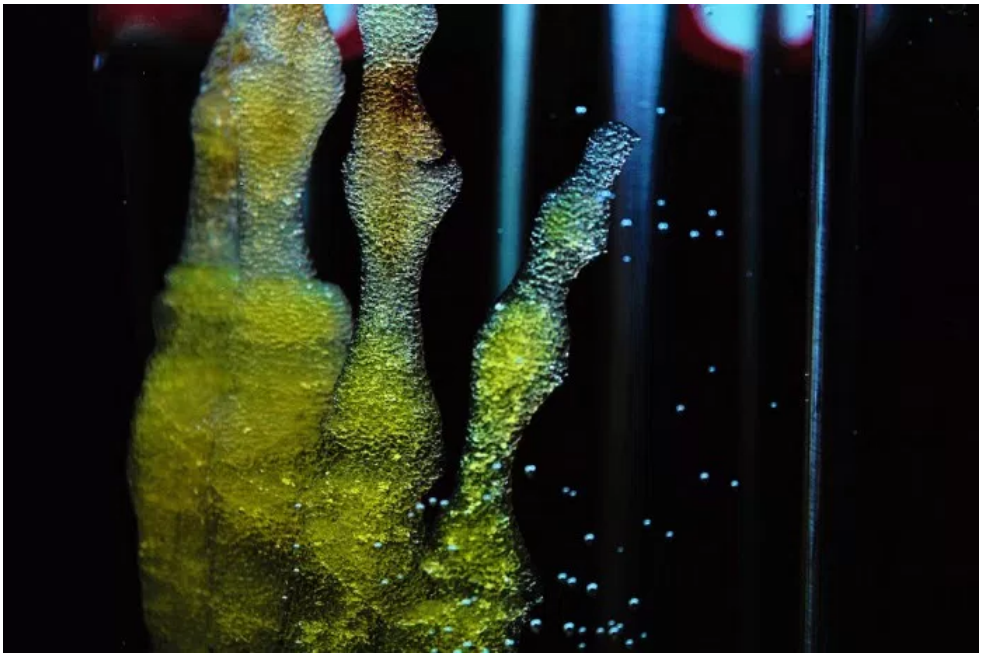
Hebrew University of Jerusalem Generates Human Genome Atlas Using Stem Cells

By **Rohit Bhisey** - April 24, 2018



An atlas of the human genome has been generated by Hebrew University of Jerusalem scientists with the help of human embryonic stem cells and ultramodern gene editing technology. The Nature Cell Biology journal has reported the findings of the scientists who generated the atlas to illuminate the roles that human genes play in disease and health. Senior author of the study, Prof. Nissim Benvenisty, MD, Ph.D. said that the gene atlas delivers a tool that will modify the way we treat and analyze genetic disorders and cancer. Benvenisty continued pointing out that the atlas gives the means to a new functional view on how the human genome is studied.

Gene Editing Made Simpler with Need to Mutate Only One Copy for Each Gene

One of the important findings of the research is the singling out of a small batch of genes considered to be distinctively crucial for human embryonic stem cells to survive. The individuality of embryonic stem cells is thought to be maintained by these genes while preventing the cells from transforming into adult cell types or becoming cancerous. The paper's lead author, Dr. Atilgan Yilmaz, Ph.D. said that the study helps to understand how an embryonic stem cell works at the genetic level by creating a new framework.

With an over 180,000 distinct mutations, virtually the human genome's all human genes were analyzed by the researchers. A new type of embryonic stem cells isolated lately was combined with an advanced gene-editing technology for producing such a massive selection of mutations. Gene editing was made easier as the new stem cells type only harbored the human genome's single copy.

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As Head of Marketing at TMR Research, Rohit brings to the table over a decade of experience in market research and Internet marketing. His dedication, perseverance, and passion for perfection have enabled him to achieve immense success in his field. Rohit is an expert at

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