In 1964, when the European Molecular Biology Organization (EMBO) was founded, molecular biology was a small, emerging field within the biological sciences. The founders of EMBO, among them Max Perutz, John Kendrew, François Jacob and Eduard Kellenberger..., to name just a few, belonged to the avant-garde of molecular biology. They came from different backgrounds—physics, chemistry, medicine and biology, but they shared interest in two basic questions: (i) What are the molecular mechanisms that govern heredity and (ii) how does genetic information become functional via the three-dimensional structure of proteins. Needless to say, these basic questions were answered in principle by the mid-1960s; thanks to the brilliant achievements of a rather small number of outstanding researchers.

Today, molecular biology provides the conceptual framework for practically all aspects of life sciences. Its impact on medical sciences is without precedent, considering the powerful diagnostics at our disposal, our present-day insights into pathological states and the medical treatments built on such insights.

Almost 60 years ago Linus Pauling coined the term ‘molecular disease’. This rapidly developing field, which has revolutionized major parts of medical research continues to grow at an ever increasing pace. We witness today exciting synergisms between classical approaches of molecular and cell biology with new developments in physical sciences and informatics. Thus, sophisticated optical methods and novel high-throughput 'omics-based approaches provide a wealth of data that can be efficiently processed, thereby revealing with amazing resolution differences that allow clinicians to distinguish between healthy and diseased tissue. Genome and systems-based studies increasingly reveal individual genetic differences and disease-associated changes in core signalling and metabolic networks. The variations observed may predispose to a disease and may be used as a basis for diagnosis and prediction for responsiveness to treatment. Together these advances will pave the way for a future 'personalized medicine'.

These overwhelming developments bring many challenges. It is with good reason that many funding bodies have called for closer links between biomedical research and its application; for the translation of research findings at the lab-bench to application in prevention, diagnosis and treatment at the bedside. There is a strong need to bridge the gaps in translating novel concepts in molecular biology into robust applications for use in the clinic, a need to find solutions that offer realistic hope that their application extends beyond model systems or organisms to patients in a clinical setting.

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meeting point and forum at the interface between basic biological research and its clinical application. It is our sincere hope that EMBO Molecular Medicine will help bridge the gap in understanding between scientists active in more basic research and clinicians ultimately resulting in a higher degree of translation of new mechanistic insights into effective means of diagnosis and treatment. The Journal will publish a range of article types that will include cutting-edge research articles, reports and reviews. A front-half section will present editorials and news, together with shorter focus and perspective reviews that give opportunity for analysis of recent articles, trends or personal forward looks into developments in particular areas.

The new Journal is fortunate to be able to call on the expertise of a group of internationally renowned molecular medicine researchers as senior editors: Dario Alessi, Giulio Cossu, Uta Francke, Fred Gage, Matthias Hentze, Ed Liu, Philippe Sansonetti and Bart de Strooper. The Journal also relies on the expertise of its distinguished Advisory Editorial Board members and the dedication and competence of Sandra Caldeira as EMBO editor, together with the longstanding professionalism of Wiley-Blackwell as the publisher.

We think that EMBO Molecular Medicine will be well worth reading and hope sincerely that our readers will choose to submit their best work for publication in this broadly distributed and highly visible forum.

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