



Sino-European Project on SARS Diagnostics and Antivirals

Informe

Información del proyecto

SEPSDA

Financiado con arreglo a
FP6-POLICIES

Identificador del acuerdo de subvención:
3831


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€ 3 338 512

[Sitio web del proyecto](#)

Aportación de la UE
€ 1 887 608

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1 Mayo 2004

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30 Abril 2008

Coordinado por
UNIVERSITY OF LUEBECK
 Alemania

Final Report Summary - SEPSDA (Sino-European Project on SARS Diagnostics and Antivirals)

Combatting and eventually eradicating the new coronavirus causing Severe Acute Respiratory Syndrome (SARS) requires specific and efficient antiviral drugs and improved diagnostics. The SEPSDA was an integrated project that applied modern biotechnical technology to create improved diagnostics and lead compounds for antiviral drugs.

Analysis of the genome and the proteome of SARS coronavirus by sequencing and advanced bioinformatics helped determine the genetic variability of the virus isolates and identify new possible targets for therapeutic intervention, both at the RNA and the protein level. SEPSDA aimed at determining the three-dimensional structures of all soluble SARS-CoV proteins or domains thereof. This structural genomics approach provided the basis for the virtual screening of large compound databases, including those containing Chinese traditional medicines, for molecules potentially interfering with the function of the viral proteins or their interaction partners in the host cell. Candidate inhibitors were tested in cell culture and improved by synthetic chemistry.

The consortium determined the three-dimensional structures of many replicas proteins of the virus by X-ray crystallography. Based on these target structures, it discovered about 50 non-toxic chemical compounds with activity against the virus; five of these were developed into lead compounds and are ready for preclinical and clinical testing in case of a new outbreak of SARS or another Coronavirus-caused epidemic. Also, SEPSDA has significantly improved the existing diagnostics for SARS and introduced differential diagnostics allowing the rapid and reliable distinction between the disease and other forms of viral pneumonia.

Documentos relacionados

 [125823001-19_en.doc](#)

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