Live Biotherapeutic Probiotics Human Microbiomic: Machine Learning Insilco clinical trials. Novel Practical approach to era of personalized probiotics medicine"

R. M Reyed

Bioprocess Development Department, Genetic Engineering and Biotechnology Research Institute(GEBRI), City for Scientific Research and Technological Applications "SRTA-CITY" New Burg El-Arab City, Universities and Research Institutes Zone, Alexandria, Egypt & egyhumanmicrobiome@inbox.ru; nutritionalgutmicrobiome@internet.ru: reved4clinicalbioinofrmatics@gmail.com:

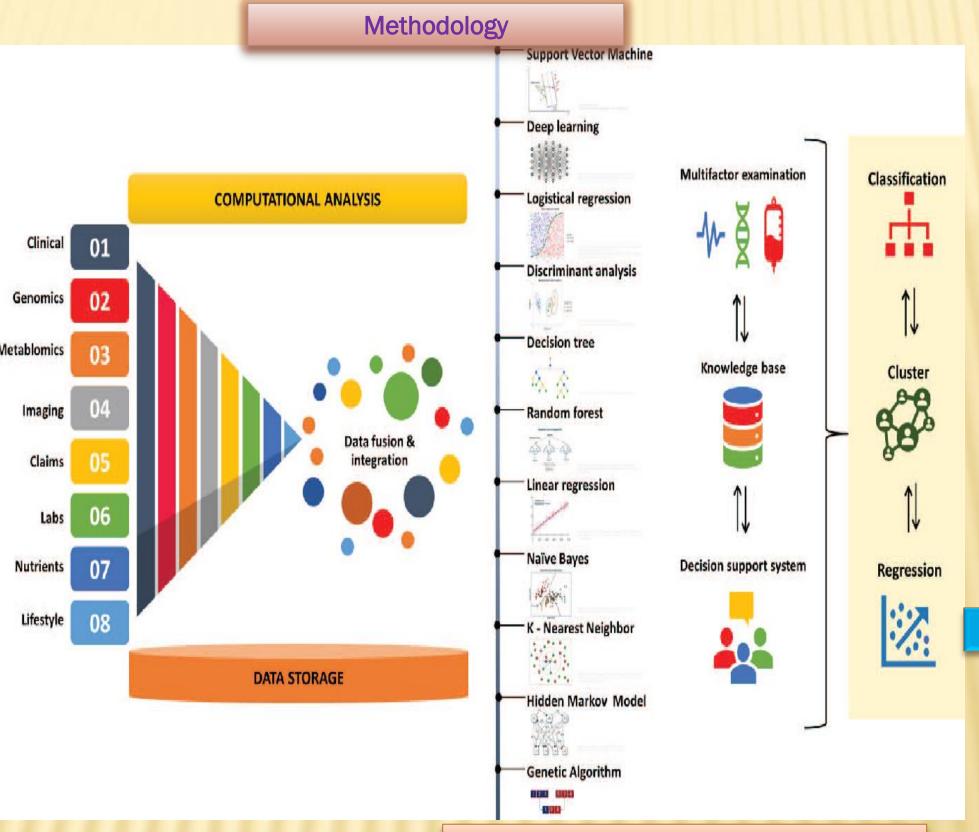
### **INTRODUCTION:**

All of us here seem to have the same Colonic Microbiomics, widely recognized as the Human Gutomics Microbiomics. This is sometimes referred to as our potential second genomic. Our microbiomics, which collects 100 trillion germs and microbiota in the stomach, skin, mouth, and other bodily regions, is a major source of individual differences. The composition and function of everyone are special to the microbiota, impacting our diet and influencing our reaction to nutrients. This Metablomics diversity of the gutomic microecological system is critical to our metabolomics and overall health. It gives us several useful responsibilities, including the creation of critical minerals and vitamins, the defense against bacteria that enter the body and cause infectious illnesses, and the regulation of immunity and metabolism.

Probiotic bacteria are a novel approach and a potential algorithm for mostly rehabilitating gut microbiomic dysbacteriosis. Probiotics are isolated strains of direct intestinal microbiota or mycobiota that grow up and live when given powerful and effective growth conditions. They are non-toxic, nonpathogenic, pure culture strains or combined strains, resistant to bile acids, and resistant to acid production. Regularly confirm a medical benefit to people. There is significant interest in probiotics for a range of illnesses, including gastrointestinal and non-gastrointestinal medical illnesses, and a great number of individuals all over the globe use probiotics on a daily basis.

## In the future when it comes, machine learning and big digital information processing will play an essential role

Probiotic-based management, personalized diets, and the use of a sophisticated Artificial Intelligence system for Gut Molding "Insilco clinical trials," as well as deep imaging processing biocomputing techniques that approved by pioneering have recently been therapeutic professionals, all justify further investigation and application interpretation As people



become more concerned about the usage of artificial intelligence (AI) and machine learning, they're wondering how technology will impact microbiomics approved by pioneering therapeutic professionals, all justify further investigation and application interpretation As people become more concerned about the usage of artificial intelligence (AI) and machine learning, they're wondering how technology will impact microbiomics research in the future and how it will help them overcome huge data difficulties. It's now relatively straightforward to sequence microbiomics samples

1-We have a big data if we combine it with the genetic makeup of the host.

2-Considering combining microbiomics information about individuals, together with the other."parameters, "the data output is ludicrous 3. As a consequence, deep learning and machine intelligence may encourage people to effectively use and make sense of this data, as well as to uncover new and exciting things. "



## Summary:

- and genetic data, as well as eating habits and nutritional

4. AI and natural language processing will undoubtedly become critical components of the microbiome's evolution.

5- Additionally, technological machine learning algorithms would be critical to supporting the development of tailored data and useful advice for healthcare practitioners, as well as ketogenic personalization

6 Some very challenging compressive strength and compressive resolution in community databases and huge dataset integration for predictive machine learning are handled by these strategies.

7 Now, we will go into these issues in the crash study by looking at a range of aspects in which new technological developments have taken place, and we will cover breakthroughs in microbiomics data analysis, individualized probiotics therapy, and expected advances in bioinformatics and prescriptive modelling..

# ANNOTATED BIBLIOGRAPHY

 American Gut (2019). What's in Your Gut? •Artificial Intelligence in Oncology Drug Discovery and Development http://dx.doi.org/10.5772/intechopen.88376 Edited by John W. Cassidy and Belle Taylor •Artificial Intelligence in Oncology Drug Discovery and Development "2020" http://dx.doi.org/10.5772/intechopen.88376 •Nayfach S, Shi ZJ, Seshadri R, Pollard KS, Kyrpides NC (2019) New insights from uncultivated genomes of the global human gut microbiome. Nature 568: 505–510 •Vich Vila A, Collij V, Sanna S, Sinha T, Imhann F, Bourgonje AR, Mujagic Z, Jonkers DMAE, Masclee AAM, Fu J et al (2020) Impact of commonly used drugs on the composition and metabolic function of the gut microbiota. Nat Commun 11: 362