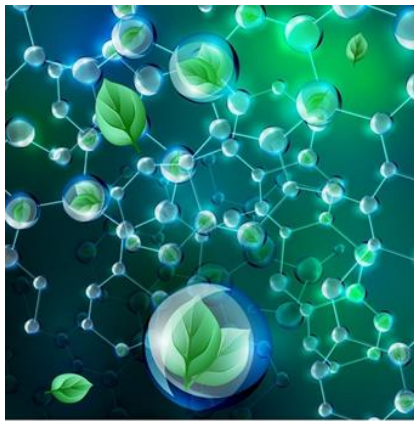


Asian plant against Ebola virus

Virustatic, silvestrol, RNA viruses, inhibitor

DESCRIPTION OF TECHNOLOGY

The Asian mahogany plant *Aglaia* contains the natural compound silvestrol. This compound reduces the number of pathogens in infected cells. The production of viral proteins is inhibited and almost stopped by the natural substance.



© Double Brain - Fotolia.com

#79822984

Experiments show that the Ebola virus depends on an enzyme (Helicase eIF4A) of the host cell to produce its own proteins. Silvestrol is an inhibitor of the helicase eIF4A, which is an integral part of the translation initiation complex.

That is why it is almost impossible for the Ebola virus to mutate its genome to escape from the antiviral effect of silvestrol.

The effective silvestrol concentration has proved to be non-toxic for human cells.

Therefore the use of silvestrol is a promising substance against Ebola infections. This increases the chance to trigger an immune response against the virus.

SCOPE OF APPLICATION

The aim is the usage of the natural compound silvestrol as an agent against Ebola and further RNA viruses.

The inhibiting effect of silvestrol is also shown when the agent is used against other viruses which need the enzyme eIF4A for the production of virus proteins.

There also exists a broad-spectrum effect against additional viruses, e.g. Corona viruses and Marburgvirus.

AT A GLANCE ...

Application Fields

- Therapy of Ebola and other RNA viruses

Business

- Pharmaceutical industry
- Manufacturers of antiviral drugs

USP

- Antiviral drug against Ebola
- No toxic side effects

Development Status

- Proof of strong antiviral effect in cell cultures

Next steps:

- Studies concerning antiviral broadband effects
- Synthesis of simple derivatives with similar effect as Silvestrol
- Clinical Studies

Patent Status

European Patent
EP 3 305 290 B1 granted on Nov. 4,
2022, validated in DE, FR, GB

ADVANTAGES OVER THE PRIOR ART

Currently no approved antiviral drugs or vaccines are available against numerous viral infections e.g. Ebola. With the new knowledge it is possible to develop a highly specific and efficient therapy against this infectious disease.

STATE OF PRODUCT DEVELOPMENT

There are experimental data from cell cultures which provide evidence concerning the strong antiviral effect by using silvestrol. Viral proteins disappear almost completely. The effective silvestrol concentration has proven to be non-toxic for human cells.

COOPERATION OPPORTUNITIES

On behalf of Philipps-University Marburg and Justus-Liebig University Giessen, TransMIT GmbH is looking for cooperation partners or licensees worldwide.

A TECHNOLOGY OF



Contact

TransMIT Gesellschaft
für Technologietransfer mbH
Kerkrader Straße 3
35394 Giessen
GERMANY
www.transmit.de

Contact Person

Dr. Andreas Fuß
Tel: +49 (0) 641 9 43 64 58
Fax: +49 (0) 641 9 43 64 55
E-Mail: Andreas.Fuss@transmit.de

