Talk

The biotechnology research for the unresolved and challenging health problems

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ABSTRACT

The big health threats are detected by Public Health indicators through surveillance systems, worldwide and/or at the European and/or Spanish levels. Solid and hematologic neoplasia's, cardiovascular and respiratory diseases, chronic and aging related diseases, infectious diseases, among others, are the main health problems; in the under-developed countries, problems arisen from lower socio-sanitary conditions may magnify the effects of severe and other moderate diseases.

At the clinical setting, the health workers, physicians and nurses detect unresolved problems in the prevention, diagnosis, support, care and treatment of diseases, when attending different patients. Depending on the presence or the absence of underlying debilitating and chronic conditions, the clinical manifestations and the outcomes of the diseases, in terms of disability or death, are different and evolving in time. Currently, important technological improvements, including new drugs and devices, new types of surgery, or new diagnosis methods, as examples, have permitted better management of many diseases. However, new challenges continuously appeared, depending on new diseases or old non-resolved problems, despite the previous advances or, in the field of the infectious diseases, because the ability to recognize old pathogens, the emergence of new virus, and the worldwide emergence of the multidrug- and extensively-drug-resistance to antimicrobials in bacteria.

Clinicians must be involved in the formulation of hypothesis to look for new solutions in the management of the old and emergent health problems and diseases, to improve the care and the cure of the patients and to prevent diseases. Clinical research is the classical approach to answer the questions derived from those hypotheses and to achieve new knowledges, which can be applied directly in the attention to the patients. However, many questions need a clinical/experimental approach to obtain useful results and, consequently, a multidisciplinary team, including biologists, biotechnologists, chemists, engineers and physicians, among others, is needed. The Sanitary Research Institutes were configured in 2004 through the cooperation between Hospitals and Universities, to have the framework where a very close multidisciplinary work can be developed. However, we must have an open mind to efficiently collaborate with any scientific, in any institution, in any company, in any country, in the context of an open scientific world. .

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