Institute of Molecular Biology

IMB TechTalk

Dr. Lars Knoch

Regional Sales Manager Central Europe
Cellectis bioresearch

"TALENs®: genome modifications in any organism, in any gene... at any position"

28 February 2012, 11:00 (*s.t.*)

Venue: 2nd Floor Seminar Room
Institute of Molecular Biology (IMB)
Johannes Gutenberg University Campus Mainz

All are welcome to attend

Host: Dr. Bernhard Korn, Director CF & Technology, IMB
For further information, please contact: Bianca Steinbach, E-mail: b.steinbach@imb-mainz.de, tel.: +49-(6131)-39-21510

Abstract:

TALENs®: genome modifications in any organism, in any gene... at any position

The field of Genome Customization has evolved rapidly in recent years through the development of new and highly innovative technologies. These technologies have opened new fields of use and have shown to be powerful tools for the targeted manipulation of genomes.

Cellectis bioresearch has recently launched a new generation of highly innovative sequence-specific nucleases called TALENs®. Created by the fusion of the Transcription Activator-Like Effector (TALE) DNA-binding domain to the catalytic domain of an endonuclease, TALENs® are able to recognize and bind to any gene and introduce a double strand break (DSB) at any position in any cell type. By harnessing the cells natural repair processes of either “homologous recombination (HR)” or “non-homologous end joining (NHEJ)”, this provides the investigator with the ability to trigger three unique outcomes in genome customization – gene modification, gene knock-out and/or targeted transgene gene integration.

Here we present and discuss the applications and recent publications of TALENs® and their benefits over existing technologies, and in doing so present TALENs® as the Next Generation of Genome Customization tools that are accessible and affordable to the research community at large.