



SIGMA Where *bio* begins™
Life Science

Abstract: Innovative Technologies for Gene Regulation

Venue:

Seminar Room (Date: 19th September, 2013 @ 3:00P.M)

Translational Health Science and Technology Institute,

496, Udyog Vihar, Phase III,

Gurgaon -122 016, Haryana

During this presentation, we wish to present the following topics:

- a. RNAi methodologies (15 minutes)**
- b. ZFN Technology (20 minutes)**
- c. Q &A Sessions**

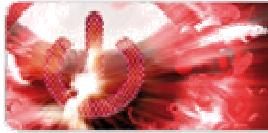
The goal of functional genomics is to understand the relationship between an organism's genome and its phenotype. However, the network of possible molecular interactions leading to the casual phenotype within a given system, pathway or disease is astounding and necessitates the implementation of innovative solutions.

Sigma is a leading provider of the requisite tools for functional genomics research. Including our MISSION® RNA interference (RNAi) products consisting of siRNA, miRNA, and esiRNA libraries, custom siRNA synthesis services, and the highly validated lentiviral based shRNA libraries of the RNAi Consortium.

In addition to these RNAi methodologies, which have greatly accelerated the processes for dissecting and understanding gene function, there is a need for the rational genomic engineering of mammalian cells. The availability of such technology has an enormous potential across basic research, drug discovery as well as cell based medicines. This includes the engineering of embryonic stem cells for the development of transgenic animal models. We discuss the utility of the CompoZr® zinc finger nuclease technology; a class of engineered DNA binding proteins that facilitate targeted gene editing and gene disruption, for the development of transgenic animal models and for the creation of engineered cell lines.



CompoZr™ ZFN Technology
for Targeted Genome Editing



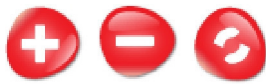
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Speaker:

Dr. Pankaj Kumar Joshi is Application Scientist at SigmaAldrich. He obtained his Ph.D. from G. B. Pant University of Agriculture & Technology Pantnagar, where he has worked on the Ectopic Expression of Mn1Superoxide Dismutase in Brassica juncea for Enhanced Tolerance to Oxidative Stress. Before joining SigmaAldrich he was Research Associate at International Centre for Genetic Engineering and Biotechnology, New Delhi, where he worked on “Deciphering RNA regulon: Construction, Analysis and Validation of a miRNA based regulatory network”.

Pankaj Kumar Joshi, Saurabh Chandra Saxena and Sandeep Arora. Characterization of Brassica juncea antioxidant potential under salinity stress. 2010. Acta Physiologiae Plantarum: 33 (3): 8111822.

Pankaj Kumar Joshi, Dinesh gupta, Sunik K. Mukherjee and Neeti S. Mishra. 2010. MirtronPred analysis and experimental identification reveals mirtrons in rice. NAR. (Communicated).



ADD. DELETE. SWAP.

EDIT FOR THE BETTER.

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