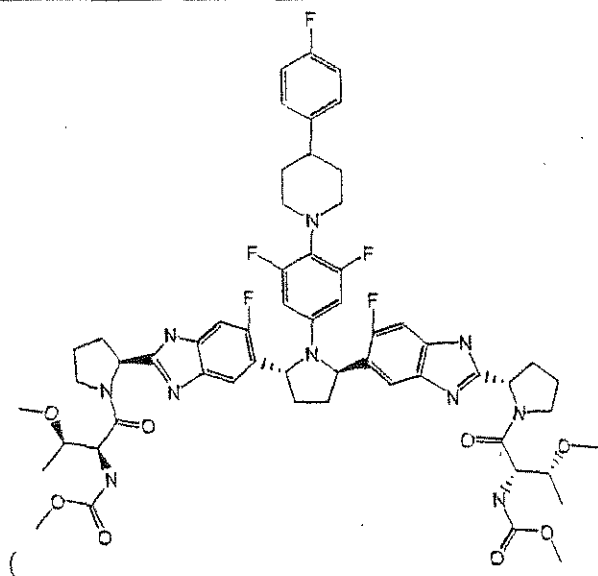


SUMMARY

The present invention features compounds of Formulae I, I_A, I_B, I_C, I_D, I_E, I_F and I_G and pharmaceutically acceptable salts thereof. These compounds and salts can inhibit the replication of HCV and therefore are useful for treating HCV infection.

In one aspect, the present invention provides methyl {(2*S*,3*R*)-1-[(2*S*)-2-{5-[(2*R*,5*R*)-1-(3,5-difluoro-4-{4-(4-fluorophenyl)piperidin-1-yl}phenyl)-5-(6-fluoro-2-{(2*S*)-1-[*N*-(methoxycarbonyl)-*O*-methyl-L-threonyl]pyrrolidin-2-yl}-1*H*-benzimidazol-5-yl)pyrrolidin-2-yl]-6-fluoro-1*H*-benzimidazol-2-yl)pyrrolidin-1-yl]-3-methoxy-1-oxobutan-2-yl} carbamate



), or a pharmaceutically acceptable salt thereof.

In one aspect, the present invention provides a pharmaceutical composition comprising methyl {(2*S*,3*R*)-1-[(2*S*)-2-{5-[(2*R*,5*R*)-1-(3,5-difluoro-4-{4-(4-fluorophenyl)piperidin-1-yl}phenyl)-5-(6-fluoro-2-{(2*S*)-1-[*N*-(methoxycarbonyl)-*O*-methyl-L-threonyl]pyrrolidin-2-yl}-1*H*-benzimidazol-5-yl)pyrrolidin-2-yl]-6-fluoro-1*H*-benzimidazol-2-yl)pyrrolidin-1-yl]-3-methoxy-1-oxobutan-2-yl} carbamate.

In one aspect, the present invention provides the use of the compound as defined above, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for treating a patient infected with HCV.

The present invention also features compositions comprising the compounds or salts of the present invention. The compositions can also include additional therapeutic agents, such as HCV helicase inhibitors, HCV polymerase inhibitors, HCV protease inhibitors, HCV NS5A inhibitors, CD81 inhibitors, cyclophilin inhibitors, or internal ribosome entry site (IRES) inhibitors.

The present invention further features methods of using the compounds or salts of the present invention to inhibit HCV replication. The methods comprise contacting cells infected with HCV virus with a compound or salt of the present invention, thereby inhibiting the replication of HCV virus in the cells.

In addition, the present invention features methods of using the compounds or salts of the present invention, or compositions comprising the same, to treat HCV infection. The methods comprise administering a compound or salt of the present invention, or a pharmaceutical composition comprising the same, to a patient in need thereof, thereby reducing the blood or tissue level of HCV virus in the patient.

The present invention also features use of the compounds or salts of the present invention for the manufacture of medicaments for the treatment of HCV infection.

Furthermore, the present invention features processes of making the compounds or salts of the invention.

Other features, objects, and advantages of the present invention are apparent in the detailed description that follows. It should be understood, however, that the detailed description, while indicating preferred embodiments of the invention, are given by way of illustration only, not limitation. Various changes and modifications within the scope of the invention will become apparent to those skilled in the art from the detailed description.

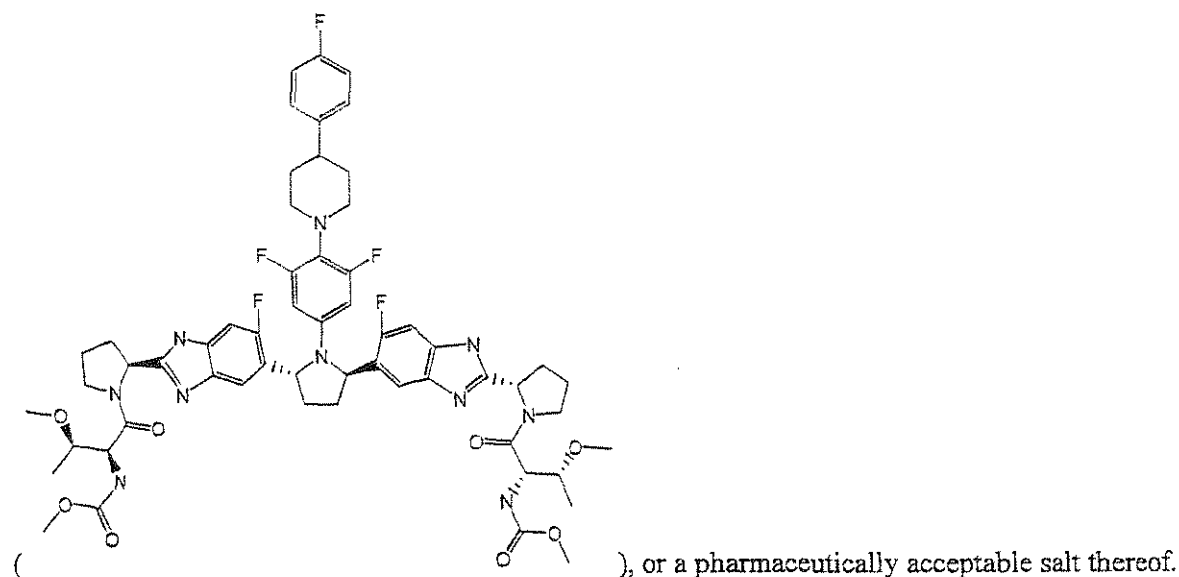
DETAILED DESCRIPTION

Tellinghuisen *et al.*, NATURE 435:374-379 (2005), describes a crystal structure of the NS5A protein in which two NS5A monomers are packed as a dimer via contacts near the N-terminal ends of the molecules. WO2006093867 postulates the use of the crystal structure of the NS5A protein in conjunction of computer modeling to design or select NS5A inhibitors.

To improve interactions with the NS5A protein, many NS5A inhibitors have been designed to have dimeric or dimer-like structures. For instance, WO2006133326 (BMS) describes compounds

CLAIMS:

1. Methyl {(2*S*,3*R*)-1-[(2*S*)-2-{5-[(2*R*,5*R*)-1-{3,5-difluoro-4-[4-(4-fluorophenyl)piperidin-1-yl]phenyl}-5-(6-fluoro-2-{(2*S*)-1-[*N*-(methoxycarbonyl)-*O*-methyl-L-threonyl]pyrrolidin-2-yl}-1*H*-benzimidazol-5-yl)pyrrolidin-2-yl]-6-fluoro-1*H*-benzimidazol-2-yl}pyrrolidin-1-yl]-3-methoxy-1-oxobutan-2-yl} carbamate



2. A pharmaceutical composition comprising methyl {(2*S*,3*R*)-1-[(2*S*)-2-{5-[(2*R*,5*R*)-1-{3,5-difluoro-4-[4-(4-fluorophenyl)piperidin-1-yl]phenyl}-5-(6-fluoro-2-{(2*S*)-1-[*N*-(methoxycarbonyl)-*O*-methyl-L-threonyl]pyrrolidin-2-yl}-1*H*-benzimidazol-5-yl)pyrrolidin-2-yl]-6-fluoro-1*H*-benzimidazol-2-yl}pyrrolidin-1-yl]-3-methoxy-1-oxobutan-2-yl} carbamate.

~~3. A method of treating a patient infected with HCV, comprising administering an effective amount of the compound of claim 1, or a pharmaceutically acceptable salt thereof, to said patient.~~

~~34. Use of the compound of claim 1, or a pharmaceutically acceptable salt thereof, in the manufacture of a medicament for treating a patient infected with HCV.~~