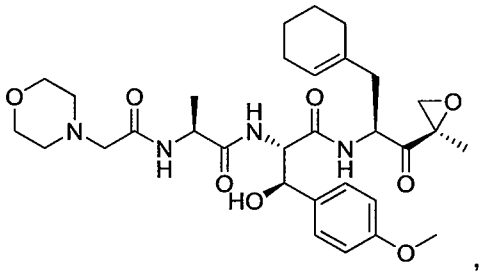
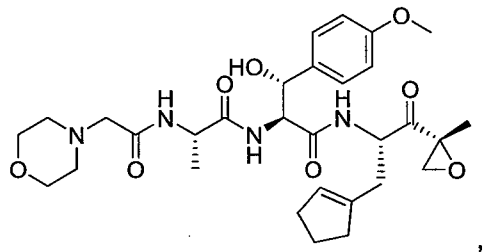
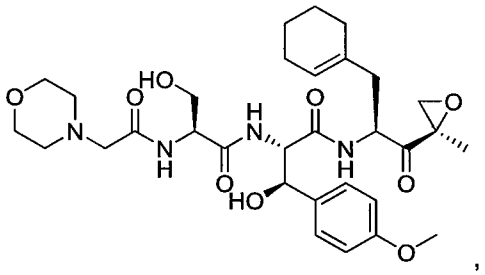
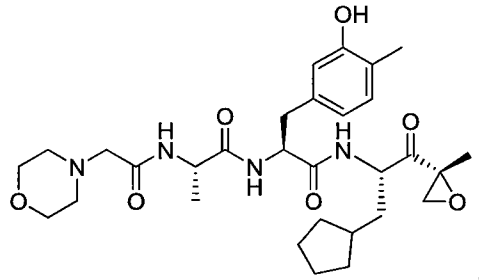
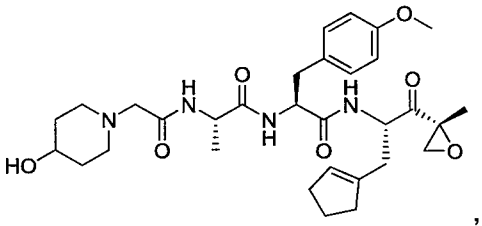
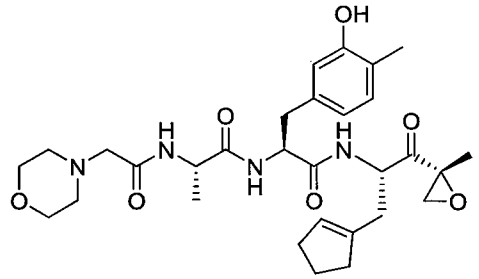
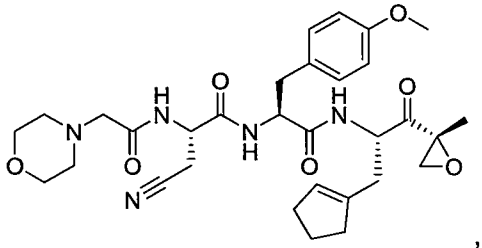
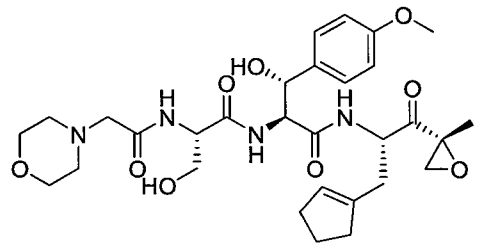
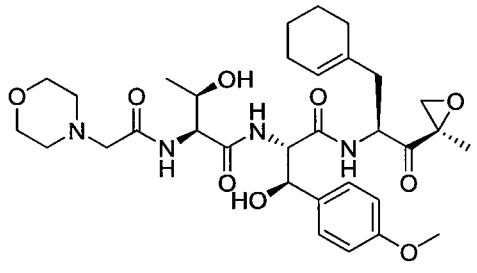

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, or a pharmaceutically acceptable salt thereof.

69. A pharmaceutical composition comprising the compound of any one of claims 1 to 68, or pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier or diluent.

70. A method of inhibiting the immunoproteasome of a cell comprising contacting the cell *in vitro* with a compound of any one of claims 1 to 68 or the composition of claim 69 in an effective amount to inhibit the immunoproteasome in the cell.

71. The method of claim 70, wherein the compound inhibits β5i (LMP7).

72. The method of claim 71, wherein the compound further inhibits one or both of LMP2 and MECL-1.

73. A therapeutically effective amount of the compound of any one of claims 1 to 68 or the composition of claim 69 for use in the treatment of an immune-related disease.

74. The use of a therapeutically effective amount of the compound of any one of claims 1 to 68 or the composition of claim 69 in the manufacture of a medicament for the treatment of an immune-related disease.

75. A therapeutically effective amount of the compound of any one of claims 1 to 68 or the composition of claim 69 for use in the treatment of inflammation, wherein the compound or the composition is to be administered to a subject in need thereof.

76. The use of a therapeutically effective amount of the compound of any one of claims 1 to 68 or the composition of claim 69 in the manufacture of a medicament for the treatment of inflammation.

77. A therapeutically effective amount of the compound of any one of claims 1 to 68 or the composition of claim 69 for use in the treatment of infection, wherein the compound or the composition is to be administered to a subject in need thereof.

78. The use of a therapeutically effective amount of the compound of any one of claims 1 to 68 or the composition of claim 69 in the manufacture of a medicament for the treatment of infection.

79. A therapeutically effective amount of the compound of any one of claims 1 to 68 or the composition of claim 69 for use in the treatment of a neurodegenerative disease associated with aberrant immunoproteasome activity.

80. The use of a therapeutically effective amount of the compound of any one of claims 1 to 68 or the composition of claim 69 in the manufacture of a medicament for the treatment of neurodegenerative disease associated with aberrant immunoproteasome activity.

81. The use of a compound of any one of claims 1 to 68 or the composition of claim 69 in the manufacture of a medicament able to inhibit the immunoproteasome of a cell for the treatment of an autoimmune disease wherein the autoimmune disease is psoriasis, dermatitis, systemic scleroderma, sclerosis, Crohn's disease, ulcerative colitis; respiratory distress syndrome, meningitis; encephalitis; uveitis; colitis; glomerulonephritis; eczema, asthma, chronic inflammation; atherosclerosis; leukocyte adhesion deficiency; rheumatoid arthritis; systemic lupus erythematosus (SLE); diabetes mellitus; multiple sclerosis; Reynaud's syndrome; autoimmune thyroiditis; allergic encephalomyelitis; Sjorgen's syndrome; juvenile onset diabetes; tuberculosis, sarcoidosis, polymyositis, granulomatosis and vasculitis; pernicious anemia (Addison's disease); diseases involving leukocyte diapedesis; central nervous system (CNS)