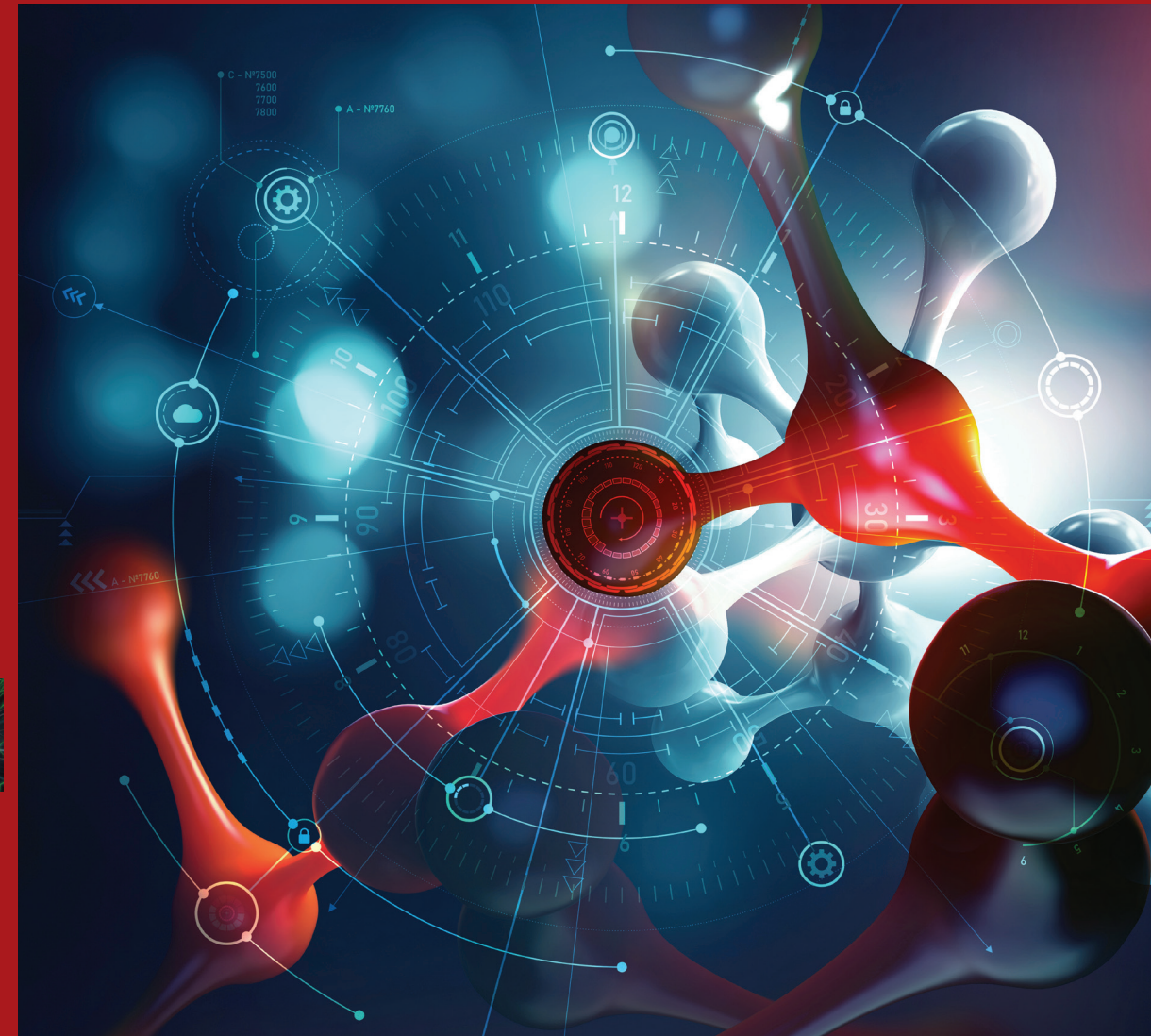
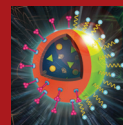


# PIONEERING DISCOVERIES IN NANOTECHNOLOGY FOR HEALTH AND WELLBEING

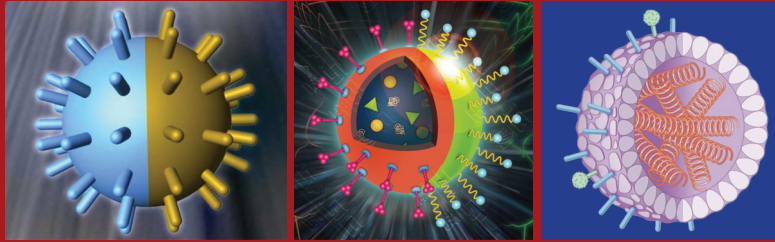


EDITED BY DONGLU SHI • MARTIN L YARMUSH

PIONEERING DISCOVERIES IN NANOTECHNOLOGY  
FOR HEALTH AND WELLBEING



DONGLU SHI  
MARTIN L YARMUSH



Over the past decade, nanotechnology has revolutionized health and wellbeing, offering transformative solutions to challenges in medicine, biology, and environmental health. Leveraging the unique properties of nanoscale materials, researchers have advanced precision medicine, regenerative therapies, advanced diagnostics, and sustainable healthcare systems. This book celebrates 15 years of Nano LIFE by compiling 16 groundbreaking articles that exemplify the journal's role in bridging nanotechnology and life sciences. The volume explores significant achievements in nanomedicine, such as multifunctional nanoparticles for targeted therapeutics and diagnostics, which have advanced cancer treatment, cardiovascular health, and neurodegenerative disease management. It also highlights the role of nanostructured biomaterials and electrospinning techniques in revolutionizing tissue engineering and regenerative medicine. Further, the book examines the impact of nanotechnology during global health crises like COVID-19, showcasing nanosensor-based diagnostics, accelerated vaccine development, and adaptive drug delivery systems. Fundamental research insights, including the biophysical properties of cancer cell surfaces and their therapeutic potential, are also discussed. This collection underscores the resilience and ingenuity of nanotechnology research, reflecting on its profound impact over the past 15 years and its potential to redefine the future of science and healthcare. An invaluable resource, it serves researchers, clinicians, and innovators aiming to harness nanotechnology for global health and wellbeing.

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