

## In the news

### RUDOLF JAENISCH AWARDED MARCH OF DIMES PRIZE



The 2015 March of Dimes Prize in Developmental Biology has been awarded to Rudolf Jaenisch for work that provided the foundation for the development of induced pluripotent stem (iPS) cells and applications used to treat a range of human diseases.

“Jaenisch has revolutionized our understanding of epigenetics,” said Joe Leigh Simpson, Senior Vice President for Research and Global Programs at the March of Dimes.

Jaenisch is a professor of biology at the Massachusetts Institute of Technology, and a founding member of the Whitehead Institute for Biomedical Research. He is a member of the US National Academy of

Sciences and the recipient of awards including the US President’s National Medal of Science (2010) and the Wolf Prize in Medicine (2011).

In 2007, Jaenisch’s laboratory was one of the first three to achieve the successful reprogramming of cells isolated from mouse tails into iPS cells, through the retroviral transduction of combinations of transcription factors.

In subsequent work, Jaenisch used iPS cells to treat sickle cell anaemia in a humanized mouse model, providing the first proof of principle of a possible therapeutic use of iPS cells. In further demonstration of therapeutic potential, he reported

the integration of neurons from iPS cells into fetal mouse brains, effectively reducing the symptoms of Parkinson disease.

These studies set the foundation for developing therapeutic applications of iPS cells. “Over the next 5 to 10 years,” said Jaenisch, “the iPS [cell] technology combined with the CRISPR/Cas gene editing approaches will revolutionize not only mechanistic understanding of human diseases but will open novel avenues for the treatment of serious disorders by approaches which will use gene therapy in combination with cell transplantation.”

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