

## **15 new compounds with anti-SARS activity discovered**

### **Sino-European SARS project meets at Hangzhou (China)**

Although there have been no cases of the life-threatening Severe Acute Respiratory Syndrome (SARS) since April 2004, researchers still work intensively on the elucidation of the infection mechanism of the SARS coronavirus. After all, virologists and medical practitioners have learnt their lesson from the 2003 epidemic, and they want to be ready in the case of another outbreak of the disease. Two years ago, SARS caught the world by surprise, and in the absence of any potent antiviral drug, about 8500 people were infected within a few weeks, most of them in China, Singapur, and Canada, with as many as 800 fatalities. The further spread of the virus could only be prevented by strict isolation of patients in the affected countries.

In the ongoing international research efforts on the new virus, the Institute of Biochemistry of the University of Lübeck in Germany plays a leading role. Under the direction of Professor Rolf Hilgenfeld, the researchers from Lübeck had elucidated the structure of an essential viral enzyme within six weeks after the begin of the outbreak, and proposed a first anti-SARS compound, which indeed showed activity in monkey cells infected with the SARS coronavirus. During the ongoing outbreak, Hilgenfeld travelled to China in May 2003 and started to collaborate with molecular biologists and virologists in order to help combat the virus. Since last year, the Sino-European Project on SARS Diagnostics and Antivirals (SEPSDA) that he created with researchers from China, Denmark, Poland and Germany, has been funded by the European Commission, with a total of 1.9 million Euro. The SEPSDA researchers now met for their 2nd Annual Meeting at Hangzhou (China), in order to assess the progress that they made in the past months. They reported on new approaches to improved diagnostics based on antibodies against proteins of the SARS virus, which will make possible a rapid diagnosis of SARS and reliable differentiation from other lung infections such as caused by influenza virus or bacteria. Also, the Sino-European researchers have already determined the structures of six proteins of the SARS virus and discovered about 15 lead compounds with anti-SARS activity on this basis, with one of them originating from Chinese Traditional Medicine. The best of these lead compounds will be improved further by chemical modification and placed at the disposal of the pharmaceutical industry or the World Health Organisation (WHO) in the event of another outbreak, for clinical testing and further development. If and when the virus strikes again, researchers want to be ready.

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