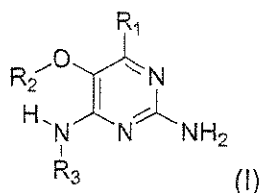


However, there exists a strong need for novel Toll-Like receptor modulators having preferred selectivity, higher potency, higher metabolic stability, and an improved safety profile compared to the compounds of the prior art.

5 In the treatment of certain viral infections, regular injections of interferon (IFN α) can be administered, as is the case for hepatitis C virus (HCV), (Fried et. al. Peginterferon-alfa plus ribavirin for chronic hepatitis C virus infection, *N Engl J Med* 2002; 347: 975-82). Orally available small molecule IFN inducers offer the potential advantages of reduced immunogenicity and convenience of administration. Thus, novel IFN inducers are potentially effective new class
10 of drugs for treating virus infections. For an example in the literature of a small molecule IFN inducer having antiviral effect see De Clercq, E.; Descamps, J.; De Somer, P. *Science* **1978**, 200, 563-565.

IFN α is also given in combination with other drugs in the treatment of certain types of cancer
15 (Eur. J. Cancer 46, 2849-57, and Cancer Res. **1992**, 52, 1056). TLR 7/8 agonists are also of interest as vaccine adjuvants because of their ability to induce pronounced Th1 response (Hum. Vaccines 2010, 6, 322-335; Hum. Vaccines 2009, 5, 381-394).

In accordance with the present disclosure~~invention~~ a compound of formula (I) is provided



or a pharmaceutically acceptable salt, tautomer(s), solvate or polymorph thereof, wherein

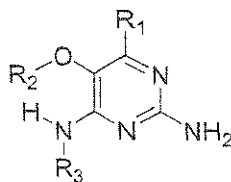
R₁ is hydrogen, methyl, C₁₋₂alkyl, cyclopropyl, methoxy, halogen, hydroxyl, trifluoromethyl, or difluoromethyl,

25 R₂ is C₁₋₈alkyl, (C₁₋₄)alkoxy-(C₁₋₄)alkyl, C₃₋₇cycloalkyl, C₄₋₇heterocycle, aromatic, bicyclic heterocycle, arylalkyl, heteroaryl, heteroarylalkyl each of which is optionally substituted by one or more substituents independently selected from halogen, hydroxyl, amino, C₁₋₆alkyl, di-(C₁₋₆)alkylamino, C₁₋₆alkylamino, C₁₋₆alkyl, C₁₋₆alkoxy, C₃₋₆cycloalkyl, carboxylic acid, carboxylic ester,

carboxylic amide, heterocycle, aryl, alkenyl, alkynyl, arylalkyl, heteroaryl, heteroarylalkyl, nitrile, and

R₃ is C₄₋₈alkyl, C₄₋₈alkoxy, C₂₋₆ alkenyl or C₂₋₆alkynyl, each of which is optionally substituted by one or more substituents independently selected from halogen, hydroxyl, amino, C₁₋₃alkyl, C₁₋₃alkoxy or C₃₋₆ cycloalkyl, nitrile.

In a first aspect, there is provided a compound of formula (I)



or a pharmaceutically acceptable salt, tautomer(s), solvate or polymorph thereof, wherein

R₁ is hydrogen, C₁₋₄alkyl, cyclopropyl or C₁₋₆alkoxy, halogen, hydroxyl, trifluoromethyl.

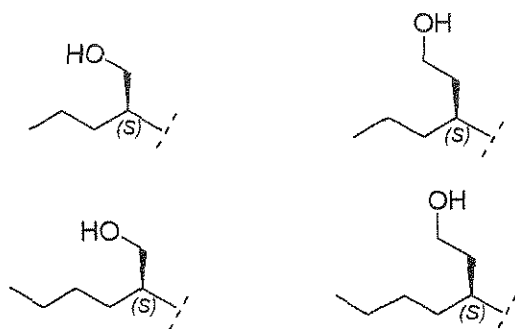
R₂ is C₁₋₈alkyl, (C₁₋₄)alkoxy-(C₁₋₄)alkyl, C₃₋₇cycloalkyl, C₄₋₇heterocycle, bicyclic heterocycle, arylalkyl, heteroaryl, heteroarylalkyl each of which is optionally substituted by one or more substituents independently selected from halogen, hydroxyl, amino, C₁₋₆alkyl, di-(C₁₋₆)alkylamino, C₁₋₆alkylamino, C₁₋₆alkyl, C₁₋₆alkoxy, C₃₋₆cycloalkyl, carboxylic acid, carboxylic ester, carboxylic amide, heterocycle, aryl, alkenyl, alkynyl, arylalkyl, heteroaryl, heteroarylalkyl, nitrile.

R₃ is C₄₋₈alkyl, C₄₋₈alkoxy, C₂₋₆alkenyl or C₂₋₆alkynyl, each of which is optionally substituted by one or more substituents independently selected from halogen, hydroxyl, amino, C₁₋₃alkyl, C₁₋₃alkoxy or C₃₋₆ cycloalkyl, nitrile.

In a first embodiment the present ~~disclosure~~invention provides compounds of formula (I) wherein R_3 is butyl or pentyl and wherein R_2 and R_1 are as specified above.

In a further embodiment the ~~disclosure~~invention concerns compounds of formula (I) wherein R_3 is C_{4-8} alkyl substituted with hydroxyl, and wherein R_2 and R_1 are as specified above.

Another embodiment relates to compounds of formula (I) wherein R_3 , when being C_{4-8} alkyl substituted with hydroxyl, is one of the following

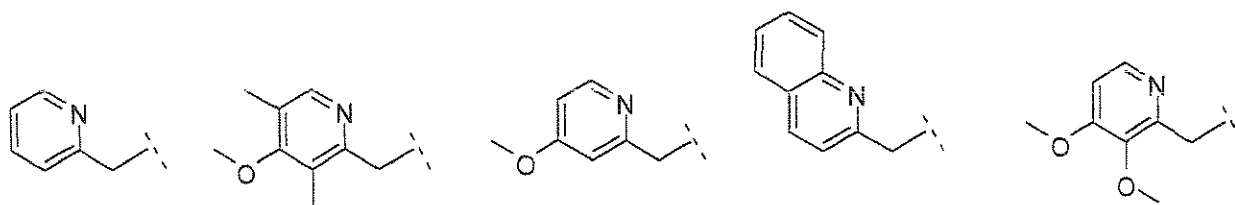


Furthermore the present ~~disclosure~~invention also provides compounds of formula (I) wherein R_1 is hydrogen or $-CH_3$ and wherein R_2 and R_3 are as specified above.

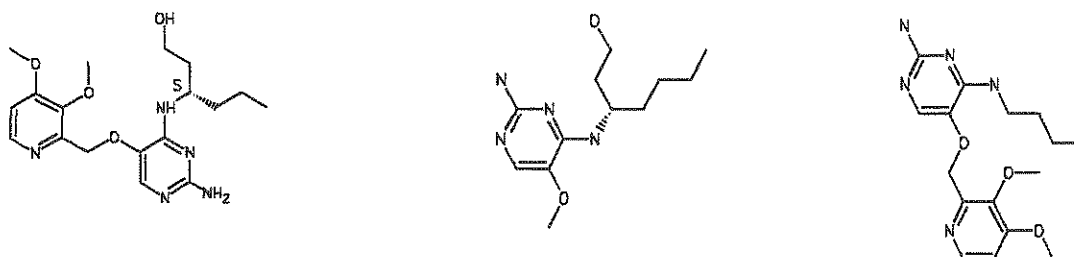
In another embodiment the present ~~disclosure~~invention provides compounds of formula (I) wherein R_2 is arylalkyl or heteroarylalkyl, substituted with C_{1-3} alkyl, hydroxyl, alkoxy, nitrile, heterocycle or ester and wherein R_1 and R_3 are as specified above.

In a further embodiment the current ~~disclosure~~invention concerns compounds of formula (I) wherein R_2 is C_{1-3} alkyl substituted by aryl, heterocycle, or heteroaryl which is further substituted by C_{1-3} alkyl, alkoxy, carboxylic ester or carboxylic amide and wherein R_1 and R_3 are as specified above

Furthermore the ~~disclosure~~invention relates to compounds of formula (I) wherein R_2 is one of the following examples that can be further substituted with C_{1-3} alkyl, hydroxyl, alkoxy, nitrile, heterocycle or ester.



The preferred compounds according to the disclosureinvention are:



The compounds of formula (I) and their pharmaceutically acceptable salt, tautomer(s), solvate or polymorph thereof have activity as pharmaceuticals, in particular as modulators of Toll-Like Receptors (especially TLR7 and/or TLR8) activity.

~~In a further aspect, the present~~ The present disclosureinvention provides a pharmaceutical composition comprising a compound of formula (I) or a pharmaceutically acceptable salt, solvate or polymorph thereof together with one or more pharmaceutically acceptable excipients, diluents or carriers.

In a second aspect, there is provided a pharmaceutical composition comprising a compound of formula (I) or a pharmaceutically acceptable salt, tautomer(s), solvate or polymorph thereof as defined above together with one or more pharmaceutically acceptable excipients, diluents or carriers.

Furthermore a compound of formula (I) or a pharmaceutically acceptable salt, solvate or polymorph thereof according to the current disclosureinvention, or a pharmaceutical composition comprising said compound of formula (I) or a pharmaceutically acceptable salt, solvate or polymorph thereof can be used as a medicament.

In a third aspect, there is provided a compound of formula (I) or a pharmaceutically acceptable salt, tautomer(s), solvate or polymorph thereof as defined above, or a pharmaceutical composition as defined above for use as a medicament.

~~Another aspect of the disclosure is that a compound of formula (I) or a pharmaceutically acceptable salt, solvate or polymorph thereof, or said pharmaceutical composition comprising said compound of formula (I) or a pharmaceutically acceptable salt, solvate or polymorph thereof that can be used accordingly in the treatment of a disorder or disease in which the modulation of TLR7 and /or TLR8 is involved.~~

In a fourth aspect, there is provided a compound of formula (I) or a pharmaceutically acceptable salt, tautomer(s), solvate or polymorph thereof as defined above, or a pharmaceutical composition as defined above for use in the treatment of a disorder or disease in which the modulation of TLR7 and /or TLR8 is involved.

The term "alkyl" refers to a straight-chain or branched-chain saturated aliphatic hydrocarbon containing the specified number of carbon atoms.

The term "halogen" refers to fluorine, chlorine, bromine or iodine.