NEOVACS ANNOUNCES THE PUBLICATION OF A PNAS ARTICLE ON ANTI-TNF-ALPHA THERAPEUTIC VACCINATION

Paris, December 21st 2006 -- Néovacs, a biotech company pioneering the development of anti-cytokine and anti-viral regulation protein therapeutic vaccines, announces the publication of an article on anti-TNF-alpha therapeutic vaccination in the December 21st edition of the prestigious journal PNAS (the Proceedings of the National Academy of Sciences of the USA). The research shows that active immunization against an endogenous cytokine may be a feasible approach in treating pathologies associated with high TNF-alpha production, such as rheumatoid arthritis, Crohn's disease, psoriasis and cachexia.

In the article entitled "TNF-alpha kinoid vaccination-induced neutralizing antibodies to TNF-alpha protect mice from autologous TNF-alpha driven chronic and acute inflammation", the authors demonstrate the efficacy and excellent safety of active immunization with TNF-alpha kinoid in prevention of rheumatoid-like arthritis and lethal shock induced in mice by TNF-alpha.

"The publication of this article in PNAS demonstrates that our anti-cytokine vaccination approach (with TNF-alpha, in this case) is safe and effective in two experimental models" emphasized Guy-Charles Fanneau de La Horie, CEO of Néovacs. He concluded "*the clinical results have been confirmed histologically. This validates the Neovacs approach, which should therefore generate safer drugs that can be more easily taken by patients suffering from diseases associated with cytokine overproduction".*

The study was undertaken as part of the development of a novel family of immunogens (namely kinoids) used as the active principle of anticytokine therapeutic vaccines, currently in development for combating cytokine-dependent diseases.

The murine models were transgenic mice over-expressing the human TNF-alpha gene; in view of the intense production of TNF-alpha, the animals rapidly develop an arthritic condition which closely resembles human rheumatoid arthritis. During the research, the team injected an anti-TNF-alpha vaccine developed using kinoid technology (hTNF-αlpha kinoid: a biologically inactive but immunogenic human TNF-alpha derivative linked to keyhole limpet hemocyanin (KLH)). The test group of mice received 3 or 4 injections of TNF-alpha kinoid, whereas control animals were injected with KLH alone.

The results observed for the immunized test groups in the two models were very encouraging and significantly better than in the non-immunized control groups. In fact, in the two kinoid-immunized test groups, the researchers noted a clear increase in the production of anti-TNF-alpha polyclonal antibodies, which neutralized the TNF-alpha activity. In one model, this translated into remission of the arthritis, whereas the control mice developed very severe and disabling rheumatoid-like arthritis. Histological analysis showed that the immunized mice had healthy joints, in contrast

to control mice. In the other model, the mice immunized with TNF-alpha kinoid all survived the shock induced by hTNF-alpha, whereas the control mice died.

These results show that active vaccination against a human cytokine can be achieved, and that the immune response can be effective and safe.

In the future, one could imagine use of this type of process in humans for treating certain chronic inflammatory states such as rheumatoid arthritis, Crohn's disease, cachexia and psoriasis. Compared with existing anti-TNF-alpha biotherapies, active immunization with TNF-alpha kinoid may well lead to better tolerance, a reduction in the number of injections and thus better treatment compliance - enabling greater efficacy and maintained quality of life.

About Néovacs

Neovacs is a worldwide pioneer in therapeutic vaccines against human cytokines and viral proteins. The company was founded in 1993 by Professor Daniel Zagury and other researchers as a spin-off from the Pierre & Marie Curie University, Paris. Truffle Venture is the lead investor in Neovacs and is represented on the Board by its Managing Director, Philippe Pouletty MD. Neovacs has invested more than €25 million in technology development since its inception and has notably received support from OSEO ANVAR (the French state's innovation agency). The company holds a portfolio of 16 patents (providing international coverage of its Toxoid and Kinoid technologies) and is developing several therapeutic vaccines for the treatment of AIDS, cancer and autoimmune diseases. Neovacs is collaborating with DebioPharm on the development of a TNF-alpha kinoid, with potential indications such as cachexia and autoimmune disease. Furthermore, Néovacs has several products due to enter clinical trials in the forthcoming 18 months.

For more information on Néovacs, visit our web site: www.neovacs.com

Disclaimer: the development of new drug technologies is difficult, erratic and unpredictable. Néovacs' forecasts and future economic performance depend on research that has yet to be performed and on a number of other factors. The company's future economic performance may differ significantly from that currently forecast.

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