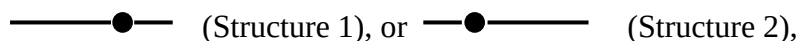


WHAT IS CLAIMED IS:

1. A multimeric oligonucleotide comprising subunits, wherein: each of the subunits independently comprises a single-stranded or double-stranded oligonucleotide; each of the subunits is joined to another subunit by a covalent linker; at least one subunit comprises at least one partial single-stranded oligonucleotide; wherein the multimeric oligonucleotide comprises:



wherein:

each  is a single-stranded oligonucleotide;

each  is a partial single-stranded oligonucleotide; and

each  is a covalent linker.

2. The multimeric oligonucleotide of claim 1, further comprising Structure 3:

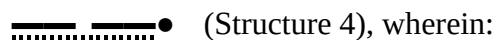


each  is independently a partial single-stranded oligonucleotide; and

 is a covalent linker.

3. The multimeric oligonucleotide of claim 1, wherein at least one subunit comprises

Structure 4:

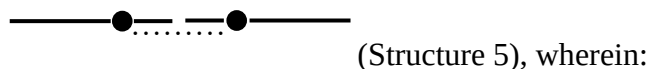


each  is a partial single-stranded oligonucleotide;

 is a covalent linker joining the partial single-stranded oligonucleotide and an adjoining oligonucleotide subunit; and

 is a complementary strand.

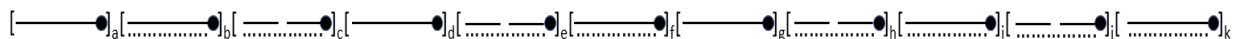
4. The multimeric oligonucleotide of claim 1, wherein the multimeric oligonucleotide comprises Structure 5:



each ● is a covalent linker joining the single-stranded oligonucleotide to the partial single-stranded oligonucleotide; and

..... is a complementary strand.

5. The multimeric oligonucleotide of claim 1, wherein the multimeric oligonucleotide comprises Structure 6:



(Structure 6)

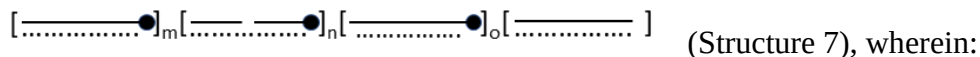
wherein:

each ● is a covalent linker;

each is a complementary strand; and

each of a, b, c, d, e, f, g, h, i, j and k is independently an integer greater than or equal to zero, with the proviso that at least one of c, e, h, and j is greater than or equal to 1.

6. The multimeric oligonucleotide of claim 1, wherein the multimeric oligonucleotide comprises Structure 7:

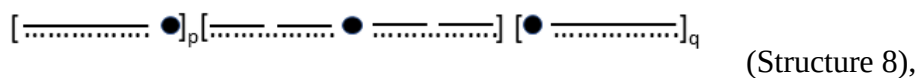


..... are each a complementary strand;

m and n are each independently an integer greater than or equal to 1; and

o is an integer greater than or equal to 0.

7. The multimeric oligonucleotide of claim 1, wherein the multimeric oligonucleotide comprises Structure 8

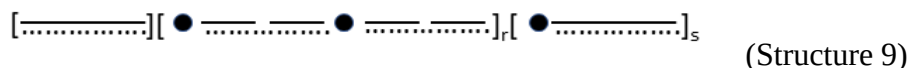


wherein:

..... are each a complementary strand; and

p and q are each independently an integer greater than or equal to zero.

8. The multimeric oligonucleotide of claim 1, wherein the multimeric oligonucleotide comprises Structure 9:



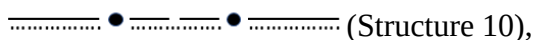
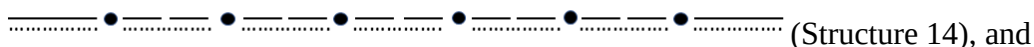
wherein:

..... are each a complementary strand;

r is an integer greater than or equal to 1; and

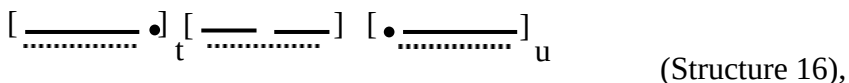
s is an integer greater than or equal to 0.

9 The multimeric oligonucleotide of claim 1, wherein the multimeric oligonucleotide comprises one of the following structures:



wherein each is a complementary strand.

10. The multimeric oligonucleotide of claim 1, wherein the multimeric oligonucleotide comprises Structure 16:



wherein each

each is a complementary strand; and

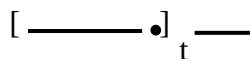
t and u are each independently an integer greater than or equal to 0 with the proviso that at least one of t and u are an integer greater than or equal to 1.

11. The multimeric oligonucleotide of any of claims 1-10, wherein each nucleic acid in the multimeric oligonucleotide is RNA, DNA, or an artificial or non-natural nucleic acid analog.
12. The multimeric oligonucleotide of any of claims 1-11, wherein at least one subunit is a single-stranded subunit.
13. The multimeric oligonucleotide of claim 12, wherein the at least one single-stranded subunit is an antisense oligonucleotide.
14. The multimeric oligonucleotide of any one of claims 1-13, wherein at least one covalent linker • is a cleavable covalent linker.
15. The multimeric oligonucleotide of claim 14, wherein the cleavable covalent linker comprises an acid cleavable bond, a reductant cleavable bond, a bio-cleavable bond, or an enzyme cleavable bond.
16. The multimeric oligonucleotide of any of claims 1-15, at least two subunits are joined by a covalent linker • between the 3' end of a first subunit and the 3' of a second subunit.
17. The multimeric oligonucleotide of any one of claims 1-16, wherein at least two subunits are joined by a covalent linker • between the 5' end of a first subunit and the 5' of a second subunit.
18. A method of synthesizing a multimeric oligonucleotide comprising Structure 16:



(Structure 16),

wherein each — is an single-stranded oligonucleotide, each — is a partial single-stranded oligonucleotide, each is a complementary strand; each • is a covalent linker joining adjacent oligonucleotides, and t and u are each independently an integer greater than or equal to 1; the method comprising annealing Structure 17



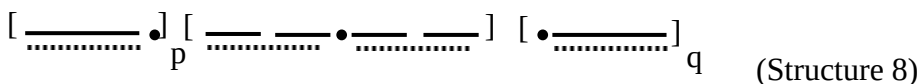
(Structure 17)

and Structure 18



with complementary strands , thereby forming Structure 16.

19. A method of synthesizing a multimeric oligonucleotide comprising Structure 8:



wherein each --- is a single-stranded oligonucleotide, each --- is a partial single-stranded oligonucleotide, each is a complementary strand; each • is a covalent linker joining adjacent oligonucleotides, and p and q are each independently an integer greater than or equal to 1;

the method comprising annealing Structure 19,



Structure 20,

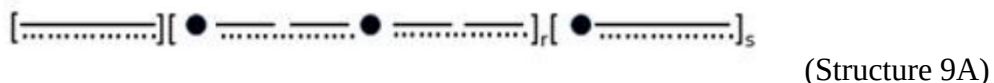


and one or more of Structure 21,



with complementary strands , thereby forming Structure 8.

20. A method of synthesizing a multimeric oligonucleotide comprising Structure 9A:



wherein each --- is a single-stranded oligonucleotide, each --- is a partial single-stranded oligonucleotide, each is a complementary strand; each • is a covalent linker joining adjacent oligonucleotides; and r and s are each independently an integer greater than or equal to 1; the method comprising annealing Structure 22



(Structure 22)

and Structure 23



(Structure 23)

and one or more of Structure 24



(Structure 24)

with complementary strands , thereby forming Structure 9A.

21. A method of synthesizing a multimeric oligonucleotide comprising Structure 9B:



(Structure 9B)

wherein each — is a single-stranded oligonucleotide; each — is a partial single-stranded oligonucleotide; each is a complementary strand; each • is a covalent linker joining adjacent oligonucleotides; and r is an integer greater than or equal to 1;

the method comprising annealing Structure 22,



(Structure 22)

and one or more of Structure 24



(Structure 24)

and a partial single-stranded oligonucleotide — with complementary strands , thereby forming Structure 9B.

22. A composition comprising the multimeric oligonucleotide of any of claims 1-17 and a pharmaceutically acceptable excipient.

23. Use of a composition of claim 22 for the manufacture of a medicament.