

**FOR IMMEDIATE RELEASE**

**Major Canadian Type 2 Diabetes Study Shows Significant Improvement in Blood Sugar Control Achievable in Primary-Care Setting**

*~ Patients demonstrate high adherence and achieve aggressive treatment targets ~*

**TORONTO, Ontario (February 16, 2006)** – Data from a major new Canadian primary-care study show that the combination of rosiglitazone maleate (Avandia®) and low-dose metformin resulted in a significant decrease in A1C compared to metformin alone. The study authors conclude that rosiglitazone and low-dose metformin combination therapy is more efficacious than the usual approach of maximizing the dose of metformin monotherapy, and is an effective strategy for helping type 2 diabetes patients reach recommended blood sugar targets. The study also demonstrates that the addition of rosiglitazone to diabetes therapy resulted in low rates of hypoglycemia, high adherence and patient satisfaction. Published in the *Canadian Journal of Diabetes*, the study is the largest with rosiglitazone conducted to date in Canada and one of the largest worldwide.

According to the Diabetes in Canada Evaluation (DICE) Study, half of all Canadians with type 2 diabetes do not have their blood sugar levels under control<sup>i</sup>, putting them at risk for serious complications such as cardiovascular, kidney and eye diseases<sup>ii</sup>. To reduce the risk of disease progression and complications, the Canadian Diabetes Association 2003 Clinical Practice Guidelines<sup>iii</sup> recommend all people with diabetes reach and maintain an A1C level of  $\leq 7.0$  per cent.

“Although physicians understand the importance of reaching treatment targets, they are often hesitant to put their patients, especially the moderately controlled ones with an A1C close to 7.0 per cent, on more aggressive therapy out of concern for side effects, such as hypoglycemia. Given the fact that any reduction in A1C can reduce the risk for the micro and macrovascular complications of diabetes, we need to overcome this treatment inertia,” says Dr. Lawrence Leiter, Head of Endocrinology at St. Michael’s Hospital in Toronto and study co-author. “These study findings are exciting because the results offer physicians relevant evidence for a therapeutic strategy that helps even a relatively well controlled patient achieve stringent blood sugar targets safely and effectively.”

## STUDY RESULTS

The *Rosiglitazone Evaluation: Advancing Canadian Treatment of Type 2 DM (REACT2 Diabetes)* study enrolled 705 patients in 80 primary care practices in Canada. Among the key findings (full study results available at [www.diabetes.ca/Section\\_Professionals/cjd-dec05.asp](http://www.diabetes.ca/Section_Professionals/cjd-dec05.asp)):

- Adding rosiglitazone to low dose metformin and lifestyle modification, instead of maximizing the metformin dosage, resulted in a significant mean reduction in A1C from 7.5 per cent to 7.0 per cent.
- Adding rosiglitazone alone to lifestyle modification resulted in a significant mean reduction in A1C of 0.62 per cent down to 6.8 per cent.
- Even patients with moderately controlled blood sugar levels (7.3 per cent A1C) achieved optimal targets with rosiglitazone (alone and in combination therapy).
- Overall, there was negligible reporting of hypoglycemia and less than five per cent of study participants reported an adverse event. The few reported were mild to moderate in severity and did not typically result in the discontinuation of the study medication.
- The greatest improvement in patient satisfaction over the course of the study was noted in the rosiglitazone treatment groups.

“Most people with type 2 diabetes are treated in the primary care setting. It is a complex and difficult to treat disease and with prevalence on the rise, this is only going to put additional pressure on our family physicians. As such, it is necessary that effective management strategies be demonstrated in primary care,” says Dr. Stewart Harris, Associate Professor, Schulich School of Medicine and Dentistry, the University of Western Ontario and co-author of the study. “REACT2 confirmed that rosiglitazone, alone and in combination therapy with low-dose metformin, is effective and safe for patients in daily practice and a good option for physicians to get their moderately controlled patients to treatment targets quickly, safely and effectively.”

## **ABOUT THE STUDY**

*REACT2 Diabetes*, a phase IV, open-label, randomized, parallel group, multicentre study, was conducted to evaluate the efficacy and safety of rosiglitazone alone and in combination with metformin in the primary-care setting. The primary efficacy endpoint was mean change in A1C from baseline at week 32. The patients were randomized into four treatment groups within two cohorts. Cohort 1 consisted of drug-naïve patients who were treated with lifestyle modification only, or rosiglitazone and lifestyle modification (total = 459 patients). Cohort 2 consisted of metformin-treated patients who were treated with metformin and lifestyle modification, or metformin and rosiglitazone and lifestyle modification (total = 236 patients).

## **ABOUT ROSIGLITAZONE**

Rosiglitazone maleate (Avandia®) used alone, or in combination with metformin or a sulfonylurea, along with diet and exercise helps to control blood sugar. Rosiglitazone directly targets insulin resistance and improves  $\beta$ -cell function, underlying causes of type 2 diabetes<sup>iv</sup>. When combined with metformin, which works primarily by reducing the amount of sugar produced by the liver<sup>v</sup>, these two drugs with complementary modes of action, can help patients achieve enhanced glucose control, which in turn may slow disease progression and reduce the risk of long-term complications<sup>vi</sup>. The most common side effects reported in clinical trials with rosiglitazone were upper respiratory tract infection, headache, and back pain. Rosiglitazone is not for everyone. Rosiglitazone is not recommended for patients with severe heart failure or with serious liver disease<sup>vii</sup>.

## **ST. MICHAEL'S HOSPITAL**

St. Michael's Hospital is a large and vibrant Catholic teaching and research hospital in the heart of Toronto. Fully affiliated with the University of Toronto, St. Michael's Hospital leads with innovation, and serves with compassion. Renowned for providing exceptional patient care, St. Michael's Hospital is a regional trauma centre and downtown Toronto's designated trauma centre for adults. For more information, please visit [www.stmichaelshospital.com](http://www.stmichaelshospital.com).

**Notes to Editors:**

1. A1C levels measure how well a patient's glucose levels are being controlled over time.
2. The 2003 CDA Guidelines full title is *The Canadian Diabetes Association Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada*.
3. The study publication: L.A. Leiter, S.B. Harris, J.L. Chiasson, L. Edwards, M. C. O'Neill, D. M. Van. Efficacy and safety of rosiglitazone as monotherapy or in combination with metformin in primary care settings. *Canadian Journal of Diabetes*. 2005;29(4):384-392.
4. REACT2 was sponsored by GlaxoSmithKline Inc.

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<sup>i</sup> S.B. Harris, J. Ékoé, Y. Zdanowicz, S. Webster-Bogaert. Glycemic control and morbidity in the Canadian primary care setting. (Results of the Diabetes In Canada Evaluation Study). *Diabetes Research and Clinical Practice*. 2005;70(1):90-97.

<sup>ii</sup> Canadian Diabetes Association. "Complications: the long term picture." Available at: [www.diabetes.ca/Section\\_About/complications.asp](http://www.diabetes.ca/Section_About/complications.asp).

<sup>iii</sup> Canadian Diabetes Association Clinical Practice Guidelines Expert Committee. Canadian Diabetes Association 2003 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. *Can J Diabetes* 2003;27(Suppl 2): S1-S152.

<sup>iv</sup> Gerich JE. Redefining the clinical management of type 2 diabetes: matching therapy to pathophysiology. *European Journal of Clinical Investigation* 2002;32 (Supplement 3):46-53.

<sup>v</sup> Metformin (Hydrochloride). *Therapeutic Drugs*, Colin Dollery 2nd Edition, M77-M81. Harcourt Brace, 1998.

<sup>vi</sup> Fonseca V, Rosenstock J, Patwardhan R et al. Effect of metformin and rosiglitazone combination therapy in patients with type 2 diabetes mellitus: a randomized controlled trial. *JAMA* 2000;283:1695-1702.

<sup>vii</sup> AVANDIA<sup>®</sup> Product Monograph, 2006.