

ADVANCING CLINICAL AND TRANSLATIONAL MEDICINE IN AN ERA OF GLOBAL HEALTH TRANSFORMATION

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Medical science is going through a transformative period where innovations are happening at a very high rate, interdisciplinary integration is being promoted, and there is a greater opportunity to enhance health outcomes in the world than ever before¹. With the demarcation between basic science and clinical practice increasingly becoming unclear, clinical and translational medicine has been at the center stage of this transformation- as the gateway through which laboratory findings are transformed into a significant intervention to patients and communities across the globe. The past 20 years have seen a revolution in the understanding and treatment of diseases as a result of improved genomics, molecular biology, and bioinformatics studies. Such advances have now brought the era of personalized medicine, where the decision to be taken in treatment more and more depends on the specific genetic and molecular profile of a person instead of the universal clinical trends². This method does not only improve the effectiveness of treatment, but reduces the negativity and leads to a new model of personal care. Nevertheless, the actualization of the full potential of these developments cannot be achieved without a strong system of translations, that is, a system that has a mechanism that makes laboratory discoveries validated, well-tested ethically, and well-implemented in clinical practices³.

It is also crucial to note that health transformation does not only revolve around technology. The COVID-19 pandemic has demonstrated the weaknesses of global healthcare systems and their strengths at the same time. It has highlighted the immediate necessity of collaborative research networks, effective data sharing and equal access to care⁴. The low- and middle-income countries, such as South Asian countries, have a huge potential of translational research to help in tackling region-specific health burdens, including diabetes, cardiovascular disease, antimicrobial resistance, and malnutrition. It is important to empower the local researchers and institutions so that

they can be involved in the global scientific discourse, so that the innovation will be useful to all people, and not only to the populations of the technologically developed countries⁵. Translational success is based on interdisciplinary collaboration. Innovation in biotechnology, artificial intelligence, and public health combined with clinical medicine allow a more comprehensive approach to the treatment of patients. Predictive algorithms can be used to identify populations at risk, nanotechnology can be used in the improvement of drug delivery, and digital health platforms can be used to bring medical services to remote areas⁶.

These synergies are the best illustration of modern medicine in which prevention, diagnosis and treatment are interrelated through data-oriented accuracy and kindness. Nevertheless, there are still challenges despite these developments⁷. The integrity and efficiency of the scientific community remains a challenge that is still being tested by the reproducibility of the research findings, ethical behavior in clinical trials, and translating the evidence into policy⁸. It is a moral and academic obligation of journals and editorial boards to maintain these standards. Medical journals can inspire innovation by encouraging open access, rigorous peer review, and transparent data practices and protecting credibility and trust. In the current times of global health change, the need to think of medical research as a continuum is paramount, that is, between bench and bedside, and eventually, to society as a whole⁹. Research Discovery is not the future of healthcare; the will to apply knowledge to practice, equity, and hope is. Clinical and translational medicine will keep on the path to a healthier and more resilient world through collaboration, integrity and purpose¹⁰.

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