

Technology Offer

Nucleoside Analogues for the Treatment of Viral Infections

Reference Number
TO 03-00140

The Challenge

Diseases due to viral infections with such as Hepatitis or Human Immunodeficiency Viruses occur with an increasing frequency worldwide. There are 350 million people infected with the Hepatitis B virus throughout the world. At present several classes of drugs have been developed and are used in medication for viral infections. For some viruses like Hepatitis B virus (HBV), vaccines have been developed, that reduce the incidence of the corresponding infection. However, those are not suitable to treat the disease itself and can only be used for prophylaxis.

Drugs which are administered to patients after the breakout of the disease usually have strong adverse effects and frequently the virus develops resistance against the drugs used. Thus there is still a challenge to efficiently treat viral infections, even those with HBV and a strong demand for new therapeutic agents.

The Technology

Viral DNA-Polymerases are essential for the replication of the virus and therefore for the infection of its host cell. Specific inhibition of the viral Polymerases blocks virus replication and reduces patient virus load.

The invention claims β -L-5-Methylcytosin and β -L-N4-Hydroxycytosin Nucleoside analogues, which are strong inhibitors of the DNA-Polymerase of the Hepatitis B-Virus. Since these claimed substances do not interact with the Polymerases of the host cell itself, the inhibition is highly specific and does not harm the patient. The nucleosides can be used not only for the therapy of Hepatitis B, but also for prophylaxis of this disease.

However, beside treating Hepatitis B these compounds are most likely suitable for other viral infections such as HIV as well. Furthermore the system might be applicable for bacterial, fungicide or parasitic diseases as well.

Commercial Opportunity

Collaboration or In-licensing opportunity for the development of pharmaceutical compositions for the treatment of HBV and HIV infections.

Patent situation

An International patent application is published (WO 2005/026186)

A second priority establishing German Patent Application is pending (confidential). A corresponding International Patent Application will be filed soon.

Contact:

Mathias Bell, Ph.D.
Technology Scout
Ascension GmbH

T : +49 (0)30 94062304

F : +49 (0)30 94062302

E : bell@ascension.de



Berlin
Braunschweig
Munich

Ascension GmbH
Robert-Roessle-Straße 10
13125 Berlin-Buch
Germany

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Foundation for the
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