

What is the purpose of launching the Translational Medicine Reports journal?

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Defining *translational medicine* is complicated. Although there are many definitions, most agree that translational medicine is an important area of Medicine which is devoted to the effective application in the clinic of knowledge generated in the laboratory, that is, from the bench to the bed. However, as we know, when a therapeutic or diagnostic procedure is first applied to patients, this is just the beginning of the journey, as many unknowns remain at this juncture. Hence, translational medicine also seeks to return bed- to bench- to further research in the laboratory, given that new clinical findings emerging from early results in patients require corroboration or expansion in the laboratory. Furthermore, emerging results in patients may give rise to new hypotheses to test, contributing to the attainment of comprehensive knowledge that will facilitate and optimize the effective application of the translated procedure to the patients. Conducting translational research in medicine is not simple as it requires a full collaboration between clinicians and basic scientists across institutes. Traditionally, it was thought that basic and clinical researchers are somehow divorced from each other, toiling in different fields although, indeed, pursuing a shared aim. Fortunately, this is changing, at least in part, due to the increased awareness in the scientific community of the importance of translational medicine, whose nature implies that these two equally important scientific communities, basic and clinic researchers, must

work in a concerted effort if the ultimate research goals are to be met for the benefit of the patient.

Beyond the aspects of *science* and *patients*, translational medicine is a complex field in which ethical, regulatory and economic issues are integral to efforts to close the circle of translational efforts by bringing diagnostic or therapeutic products to the market, that is, to the patient. It is unrealistic to expect that an individual researcher will possess all the knowledge and expertise required for bringing about the development of a product. However, he or she must at least have an understanding of the entire process and the steps to be completed, and be prepared to seek advice and aid from colleagues with particular expertise in specialist areas and from institutional resources on matters of intellectual property and collaboration with industry. Thus, it is clear that successful translational medicine can only be achieved in well-organized and highly efficient research institutions. Otherwise, even extremely valuable ideas and/or research findings may end up as just that: good ideas, good efforts, or good intentions. The practice of translational medicine does not in itself guarantee success. Current biomedical research is often non-innovative and driven principally by commercial forces. It has been said that the research agenda is dictated by industry rather than by the investigator and that patient-centered research belongs to the past. The current paradigm of biomedical research relies heavily on the molecular approach as the only way to understand disease processes and discover new drugs and disease markers. Furthermore, molecular research is performed using increasingly expensive, complex, and sophisticated marker-driven technologies. This has brought to the fore a type of science that often requires little creative imagination and few *a priori* hypotheses, but which possesses the capacity to readily yield copious

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Conflict of interest: the author declares no potential conflict of interest.

Key words: translational medicine; journal; editorial.

Received for publication: 28 April 2014.

Accepted for publication: 14 May 2014.

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Translational Medicine Reports 2017; 1:4038

doi:10.4081/tmr.4038

volumes of data that in turn solely yield more promises for the future.

These views on the complexity of translational medicine help us to understand why a new journal that addresses this field is needed. The Translational Medicine Reports (TMR) journal is primarily intended to facilitate the translation of biomedical knowledge into improved human healthcare, covering every aspect of the field. Interdisciplinary approaches are particularly encouraged: the journal will publish original articles in the fields of molecular biology and biochemistry applied to the treatment of chronic-degenerative diseases including diabetes, cancer, neurodegenerative and cardiovascular diseases. A special emphasis of the TMR journal will be the publication of innovative or revolutionary ideas, even if these are not contemplated within the current molecular research paradigm, as long as they are scientifically sound.