



Welcome to Kovler Connection, the new University of Chicago Kovler Diabetes Center newsletter!

With the problem of diabetes and obesity continuing to rise in the United States, and a wealth of new treatments and technologies on the horizon for both Type 1 and Type 2 diabetes, the Kovler Diabetes Center plays an increasingly critical role as a comprehensive resource for individuals with diabetes, their families, health care providers and generous supporters.

The Kovler Diabetes Center, or KDC, is the place to find premier programs in education, innovative research, cutting-edge clinical treatment and top-notch quality-of-life support services. We want to help individuals take control of diabetes and we plan to reach out with breaking information and open access to the highest possible quality of care. We are continually developing our website, Facebook page and creating new opportunities to communicate information as quickly and widely as possible.

This newsletter is part of that effort. Here you will find useful news on the full range of issues in diabetes. We'll keep you informed about upcoming events, such as Chicago Diabetes Day, and accomplishments, such as our award for the program, "Improving Diabetes Care and Outcomes on the South Side of Chicago" from the Merck Alliance to reduce disparities in diabetes. We'll have details about current clinical trials, and who qualifies for participation. We'll provide new information about important research (see page 3 for our stories about Dr. Ronald Cohen's latest project, our unique neonatal diabetes program and Lilly's Law, now going through the Illinois State House to make neonatal diabetes reportable). Look for stories about patients and physicians, and thoughts about how to help those living with diabetes.

Recognized by the National Institutes of Health as a Diabetes Research and Training Center, Kovler can handle the complexities and complications of diabetes, with special services for:

- adolescents and teens with diabetes
- diabetes in pregnancy
- individuals with celiac disease
- families with early onset and genetic forms of diabetes
- sleep disorders

We offer the newest and best methods for managing diabetes, from state-of-the-art insulin pumps and sensors to investigational therapies not available elsewhere. As the hospital receiving the most NIH funding for diabetes and endocrinology research in Illinois, the University of Chicago and Kovler Diabetes Center are poised to identify at-risk individuals and help prevent diabetes among those in the highest risk groups.

We appreciate your involvement with the KDC, and hope you will enjoy reading the Kovler Connection. Your feedback on this newsletter, as well as our programs and services is truly welcome.

Sincerely, *LPhilipson*

Louis H. Philipson, MD, PhD
Director, University of Chicago Kovler Diabetes Center
Professor of Medicine and Pediatrics



P2
Neonatal
Innovation

P3
Research
Update

P4
Clinical
Trials

P5
Reducing
Disparities

P6
Giving
to Kovler

One thing leads to another

Innovative treatment at University of Chicago leads to new state legislation



Professor Graeme Bell, PhD, leads our research efforts in the genetics of diabetes and is Principal Investigator of our NIH Diabetes Research and Training Center.

In August 2006, six-year-old Lilly Jaffe put away the insulin pump that had been a lifeline since she was one month old. Instead of glucose checks 10 times a day, insulin injections up to five times a day, and constant scrutiny of what she eats, Lilly now takes pills twice a day and checks glucose a few times during the day. “It’s like trading a severe case of type 1 diabetes for a mild

case of type 2,” said Louis Philipson, MD, PhD, Medical Director of the University of Chicago Kovler Diabetes Center and the physician who oversaw Lilly’s care.

The transformation was possible because of a novel genetic treatment used only four times in the United States. It targets “monogenic” diabetes, or diabetes caused

by a mutation in a single gene. These forms of diabetes in children are just being recognized and studied, but Dr. Graeme Bell, one of the world’s leaders in the genetics of diabetes, first recognized several of these genes causing diabetes in young people in the 1990s.

Researchers suspect that about 2,000 people in the United States with neonatal diabetes could benefit from Lilly’s treatment if precisely diagnosed and treated relatively early in life. The take-home message, Dr. Philipson said, is that, “anyone who has what appears to be type 1 diabetes with onset before the age of six months should be tested for this condition.”

Toward that end, Drs. Philipson, Bell and Greeley have established the first registry in the United States for neonatal diabetes. The registry, funded by a grant from the Juvenile Diabetes Research Foundation, will:

- help identify new and existing patients with neonatal diabetes
- provide a clearinghouse of information for individuals, their families and doctors about these syndromes

- track patients with these mutations who are being treated with sulfonyleureas
- help identify new genes responsible for diabetes

The idea was so good, Illinois legislators are working to enact “Lilly’s Law,” a bill mandating that the Department of Public Health develop and implement a neonatal diabetes mellitus registry pilot program. It will require physicians and other healthcare providers treating a patient with diabetes mellitus with onset before 12 months of age to report the occurrence. And it will require clinical laboratories performing glycosylated hemoglobin tests for young patients with diabetes mellitus to report the results of each test the laboratory performs. In addition, the Department of Public Health must allow access of the registry to neonatal diabetes mellitus research institutions.

To register or to find out more, go to the Neonatal Diabetes Mellitus Registry website: <http://www.kovlerdiabetescenter.org/registry>.

Dr. Philipson elected to Board of American Diabetes Association

Our own Kovler Diabetes Center Director, Louis H. Philipson, MD, PhD, has been elected to the Board of Directors of the American Diabetes Association. Dr. Philipson began a three-year term on January 1, 2009.

The American Diabetes Association was founded in 1940 to prevent and cure diabetes and to improve the lives of all people affected by diabetes.

Dr. Philipson has served the ADA in both national and local capacities for many years, and has been awarded the American Diabetes Association’s Mentor-Based Postdoctoral Fellowship, and Mentor-Based Minority Postdoctoral Fellowship

awards, earned American Diabetes Association and National Institutes of Health research awards, and received the Association’s Northern Illinois “Father of the Year” award in 2007.

Dr. Philipson was also named “Scientist of the Year” by the National Disease Research Interchange in 2007. He is Scientific Director of the Cellular and Tissue Based Processing cGMP Facility and the Director of the Islet Cell Biology Core Laboratory at the University of Chicago Diabetes Research and Training Center.

We salute you for your phenomenal contributions, Dr. Philipson!



Congratulations Amy!
Kovler educator wins award

Amy Hess-Fischl, coordinator for the *In Transit* program at Kovler Diabetes Center, has been named Diabetes Educator of the Year by the Diabetes Care and Education Practice Group of the American Dietetic Association. She was chosen from among more than 6,000 members nationwide.

Hess-Fischl has worked with children and adolescents with diabetes for many years. In Kovler’s *In Transit* program, she helps adolescents, teens and young adults make an effective transition from parental care to self-care, and from the pediatric clinical model to an adult one. The award noted her contributions to diabetes education and medical nutrition therapy.

“I am honored and humbled,” says Hess-Fischl. “I truly enjoy working with the kids and their families. This award is because of them.”

Current Clinical Trials

Clinical trials, the point in research when physicians team with patients to test new therapies, are a vital and ongoing function of advancing medical understanding and treatment. Many of the trials based in the Kovler Diabetes Center hold great promise for patients dealing with diabetes and obesity and their side-effects. Investigators rely on patient participation, and seek those who have an interest in and may qualify for enrollment in a study. **If you or someone you know** are interested in participating in a clinical trial, talk to your physician.

Trials currently underway in the Kovler Diabetes Center:

1. Improving glycemic control in patients with post-transplant diabetes

Funding Novo-Nordisk

Enrolling Adult patients with post-transplant diabetes, who have trouble controlling glucose.

Purpose Some patients with post-transplant diabetes have diabetes that is difficult to control. Continuous glucose monitoring can be used to elucidate glucose patterns in these patients and this information can be used to prescribe a more effective insulin regimen.

Timeframe Trial ongoing, scheduled to complete in early 2010

Contact Dr. Suma Dronavalli, (773) 702-3624

2. The Effects of Nocturnal ACE inhibitor dosing on conversion of a non-dipping blood pressure pattern in African Americans with nondiabetic kidney disease.

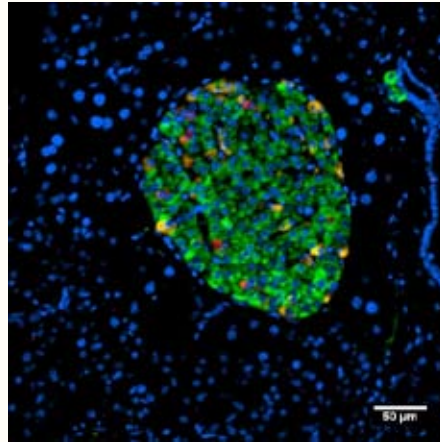
Funding NIDDK (NIH)

Enrolling Fully enrolled

Purpose To evaluate whether a change in the time of dosing will slow nephropathy progression in patients in the African American Study of Kidney Disease. A long term outcome trial will then be designed to see if the renal outcomes will be different.

Timeframe One year (2008-2009)

Contact Linda Fondren, RN, Project Coordinator, (773) 702-7941, or George Bakris, MD, Co-Investigator, gbakris@gmail.com



Mouse islet and β cells from duct.

3. DEFEND1

Funding ToleRx

Enrolling Generally healthy individuals between the ages of 18-35 with a confirmed diagnosis of T1DM may be eligible. In order to participate in DEFEND1, a subject must:

- Be 18 to 35 years of age
- Have new-onset Type 1 (autoimmune) diabetes (consistent with ADA/WHO criteria) that requires insulin treatment
- Have been diagnosed within 90 days of receiving the first dose of study drug
- Have a screening stimulated C-peptide level > 0.20 nmol/L during an oral mixed-meal tolerance test when pre-challenge blood glucose is > 70 mg/dL and \leq 200 mg/dL
- Have a maximum stimulated C-peptide level \leq 3.50 nmol/L during screening
- Have a positive test result for anti-GAD and/or anti-IA-2 autoantibodies
- Not be pregnant, breastfeeding, or planning to become pregnant within the 60 days after the last dose of study drug
- Have a Body Mass Index (BMI) of < 32
- Require insulin
- Have no other significant medical illnesses

Purpose To assess the efficacy and safety of oteelixizumab, an anti-CD3 monoclonal antibody also referred to as TRX4

Contact Kovler Diabetes Center, (773) 702-2371, diabetes@uchospitals.edu, www.DefendAgainstDiabetes.com/refer

4. Effects of Simvastatin alone and in combination with Rosiglitazone on urine albumin excretion, blood pressure and markers of oxidant stress (The SIROCCO study)

Funding Glaxo Smith Kline

Enrolling Patients ages 40-75 with impaired fasting glucose, hypertension and microalbuminuria; closing summer 2009 patients destined to develop Type 2 diabetes.

Purpose To evaluate the effect of simvastatin alone and in combination with rosiglitazone.

Timeframe Three years (2007-2010)

Contact Linda Fondren, RN, Project Coordinator, (773) 702-7941, or George Bakris, MD, Co-Investigator, gbakris@gmail.com

5. The Effects of Nebivolol on aortic impedance parameters in Type 2 diabetics (The EFFORT trial)

Funding Forest Laboratories

Enrolling Patients ages 40 and higher with Type 2 diabetes, hypertension and impaired kidney function

Purpose To evaluate whether an agent that increases the ability of the aorta to be more pliable through increases in nitric oxide will yield greater and more enduring distensibility versus blood pressure control with an agent from the same class that does not have this effect. If positive it could result in reduced aging of the main artery of the body and hence reduced cardiovascular risk.

Timeframe 2009-2011

Contact Carrie Schlaffer, Project Coordinator, (773) 702-7941, cschlaff@medicine.bsd.uchicago.edu, or George Bakris, MD, Principal Investigator, gbakris@gmail.com

Reducing Disparities Kovler partners with Merck to improve diabetes care on Chicago's South Side



In a new initiative supported by the Merck Company Foundation, Kovler Diabetes Center and the University of Chicago will work collaboratively with four

community health centers to improve access to medical care and the quality of diabetes care delivered to patients on the South Side of Chicago.

“Improving Diabetes Care and Outcomes on the South Side of Chicago,” is one of five programs selected to be part of Merck’s new Alliance to Reduce Disparities in Diabetes. The five-year initiative is part of a national effort to mobilize community-based partners and enhance the delivery of proven, collaborative approaches to closing gaps in diabetes care. The alliance includes the U.S. Department of Health and Human Services’ Centers for Disease Control and Prevention (CDC) and the Office of Minority Health (OMH).

“This project will be a tremendous opportunity for the University, the community and health centers and clinics to partner together,” said Dr. Marshall H. Chin, co-principal investigator on the grant.

That’s something they’ve got experience with. “One reason we were selected is our ongoing effort to work with the community,” added Dr. Monica E. Peek, co-principal investigator.

The “hygiene hypothesis”

Alexander Chervonsky, MD, PhD, Associate Professor in Pathology at the University of Chicago, has recently found that raising mice susceptible to diabetes and deficient in control over normal gut bacteria in a pathogen-free environment in fact keeps them from developing diabetes. However, when the same kinds of mice are raised in a completely sterile environment, without the normal bacterial flora like those that aid in digestion, the mice consistently develop diabetes.

Chervonsky believes that these common, non-pathogenic bacteria somehow inoculate the mice against the onset of the disease.

Recent research suggests that the autoimmune response which underlies type 1 diabetes can be invoked by infections. The receptors which “recognize” viruses and bacteria may be recognizing the beta cells, which make insulin, as pathogens, too. On the other hand, bacteria can protect from autoimmunity.

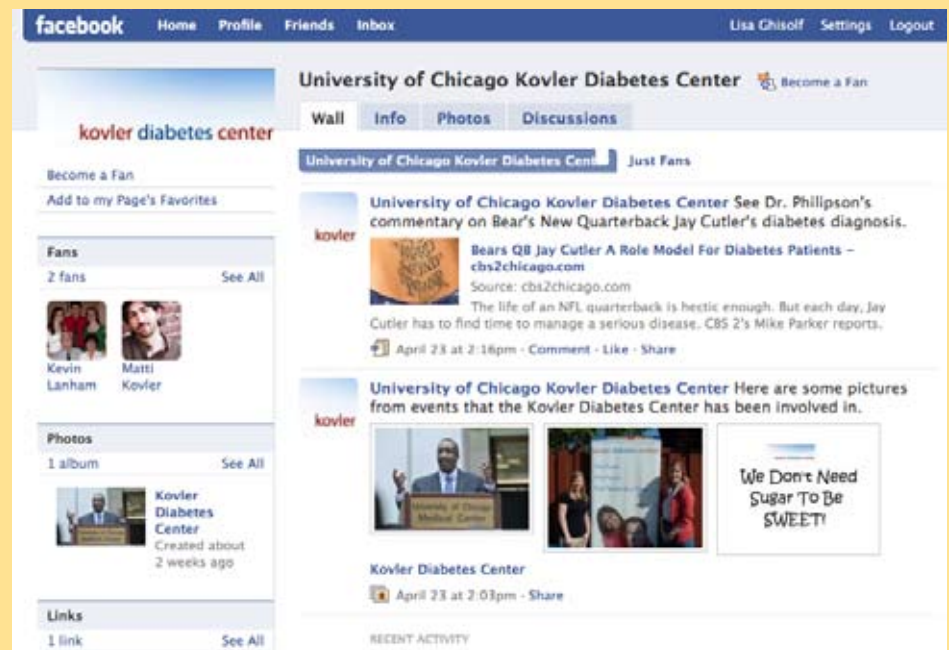
Chervonsky believes that these common, non-pathogenic bacteria somehow inoculate the mice against the onset of the disease. The bacteria he suspects are responsible for this inoculation effect are lactic bacteria, sometimes found in yogurt, a distinctly safe “pharmacological” agent.

Chervonsky is now attempting to understand how the white blood cells that initiate the immune response are activated, how they home in on target organs, and how they destroy organs.

Make a New Friend on Facebook

Join the Kovler Diabetes Center on Facebook, and keep up with news and the people you have come to know. Post your contributions – we’re happy to hear from you! Search for Kovler Diabetes Center at www.facebook.com to “become a fan.”

facebook



Research Update

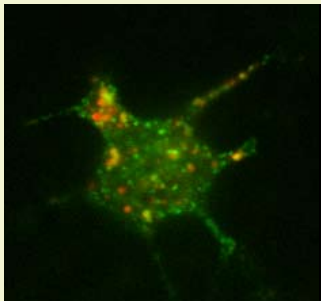
As Research Director of the Kovler Diabetes Center, I am here to tell you this is an exciting time for research.

NIH Challenge Grants

For example, we're witnessing for the first time ever a "challenge" grant program issued by the National Institutes of Health, the government agency that provides funding for biomedical research. This is unprecedented! Thanks to the U.S. stimulus package, researchers have been invited to write grant proposals for immediate two-year funding. As a result, the quest for discovery, as well as the need to create jobs, will receive a good boost at the right time. The competition for challenge grants will be stiff, but we've never seen an opportunity like this before, and we're up for the ... challenge.

Pharma partnership

Add to that an increase in partnerships with industry. Today, academic institutions and pharmaceutical companies are finding new and novel ways to transform research discoveries into treatment for patients. This means "translational research," or work that's designed to advance treatment, will progress at faster rates, leading to better healthcare for everyone.



Insulin storage vesicles

The Knapp Center for Biomedical Research

We're sure to take advantage of these developments with greater efficiency once our Knapp Center for Biomedical Research opens in June. This is also momentous. The Knapp Center allows us to concentrate all diabetes and obesity research under one umbrella. And, we're getting new facilities to work in! This will not only facilitate cutting edge research, it will enable us to work closely with patients who will benefit from our advances.

The Committee on Molecular Metabolism and Nutrition

We're also working closely with students. Through the Committee on Molecular Biology and Nutrition, we're training the diabetes and obesity researchers of tomorrow. Students from the best schools in the country are coming to our program, one of the few, if not the only PhD granting program in molecular metabolism in the United States.

Diabetes and Pre-Clinical Conditions

Finally, we're not only looking at what happens in the clinic, we're looking at "pre-clinical" conditions. At Kovler Diabetes Center, we have researchers exploring innovative applications for and new combinations of therapies. They're thinking outside the box to improve treatment, and in so doing, they are at the forefront of advancing therapy for diabetes, as well as its complications.

Now that we have this newsletter, I will make regular reports of research progress in the Kovler Diabetes Center. If you have questions, or would like more information, visit our website, www.kovlerdiabetescenter.org.

Very best, 

Christopher J. Rhodes, PhD
Research Director, The Kovler Diabetes Center
Chair, Committee on Molecular Metabolism & Nutrition



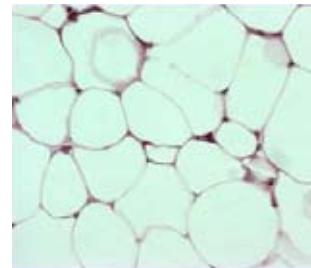
The Right Place at the Right Time

Controlling fat at the cellular level

If you already think it's hard to control fat, just try to control it at the cellular level!

That's what Kovler researcher Ronald Cohen is trying to do. Dr. Cohen, an Associate Professor in Medicine and the Section of Endocrinology, Diabetes and Metabolism at the University of Chicago, is on track to show how a protein called "SMRT" affects fat cells. He and his team may one day be able to influence the prevalence, function and health of fat cells in the body.

"We think SMRT is important for dictating how much adipocyte (or fat) tissue will be formed, and how it will function," Dr. Cohen says. "Knowing how SMRT works, and how it interacts with other proteins, will be important for designing novel ways to regulate fat cells. It can teach us about insulin sensitivity, and eventually may help us develop a new class of medications for Type 2 diabetes."



Fat cells full of fat

Dr. Cohen is also involved in a joint proposal for one of the challenge grants issued by the National Institutes of Health. This work would be geared toward multi-specialty investigation.

In the meantime, he is one year into a five-year National Institutes of Health (NIH) grant supporting the SMRT research. Essentially, Dr. Cohen says, he's looking at, "having the right type of fat in the right place."

Kovler Calendar

As part of our commitment to the community, Kovler Diabetes Center schedules regular programs relating to diabetes and its management. We serve the entire Chicago metropolitan area with programs for people of all ages. Events are always being scheduled. Go to our website for more information: www.kovlerdiabetescenter.org

May 14 and 15

"New Approaches in Endocrinology: Transition from Pediatric to Adult Care"
University of Chicago
Gleacher Center.
<http://cme.uchicago.edu/courses>

May 16

Chicago Diabetes Day
University of Chicago
Medical Center, Hyde Park
<http://drtc.bsd.uchicago.edu>.

June 14

Juvenile Diabetes Research Foundation (JDRF)
Family Day at Six Flags Great America
This event is geared for newly diagnosed families. Some restrictions apply. For more information, please call (312) 447-7967 or email familyday@jdrfillinois.org.

Living Well with Diabetes

An annual event to present the latest strategies for diabetes management

For Bill Campbell, host and producer of ABC 7's



"Chicagoing with Bill Campbell," staying positive in the face of challenges such as diabetes is what keeps him going. Campbell was the keynote speaker at Kovler's third annual "Living

Well with Diabetes" event in March. He talked about the "Seven Choices of Being Positive on Purpose" and how they can be dynamic, powerful and effective in life.

More than 200 people attended the free event, which also included an update by the Director of the Kovler Diabetes Center, Louis Philipson, MD, PhD, on diabetes research and the latest information emerging from recent clinical trials. John Rolland, MD, Clinical Professor of Psychiatry and Co-Director of the Center for Family Health, spoke about how family dynamics are affected by diabetes and how these challenges can be overcome. And Kovler diabetes educator and registered dietician, Amy Hess-Fischl, MS, BC-ADM, CDE, shared practical information on long-term diet and exercise strategies customized for diabetes patients.

The "Living Well with Diabetes" event is part of Kovler's ongoing commitment to supporting community members living with the challenges of diabetes. Learn about future events at www.kovlerdiabetescenter.org.

Supporting the Kovler Diabetes Center

Your generosity keeps us going

Anyone who has been affected directly or indirectly by diabetes understands the importance of early and accurate diagnosis, rigorous and caring management, and access to the best possible treatment options. The Kovler Diabetes Center remains a national leader in all areas, forging breakthroughs in the laboratory that are changing the way we care for our patients in the clinic. This excellence in research and care is made possible by the generosity of our philanthropic partners, and we are grateful to have their endorsement. As you think about your charitable giving, we invite you to join us and others in support of our important efforts. **Gifts of all levels can make a meaningful impact, and we appreciate your consideration.**

To make a gift to the University of Chicago Kovler Diabetes Center, or to discuss philanthropic opportunities, contact:

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You give through iGive.com

One gift-giving option is through the online service, iGive.com. In this program, when you shop online at over 700 brand name stores, a portion of the proceeds goes to your favorite cause. You can also save money with exclusive coupons and free shipping deals. Plus, when you shop within 45 days of registering, they donate an extra \$5 to your cause. Visit igive.com to register.

Thank you!

