



**CENTRUM PRO CYANOBAKTERIE A JEJICH TOXINY**

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## **NAZV PROJECT: QJ1320234 – SUROVINY2012 – From waste to commodities**

The cited project was awarded by **National Agency for Agricultural Research** and aims to develop recycling technologies from commodities that are currently considered as a waste. The target of those commodities is for being used mainly in the agriculture field. The project is scheduled to be solved within four years (from 2013 to 2016).

### **We cooperate in this project with following partners:**

- [ASIO Ltd.](#), Brno-Komarov, Czech Republic
- [PROJEKTY VODAM Ltd.](#), Hranice, Czech Republic

### **Our Project team includes:**

- Marek Holba, Ph.D.
- Prof. Ing. Blahoslav Marsalek, CSc.
- Mgr. Valentina Endo Cerquera

The aim of this project is to achieve successfully the development of **waste recycling technologies** into **commodities** that can be applied in the agriculture sector. We will develop the technology of the essential and irreplaceable nutrient **phosphorus** as a **fertilizer**. Phosphate fertilizer will be developed from treated wastewater, however we also explore another ways of **phosphorus recycling** from concentrated streams. We will optimize handling with yellow water in order to use it directly as a fertilizer and/or use it as a source for fertilizer production in the form of struvite. We will test several options for direct greywater application into the soil as irrigation water. We also focus on (re)-processing of liquid and solid waste from biogas stations and its application in the agriculture.

Our institute is responsible mainly for laboratory batch tests of **yellow water management** connected with scale-up to pilot-scale level. We pursue the goal of concentrating yellow water and minimize costs of yellow water management. We use common laboratory equipment and techniques for our tests.

Another task is to carry out **ecotoxicological evaluation** of **greywater** for its possible application for irrigation purposes. Last task is to optimize phosphorus recycling technology in a lab-scale. We set up specific laboratory apparatus for developing of this technology.