[0004a] In one aspect, the present disclosure refers to a composition comprising a population of oligonucleotides, wherein the oligonucleotides hybridize to a BCL2 polynucleotide gene product, wherein oligonucleotides of the population are composed of nucleoside molecules linked together through phosphate backbone linkages, wherein 60% to 75% of the phosphate backbone linkages are P-ethoxy backbone linkages and wherein 25% to 40% of the phosphate backbone linkages are phosphodiester backbone linkages, wherein the composition further comprises phospholipids and a surfactant.

[0004b] In another aspect, the present disclosure refers to an in vitro method for reducing the expression level of Bcl2 protein in a cell comprising contacting the cell with a composition as disclosed herein, wherein the oligonucleotides in the pharmaceutical composition comprise a sequence according to SEQ ID NO: 1.

[0004c] In another aspect, the present disclosure refers to a pharmaceutical composition comprising a composition as disclosed herein and a pharmaceutically acceptable carrier.

[0004d] In another aspect, the present disclosure refers to a use of a pharmaceutical composition as disclosed herein in a manufacture of a medicament for treating hyperplasia, cancer, autoimmune disease, or infectious disease, wherein a therapeutically effective amount of an oligonucleotide is to be delivered to a cell by contacting the cell with the pharmaceutical composition, wherein the oligonucleotides in the pharmaceutical composition comprise a sequence according to SEQ ID NO: 1.

[0004e] In another aspect, the present disclosure refers to a use of a pharmaceutical composition as disclosed herein in the manufacture of a medicament for treating a subject with a cancer, wherein oligonucleotides in the pharmaceutical composition comprise a sequence according to SEQ ID NO: 1.

WHAT IS CLAIMED IS:

1. A composition comprising a population of oligonucleotides, wherein the oligonucleotides hybridize to a *BCL2* polynucleotide gene product, wherein oligonucleotides of the population are composed of nucleoside molecules linked together through phosphate backbone linkages, wherein 60% to 75% of the phosphate backbone linkages are P-ethoxy backbone linkages and wherein 25% to 40% of the phosphate backbone linkages are phosphodiester backbone linkages, wherein the composition further comprises phospholipids and a surfactant.

2. The composition of claim 1, wherein oligonucleotides of the population comprise a sequence according to any one of SEQ ID NOs: 1-2.

3. The composition of claim 2, wherein oligonucleotides of the population comprise a sequence according to SEQ ID NO: 1.

4. The composition of claim 3, wherein the phosphate backbone linkages at least between nucleotides 5 and 6, between nucleotides 7 and 8, between nucleotides 9 and 10, between nucleotides 11 and 12, and between nucleotides 14 and 15 of the oligonucleotides of the population are phosphodiester backbone linkages, wherein the positions are relative to SEQ ID NO: 1.

5. The composition of claim 2, wherein oligonucleotides of the population comprise a sequence according to SEQ ID NO: 2.

6. The composition of claim 5, wherein the phosphate backbone linkages at least between nucleotides 5 and 6, between nucleotides 7 and 8, and between nucleotides 9 and 10 of the oligonucleotides of the population are phosphodiester backbone linkages, wherein the positions are relative to SEQ ID NO: 2.

7. The composition of claim 1, wherein the phosphodiester backbone linkages are distributed throughout each oligonucleotide.

8. The composition of claim 1, wherein the phosphodiester backbone linkages are not clustered within a portion of each oligonucleotide.

9. The composition of claim 1, wherein the population of oligonucleotides is heterogeneous as to the number of P-ethoxy backbone linkages and phosphodiester backbone linkages present in the oligonucleotides of the population.

10. The composition of claim 1, wherein the oligonucleotides of the population have a size ranging from 18 to 30 nucleotides.

11. The composition of claim 1, wherein the population of oligonucleotides comprises a single species of oligonucleotides.

12. The composition of claim 1, wherein the population of oligonucleotides comprises at least two species of oligonucleotides.

13. The composition of claim 1, wherein the population of oligonucleotides is heterogeneous as to the distribution of phosphodiester backbone linkages among the oligonucleotides of the population.

14. The composition of claim 1, wherein the oligonucleotides of the population inhibit the expression of Bcl2 protein.

15. The composition of claim 1, wherein the surfactant is polysorbate 20.

16. The composition of claim 1, wherein the oligonucleotides and phospholipids form an oligonucleotide–lipid complex.

17. The composition of claim 1, wherein the phospholipids are uncharged or have a neutral charge at physiologic pH.

18. The composition of claim 17, wherein the phospholipids are neutral phospholipids.

19. The composition of claim 18, wherein the neutral phospholipids are phosphatidylcholines.

20. The composition of claim 18, wherein the neutral phospholipids are dioleoylphosphatidyl choline.

21. The composition of claim 17, wherein the phospholipids are essentially free of cholesterol.

22. The composition of claim 17, wherein the phospholipids and oligonucleotides are present at a molar ratio of from 5:1 to 100:1.

23. The composition of claim 16, wherein the oligonucleotide–lipid complex is further defined as a population of liposomes.

24. The composition of claim 23, wherein at least 90% of the liposomes are less than 5 microns in diameter.

25. The composition of claim 23, wherein the population of oligonucleotides is incorporated in the population of liposomes.

26. The composition of claim 1, wherein the composition is lyophilized.

27. An in vitro method for reducing the expression level of Bcl2 protein in a cell comprising contacting the cell with a composition of claim 1, wherein the oligonucleotides in the pharmaceutical composition comprise a sequence according to SEQ ID NO: 1.

28. A pharmaceutical composition comprising a composition according to claim 1 and a pharmaceutically acceptable carrier.

29. The composition of claim 28, further comprising a chemotherapeutic agent.

30. Use of a pharmaceutical composition of claim 28 in a manufacture of a medicament for treating hyperplasia, cancer, autoimmune disease, or infectious disease, wherein a therapeutically effective amount of an oligonucleotide is to be delivered to a cell by contacting the cell with the pharmaceutical composition, wherein the oligonucleotides in the pharmaceutical composition comprise a sequence according to SEQ ID NO: 1.

31. Use of a pharmaceutical composition of claim 28 in the manufacture of a medicament for treating a subject with a cancer, wherein oligonucleotides in the pharmaceutical composition comprise a sequence according to SEQ ID NO: 1.

32. The use of claim 31, wherein the subject is a human.

33. The use of claim 31, wherein the cancer is a non-small cell lung cancer, pancreatic adenocarcinoma, breast cancer, prostate cancer, melanoma, colon cancer, leukemia, lymphoma, glioblastoma, osteosarcoma, oral cavity cancer, ovarian cancer, uterine

cancer, bone cancer, brain cancer, prostate cancer, kidney cancer, stomach cancer, esophageal cancer, rectal cancer, bladder cancer, testicular cancer, or liver cancer.

34. The use of claim 33, wherein the lymphoma is germinal center B-cell-like diffuse large B cell lymphoma.

35. The use of claim 33, wherein the lymphoma is activated B-cell-like subtype diffuse large B cell lymphoma.

36. The use of claim 33, wherein the lymphoma is mantle cell lymphoma.

37. The use of claim 33, wherein the lymphoma is Burkitt lymphoma.

38. The use of claim 33, wherein the leukemia is myeloid leukemia.

39. The use of claim 31, wherein the composition is to be administered subcutaneously, intravenously, or intraperitoneally.

40. The use of claim 31, further comprising that at least a second anticancer therapy is to be administered to the subject.

41. The use of claim 40, wherein the second anticancer therapy is a surgical therapy, chemotherapy, radiation therapy, cryotherapy, hormone therapy, immunotherapy, anti-viral therapy, immune suppression therapy, anti-bacterial therapy, anti-parasite therapy, anti-fungal therapy, or cytokine therapy.

42. The use of claim 31, wherein the composition reduces expression of Bcl2 protein in the patient.