



Translational science: The future is already here

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The scientific community has always been struggling to find the connections and bridges between fundamental and applied sciences. Translational science addresses the problem. In the modern society, most of the current humanity's issues can only be answered by combining different technologies and innovations, which is most efficiently done by practicing translational research. Translational science allows more efficient transfer of knowledge, technologies and ideas between different fields of science. Due to its multi-disciplinary character, it demands more efficient and understandable communication, practical solutions and goal-oriented thinking. However, its practice does not threaten the existence of sole basic, clinical or practice-oriented research. It actually enhances the intellectual potential offered by trained scientific teams towards more efficient societal development beyond its current limits. The introduction of computed tomography (CT) scanners is one the best examples of implementation of basic science into practice. In fact, utilizing and connecting biology, mathematics, and physics at the same time has made this invention unrivaled (1,2). Back in the 70's no one would have guessed that in less than half a century this brilliant invention becomes an essential part of all diagnostic clinics, providing crucial information for medical practitioners. Other technologies from basic sciences have also been developed and successfully implemented in research laboratories and/or diagnostic clinics ranging from Next Generation Sequencing (NGS) techniques (in cancer diagnostics) to treatment planning programs (in the field of radiotherapy) (3,4). However, it is not always easy to employ the sporadic scientific knowledge for practice. That is why countries that are leading in science have already started to realize the importance and necessity of bureaus that facilitate such connection. For example, the National Center for Advancing Translational Sciences (NCATS) was founded in the United States in 2011 solely for strengthening the transfer of knowledge between different fields of science. Here, in Journal of Radiobiology (JRB), we have

■ Implication for health policy/practice/research/medical education

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acknowledged such a need in the field of radiation biology (5-7). We are keen to encourage those who are willing to interconnect their knowledge from different areas. In this issue, you can read first-hand articles from scientist portraying the possibilities of using biological knowledge in radiation sciences. We hope that this beginning will lead to other open doors in the field of translational science as basis of sustainable development.

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Authors' contributions

All authors wrote the manuscript equally.

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