

First international study on the prevention of diabetes:

Early treatment with Bayer drug can drastically lower the risk of diabetes and cardiovascular disease

Better and more cost-effective treatment possible

Munich – Patients with impaired glucose tolerance who receive treatment with acarbose at an early stage can not only prevent type II (adult-onset) diabetes from developing but can also drastically lower the risk of cardiovascular complications such as myocardial infarction. These findings of the large-scale international STOP-NIDDM Study were recently presented at the 21st International Bayer Pharma Press Seminar in Munich. “The clock starts ticking long before diabetes is diagnosed,” warned the Principal Investigator of the Study, Professor Jean-Louis Chiasson from Montreal, Canada. According to Professor Chiasson, the findings of the STOP-NIDDM Study confirm that impaired glucose tolerance (IGT), a condition regarded as a precursor stage to diabetes, has to be treated at an early stage if cardiovascular complications which frequently take a fatal course are to be avoided.-

In the STOP-NIDDM Study (Study to Prevent Non-Insulin-Dependent Diabetes Mellitus), 1,429 patients with IGT received treatment with 100 mg acarbose (Glucobay®) or placebo three times daily. The numbers of male and female participants in the Study were approximately equal – a first in prevention studies. The mean body mass index was 30 and about one half of the patients suffered from hyperlipidemia and/or hypertension. The data were evaluated after 39 months of treatment. According to Professor Chiasson, the relative risk of developing manifest diabetes was reduced by up to 36 percent. These results were independent of age and sex. Another remarkable finding was that acarbose caused the glucose tolerance of 30 percent of the participants to return to normal.

Even the experts involved in STOP-NIDDM were surprised by the drastic reduction in cardiovascular diseases following treatment with acarbose. As a

result the data were checked once again by an independent committee of cardiologists.

“The efficacy of the acarbose molecule is enormous: in more than one third of all cases, diabetes was prevented. The risk of cardiovascular complications was dramatically reduced by almost 50 %, with the risk of myocardial infarction dropping even lower. There were only two myocardial infarctions during the study period in the group of patients who took acarbose, compared with 19 in the placebo group,” summarized Professor Chiasson.

Endothelial damage and oxidative stress apparently play a key role in the pathophysiology of both diabetes and cardiovascular disease.

Post-challenge glucose levels are an independent predictor of mortality – whether cardiovascular or all-cause mortality – whereas fasting glucose levels are not. These findings from the Diabetes Intervention Study were presented by Professor Markolf Hanefeld from the University of Dresden, Germany. In another study he showed that the extent of hyperglycemia after an oral glucose challenge correlated with increased intima media thickness. “This is a clear indicator for the progression of atherosclerosis. These studies strongly suggest that postprandial hyperglycemia is an appropriate target for both effective glycemic control and the reduction of cardiovascular risk,” Professor Hanefeld explained. Interestingly, oscillating blood glucose levels proved to be more damaging to the cells, in particular the beta cells of the pancreas, than constant, chronic hyperglycemia.

Experts agree that the timebomb of diabetes and all its complications must be disarmed. They are therefore stressing that new, specific recommendations for IGT screening and treatment of patients suffering from impaired glucose tolerance with acarbose at an early stage cannot be far away.

It is estimated that 150 million people around the world suffer from diabetes. This number is set to increase by about 50 percent by 2010. “The disease and its complications represent a massive financial drain on the health care system,” said Professor Dr. Jaakko Tuomilehto from the University of Helsinki, Finland. The American Diabetes Association estimates that 77,000 patients die of heart disease every year.

Glucobay® delays the digestion of carbohydrates in the gut, thus preventing elevated postprandial blood glucose levels. The product has been on the market in more than 120 countries for more than 10 years and has proved to be a safe drug for the treatment of type II diabetes in millions of patients.

“When we brought Glucobay® onto the market, we never thought that this innovative Bayer drug could have such a great therapeutic potential. We are currently opening a new chapter in the prevention and treatment of diabetes. I am convinced that the findings presented here will lead to better and more cost-effective treatment of patients,” said Dr. Wolfgang Plischke, Head of Bayer HealthCare’s Pharmaceuticals Division.

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Forward-Looking Statements

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