

TKU FACULTY JOINING ANTI-SARS R&D WORK: TAITA NO. 1 PROVED TO BE EFFECTIVE TO DESTROY SARS VIRUS

英文電子報

Lee Shih-yuan, Chair of Department of Chemistry, and Chu Shu-fang, student of Graduate Institute of Chemistry in Doctoral Program, joined a research team chiefly comprising National Taiwan University (NTU) faculty and students to conduct SARS research program. The team has successfully worked out an anti-SARS organic synthesis, which at present, has been proved as one of the effective materials to fight against SARS virus in the world. The newly founded organic synthesis has been named as “Taita No. One”.

Three years ago, Lee joined the team, which was composed of more than 100 medical doctors, engineers in colleges and experts of the industry to conduct research and study of biological technology under the direction of National Science Council of the Executive Yuan. Lee is the only expert on chemistry in the team, which is researching how to make the molecule of liquid to be attached on biolinkers. The team took part in the research program of anti-SARS measures at the end of April. The team found that “8-hydroxyoctanoic acid” could encircle the “capsid” of SARS corona virus. After narrowing the distance, it employs the interaction of molecule in virulent corona envelope to force the 3-D structural protein envelope to be completely collapsed.

It employs biolinkers, nano synthesis and the virulent space structure to the interaction of human beings. After soaking and spraying, it would attach it to filtering materials of mask, protecting clothes, filter of air purification. The results of research made known to the public through a press conference held in May.

The team has spent 20 days to successfully develop “Taita No. One”. Lee said that the success resulted from a combined effort made by members of

the team. He said: "It is good luck!" The team has already found that the biological connecting molecule has appeared special physical phenomenon, Lee said. After the team was summoned to make research of anti-SARS, the team made several reform experiments from SARS virus and suddenly discovered the "8-hydroxyoctanoic acid" equipped with functions to kill the lipoprotein envelope. At present, it has been proved that it could effectively kill SARS and enterobacterial virus.

Lee explained that a general mask with protecting cloth has function of filtering virus. For instance, N95 mask means it can only resist 95 percent of virus. The function of N95 and a general mask will greatly reduce if they were wetted. Several medical doctors and nurses were still infected SARS although they wore masks and protecting clothes. However, "Taita No. One" would maintain strong virus killing function under the condition of heavy humidity. At the same time, "Taita No. One" which can demonstrate its functioning characteristics in a lower density, is a non-poisoned and non-damaged organic compound.

Based on the social responsibility, NTU and the Ministry of Economic Affairs (MOEA) have decided to open "Taita No. One" patent right for application to the public and to transfer the manufacturing technology to manufacturers. Part of the Graduate students under Lee's direction will continue to make their efforts on research of anti-SARS organic compound, with the hope that the organic compound will enlarge its curing function while the remaining part continuing to study of biolinkers.