

Our Products are the Most Widely Used Drugs in the World



Specially Appointed Prof. **Akira Endo**

Born in 1933, he graduated from the Faculty of Agriculture, Tohoku University and in 1966-1968 studied in the United States, at the Albert Einstein College of Medicine.

The drugs generically called Statins, administered to more than 30 million people daily, are the most widely sold drugs in the world. Dr. Akira Endo, the Representative Director for Biopharm of Japan Corporation, is from the Faculty of Agriculture, Tohoku University and discovered ML-236B (Compactin) the main ingredient of statin.

Specialized in applied microbiology, Doctor Endo studied as many as 6,000 varieties of fungus in the early 1970's; then in 1973, he discovered a substance in a blue-green mold variety called ML-236B (this report was published in 1976) and also showed how ML-236B dramatically reduces cholesterol in the blood. Doctor Endo's research project was initially triggered by his study experience in the United States at the Albert Einstein College of Medicine. It was here that the increasing number of heart attacks was to top cancer among lifestyle diseases as a cause of death. However, at that time, there was no effective medicine for its treatment. While chemical medicines were thriving at that time, Doctor Endo had the inspiration that an "effective treatment by medicines might be discovered in microorganisms similar to the story of the discovery of penicillin from a blue-green mold by Doctor Fleming."

Doctor Endo has been honored with many awards including the 2006 Massry Prize in the United States and the 2006 (22nd) Japan Prize, presented for his enormous contribution to the advancement of medicine.



Dr. Endo's fundamental work in microbiological study is in sampling soil. A hole 15 cm in diameter and 15 cm deep is dug in the ground for sampling the soil, then microorganisms in the soil are examined carefully.



"Statin," a new drug, effectively reduces cholesterol in blood

Specially Appointed Professor Akira Endo, Graduate School of Agricultural Science <http://www.biopharm.co.jp/>

Discovering the Mechanism for Reducing Obesity and Diabetes



Japan Society for the Promotion of Science Prize plaque

[Division of Molecular Metabolism and Diabetes]

Professor **Yoshitomo Oka**

Born in 1949, he graduated from the Faculty of Medicine, University of Tokyo. He worked at the University of Tokyo Hospital, University of Massachusetts Medical School, and then the Faculty of Medicine, Yamaguchi University. In 2001, he joined Tohoku University, as a professor at the Graduate School of Medicine. Since 2004 he has been the Associate Dean of the Graduate School of Medicine. (Left in the picture)

[Division of Advanced Therapeutics for Metabolic Diseases]

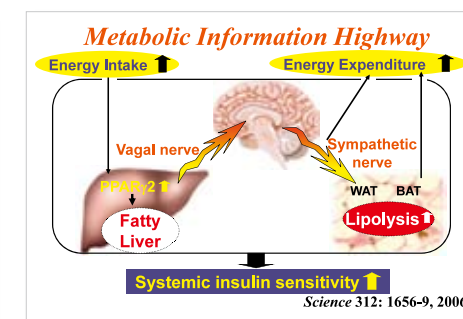
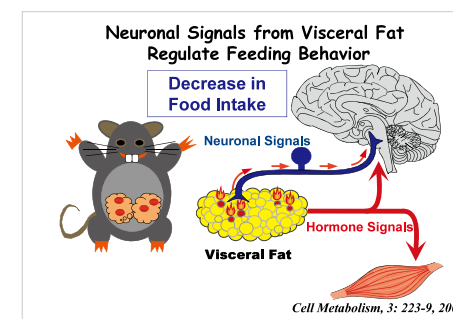
Professor **Hideki Katagiri**

Born in 1962, he graduated from the Faculty of Medicine, University of Tokyo. He worked at the University of Tokyo Hospital, and then became a professor at the Graduate School of Medicine, Tohoku University in 2003. (Right in the picture)

A research team composed of Professor Hideki Katagiri (Center for Translational and Advanced Animal Research) and Professor Yoshitomo Oka (Department of Internal Medicine) was the first in the world to discover the existence of "an inter-organ neural network for metabolic information." When fatty liver was induced in mice, the basal metabolism responded actively to reduce fat accumulation in fat tissue. This inter-organ neuronal system functions as a protective machinery against obesity.

Professor Oka states that: "The brain cells receive neural signals sent from the liver and instruct the fat tissue to decompose fats by becoming more actively metabolic. The brain plays the role of conductor for the entire body, the orchestra." This discovery anticipates great research advances, especially in the fields of biology and medicine. Its clinical application, of course, will be in the prevention of obesity and establishment of new means of treating it. "This discovery opens up a new field for research," said Professor Katagiri.

Professor Oka has been honored with many awards, including the Japan Diabetes Society Award in 1990. Professor Katagiri was awarded the Japan Society for the Promotion of Science Prize (FY2006), which is given to young researchers who have produced notable research and achievements. Their research results were published in the US journal *Science* (Vol. 312, June 16, 2006).



Professor Yoshitomo Oka, Graduate School of Medicine, Tohoku University <http://www.med.tohoku.ac.jp/room/146/japanese.html>
 Hideki Katagiri, Graduate School of Medicine, Tohoku University <http://www.med.tohoku.ac.jp/room/222/japanese.html>