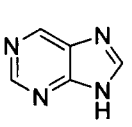
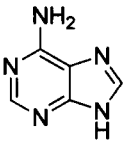
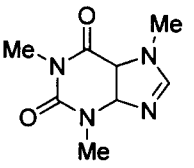
nucleic acid structures. In RNA, which is used for protein synthesis, adenine binds to uracil. It forms adenosine triphosphate (ATP), which transports chemical energy within cells for metabolism. Caffeine, a purine degradant, acts as a central nervous system stimulant, and it is the world's most widely consumed psychoactive drug.



purine

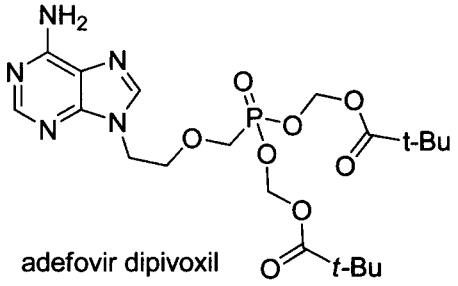


adenine

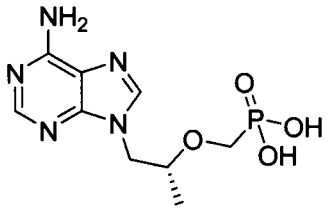


caffeine

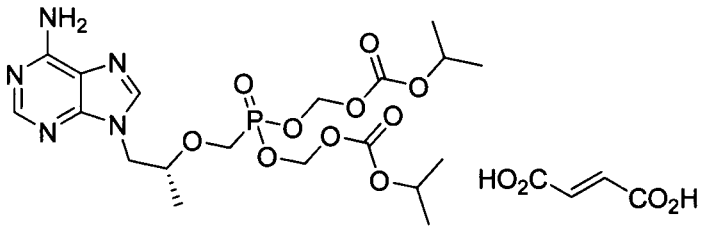
Adenine itself was successfully incorporated into a number of pharmaceuticals. Adefovir dipivoxil, also known as bis-POM PMEA, with trade names Preveon and Hepsera, is used for the treatment of hepatitis B and herpes simplex virus infection.[2] It is an orally administered nucleotide analog as a reverse transcriptase inhibitor (NRTI). Reverse transcriptase is an enzyme crucial to viral production. A second NRTI that contains adenine is Tenofovir disoproxil fumarate (TDF), which has been used in the treatment of HIV/AIDS[3] and hepatitis B.[4] TDF is a prodrug of tenofovir (also known as PMPA) designed to improve absorption and cell permeability of the active moiety under the trade name Viread. Both adefovir dipivoxil and TDF are marketed by Gilead Sciences.



adefovir dipivoxil



tenofovir



tenofovir disoproxil fumarate