CEL-1000 Peptide Shows Adjuvant Activity with Malaria Vaccines

21.04.2006 - CEL-SCI Corporation announced that its CEL-1000 peptide showed adjuvant activity when used with a peptide based malaria vaccine and a DNA based malaria vaccine in animal challenge studies as part of a Cooperative Research arrangement with the Naval Medical Research Center, Silver Spring, MD. In both cases the one time addition of the patent protected CEL-1000 to the vaccines resulted in significant increases in the protection of the animals.

This new data indicates that CEL-1000 has protective activity in various animal models. These results are very important because CEL-SCI is planning to develop CEL-1000 as a potential addition to the different bird flu vaccines currently under development by the pharmaceutical and biopharmaceutical industry. It recently became very apparent that there is a great need for an adjuvant for these vaccines. Adjuvants are designed to improve the effectiveness of vaccines.

On March 30, 2006 the New England Journal of Medicine ("NEJM") published the results of the first human testing of a H5N1 bird (avian) flu vaccine. It showed that the vaccine, which was produced by the pharmaceutical giant Sanofi-Aventis, sparked a protective immune response in a disappointingly small percentage of vaccine recipients -- 54 percent of those who received two shots, 28 days apart, of the highest dose tested. This dose was twelve times higher than that needed for protection by the "normal" human flu vaccine where protection rates are generally in the 80-90% range.

This study identified 3 problems with this bird flu vaccine: 1) Each person requires so much vaccine that the government will not be able to build up the necessary stockpiles to protect the general population from the bird flu. 2) Only about half the people respond with the desired immune responses. 3) It takes a long time to produce an immune response during which time the person is not protected.

Dr. Daniel Zimmerman, Senior V.P of Research, Cellular Immunity, at CEL-SCI Corporation said, "This new data confirms our belief that CEL-1000 could be an important addition to the bird flu vaccines. That is why CEL-SCI is in contact with all of the major bird flu vaccine developers to test CEL-1000 with their vaccines."

In December 2005, CEL-SCI signed an agreement with the National Institute of Allergy and Infectious Diseases (NIAID), whereby NIAID agreed to test CEL-1000 as a possible vaccine or treatment against bird flu virus H5N1 in its animal models of the disease.

CEL-1000, when used as a single adjuvant (enhancer of a vaccine) or in combination with other adjuvants, potentiates Th1 (cellular) and innate (earliest stage) immune responses and protects animals
from viral and parasitic challenge. Upon challenge with the disease causing agent(s), CEL-1000 provides antigen-independent (i.e., non-disease specific) and broad-spectrum protection, which is important against the bird flu virus since it exhibits a high mutation rate.