

EMBO Conference

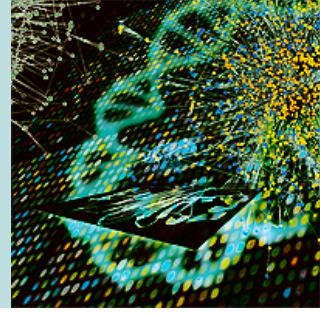
From Functional Genomics to Systems Biology

EMBL Heidelberg, Germany

Saturday 8 November - Tuesday 11 November 2014

Registration deadline: Friday 10 October 2014

Abstract submission closed



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Abstract Review

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Event Information

Event: EMBO Conference: From Functional Genomics to Systems Biology

Event Dates: Saturday, 11/08/14 10:00 AM - Tuesday, 11/11/14 11:00 PM

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Title: Localization of hsa-mir-5096 and hsa-mir-1268 around the Somatotropin Axis in Mammals

Abstract Text:

miRNAs participate in transcriptional and post-transcriptional regulation of gene expression via RNA interference and considered to be one of the most important regulators of cell proliferation and tissue differentiation.

All intron and non-coding nucleotide sequences were obtained from NCBI database. miRNA sequences were obtained from miRBase database. Screening was carried out with GLAM2. Mature miRNA was registered in case of more than 85% coincidence of its nucleotides with the original sequence. Localization of miRNAs around the somatotropin axis GH1, GHRH, SST and IGF1 was analyzed in 12 mammalian species.

Multiplex hsa-mir-5096 and hsa-mir-1268 were found in front of all genes studied in primates (*H.sapiens*, *M.mulatta*, *P. troglodytes*, *P. abelii* and *G. gorilla*). However, these types of miRNA were not found in other mammals (*O. aries*, *B. Taurus*, *L. Africana*, *O. cuniculus*, *C. lupus*, *R. norvegicus* и *M. musculus*).

The biggest number of copies of hsa-mir-5096 in genomes of primates was observed around the gene GHRH (17 – 21 copies). 4 – 8 copies of hsa-mir-5096 were found near the gene GH1; 3 – 7 copies were located around the gene SST and 7 copies were found around the gene IGF1 in all primates studied.

Maximal number of copies miRNA hsa-mir-1268 was located in introns and in the non-coding DNA around the GHRH gene (10 – 17 copies in different primate species).

Localization of the big number of copies of hsa-mir-5096 and hsa-mir-1268 around the genes of the somatotropin axis may be considered to be the evidence of their important role in the development and growth of the organism, and hsa-mir-5096 and hsa-mir-1268 may be further studied as the markers of human ontogenetic development.

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