

Methods for Prevention and Treatment of Polyomavirus Infection or Reactivation (E-101-2007)

Published date: Feb. 1, 2012

Technology description

Summary

Available for licensing and commercial development are methods of using two MAP kinase kinase (MEK) inhibitors, PD98059 and U0126, in the prevention and treatment of polyomavirus infection. Decrease in viral protein expression upon treatment with the MEK inhibitors has been demonstrated for two polyomavirus species, JC virus (JCV) and BK virus (BKV). It is believed that these MEK inhibitors may also be effective against other polyomavirus species in which TGF-beta expression is elevated. JCV is responsible for the demyelination of the central nervous system which is observed in cases of progressive multifocal leukoencephalopathy (PML). PML is most frequently seen in patients with HIV/AIDS, but is also a contributing factor in fatalities in patients with leukemia, lymphoma, and connective tissue diseases, in addition to individuals receiving immunosuppressive therapy for autoimmune disorders or prevention of transplant rejection.

BKV is associated with deadly clinical syndromes such as viruria and viremia, ureteral ulceration and stenosis, and hemorrhagic cystitis. BKV also causes polyomavirus-associated nephropathy in 1-10% of all renal transplant recipients.

Currently, no effective antiviral agents are available to treat these opportunistic infections. In all observed cases, activation of either JCV and BKV in immunosuppressed patients has resulted in fatality.

Application area

Treatment and prevention of polyomavirus infection in immunocompromised patients.

Institution

[NIH - National Institutes of Health](#)

联系我们



叶先生

电话 : 021-65679356

手机 : 13414935137

邮箱 : yeyingsheng@zf-ym.com