Product Patent on Dumbbell-Type (Ribbon-Type) E2F Decoy Oligonucleotide Granted in Japan

--- Covering a Circular Oligonucleotide Sequence ---

AnGes MG, Inc. announces that a product patent on a new second-generation decoy, namely, a dumbbell-type (ribbon-type) E2F decoy oligonucleotide, has been granted in Japan, and the Patent Gazette (Patent No. 4255123) was issued.

Prior to this patent, AnGes MG has registered a series of product patents covering dumbbell (ribbon) type NF- κ B and AP-1 decoy oligonucleotides. The company now possesses a wide range of rights on dumbbell (ribbon) type decoy oligonucleotides for three major transcription factors associated with inflammation.

These new type decoy oligonucleotides cover diseases associated with NF- κ B, AP-1 and EF2. Specifically, they cover inflammatory diseases (chronic rheumatoid arthritis, atopic dermatitis, psoriasis, etc.), aneurysms, atherosclerosis, restenosis after endovascular treatment, cancer metastasis and invasion and so on.

The results of animal studies have demonstrated that these new decoy oligonucleotides are more effective than conventional type decoys in preventing postoperative restenosis following percutaneous angioplasty, and thus are looked forward for their clinical application.

The dumbbell (ribbon) type decoy oligonucleotide covered by the current new patent is a new type of decoy oligonucleotide with improved in vivo stability through adoption of a circular structure molecule achieved by closing both ends of the first-generation double-stranded decoy oligonucleotide.

Specifically, the improved in vivo stability achieved by this invention is expected to enable intravenous administration and other administration routes that have been difficult with the conventional double-stranded decoys, and to expand the scope of diseases to which this new decoy oligonucleotide can be therapeutically applied.

Patents for this new type decoy oligonucleotides have been registered in Taiwan, Korea and Australia in addition to Japan, and patents are pending in the US, Europe, Canada and China.

This patent is valid until April 2022. If the substance covered in this patent is approved as a new drug in each country before that point, it is expected that the patent term may be extended for a maximum of additional five years. It can therefore be said that this will serve as one of the basic patents that will support AnGes MG's projects concerning the development of NF- κ B, AP-1 or E2F decoy oligonucleotide into the future.

In addition to the current patent, AnGes MG has filed patent applications in succession on various types of next-generation decoy oligonucleotides and will continue its efforts to expand the scope of the clinical application of decoy oligonucleotides for various transcription factors.

(Note: The term "dumbbell-type" was adopted because the molecular structure of this substance resembles that of dumbbells used in physical training, and the term "ribbon-type" was adopted because the substance resembles the figure of a ribbon bowknot.)