

# BACHEM SPRING SYMPOSIUM 2019

Bachem's traditional Spring Symposium under the headline "Antimicrobial Peptides: Resistance is Futile" took place in the Hotel Victoria in Basel on April 4, 2019. With the annual Spring Symposium Bachem continues a long tradition of bringing together international scientists and to contribute to the development of peptide based active ingredients.

Dr. Anne-Kathrin Stoller, Chief Marketing Officer at Bachem, welcomed numerous international guests from the industrial as well as from the academic sector and gave the introductory speech. Prof. Dr. Helma Wennemers (ETH Zurich, Switzerland) moderated the event.

Resistances of bacterial strains against classical antibiotics are a growing threat to public health. Scientists all over the world are doing research to overcome this threat. One approach is the use of antimicrobial peptides (AMP). The lectures gave an insight to current research with AMPs, examples for such in development and clinical or preclinical phases and the challenges in GMP manufacture.

One of the challenges with AMPs is that their antimicrobial activity frequently comes along with hemolytic activity. Prof. Dr. Kai Hilpert (St. George's University in London, United Kingdom) is progressing his work by building up peptide screening libraries to find compounds with the first activity but lacking the latter one. He showed that AMPs have modes of action which are different from those of classical antibiotics.

With the lead compound Aspidasept®, Prof. Dr. Klaus Brandenburg (Forschungszentrum Borstel, Germany) described an approach to overcome sepsis as complication after treatment with antibiotics. The release of bacterial toxins after treatment with

antibiotics leads to the release of cytokines in the immune cascade, which again lead to sepsis. The target of Aspidasept® is not killing of bacteria, but the neutralization of the inflammation-inducing bacterial toxins.

In his very enthusiastic talk about their unique mode of action compound OMN6, Dr. Niv Bachnoff (Omnix Medical Ltd., Israel) presented promising results about antimicrobial activity against the multidrug resistant *Acinetobacter baumannii* without cytotoxic, hemolytic or other adverse effects.

Dr. Daniel Knappe (EnBiotix GmbH, Germany) presented linear peptide antibiotics (LPA) as novel highly potent and safe therapeutics with a unique intracellular mode of action. They can freely enter bacteria, bind to ribosomes within the cells and inhibit protein translation. Protein synthesis, crucial for the cell, is inhibited.

Dr. Daniel Obrecht (Polyphor AG, Switzerland) described the mechanism of outer membrane protein targeting antibiotics with Murepavadin as the first member of this class. This compound is in late stage development for the treatment of *Pseudomonas aeruginosa* infections. It is pathogen specific and has a low resistance potential.

It was interesting to see the manufacturing challenges for Murepavadin, described by Dr. Stefan Eissler (Bachem AG, Switzerland), and the way Bachem successfully developed a scalable, safe and commercially viable GMP manufacturing process. Bachem has been able to prove its expertise and the "Pioneering Partner" approach in this project.

The lively questions and answers after each talk have been continued during the aperitif and dinner, which had been offered in Hotel Victoria's top floor dining room with a great view over Basel.

