

Shaping the bio/medical research in the early 21st century: A success story of 3P medicine

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Abstract

Creation of the EPMA in 2008 was a success story from the very beginning. The release of the first issues of the EPMA Journal occurred within the active preparatory phase of the European Programme “Horizon 2020”. The revolutionising EPMA concepts of the paradigm change from reactive to predictive, preventive and personalised medicine have strongly contributed to corresponding concepts and calls released later on by the “Horizon 2020” specifically for innovative bio/medical fields.

The EPMA philosophy is that all strategies of the 3PM professional network, technological innovation, challenges and achievements have to be fully transparent for the world. Research and strategic articles generally published in “open access” are freely accessible for readers of any socio-economic status worldwide following the principles of promoting high quality medical care, promotion of international partnerships and equality proclaimed amongst the main goals of the UNO. Currently the EPMA-network of 54 countries worldwide actively promote the field of 3PM; see www.epmanet.eu.

Due to the extensive promotion of the unique publishing niche “Predictive Preventive and Personalised Medicine” and its scientific excellence, an exponential growth of scientific publications was achieved starting with very few articles published in 2008 (the year of the EPMA registration) that evidently has shaped the bio/medical research in the early 21st century — see [Pubmed](#).

Concepts of 3P medicine are valid for and applicable to the primary medical care relevant for healthy individuals and individuals in sub-optimal health conditions with reversibly damaged health status, secondary medical care relevant for cascading pathologies and tertiary medical care relevant for making palliative medicine to healthcare of chronic diseases.

Particularly under COVID-19 pandemic conditions it is getting more and more clear that to save lives and to be cost-effective, translational research, policy-making and medical care acting “hand-in-hand” — all have to follow principles of evidence-based prediction, targeted prevention and treatments tailored to individualised patient profiles, i.e. 3P medicine. With internationally accumulated 3PM expertise, pandemics are certainly preventable with corresponding scenarios carrying predictive character.

However, once a pandemic escalated, over couple of months or several years being essentially focused on acutely affected individuals, we are not allowed to neglect needs of

chronically diseased patients, as well as individuals in sub-optimal health conditions — these deficits may cost human lives over the next couple of decades and create tremendous economic burden. To avoid this scenario, expertise of well-consolidated multi-professional networks is unavoidable such as 3PM/EPMA.

Groundbreaking scientific findings that could help humanity and protect our planet are essential, since currently applied “reactive” medical services are cost-ineffective and frequently unsatisfactory for the patient needs and society at large. Contextually, there are no doubts that 3PM will increasingly shape the bio/medical research in the 21st century being already broadly acknowledged as the “medicine of the future”. Multi-disciplinary character of the branch will expand for evolving 3PM industrialisation and deep penetration of artificial intelligence into daily medical practice in favour of cost-effective predictive medical approaches.

To describe the next decade of the 3PM development the below listed items will be elicited to support the prognosis:

- 3PM research focuses shifted towards translation into daily medical practice
- patient stratification utilising individualised multi-parametric analysis
- increasing 3PM literacy in the population
- artificial intelligence driven patient self-care
- expanding market of corresponding products and services

About the presenter

Professor Dr. Olga Golubnitschaja is the head of the world first Predictive, Preventive and Personalised (3P) Medicine unit at the Department of Radiation Oncology, University Hospital Bonn, Rheinische Friedrich-Wilhelms Universität Bonn, Germany. She is educated in journalism, biotechnology and medicine and has been awarded research fellowships in Austria, Russia, UK, Germany, the Netherlands, and Switzerland (early and predictive diagnostics in paediatrics, neurosciences and cancer). Dr. Golubnitschaja is (co-)author of more than 400 international publications (research and review articles, position papers, books and book contributions) in the innovative field of predictive, preventive and personalised medicine (3PM) with the main research focuses on sub-optimal health conditions, pre- and perinatal diagnostics, diagnostics of cardiovascular diseases and neurodegenerative pathologies, predictive diagnostics in cancer and diabetes. She received many honorary awards, as e.g. Fellowship of the Alexander von Humboldt-Foundation; Highest Prize in Medicine and Eiselsberg-Prize in Austria; Springer-Nature Award; EMA Award. Since 2009 Dr. Golubnitschaja is the Secretary-General of the European Association for Predictive, Preventive & Personalised Medicine (EPMA, Brussels) networking over 50 countries.

Dr. Golubnitschaja is a regular reviewer for over 30 clinical and scientific journals and serves as a grant reviewer for the national (Ministries of Health in several European countries) and international funding bodies. Since 2007 until the present, she works as the European Commission evaluation expert for FP7, Horizon 2020, IMI-1 (Innovative Medical Initiatives) and IMI-2. In years 2010–2013 she was involved in creating the PPPM related contents of the European Programme “Horizon 2020”. Currently, Dr. Golubnitschaja is Vice Chair of the Evaluation Panel for Marie Curie Mobility Actions at the European Commission in Brussels.