



- ■ ■ Internationale
- ■ ■ Bodensee
- ■ ■ Hochschule



PERSONAL HEALTH BUDDY

Projektlaufzeit: 06/2014 – 05/2015, Projektleitung: Edith Maier, FHS St. Gallen

Introduction

Obesity is one of the greatest challenges to health in the 21 century. It is a risk factor for heart attack, stroke, diabetes, hypertension, and reduces life expectancy. Increasingly, bariatric surgery (also called “metabolic” surgery) is an option chosen by many who cannot lose weight normally. It leads to significant weight loss and reduction of blood glucose levels thus reducing the risk factors for diabetes and cardiovascular diseases.*

At the same time, Web-based personal health systems as well as health apps for use on mobile devices such as smartphones have been gaining acceptance by patients and the general public alike. The IBH funding is used for setting up a European consortium and preparing a proposal to be submitted in the next Horizon 2020 call that addresses self-management for health and disease.

* Schauer, Philip R., et al. "Bariatric surgery versus intensive medical therapy for diabetes—3-year outcomes." *New England Journal of Medicine* 370.21 (2014): 2002-2013.

Consortium

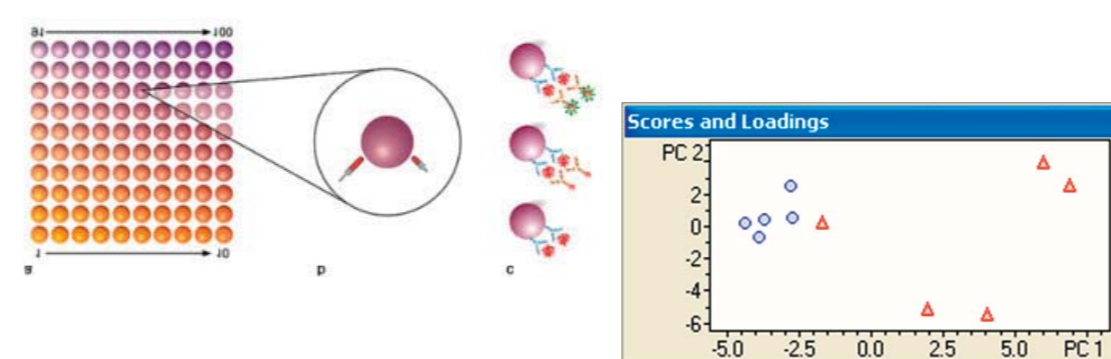
- Lead partner: Hannover Medical School (Germany)
- INSERM (France)
- Karolinska (Sweden)
- Geneplanet (Slovenia)
- NetUnion (CH)
- EMPA (CH)
- FHS St. Gallen (CH)
- HSAS (NMI) (Germany)

Clinical partners from 3 different countries

2 SMEs

3 Academic partners

Molecular biomarker profiles



- Metabolic profiling
- Multiplexed diagnostics

Socio-psychological profiles

- Questionnaires
- Emotional state / mood
- Social environment

Smart fabrics

- monitoring fast-changing body reactions
- Immediate feedback on metabolic changes e.g. skin pH, lactate, glucose levels

Long-term health effects

Personality, behaviour & environment

Validated by experts



Personalized self-management system

- Feedback for decision support
- Social / peer group support
- Gamification elements for improvement of adherence and motivation



Highly fluctuating health parameters

Expected Impacts

- Improving adherence to therapy by using insights from behavioural economics as well as immediate feedback
- Improving outcomes for bariatric surgery by reducing the number of severe episodes and complications
- Establishing a valuable use case for treating obesity and eating disorders in general
- Increasing the importance of the prevention sector in healthcare using predictive modelling
- Boosting the development and acceptance of personal mobile devices used for self-management of health and disease
- Improving the participation of the patient in the care process and his/her self-control of health and of disease prevention.