
Asia 3 Roundtable on Nucleic Acids 2024

Kyeong Eun Jung, EVP

Department of Chemistry,
Oligo R&D Head, SFC Co. Ltd.
Cheongju, 28122, Korea.
Tel: +82-10-9408-2034
Email: kejung@stcbio.co.kr

2024- Present	Executive vice president, SFC. Co. Ltd. in Korea
2001-2023	Senior vice president, ST Pharm. Co. Ltd. in Korea
1994-2001	Senior Researcher, Dongbu Research Institute
1992-1993	Postdoc. University of California, Riverside
1992 Ph.D.	University of Iowa, USA
1984 BS	Busan National University

Research Interests:

Oligonucleotide Therapeutics, Oligonucleotide Process Study, GMP Oligonucleotide Production

Selected Publications:

1. DDIAS suppresses TRAIL-mediated apoptosis by inhibiting DISC formation and destabilizing caspase-8 in cancer cells. *Oncogene*. 2018 Mar;37(9):1251-1262.
2. Analysis and Purification of Synthetic Nucleic Acids Using HPLC. *Curr Protoc Nucleic Acid Chem*. 2015 Jun 3;61: 10.5.1-39
3. Transvascular delivery of small interfering RNA to the central nervous system. *Nature*, 2007, Jul 5;448(7149):39-43
4. Newly designed six-membered azasugar nucleotide-containing phosphorothioate oligonucleotides as potent human immunodeficiency virus type 1 inhibitors. *Antimicrob Agents Chemother.*, 2005 Oct;49(10):4110-20
5. RNA recognition by the 2'-structural isomer of DNA, *J. Chem. Soc. Chem. Commun.*, 1996, 1793
6. 2'-5' DNA containing guanine and cytosine forms stable duplexes. *J. Am. Chem. Soc.*, 1994, 116, 6059

Oligonucleotide Manufacturing Technology: the Present and the Future

Kyeong Eun Jung, Oligo R&D Head, SFC Co. Ltd., Cheongju, 28122 Korea

Abstract

Oligonucleotide therapeutics are now standing out as a powerful drug modality that treats a wide range of diseases. A total of 21 products have been approved by the FDA including 2 aptamers, 12 antisense oligonucleotides, 6 small interfering RNAs. The rising number of drugs and the cardiovascular applications pose a manufacturing challenge. The current method based on solid-phase synthesis works well but is limited by the scalability and sustainability. Accordingly, other approaches are being searched and developed. This talk will present the current technology and promising future technologies of oligonucleotide manufacturing.