# **Bio**light

Press release from Biolight International AB Danderyd, January 11, 2002

## **Biolight reaches research agreement with KI**

Biolight has reached a preliminary agreement with the Karolinska Institutet (KI) regarding research to optimise and fine-tune, by means of micro array technology (Affymetrix), the various treatment programs currently used by the company. Attempts will also be made to map out the signal paths in the cells initiated through Biolight<sup>®</sup>.

### Professor Jan-Åke Gustafsson, KI, says:

"Micro array technology (Affymetrix) has been used to study the gene expression in fibroblasts (connective tissue cells) after treatment with Biolight<sup>®</sup>, treatment that has previously been shown to result in cell division in fibroblasts. The results clearly show that genes for growth factors and genes for receptors for growth factors in fibroblasts are stimulated to expression. The same applies to many genes that express collagen (collagen is a vital protein in the skin, produced by fibroblasts). These exciting data strongly indicate that a cascade of signals are set off in the intracellular systems of fibroblasts exposed to Biolight<sup>®</sup>, leading to a change of gene expression, which in turn controls the cell proliferation (cell growth) and the production of important elements in the skin (including collagen). Thus, this fibroblast model, used to imitate accelerated healing of wounds after treatment with Biolight<sup>®</sup>, appears well documented. These results also seem to offer a rational scientific explanation to the biological effects of Biolight<sup>®</sup> demonstrated several years ago."

### Jan-Åke Gustafsson continues:

"Our future research on this fibroblast model will focus on two main areas:

1. The use of micro array technology (Affymetrix) to optimise and fine-tune the various programs used by Biolight International AB today. This is now possible, as biological end-products which in a stringent way makes it possible to quantify the biological effects after treatment with Biolight<sup>®</sup>, appear to have been identified.

2. Trials aiming at mapping out the molecular details in those intracellular signal paths initiated by Biolight<sup>®</sup>, the final goal being to clone and identify the hypothetical photo receptor, probably located in the cell membranes of the fibroblasts, responsible for the initial response after treatment with Biolight<sup>®</sup>. Successfully realising this goal would be a great scientific breakthrough, and would lead to yet another powerful business potential for Biolight International AB."

## Christer Wallin, President of Biolight International AB, states:

"For Biolight International AB, the research results from gene expression in fibroblasts after treatment with Biolight<sup>®</sup> are of tremendous value for many reasons. We can now clearly and unmistakably show that Biolight<sup>®</sup> is active on a cellular level, which explains the good clinical results we have obtained in our trials. Furthermore, through our future research planned at KI we can now refine and enhance our treatment programs. Another advantage regarding the use of Affymetrix is that the results of the various trials can be evaluated very quickly.

And if our attempts to clone a photo receptor turn out successful, completely new and revolutionary fields will be opened to the company."

## Bio ight

### **Facts about Biolight:**

Biolight is a Swedish medical technology company that has developed a unique product for the treatment of damaged cells. The patented product is based on a method that introduces light of a specific wavelength (monochromatic light), pulse frequency and time. The light provides energy to the cell, increases its activities and initiates healing. A cell without sufficient energy is not strong enough to contribute properly to healing. The method speeds the healing processes and supplements traditional treatment. It contributes to an improved quality of life and reduced treatment expenses. The treatment is non-pharmaceutical (not a drug) and applied externally. It is easy to administer, painless and does not involve any side effects. Today, Biolight is active in treatment of ulcerations, dental care and rehabilitation.

Clinical studies using the same stringent design as for pharmaceutical products, have demonstrated that the Biolight method significantly reduces time to healing for both gingivitis and chronic wounds. A phase III study regarding gingivitis has shown that patients treated with Biolight<sup>®</sup> have 87% greater reduction in their inflammation as compared to patients who have undergone traditional treatment.

Biolight International AB is a medical technology company that offers its customers, including patients, health care personnel and authorities, various products and services based on the company's patented method for the use of pulsating, monochromatic light. The company aims to improve the patients' quality of life and significantly reduce healing time as well as treatment expenses. Through systematically performed clinical trials, Biolight is gradually expanding its scientific basis to establish the method within the health care system. In recent years, Biolight has focused on a small number of indication areas grouped around wound healing.

For further information, please visit Biolight's home page www.biolight.se or contact Christer Wallin, President of Biolight International AB, on +46-(0)8-622 52 70.