



**Büro des Rektors**

Auenbruggerplatz 2, A-8036 Graz

Mag. Birgit Rami-Jauk  
Leiterin Marketing & Kommunikation

birgit.rami-jauk@medunigraz.at

Tel +43 / 316 / 385-72023

Fax +43 / 316 / 385-72030

**Press release**

**For immediate publication**

Graz, 26.Mai, 2010

**Medical University of Graz is coordinator of EU-project DALI  
Vitamin D and lifestyle change prevent diabetes mellitus during pregnancy**

Graz, May 21<sup>st</sup> 2010: One of the biggest problems in medicine, which goes along with a worldwide increase of obesity, is the rise of blood sugar levels. This fact can be fatal to women of childbearing age: in some countries, almost 20% of the pregnant women are diagnosed with Gestational Diabetes Mellitus (GDM). There is a high probability that considerably increased blood sugar levels during pregnancy not only lead to complications before, during and after childbirth but also have a long-lasting effect on the health of both mother and baby. Therefore, the effectiveness of three intervention strategies for the prevention of GDM will be tested in a large-scale EU-project called DALI (Vitamin **D** And **L**ifestyle Intervention for Gestational Diabetes Mellitus Prevention). This project is coordinated by the Medical University of Graz and various centers and enterprises of 11 European countries take part in it.

For several years now the European Diabetic Pregnancy Study Group (DPSG) has been concentrating on the question how to prevent the development of diabetes during pregnancy in obese women. Presently, dietary change, physical activity, and administration of vitamin D are regarded as the most promising therapeutic strategies. Unfortunately, there are neither standards for such interventions nor any knowledge as to which strategy is the most effective one. In order to answer this question, Univ.-Prof. Dr. Gernot Desoye from the Department of Obstetrics and Gynecology at the Medical University of Graz has developed the project DALI on behalf of DPSG. DALI has been selected by the European Commission for the 7<sup>th</sup> Research Framework Program (FP7) of the EU and is funded with a total of EUR 3 million, and the Medical University of Graz receives EUR 700,000. The kick-off meeting took place on March, 19<sup>th</sup> in Graz, the capital of Styria.

One of the objectives of the project is to collect reliable data on the frequency of occurrence of GDM in the participating countries. Up to this moment researchers were confronted with the problem of very different diagnostic criteria, so epidemiological figures were difficult to compare. DALI, for the first time, uses standardized diagnostic criteria in all participating countries which are based on the results of the HAPO-study (Hyper Glycemia and Adverse Perinatal Outcome). This worldwide study investigated the negative effect of high glucose levels

on newborns). So it is also possible to calculate the costs caused by GDM and to provide evidence-based principles for adequate decisions in health care policy.

In a first phase, appropriate recommendations will be worked out for the three main intervention strategies - dietary change, physical activity, and vitamin D - on the basis of ample literature on this subject. Then, in a pilot phase, it will be tested on a small group of obese pregnant women if theory also works in practice. After this preliminary work the recruitment of the study subjects for the clinical trial can start. For this purpose, 880 pregnant women throughout Europe with a body mass index over 30 kg/m<sup>2</sup> are asked to volunteer for this trial. Basically, advisory service and motivation are offered: each center has special trained coaches who accompany and motivate the pregnant women to change their behavior. "The success of this project strongly depends on the quality of this intervention", says Prof. Desoye. Therefore, the coaches will be trained and supervised on a regular basis. The three intervention strategies are either applied alone or in any possible combination. The results of the programs will be measured in the 36<sup>th</sup> week of pregnancy: gain or loss in weight, fasting blood sugar level, and insulin resistance.

### **Bio bank in Graz: information for further, continuative examinations**

One part of the project is the installation of a bio bank, where maternal serum, placental tissue, and cord blood will be examined and stored. This bio bank will be set up at the Medical University of Graz, which already operates a large-scale European bio bank project.

In order to enhance and ensure consistent high quality, the bio bank at the Medical University of Graz provides the material need for taking the samples and stock material for the whole DALI project. Furthermore, the training of the bio bank experts for the European centers takes place there. In addition to that, researchers try to find out to what extent medical imaging methods (magnetic resonance tomography and ultrasonic imaging) can contribute to the determination of fetal fat accumulation and placental blood flow. All data collected during pregnancy will be stored in a separate database that meets the highest quality and security criteria. With all the gathered information it would even be possible to answer questions beyond the scope of DALI. At a later date, for example, children could be screened to evaluate the medium-term and long-term effects of the interventions during pregnancy on them.

### **More than 30 years of research on GDM**

For more than 30 years the Department of Obstetrics and Gynecology has been researching on the very complex topic of gestational diabetes mellitus. Due to the longstanding and interdisciplinary cooperation with different institutes and departments, five large-scale research projects were successfully carried out, all funded by the EU. So the Medical University of Graz has build up a reputation as the leading center in this field. This know-how was definitely one reason for choosing DALI from seven submitted project proposals.

**Facts & Figures:**

- In some countries, almost 20% of the pregnant women are diagnosed with Gestational Diabetes Mellitus (GDM)
- In Austria, approximately 7% suffer from GDM, and this figure increases continuously
- Complications resulting from GDM: high amniotic fluid levels, gain in weight and growth which might lead to problems during childbirth, disturbed development of the placenta, high risk for diabetes type 2 and cardio-vascular diseases for both mother and baby

**Further information:**

Univ.-Prof. Dr. Gernot Desoye

Department of Obstetrics and Gynecology, Medical University of Graz

Email: [gernot.desoye@medunigraz.at](mailto:gernot.desoye@medunigraz.at)

Tel: +43-316-385-4605

Picture credits: Department of Obstetrics and Gynecology, free of charge



The Medical University of Graz coordinates the EU-project DALI which is supposed to develop consistent standards for therapeutic approaches to gestational diabetes mellitus. Altogether, centers and enterprises of 11 European countries take part in this project which is funded with EUR 3 million. The Medical University of Graz receives EUR 700,000. Project manager is Univ.-Prof. Dr. Gernot Desoye, who has systematically studied the problem of gestational diabetes mellitus for many years.