NK4 Patented in Japan as a Preventive and Therapeutic Agent for Diseases Associated with Abnormal Angiogenesis

Kringle Pharma, Inc. (Head office located in Toyonaka, Osaka; President & CEO: Kunio Iwatani, “KRINGLE”) today announced that NK4 has been patented in Japan as a medical agent for diseases caused by abnormal angiogenesis, so-called neovascularization. This patent titled ‘neovascularization inhibitors’ was published in the Japanese Patent Gazette (No. 4094814). KRINGLE has an exclusive worldwide right to this patent as well as to other NK4-related patents, from Professor Toshikazu Nakamura at Osaka University, who initially made the discovery.

NK4, the intramolecular fragment of hepatocyte growth factor (HGF), is a unique bifunctional protein. NK4 acts as a competitive antagonist of HGF, thereby effectively inhibiting tumor invasion and metastasis. Moreover, NK4 inhibits angiogenesis induced by multiple angiogenic factors including vascular endothelial cell growth factor (VEGF) and basic fibroblast growth factor (bFGF) in addition to HGF. This antiangiogenic function is independent of its HGF-antagonizing action. The granted patent covers medical use of NK4 for various inflammatory diseases including but not limited to rheumatoid arthritis, psoriasis, and the wet form of age-related macular degeneration. The notice of allowance of this patent has already been issued by the European Patent Office. Now KRINGLE is working on securing the patent in the United States and other countries.

Kunio Iwatani said, “This is the second NK4 patent following the ‘anti-cancer agent’ patent which had already been granted in the United States, Europe and Japan (see KRINGLE Press Release dated July 28, 2006). This patent expands the potential target indications of NK4 and forms a firm foundation for the pharmaceutical development of NK4. Our NK4 patent portfolio has been consolidated and we will now have a better chance of collaborating with a pharmaceutical partner to accelerate the clinical development of NK4.”

About Kringle Pharma, Inc.
Kringle Pharma is a biopharmaceutical company established in 2001 to develop novel biologics based on HGF and NK4, both discovered by Professor Toshikazu Nakamura at Osaka University. Currently, Kringle’s pipeline consists of human recombinant HGF for the treatment of 1) acute renal failure, 2) skin ulcers, and 3) CNS diseases, in addition to human recombinant NK4 and NK4 gene drug for cancer therapies. For more information, please refer to the company’s website: www.kringle-pharma.com/en/index.html.

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