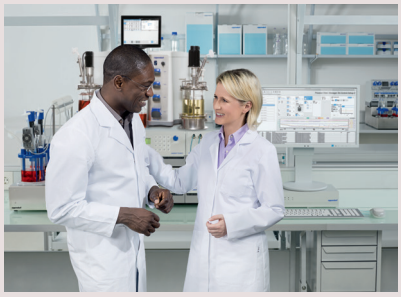

User at a Glance

Eppendorf knows the users of its products and their specific requirements for various applications very well. Here, we would like to introduce some of our valued customers - or rather: let them introduce themselves by answering five questions - about themselves, their employer and current challenges they face in their market.

For this issue we have interviewed Dr. Jörg Hennemann about his work and private life. Jörg is working as Group Leader Science & Technology at Evonik Creavis GmbH, a strategic R&D unit of Evonik Industries in Marl, Germany. His team is using several DASGIP Parallel Bioreactor Systems for the development of biotransformation processes in metabolic engineering.

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Jörg Hennemann was interviewed by Eppendorf on June 5, 2012

«It is most exciting to do things that have never been done before.»

Dr. Jörg Hennemann, Group Leader Science & Technology at Evonik

What three words would your colleagues use to describe you?

Hopefully, these words would be „sociable", "professional", and "ambitious".

Where and how did you spend your last vacation?

I spent my last vacation together with a group of music maniacs staging Frank Wildhorn's musical "Jekyll and Hyde". I play the keyboard in a band belonging to an ambitious choir. With its 25 years of existence, having presented "Jesus Christ Superstar", "Elisabeth" and several gala performances, this was our fifth big production. Music is my passion.

What do you especially like about your job?

I work in the field of explorative research at Evonik Creavis. I am engaged in the development of biotransformation processes in the field of metabolic engineering. It is most exciting to do things that have never been done before. Time and again, I am surprised and fascinated how the combined work of chemists, molecular biologists, process engineers, fermentation specialists, and analytics professionals turns vague concepts into real processes. It starts with an idea, with the proof of principle in a shake flask where only milligram amounts of a product are achieved. Following the first development steps, product amounts increase during fermentation. More and more biological and technical roadblocks are being identified and overcome—and suddenly, you think of production sites in the size of several cubic meters. For me, these feelings of success are the greatest motivation.

How did you get in touch with Eppendorf bioprocess equipment?

During my first job in a small start-up I was engaged in screening, cloning, optimization and process development as well as production of enzymes for catalyzing synthesis of chiral molecules used in the pharmaceutical industry. The company was located in the same building as DASGIP. Virtually "in the hall" I got to know the DASGIP System. It didn't take long until we owned a 4-fold DASGIP Parallel Bioreactor System ourselves for optimization of protein expression.

Today, my team at Evonik is working with three 8-fold DASGIP systems. They enable an enormous experimental throughput for establishing strains and mutants as well as for adjusting process and biotransformation parameters. The DASGIP system is an important and reliable platform for metabolic engineering in explorative research at Evonik. Eliminating the shake flask step, it very much facilitates transferring research from lab scale to small pilot scale.

In your opinion, what is the most exciting challenge in your area of science at the moment?

Biotechnologists like to aim at replacing established chemical processes by "more favorable" biotransformations. The big challenge of chemical industries is to transfer whole multi-stage synthesis processes from the organic-chemical apparatus to a cell. It is no longer (only) about production of biocatalysts in big amounts, but about establishing a functional, carefully balanced enzyme network within a cell. At the same time, resources should be used as sparingly as possible.