



## Registration of a Patent for Photodynamic Therapy Using a Photosensitizer or **5-Aminolevulinic Acids**

SBI Pharmaceuticals Co., Ltd., (Head office: Minato-ku, Tokyo; Representative Director and CEO: Yoshitaka Kitao; "SBI Pharmaceuticals"), a subsidiary of SBI Holdings, Inc., engaged in research and development of pharmaceuticals, health foods and cosmetics using 5-aminolevulinic acid (5-ALA)\*, hereby announces that a patent has recently been registered in Japan for a photodynamic therapy using a photosensitizer or 5-ALA.

Patent number: 5885743

Title of invention: Photodynamic therapy using a photosensitizer or 5-ALAs

Assignee: SBI Pharmaceuticals Co., Ltd.

Filing date: June 20, 2012

Photodynamic therapy ("PDT") is a type of therapy in which a photosensitizer is administered to the patient to cause accumulation in the affected area while using the cytocidal function of an active form of oxygen generated by photo-excitation. In recent years, PDT has been attracting the attention since it is less invasive compared to typical therapies such as surgical operations and it is less prone to cause a scar. However, light with a wavelength of 600 nm or longer, which has been widely used so far, is low in energy and hence many hours of emission are required, imposing an undue burden on patients.

It was recently discovered that, by emitting excitation light with a wavelength of 480 to 580 nm after administering 5-ALA as a photosensitizer, the affected area could be excited more effectively than the light with a wavelength of 600 nm or longer. This potentially improves the effectiveness of the PDT while shortening the treatment time. This development has resulted in the registration of the above-mentioned patent.

SBI Pharmaceuticals will continue to pursue various potential applications of 5-ALA, and focus on research and development to provide pharmaceuticals that satisfy the unmet medical needs of as many people as possible around the world.

## \* 5-aminolevulinic acid (5-ALA)

An amino acid produced in mitochondria. It is an important substance that serves as a functional molecule related to energy production in the form of heme and cytochromes, and its productivity is known to decrease with age. 5-ALA is contained in food such as shochu lees, red wine and Asian ginseng. It is also known as a material forming chloroplasts in plants.

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For further information, please contact:

SBI Pharmaceuticals Co., Ltd.: Corporate Planning Dept., Tel: +81 3 6229 0095