EuroSciCon

June 21-22, 2018
Paris, France

EuroSciCon Conference on
Microbiology & Virology

M.SISSAOUI, Arch Clin Microbiol 2018 Voulume: 9
DOI: 10.4172/1989-8436-C3-011

ANTI-CANCER DRUG DESIGN

M.SISSAOUI
University of Biskra, Algeria

The emerging future of antisense oligonucleotides depends on rational modifications of its nucleotide repeating units. Currently the most prevalent design features that are crucial for continued antisense development are nuclease resistance, cellular uptake, hybridization properties, and disruption of RNA functions through terminating events.Very few structure-activity relationship (SAR) studies have been directed to these problems and these have typically used binding affinities and nuclease sensitivities as activity end points rather than in vitro or in vivo biological activities. Further SAR studies may be approached by sequence selection SARs which hold a certain uniform modification type constant (e.g. phosphorothioates) while varying the sequence of the oligonucleotide.The more traditional approach is to modify the oligonucleotide while keeping the sequence constant. This review is concerned with the latter approach and summarizes modifications of the phosphorus atom, pentofuranosyl (sugar) linker, pentofuranosyl ring and its 2'-substituents, and the heterocycles. The review covers the 1989-91 literature of various modified oligonucleotides designed and synthesized to enhance pharmacokinetic and pharmacodynamic properties of antisense oligonucleotides.

Keywords- oligonucleotides, nuclease, RNA, SAR, pentofuranosyl, hetercycles.

Biography

Mohammed Sissaoui has completed his Master's degree In Biochemistry & Molecular Biology at the age of 30 years from The University Of Biskra - Algeria. He is a Medical Laborotry Scientist At the Hospital Of Taoura Souk Ahras - Algeria, and has been serving as a Medical Laboratory Technologist at The Hemodialysis Clinic Souk Ahras - Algeria.

sissaoui_mohammed@yahoo.com