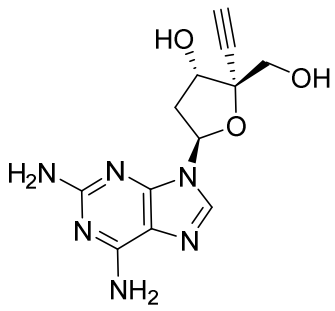
CLAIMS

1. Use of the compound: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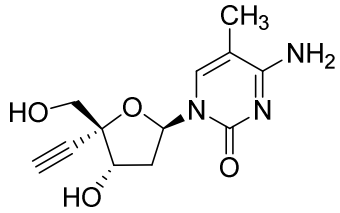
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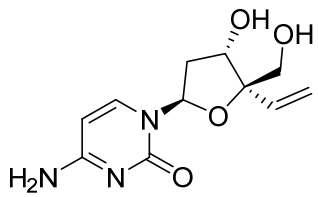
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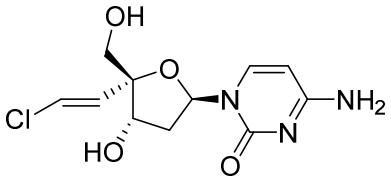
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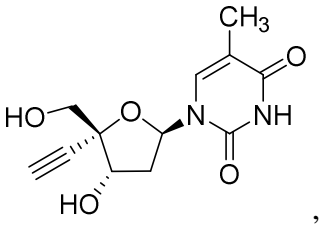
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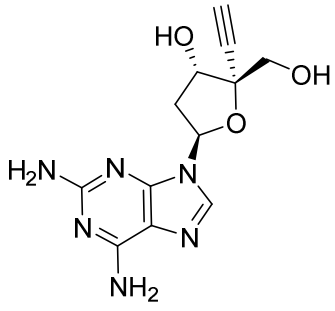
in the manufacture of a medicament for treating or preventing a disease, disorder, or condition caused by a pathophysiological retrotransposon-associated process in a subject in need thereof, and/or treating or preventing a symptom of the disease, disorder, or condition, with provisos that the disease, disorder, or condition is not (i) cancer; or (ii) an infectious disease.

2. Use of the compound: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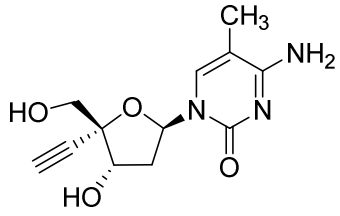
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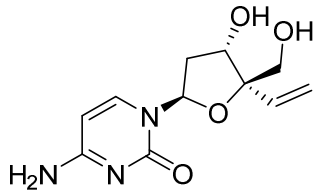
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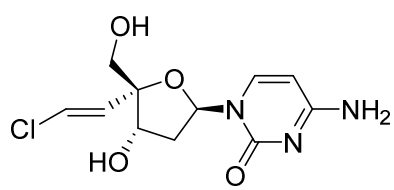
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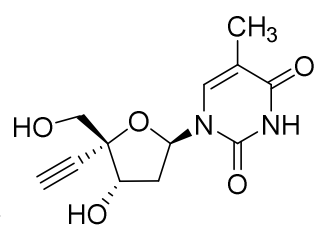
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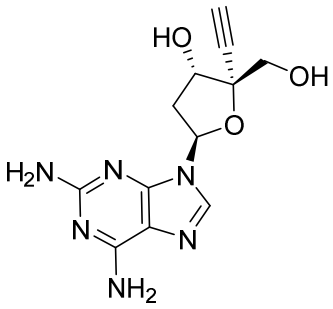
in the manufacture of a medicament for inhibiting a LINE-1 retrotransposition event that causes a disease, disorder, or condition in a subject in need thereof, with provisos that the disease, disorder, or condition is not (i) cancer; or (ii) an infectious disease.

3. Use of the compound:



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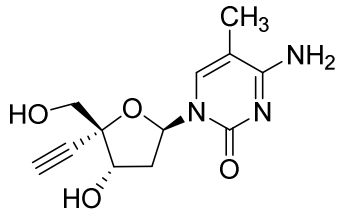

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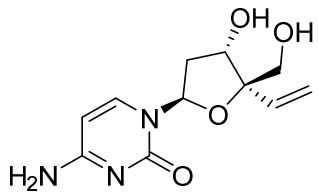

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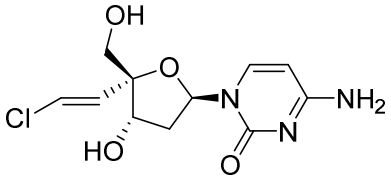

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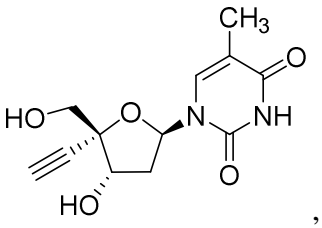

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in the manufacture of a medicament for treating a disease, condition, or disorder, wherein the disease, condition, or disorder is characterized as having an overexpression of retrotransposon RNA, retrotransposon reverse transcriptase, or retrotransposon DNA, with provisos that the disease, disorder, or condition is not (i) cancer; or (ii) an infectious disease.

4. The use of claim 1 for treating the disease, disorder, or condition in a subject.

5. The use of any one of claims 1-4, wherein the disease, disorder, or condition is a neurodegenerative disease.

6. The use of claim 5, wherein the neurodegenerative disease is Alzheimer's disease, amyotrophic lateral sclerosis, Parkinson's disease, dementia with Lewy Bodies, multi systems atrophy, Huntington's disease, frontotemporal lobar degeneration, mild cognitive impairment, corticobasal degeneration, progressive supra nuclear palsy, Rett Syndrome, peripheral degenerative disease, or Aicardi-Goutières syndrome.

7. The use of any one of claims 1-4, wherein the disease, disorder, or condition is an autoimmune disease.

8. The use of claim 7, wherein the autoimmune disease is lupus, rheumatoid arthritis, Sjogrens syndrome, or multiple sclerosis.

9. The use of any one of claims 1-4, wherein the disease, disorder, or condition is an age-associated disease.

10. The use of claim 9, wherein the age-associated disease is Alzheimer's disease, Parkinson's disease, atherosclerosis, osteoarthritis, osteoporosis, rheumatoid arthritis, macular degeneration, peripheral degenerative disease, or skin aging.

11. The use of any one of claims 1-4, wherein the disease, disorder, or condition is autism spectrum disorder (ADS), cardiovascular dysfunction, hearing loss, hematopoietic stem cell function, pulmonary fibrosis, schizophrenia, or vision loss.

12. The use of any one of claims 1-4, wherein the disease, disorder, or condition is progressive supra nuclear palsy.

13. The use of any one of claims 1-4, wherein the disease, disorder, or condition is amyotrophic lateral sclerosis.

14. The use of any one of claims 1-4, wherein the disease, disorder, or condition is Aicardi-Goutières syndrome.

15. The use of any one of claims 1-4, wherein the disease, disorder, or condition is ataxia-telangiectasia.

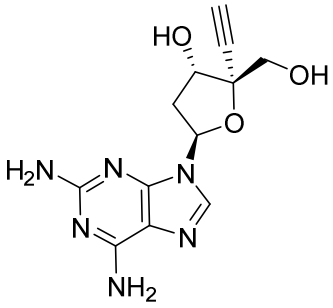
16. The use of any one of claims 1-4, wherein the disease, disorder, or condition is age-related macular degeneration, systemic lupus erythematosus, psoriasis, Fanconi Anemia, idiopathic pulmonary fibrosis, or cardiovascular disease.

17. The use of any one of claims 1-16 further comprising one or more optional therapeutic agents to the subject.

18. The use of any one of claims 1-17, wherein the subject is (a) not infected with the HIV virus; (b) not suspected of being infected with the HIV virus; (c) not being treated for the HIV virus; and/or (d) not being treated to prevent the HIV virus.

19. The use of any one of claims 1-17, wherein the compound inhibits human LINE-1 retrotransposition activity with a half maximal inhibitory concentration of 1 μM or less in an in vitro HeLa cell-based dual-luciferase assay.

20. A kit comprising the compound:



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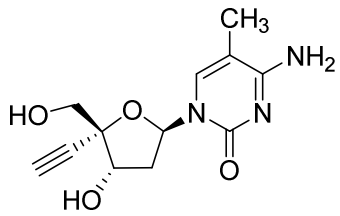

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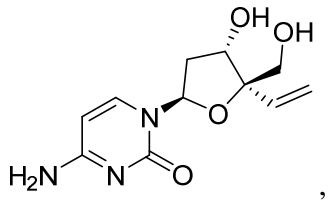

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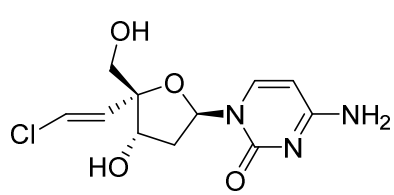

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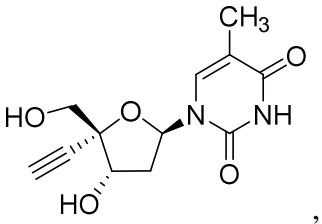

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and instructions for administering the compound to a subject having a disease, condition, or disorder caused by a pathophysiological retrotransposon-associated process.