

Avidity Biosciences' Arthur A. Levin Publishes Review of Therapeutic Approaches of Targeting RNA in the New England Journal of Medicine

LA JOLLA, CA — January 3, 2019 – Arthur A. Levin, Ph.D, executive vice president of research and development at Avidity Biosciences LLC, a biotechnology company advancing Antibody- Oligonucleotide Conjugates (AOCs) as a new class of precision medicines, today published a review titled, “Treating Disease at the RNA Level with Oligonucleotides” in the January 3, 2018, issue of the [New England Journal of Medicine](#)[1].

“Although the potential of modulating RNA function to treat diseases and disorders has been long recognized, decades of research have been required to realize the promise of oligonucleotide-based therapeutics,” said Dr. Levin. “With these advances in hand, and multiple oligonucleotide therapeutics now marketed and more advancing toward FDA approval, this is an important time to assess the landscape and how we can realize the full promise of this therapeutic class.”

In the review, Dr. Levin discusses multiple therapeutic approaches with distinct methods of targeting RNA to treat human health conditions such as hemophilia, amyloidosis, hemostasis, and hyperlipidemias. He evaluates the promise of four therapeutic approaches that have shown distinct advances in recent years: splicing to induce changes in function, exon skipping in Duchene’s muscular dystrophy, exon inclusion in spinal muscular atrophy, and cleavage-based mechanisms for the destruction of mRNA. Dr. Levin discusses in depth the therapeutic advantages, as well as challenges in delivery and safety, for oligonucleotide therapeutic agents. He describes how maturing technologies can help overcome these challenges and create new technologies and methods to advance the field.

Dr. Levin has decades of experience in the field of nucleic acid-based therapeutics and is well respected in the field. Prior to his role at Avidity Biosciences, he held senior drug development roles at miRagen Therapeutics, Ionis Pharmaceuticals and Santaris Pharma. He has played key roles in the development of numerous of oligonucleotides including the first approved antisense NDAs, and the first microRNA-targeted therapeutic in clinical trials. He has a combined three decades of experience in all aspects of drug development from discovery through drug registration, both in large pharma and smaller biotech companies. Dr. Levin has published over 60 scientific articles and several of the most cited reviews in the field. He served as a director of the Oligonucleotide Therapeutics Society and holds several additional scientific organization affiliations and honors. He received a doctorate in toxicology from the University of Rochester and a bachelor’s degree in biology from Muhlenberg College.

About Avidity Biosciences

Avidity Biosciences is a privately held biotech company pioneering Antibody Oligonucleotide Conjugates (AOC™). AOCs combine the tissue selectivity of monoclonal antibodies and the precision of oligonucleotide-based therapeutics to overcome barriers to the delivery of oligonucleotides and target genetic drivers of disease. Avidity is advancing a pipeline of therapeutic programs focused on rare muscle disorders and other serious diseases. Avidity has raised \$30 million in venture financing from a top-tier group of sophisticated healthcare investors. More information about Avidity can be found on the company’s website at www.aviditybiosciences.com.

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