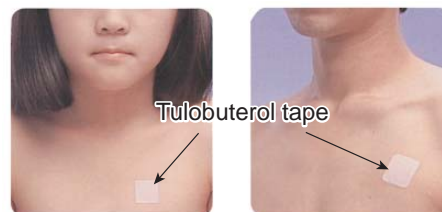


# The Pharmaceutical Society of Japan Award for Drug Research and Development

Development of Hokunalin<sup>®</sup> Tape, a transdermal formulation of the bronchial asthma therapeutic drug tulobuterol

Hokunalin is a registered trademark of ABBOTT JAPAN Co., Ltd.



Photographs of product use

## == Date of Award ==

March 27, 2001

## == Award Recipients ==

- KATO Hideo  
(Hokuriku Seiyaku Co., Ltd.)  
NAGATA Osamu  
(Hokuriku Seiyaku Co., Ltd.)  
YAMAZAKI Masahiro  
(Hokuriku Seiyaku Co., Ltd.)  
SUZUKI Toshihiro  
(Hokuriku Seiyaku Co., Ltd.)  
NAKANO Yoshihisa  
(Nitto Denko Corporation)  
Company names as of award date  
Hokuriku Seiyaku Co., Ltd., is the present-day ABBOTT JAPAN Co., Ltd.

## == Features of Award ==

The PSJ Award for Drug Research and Development is one of the seven awards established by regulation of the Pharmaceutical Society of Japan and is



Award ceremony

awarded to up to two recipients each year in respect of pharmaceutical discovery or related development of pharmaceutical application technology where originality and a contribution to medical treatment are recognized. Among previous recipients of the award are a hyperlipidemia drug by Sankyo Co., Ltd., an immunosuppressant by Astellas Pharma Inc., and other ground-breaking drugs that became representative of the pharmaceutical companies that created them.

## == Reason for Award and Product Outline ==

The product is the world's first transdermal patch preparation in the asthma therapy field, where oral and inhaled pharmaceuticals had been the mainstream. The chief reason for the award was its great contribution to improving the quality of life of asthma patients.

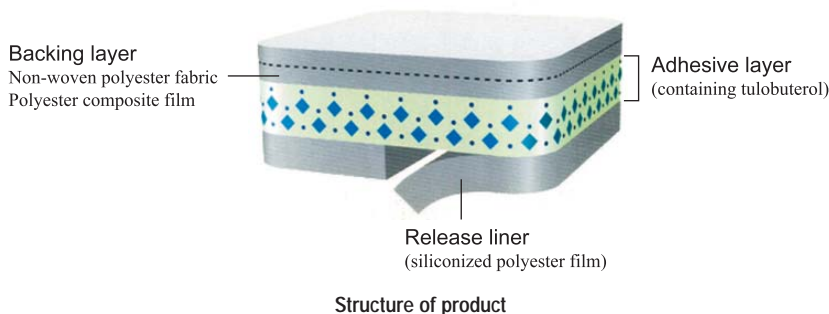
The characteristics of the product are that it can be used on a wide range of patients from children to the elderly and that it is effective in preventing asthmatic attacks when applied just once daily. In particular, the use of unique drug release control technology allows effective prevention of the asthma attacks which frequently occur in the early morning. This not only benefits asthma patients but also greatly reduces the burden on their carers.

It has also been demonstrated that, by appropriately controlling the concentration of the drug in the human body, the product greatly reduces the incidence and severity of the systemic adverse effects seen with oral and inhaled formulations.

Asthma patients suffer great challenges in everyday life compared to healthy individuals. In some cases, use of the product allows the disease to be kept under control so that for instance a switch from inpatient to outpatient treatment may be possible. It can also ensure that the patient sleeps adequately at night and is therefore able to lead a normal working and social life. The product thus also makes a great contribution in terms of the social economy and the medical economy.

In the seven odd years since its release at the end of 1998, the product has been in widespread use for the treatment of asthma and its therapeutic efficacy is rated highly in medical care environments. It has won a large share of the market among drugs with similar efficacy and is expected to achieve further market penetration of medical care environments as an asthma therapy drug in transdermal patch form.

There are many people who say they came to know about the company called Nitto Denko through using the product, while parents of asthmatic children have sent us letters of thanks and other testimonials.



Structure of product