

Press Release



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Insilico Biotechnology expands its patent portfolio with a biotechnological method for acrylic acid production

(Stuttgart) – Insilico Biotechnology, a leading provider of predictive solutions for knowledge-based biotechnology, has been granted a patent for a new method for the biotechnological production of acrylic acid. The method enables this key raw material to be produced cost-effectively and sustainably. The compound is used for producing superabsorbents such as nappies from renewable materials.

Acrylic acid is a key raw material in polymer production with an annual demand of approximately four million tons and a market value of around 11 billion euros. Acrylic acid-based polymers are the basis of plastics and adhesives, and components in coatings, emulsion paints and polishes. They are also the major constituents of superabsorbent polymers which are used for instance in diapers.

This universal compound is currently almost exclusively produced using complex chemical processes involving petroleum. The biotechnological method that has now been developed by Insilico Biotechnology uses bacterial and yeast metabolic pathways to produce acrylic acid. As acrylic acid is toxic for many production organisms used in biotechnological processes, Insilico has a particular ploy: the synthesis pathway is divided so that the last step leading to acrylic acid takes place outside the cell. The company were able to develop this strategy because the acrylic acid synthesis pathway was designed *in silico* and simulated with network models to identify the optimal synthesis pathways and the enzymes and reactions involved.

"The awarding of this patent highlights the potential of our *in silico* platform for the development of new and efficient biotechnological production processes based on natural raw materials," says Klaus Mauch, CEO of Insilico Biotechnology AG. "We are working on the development of further innovative production processes, which will accelerate the transformation of the bioeconomy into a knowledge-based industry."

Insilico Biotechnology is a market-leading company providing predictive solutions for the Bioeconomy. An interdisciplinary team of experts offers mechanistic models, customized software, and a high performance computing platform for the simulation of living cells. For world-leading pharma and biotech companies Insilico's technology lowers time, risk and costs of development processes. Founded in 2001, Insilico is a privately held company based in Stuttgart, Germany. For more information please visit www.insilico-biotechnology.com.

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