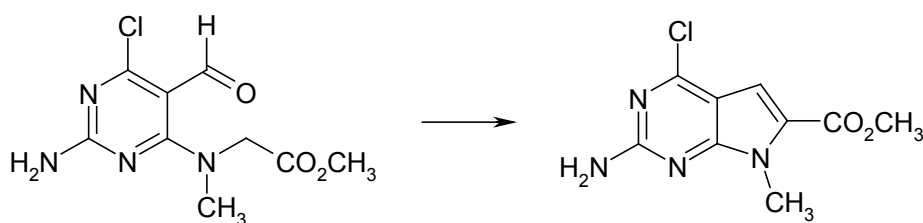


Pyrimidines & Pyrrolo(2,3-d)pyrimidines

The biological importance of pyrimidine derivatives has led to considerable interest in the development of new methods for obtaining and synthesizing new pyrimidine reagents. Among the set of synthons of pyrimidines, applied in organic synthesis in recent years, 4(6)-aminopyrimidines should be highlighted, as they are used not only for the synthesis of modified pyrimidines but also for annulated pyrimidine derivatives. The presence of a mobile halogen atom at position 6 of the pyrimidine ring makes it possible to successfully carry out transformations with nucleophilic reagents^[1-14], borane acids^[1,2-15,16], and organometallic compounds^[17-18].

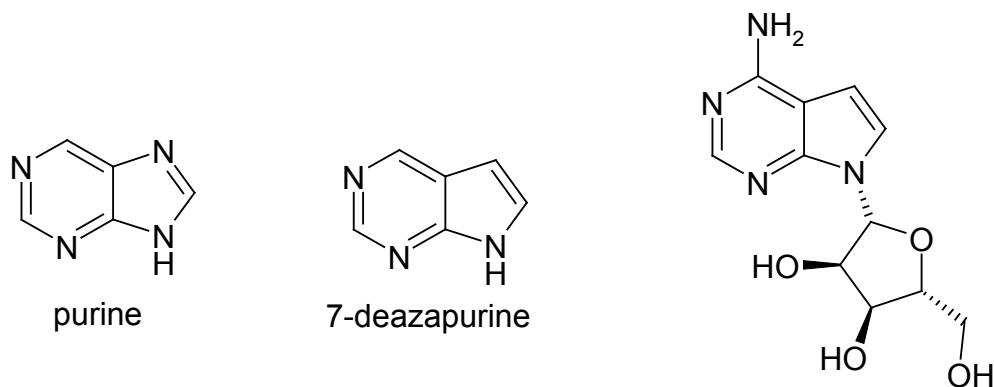
Many of the pyrimidines exhibit a wide spectrum of biological activity^[4,8-11,13,15,18,19,23,25,26].

For the synthesis of fused pyrimidine derivatives, 4(6)-aminopyrimidines containing a halogen or a formyl group in the 5-position are used^[3,19,20,27-29], e.g.:



J. Heterocycl. Chem., 2006, 43, 1629

Interest in the derivatives of pyrrolo[2,3-d]pyrimidine (7-deazapurines) has increased significantly after the introduction of nucleoside antibiotics - tubercidin, toyocamycin and sangivamycin^[30-31].

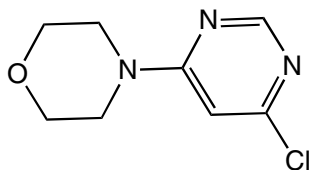


Tubercidin CAS # 69-33-0

The search for potential antiviral drugs has been enhanced by the structural relationship between purine nucleosides and a series of pyrrolo [2,3-d] pyrimidines. During the past 20 years, the attention of many researchers has been focused on the modification of β -D-ribose fragment and replacing it with carbocyclic or acyclic substituents^[32-44]. In recent years, there has been an increase in the study of derivatives of pyrrolo [2,3-d] pyrimidine, which is associated with predicting and identifying new biologically active compounds: Glycogen synthase kinase-3 β inhibitors^[19], MK2 inhibitors^[45], Anticancer Agents^[46], Antitumor Agent^[47], Cytostatic Agents^[48].

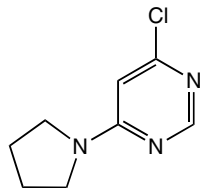
Pyrimidines & Pyrrolo(2,3-d)pyrimidines

Pyrimidines



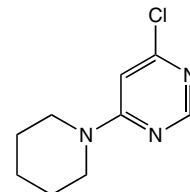
H32140

4-(6-Chloro-4-pyrimidinyl)morpholine, 98%
[22177-92-0]



H32100

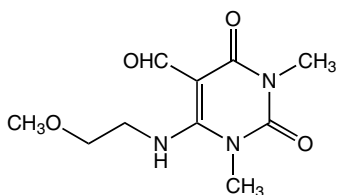
4-Chloro-6-(1-pyrrolidinyl)pyrimidine, 98%
[939986-64-8]



H32973

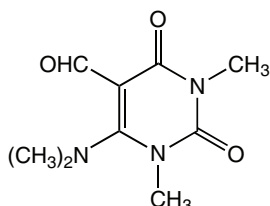
4-Chloro-6-(1-piperidinyl)pyrimidine, 98%
[1722-14-1]

Intermediates for synthesis pyrrolo (2,3-d) pyrimidines



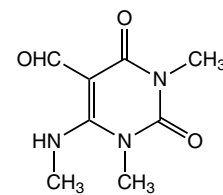
H31619

6-[(2-Methoxyethyl)amino]-1,3-dimethyl-2,4-dioxo-1,2,3,4-tetrahydro-5-pyrimidinecarboxaldehyde, 96%
[1018301-05-7]



H32506

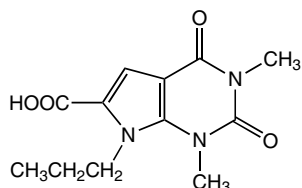
6-Dimethylamino-1,3-dimethyl-2,4-dioxo-1,2,3,4-tetrahydropyrimidine-5-carboxaldehyde, 97%
[35824-92-1]



H31650

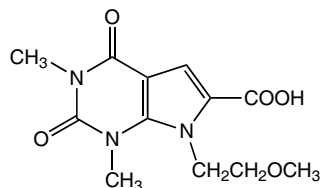
1,3-Dimethyl-6-methylamino-2,4-dioxo-1,2,3,4-tetrahydropyrimidine-5-carboxaldehyde, 96%
[89549-92-8]

Pyrrolo (2,3-d) pyrimidines



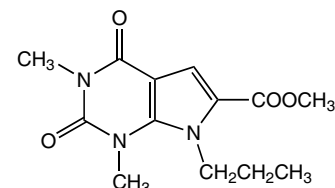
H31891

1,3-Dimethyl-2,4-dioxo-7-n-propyl-2,3,4,7-tetrahydropyrrolo[2,3-d]pyrimidine-6-carboxylic acid, 96%
[1018256-11-5]



H34329

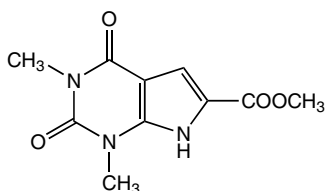
7-(2-Methoxyethyl)-1,3-dimethyl-2,4-dioxo-2,3,4,7-tetrahydro-1H-pyrrolo[2,3-d]pyrimidine-6-carboxylic acid, 96%
[1018501-32-0]



H33350

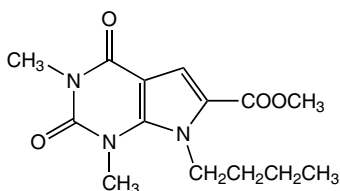
Methyl 1,3-dimethyl-2,4-dioxo-7-propyl-2,3,4,7-tetrahydro-1H-pyrrolo[2,3-d]pyrimidine-6-carboxylate, 96%
[1086386-30-2]

Pyrimidines & Pyrrolo(2,3-d)pyrimidines



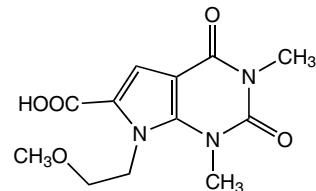
H33893

Methyl 1,3-dimethyl-2,4-dioxo-2,3,4,7-tetrahydro-1H-pyrrolo[2,3-d]pyrimidine-6-carboxylate, 96%
[119350-50-4]



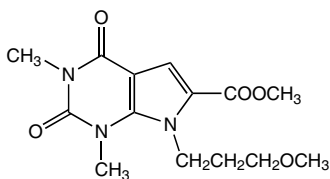
H34199

Methyl 7-n-butyl-1,3-dimethyl-2,4-dioxo-2,3,4,7-tetrahydro-1H-pyrrolo[2,3-d]pyrimidine-6-carboxylate, 96%
[1086386-32-4]



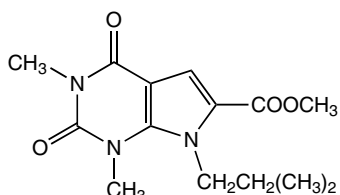
H32418

7-(3-Methoxypropyl)-1,3-dimethyl-2,4-dioxo-2,3,4,7-tetrahydro-1H-pyrrolo[2,3-d]pyrimidine-6-carboxylic acid, 96%
[1086386-36-8]



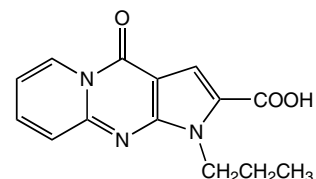
H34105

Methyl 7-(3-methoxypropyl)-1,3-dimethyl-2,4-dioxo-2,3,4,7-tetrahydro-1H-pyrrolo[2,3-d]pyrimidine-6-carboxylate, 96%
[1086386-38-0]



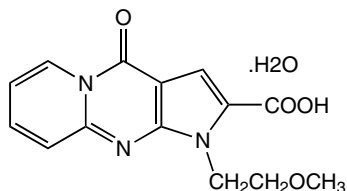
H34420

Methyl 7-isobutyl-1,3-dimethyl-2,4-dioxo-2,3,4,7-tetrahydro-1H-pyrrolo[2,3-d]pyrimidine-6-carboxylate, 96%
[1086386-40-4]



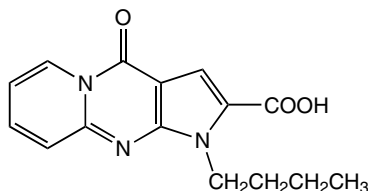
H34165

4-Oxo-1-propyl-1,4-dihydropyrido[1,2-a]pyrrolo[2,3-d]pyrimidine-2-carboxylic acid, 96%
[1086386-69-7]



H34270

1-(2-Methoxyethyl)-4-oxo-1,4-dihydropyrido[1,2-a]pyrrolo[2,3-d]pyrimidine-2-carboxylic acid monohydrate, 96%



H34277

1-n-Butyl-4-oxo-1,4-dihydropyrido[1,2-a]pyrrolo[2,3-d]pyrimidine-2-carboxylic acid, 96%
[1086386-75-5]

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²Tetrahedron Lett. **2002**, 43, 5739.

³Tetrahedron **2007**, 63, 5394.

⁴Bioorg. Med. Chem. Lett. **2007**, 17, 5447.

⁵Angew. Chem. **2004**, 116, 242.

⁶Euro. J. Med. Chem. **2005**, 40, 862.

⁷Australian J. Chem. **2004**, 57, 1079.

⁸Bioorg. Med. Chem. Lett. **2003**, 13, 2955.

⁹Bioorg. Med. Chem. **2009**, 17, 7186.

¹⁰Bioorg. Med. Chem. Lett. **2009**, 19, 4692.

¹¹Bioorg. Med. Chem. Lett. **2010**, 20, 4027.

¹²J. Med. Chem. **2001**, 44, 3355.

¹³Tetrahedron Lett. **2010**, 51, 832.

¹⁴Bioorg. Med. Chem. **2001**, 9, 897.

¹⁵Tetrahedron **2006**, 62, 10055.

¹⁶J. Am. Chem. Soc. **2010**, 132, 7043.

¹⁷Bioorg. Med. Chem. Lett. **2009**, 19, 3297.

¹⁸Bioorg. Med. Chem. **2010**, 18, 3885.

¹⁹Tetrahedron Lett. **2010**, 51, 3597.

²⁰Synlett **2010**, 14, 2179.

²¹Bioorg. Med. Chem. Lett. **2002**, 12, 1591.

²²J. Med. Chem. **2005**, 48, 1886.

²³J. Med. Chem. **1989**, 32, 663.

²⁴Bioorg. Med. Chem. Lett. **2008**, 18, 3978.

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²⁶J. Med. Chem. **1997**, 40, 4420.

²⁷J. Heterocycl. Chem. **2006**, 43, 1629.

²⁸Chem. Heterocycl. Comp. **2009**, 45, 1285.

²⁹J. Comb. Chem. **2010**, 12, 503.

³⁰J. Org. Chem. **1963**, 28, 3329.

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³²J. Org. Chem. **1994**, 59, 6902.

³³Org. Biomol. Chem. **2008**, 6, 1450.

³⁴J. Med. Chem. **1995**, 38, 3957.

³⁵J. Med. Chem. **2004**, 47, 5284.

³⁶J. Med. Chem. **1985**, 28, 1477.

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³⁸J. Med. Chem. **1990**, 33, 2162.

³⁹J. Med. Chem. **1996**, 39, 873.

⁴⁰J. Med. Chem. **1989**, 32, 1420.

⁴¹J. Med. Chem. **1988**, 31, 1501.

⁴²J. Med. Chem. **1989**, 32, 402.

⁴³J. Med. Chem. **1990**, 33, 1984.

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⁴⁵Bioorg. Med. Chem. Lett. **2008**, 18, 6142.

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⁴⁸J. Med. Chem. **2010**, 53, 460.