Press Release

Yeast-Based Bioplastics and Pharmaceuticals – White Biotech to Reduce Pressure on Resources and Environment

Basle, 20 November 2013 – Employing microbiological processes to utilize plant materials – often referred to as industrial or “white biotechnology” – helps optimize our use of limited natural resources and preserves Nature and the environment. This was emphasized by Prof. Dr. Christine Lang, chair of the Federal Government’s Bioeconomy Council, in a presentation at the Ecochem Conference in Basle. The objective of biotechnology and bioeconomy must be to use natural plant materials wisely and judiciously in the production of new profitable substances, she said.

One example was succinic acid (spirit of amber), used as a precursor in plastics, which could be produced from renewable resources with the help of baker’s yeast. Currently, production remains generally petroleum-based, using high-temperature synthesis with correspondingly high power consumption and involving solvents with harmful environmental effects.

Christine Lang is the CEO of the Berlin-based biotechnology company Organobalance. The company has a collection of more than 8,000 strains of yeast and lactic acid bacteria which has already provided natural agents against bacterial infections, e.g. caries. “Nature offers so many means which we can utilize in the industrial production of everyday products or to treat or prevent diseases”, says Prof. Lang. “This is why we want and have to continue our research into these positive characteristics of microorganisms.”

Another example mentioned by Ms. Lang was squalene, a compound used in pharmaceuticals and cosmetics and obtained from shark liver. “Here, too, systematic screening of yeast and lactic acid bacteria will enable us to find alternatives which reduce the pressure on the environment and animal populations”, the scientist stressed.

Ecochem is a sustainable chemistry and engineering conference and trade event. The inaugural edition took place from 19-21 November 2013 in Basle, Switzerland.