Multi-omics as the Key Instrument for Implementing Predictive, Preventive and Personalised Approach as the Medicine of the Future

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Description

Predictive, preventive and personalised medicine (PPPM) is considered as the medicine of the future representing the most optimal strategy for healthcare management benefitting individuals, patients, healthcare sector and the society at large. Many health conditions such as suboptimal health, diabetes, cardiovascular and cancer pathologies are multi-factorial diseases demonstrating high heterogeneity within the patient cohorts, great subtypes plurality and highly individual outcomes that significantly aggravates overall disease management, predictive approaches, targeted preventive measures and personalised medical services. Consequently, the challenge is to equip clinicians with robust instruments recognising multi-causes, multi-processes and multi-targets for more accurate diagnostics, more effective primary and secondary prevention, more optimal disease treatment and therapy monitoring tailored to the person. Contextually, multiple alterations in genome, transcriptome, proteome, metabolome, and radiome, amongst others, provide comprehensive multi-omic signature essential for diagnostic and treatment purposes, in contrast to single *omics which are frequently unbalanced lacking important information and, therefore, not capable to satisfy the complex PPPM ambitions to advance healthcare effectively.

For the announced EPMA J. issue, papers will be considered which utilise multi-professional expertise in biotechnologies (biomarker research, liquid biopsy, big data analysis, machine learning, multi-level diagnostics etc), healthcare (entire spectrum from a disease predisposition to a cascade of collateral pathologies) and relevant fields (medical ethics, healthcare economy, amongst others), present clear technological innovation in multiomics and provide the road-map for implementation of new approaches focused on benefits of the patient and healthcare as the whole.

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