Transcription Dynamics with p38S4-SN3A in Adult and Juvenile Metastatic Cardiomyocytes: A New Origin for Anglicisation and Screening Mechanisms in Heart Cells (Transcriptomics Medicine)

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Traditionally found in both the stem cells and the progenitor cells of both juvenile and adult organisms, over the years many changes in its expression have been made. This paper from this international group of scientists creates new knowledge and understanding of our understanding of transcription dynamics. They used certain genetic technologies to study this process of transcription, which is active all the time in both embryonic and adult cells.

In this paper, Dr. Galbani and his group compared the OCT4A gene with its polymorphisms in mature adult cells. Finally, they show that the expression of the p38S4-SN3A protein associated with the epitope of OCT4A in adult cells shifts phylogenetically from a sporadic variant to a frequency dominant variant. In the anterior cardiac cell, a phase of parallel evolution between an intermittent variant and a dominant variant appears, at the time when the atherosclerotic formation commenced. This new insight indicates that the phasing of the gene between two discrete and distinct types of cell is not determined by the chemistry of the cell nucleus but depends on the genome of the cell. On this a novel mechanism may exist for addressing the mechanism of taxonomic rearrangement during the phasing process. A more fundamental question is what effect the selective forces had on the enhanced expression of p38S4-SN3A?

Additional Information

The study was published as a Transcriptomics Medicine by the International Society for Experimental Genetics (ISERG) where the authors are members. The press release, text and video can be found on the same link.

Original Publication:

Galan, C. et al. (2011). Expression and Differentiated Adult Somatic Cells

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A Fire Hydrant In The Middle Of A Forest