

## AI in Medicine

Future of Healthcare by AI



Name	Muthiah (Mano) Manoharan
Country	USA
Official Title	Senior Vice President, Innovation Chemistry & Alnylam Distinguished Scientist
Department	Drug Innovation
Institute	Alnylam Pharmaceuticals
Telephone / Fax	
E-Mail	mmanoharan@alnylam.com
Mailing Address	

### Education Background

Post-Doc. in Bioorganic Chemistry, Yale University  
Ph.D in Organic Chemistry, University of North Carolina at Chapel Hill  
B.Sc., M.Sc in Chemistry, The American College

### Professional Career

Dr. Muthiah (Mano) Manoharan serves as a Senior Vice President of Drug Innovation, a Scientific Advisory Board Member, and a Distinguished Research Scientist at Alnylam Pharmaceuticals, Cambridge, Massachusetts, USA. In 2003, he was the first chemist hired at Alnylam and built the Drug Discovery team at Alnylam. He and his team pioneered the discovery and development of the chemical modifications that make RNA interference-based human therapeutics possible. This work led to ONPATPRO (patisiran), the first RNAi therapeutic approved by FDA in 2018 for treating TTR amyloidosis mediated polyneuropathy. Dr. Manoharan has had a distinguished career as a world-leading chemist in the areas of oligonucleotide chemical modifications, conjugation chemistry, and delivery platforms (lipid nanoparticles, polymer conjugates, and complex-forming strategies). Dr. Manoharan and his research group designed, synthesized and demonstrated for the first time the human therapeutic applications of GalNAc-conjugated oligonucleotides at Alnylam, a platform that has revolutionized the RNA therapeutics field with several compounds presently in the advanced clinical trials. The very first GalNAc-siRNA conjugate among them, GIVLAARI (givosiran), for the treatment of acute hepatic porphyria (AHP) has been approved by FDA very recently (November 2019). He is an author of more than 215 publications (nearly 44,500 Google Scholar citations with an h-index of 97 and an i10-index of 375) and over 400 abstracts, as well as an inventor of over 240 issued U.S. patents. Prior to Alnylam, Dr. Manoharan worked at Ionis (formerly Isis) Pharmaceuticals (1990-2003; Carbohydrate modifications like 2'-O-MOE and Conjugates) and LifeCodes Corporation (1988-1990) in the field of antisense oligonucleotide therapeutics.

## AI in Medicine

Future of Healthcare by AI



Speech Title

Abstract( 200 words) :