



Minnesota Lions Diabetes Foundation Update *Development of the Next Generation of Type 2 Diabetes Drugs*

Annual Research Update

Our 13th Annual Minnesota Lions Diabetes Foundation Research Update is on Saturday, March 19 in St. Cloud. We hope you will attend to learn more about University of Minnesota Research aimed at preventing and curing diabetes. Following the presentations, attendees will be able to interact with U of M scientists one-on-one to learn about their research. A flyer with additional information is included in this issue of the *Informer*. Registration is due by March 8.

MLDF STRIDES Physical Activity Challenge

Physical activity is key to preventing diabetes and improving health. With that in mind, MLDF's fundraiser this year is encouraging measurable physical activity of 15 miles (2,000 miles = 1 mile) a month during February, March and April. You may join the challenge at any time during these

three months. (Most of us in our daily activities easily achieve 15 miles a month, so you probably have already done 15 plus during February!) Whether you like to walk, cycle, curl, roll, swim, ski, snowshoe or other activities, this is an exciting opportunity to support MLDF's mission. You do not need to report your miles, just commit to doing so by registering. Look for the STRIDES for Physical Activity Challenge link on our website. Find the Challenge link at MNLionsDiabetes.org. See our flyer in this *Informer*.

Supporting Research

Raising funds for diabetes research is a core mission of the Minnesota Lions Diabetes Foundation (MLDF). Type 1 and Type 2 Diabetes are increasing throughout our population. Additionally, in the past, Type 1 Diabetes was considered to occur only in teenagers and younger. Type 2 diabetes was considered to occur only in adults. However, that is no longer true and both types of diabetes are impacting all ages! With the increase of diabetes among people of all ages, it is important for MLDF to continue its support of diabetes research.

Funds MLDF donates to University of Minnesota for diabetes research is made possible by all of our 5M-5 clubs. Your hard work fundraising and gifts to MLDF that make it possible for us to support diabetes research. *Thank you for your support of our mission.*

Each month we highlight the progress and advancements being made in research projects. This month, we are focusing on the work of David Bernlohr, Ph.D. and his lab team. His research basis is "Development of the Next Generation of Type 2 Diabetes Drugs."

Type 2 Diabetes Background

Type 2 diabetes, the most common form of diabetes, means that the body either does not use insulin properly or it does not produce enough insulin. Some risk factors for developing Type 2 diabetes are being overweight, having a lifestyle that is not active, genetics, and ethnic background. While some people can control their blood-sugar levels with healthy eating and exercise, others may need medication or insulin to keep blood sugar levels within a healthy range, thereby reducing the chance of diabetic complications.

Current Research

The Bernlohr lab, with the help of past MLDF contributions, has developed a breakthrough drug for Type 2 Diabetes called HTS01037. This drug has been shown to prevent the development of inflammation, the loss of a cell's power of division and growth, and insulin resistance. It has also shown signs of reversing the effects of obesity-linked insulin resistance in mice. Previously Lions and MLDF support has allowed the Bernlohr lab to conduct research with live animals

During the next year, the Bernlohr lab will:

- expand studies in experimental mice to include obese, insulin resistant monkeys as a stepping-stone toward eventual human clinical trials;
- carry out targeted chemical optimization of HTS01037 to improve its selectivity and efficacy (i.e., make it more efficient); and
- publish studies and results HTS01037 experiments and testing so it is more widely known within the diabetes field.

Club Visits; please reach out to your trustees to schedule your club visit. Whether your club is meeting in person, or virtually, we are available to visit!