



The OMICAS – IDIOMA

The Onco-Molecular Immunotherapeutic-Constellation Analytics Spectrum – Infectious Diseases ImmunOmics Meta-Analysis

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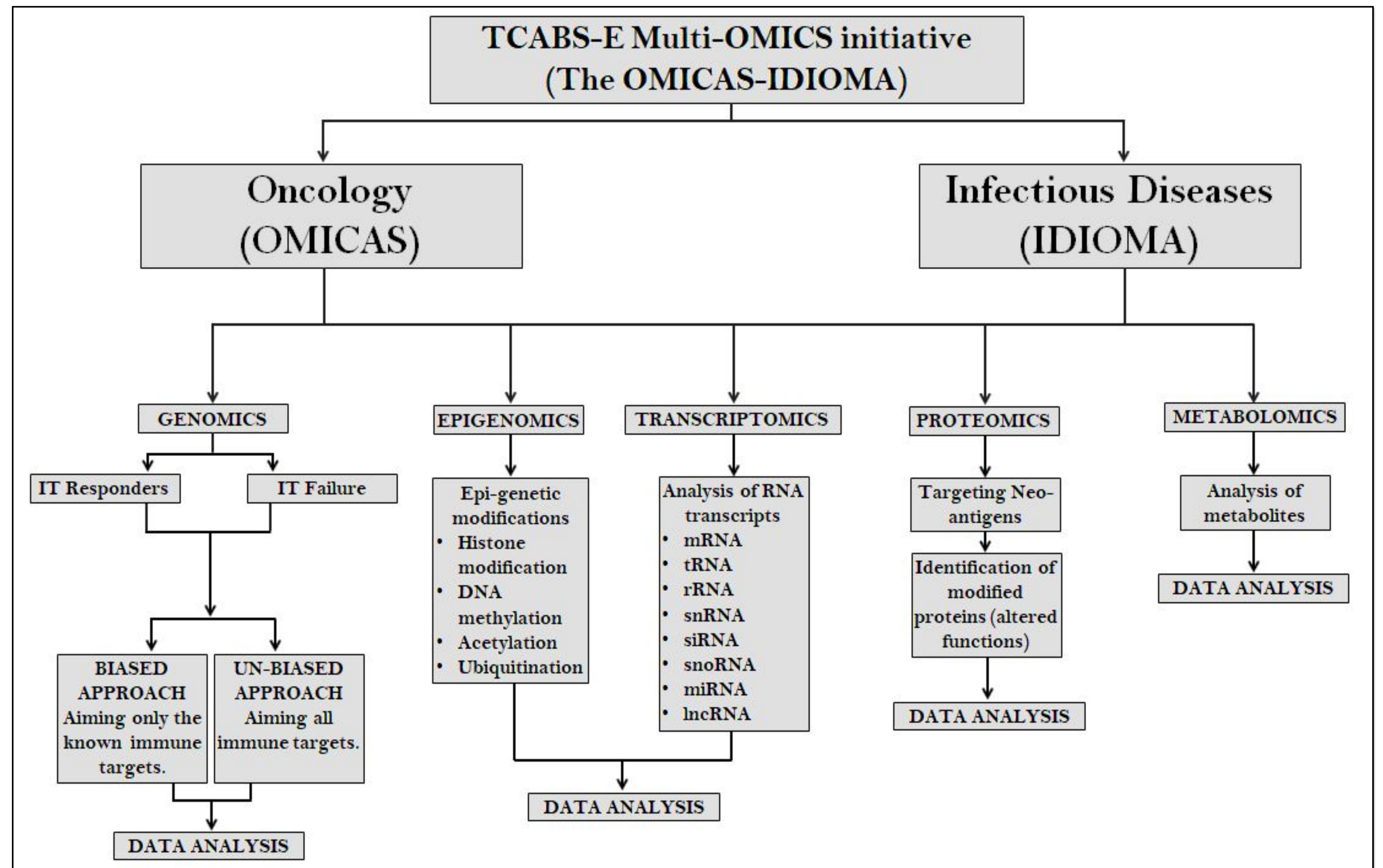
INTRODUCTION

<https://acsjournals.onlinelibrary.wiley.com/doi/abs/10.3322/caac.21590>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1125643/>

<https://www.cancer.org/research/cancer-facts-statistics/global.html>The immune system is a complex network of the defense mechanism against diseases. The immune system plays a major role in the fields of cancer biology and infectious diseases. Immunotherapy (IT) is a biological therapy for the treatment of diseases by activating or suppressing the immune system. Immunotherapy treats a lot of cancer patients which is performed along with chemotherapy or radiation therapy. <https://www.cancer.org/research/cancer-facts-statistics/global.html>According to the IARC, the number of cancer patients rose to 17.0 million and there are 9.5 million deaths due to cancer. 15-20% is the success rate of immunotherapy. The failure of responding to immunotherapy has been a challenging phase to date. Identifying the responsible genes, infected areas, immune responses, and altering the activities by proper analysis of clinical data under *in-vitro* conditions which includes Genome sequencing by Genomics (determining gene expression of all genes), Epigenomics, Transcriptomics, Proteomics, and Metabolomics. Any microbe entering the body has to get identified and attacked by the immune cells by several complex interactions among them. Deep learning using several computational tools and methods of the interactions of immune systems can help further research on infectious diseases. The researches on natural extracts empowering the immune system can open doors to many mysteries of science. The multi-OMICS approach being the idea as part of the research made the project unique and challenging.

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