pharmaceuticals Nanotechnology

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In my presentation, "Nanotechnology for Drug Delivery: My Journey in Pharmaceuticals Nanotechnology," I will delve into my research experiences in Graz, Austria, where I explored the exciting intersection of pharmaceuticals and nanotechnology. This field presents a transformative platform for drug therapy, particularly through nanosystems that can effectively overcome traditional limitations in drug delivery. Among these, lipid nanoparticles have emerged as one of the most promising systems, demonstrating significant potential for enhancing the bioavailability and targeting of therapeutics. Drugs may be located within the nanocarrier layers or distributed across the nanocarrier matrix. Compared to typical medication therapies, nanocarriers have a number of advantages because it is simpler to control the size, charge, surface characteristics, and targeting moieties of these particles to control uptake, biodistribution, targeting, and elimination.

I will discuss how my practical research, collaborations with leading experts, and exposure to cutting-edge methodologies shaped my understanding of this dynamic area. By reflecting on both the successes and challenges faced during my journey, I aim to provide insights into how these experiences have influenced my perspective on the future evolution of drug delivery systems. Additionally, I will highlight the importance of interdisciplinary approaches in advancing this field, drawing connections between my findings and current trends in pharmaceutical development. Ultimately, this investigation underscores the revolutionary impact of nanotechnology in shaping the next generation of medical treatments, paving the way for more effective and personalized therapies.

Keywords:Nanotechnology,drug delivery system,bioavailability,nanosystems.

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