Intellectual Property regarding ATAC technology

The patent portfolio of Heidelberg Pharma Research GmbH covers a patent family licensed from the DKFZ and Professor Faulstich that relates to the chemical reaction to crosslink certain carrier molecules, such as antibodies, to Amanitin and protects certain chemical binding positions which, in Heidelberg Pharma's opinion and based on its data, are best suitable for linker coupling. In early 2016, the patent "Amanitin armed therapeutic cell surface binding components designed for tumor therapy" was granted in the United States.

A couple of pending patent families protect Amanitin derivatives and chemical building blocks necessary for chemical synthesis of ATACs. Other pending patent families are dedicated to lysine and cysteine linker chemistry and certain thio-mab linking positions in antibodies.

In mid-2016, the European Patent Office granted a patent to Heidelberg Pharma Research for its proprietary chemical synthesis of dihydroxyisoleucine. The patent has a term until 2033. The amino acid dihydroxyisoleucine is a synthetic building block of alpha-Amanitin and of Amanitin derivatives. The patent protects the company's chemical synthesis of Amanitin. In April 2017, Heidelberg Pharma Research received a communication from the US Patent Office, too, that it intends to grant this patent.

Furthermore, Heidelberg Pharma has applied for patent protection of its lead candidate HDP-101.

As of August 31, 2017, Heidelberg Pharma Research has filed applications for patents directed at its proprietary ATAC Technology in 8 patent families, the most important patent families covering the major countries worldwide (U.S., Europe, Australia, Brazil, Canada, China, Israel, India, Japan, South Korea, Mexico, New Zealand, Russia, Singapore, Ukraine, South Africa). Also, Heidelberg Pharma Research has in-licensed several patent families to expand the protection of its ATAC technology and to secure protection for specific ATAC development candidates.

In recent years, patents have been granted in several countries, including Europe and the United States.

The current patent horizon extends until 2037 plus additional protection periods provided by the EU, the U.S. and other countries (Supplementary Protection Certificates are available in the pharmaceutical industry under certain circumstances).

Intellectual Property regarding licensed antibodies

In 2017, Heidelberg Pharma Research entered into a license agreement with the Max Delbrück Center, acquiring worldwide exclusive rights for the use of specific antibodies directed at the target BCMA in Amanitin conjugates, which form a part of Heidelberg Pharma's lead developing candidate HDP-101. Also in 2017, Heidelberg Pharma Research has concluded a license agreement with the University of Freiburg, acquiring worldwide exclusive rights for the use of specific antibodies directed at the target PSMA in Amanitin conjugates.

Intellectual Property regarding the clinical legacy portfolio of Heidelberg Pharma AG

These patents relate to the clinical portfolio formerly developed under the name of WILEX. As of 31 August 2017, Heidelberg Pharma AG holds licensed intellectual property rights, owns more than 95 patents worldwide and has filed 20 applications for patents in different patent families. Heidelberg Pharma AG has expanded its intellectual property rights through strategic acquisitions or licenses respectively of patent portfolios from Leiden University, Centocor and Biomedical Research Center, Slovak Academy of Sciences.

Intellectual Property MESUPRON®

The uPA-based patent family currently comprises eleven patent families. Patent protection applies to both, the active ingredients (claim to the compound or chemical structure) and the medical use of the compounds, as well as to both formulation and production. The maximum terms for patents and patent applications of this portfolio are set to expire between 2018 and 2028. Possible extensions of the maximum terms by means of Supplemental Protection Certificates are not included.

Intellectual Property for Antibody Girentuximab

More than 40 patents and patent applications currently apply to the Girentuximab antibody program. These patents and applications for patents, if granted, are set to expire between 2022 and 2034. Possible extensions of the maximum terms by means of Supplemental Protection Certificates are not included.

The intellectual property rights cover, among others, the hybridoma cell line producing the Girentuximab antibody, the production of Girentuximab or a pharmaceutical compound containing this antibody, and the antibody itself for use in adjuvant therapy or as combination therapy.