

Press Release

1435

24 June 2014

EMMANUELLE CHARPENTIER RECEIVES DR. PAUL JANSSEN AWARD

HZI SCIENTIST IS HONOURED FOR THE DISCOVERY OF THE CRISPR-CAS9 TECHNOLOGY

Professor Emmanuelle Charpentier, head of the department “Regulation in Infection Biology” at the Helmholtz Centre for Infection Research (HZI) in Braunschweig is one of the two winners of this year’s Dr. Paul Janssen Award for Biomedical Research. The award is presented by the biotechnology and healthcare company Johnson & Johnson and is endowed with prize money of 100,000 US Dollars.



Emmanuelle Charpentier is the head of the department “Regulation in Infection Biology” at the HZI

“I feel extremely honoured by this award and am very pleased to join the list of exceptional winners,” said Charpentier. She and the other laureate Jennifer Doudna, from the University of California, Berkeley, are recognized for their work demonstrating that Cas9 – an enzyme specialized for cutting DNA – can be programmed with single RNA molecules to cleave specific DNA sites, creating a simple and versatile system for genome targeting and editing.

CRISPR-Cas9 is based on a defense system that bacteria use to protect themselves from viruses and was co-discovered by Charpentier during her time at the Laboratory for Molecular Infection Medicine Sweden at Umeå University in collaboration with the group of Jennifer Doudna. The technique resulting from their findings allows researchers to target and cut DNA with great precision and therefore improves the speed, efficiency and flexibility of genome editing. This new understanding enables researchers to rapidly model human disease alleles in the laboratory, speeding the search for new drug leads and opening new doors for the treatment of human genetic disorders

“I am excited about the potential of our findings to make a real difference in people’s lives. The discovery demonstrates the relevance of basic research and how it can transform application in bioengineering and biomedicine,” said Charpentier.

Charpentier holds an Alexander von Humboldt Professorship at Hannover Medical School and is a Guest Professor at the Laboratory for Molecular Infection Medicine Sweden (MIMS), Umeå University. Recently the Royal Swedish Academy of Sciences honoured Charpentier with the Göran Gustafsson Prize and EMBO elected her as a new member.

The Dr. Paul Janssen Award for Biomedical Research was created by Johnson & Johnson to honour the legacy of one of the most passionate, creative and productive scientists of the 20th century, Dr. Paul Janssen. He founded Janssen Pharmaceutica, which was acquired by Johnson & Johnson in 1961. His work led to the development of more than 80 transformational medicines in several fields, including pain management, psychiatry, infectious disease and gastroenterology.

The awardees are chosen by an independent selection committee of the world’s most renowned scientists. Doudna and Charpentier will be honoured today at parallel receptions at the 2014 BIO International Convention in San Diego, and The EuroScience Open Forum in Copenhagen.

A video message of the awardee can be found [here](#).

Further information about the award and the official press release published by Johnson & Johnson is available [here](#).

Scientists at the **Helmholtz Centre for Infection Research (HZI)** in Braunschweig, Germany, are engaged in the study of different mechanisms of infection and of the body's response to infection. Helping to improve the scientific community's understanding of a given bacterium's or virus' pathogenicity is key to developing effective new treatments and vaccines. <http://www.helmholtz-hzi.de>