

# GoCARB TRANSFER OF KNOWLEDGE ACTIVITIES

## Invited Lecturers

### Lecture 1: Technologies used for Measuring Glucose Continuously in People with Diabetes

**Presenter:** PD Dr. Arnulf Staib, Roche Diagnostics GmbH, Mannheim, Germany

**Abstract:** The presentation starts with an introduction on the use of Continuous Glucose Monitoring (CGM) in patients with diabetes. The principal section covers the major technological approaches for the continuous measurement of glucose with implanted sensors, such as electrochemical and fluorescence-based technologies. The final part comprises algorithm-related aspects relevant for CGM sensors, in particular filtering and calibration.

**Date & Time:** Tuesday, December 10<sup>th</sup>, 2013, 12:30 - 14:10

**Location:** Inselspital, Kinderklinik (KiKli) KR3, Entrance 31 or 31B, 3010 Bern

### Lecture 2: Technology Options for Non-invasive Glucose Monitoring

**Presenter:** Prof. Dr. Wolfgang Petrich, Roche Diagnostics GmbH, Mannheim, Germany

**Abstract:** The ability to determine the concentration of glucose without the need for pricking, i.e. non-invasively, is perceived as the most convenient way of glucose monitoring. Various attempts towards non-invasive glucose monitoring have and are being reported in literature. The technologies behind these advances include, for example, near infrared spectroscopy, optical coherence tomography, Raman spectroscopy, Mie scattering, or fluorescence spectroscopy. The transmission of radiation through the human skin thereby appears to be the most preferred path towards revealing the concentration of glucose within the blood vessels. Furthermore, the aqueous humor in the eye, or the interstitial fluid in skin, may possibly provide information about the glucose concentration. However, despite the long history of the quest for non-invasive monitoring of glucose, no such systems are on the market so far. It is thus legitimate to have a closer look at the technical opportunities, as well as challenges and hurdles in the field of non-invasive glucose monitoring.

**Date & Time:** Tuesday, December 17<sup>th</sup>, 2013, 12:30 - 14:10

**Location:** Inselspital, KiKli KR3, Entrance 31 or 31B, 3010 Bern

# GoCARB

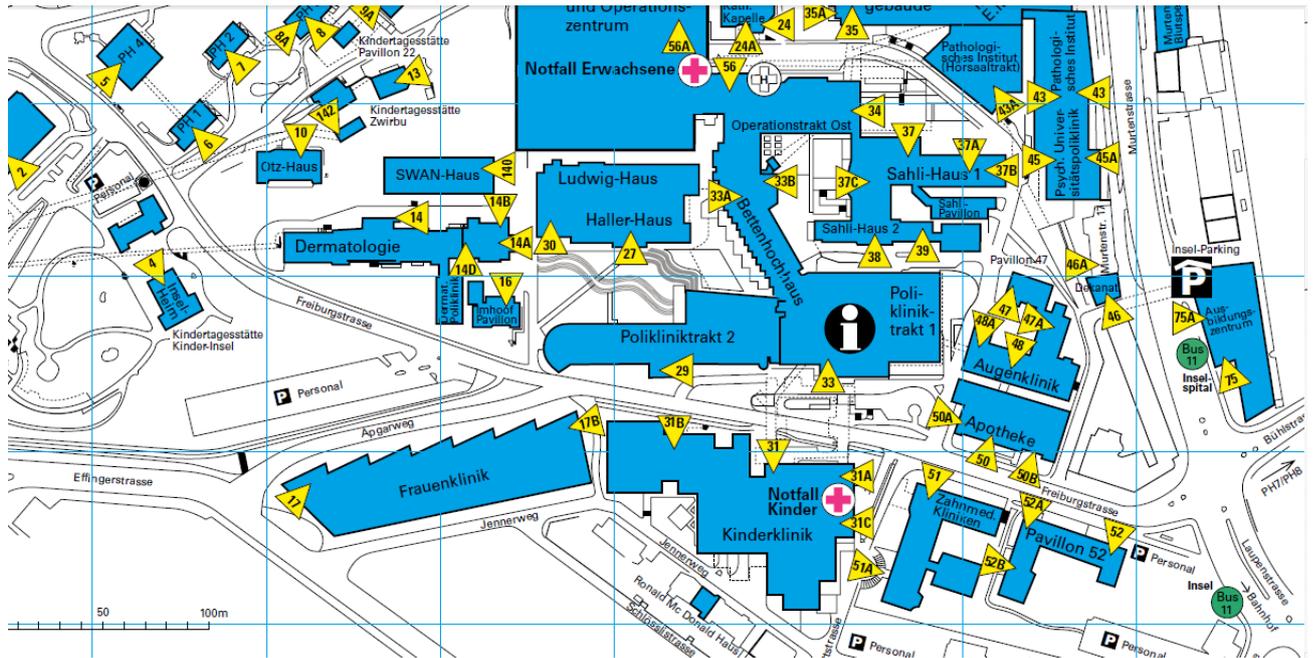
TYPE 1 DIABETES SELF-MANAGEMENT AND CARBOHYDRATE COUNTING:  
A COMPUTER VISION BASED APPROACH

[www.gocarb.eu](http://www.gocarb.eu)



GoCARB is a Marie – Curie  
Industry Academia  
Partnerships and Pathways  
Project funded within the 7th  
Programme Framework





## Bern University Hospital "Inselspital“, 3010 Bern

### Public transport:

From the Main Station, Bus 11 direction Güterbahnhof to Inselspital (3<sup>rd</sup> stop)

### By car:

Motorway A1, exit Forsthaus,  
Parking Inselspital