EDITORIAL

Strengthening Biomedical Research in Yemen: A Pressing Need for Raising Research Funding

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ABSTRACT

This editorial emphasizes the need to secure funding for biomedical research in Yemen, considering the ongoing challenges faced by the research community in the country due to the war and humanitarian crises in the recent years and the lack of domestic research funding. It raises some issues related to improving the fundraising capacity of research institutions and highlights the success story of the University of Science and Technology in Sana'a in raising international funding for research projects on infectious diseases over the past decade.

Keywords: Biomedical research ▪ Funding ▪ Yemen

According to the projections of the World Bank, Yemen's population is estimated to be around 33.7 million people in 2022, with an annual population growth rate of about 2.1%.[1] Moreover, the country has been experiencing one of the world's worst humanitarian crises since March 2015. After eight years of conflict, more than 80% of Yemenis live below the poverty line.[2] Yemen is one of the least developed countries in the world, ranking 183 out of 191 countries and territories in the 2022 Human Development Index,[3] a measure devised by the United Nations to assess countries' overall development and well-being. The increase in population size and the ongoing challenges reflect the growing need for biomedical research to improve the quality of life and advance healthcare, where the need to strengthen biomedical research has never been more urgent. However, there has been a shortage of studies on many aspects related to health in Yemen over the past few years of the ongoing crisis, particularly among vulnerable population groups.[4]

With limited resources and infrastructure, Yemen's biomedical research sector is struggling to make significant progress. Research in various health-related areas, including communicable and noncommunicable diseases, malnutrition, and maternal and child health, is essential for understanding the health needs of the population and developing effective interventions. Nevertheless, a lack of domestic funding for research projects is one of the key factors hindering the growth of biomedical research in the country. As a result, the country lags in terms of scientific output and innovation in biomedical research. To address this issue and propel the country's biomedical research forward, it is imperative to attract funding for research projects. Concerted efforts are also needed to build the capacity of Yemeni researchers and institutions to develop competitive research proposals and apply for international funding opportunities and research grants.

Identifying potential funding sources that support biomedical research, particularly in conflict-stricken countries, is a critical starting point. Meanwhile, researchers should be trained on how to develop competitive biomedical research proposals that address specific health issues and challenges in the country in alignment with the priorities of funding bodies. There is a need to provide them with the skills necessary for writing proposals with clear objectives, methodology and potential impact, as well as managing research projects. Researchers also need training on how to prepare justifiable budgets that align with their research objectives.

Partnerships and collaborations with local and international research institutions during the preparation of research proposals can also help attract funding. Collaborative and interdisciplinary projects are often viewed favorably by funding bodies as they leverage expertise and resources. In addition, academic institutions, non-governmental organizations and the private sector can play a role in providing funding and support for research projects. By investing in research and innovation, these stakeholders can contribute to the growth of the biomedical research sector in the country and help address the country's healthcare challenges.

A major stride in attracting funded research projects in the country has been the success of the University of Science and Technology (UST), a not-for-profit academic and research institution in Sana'a, in securing several research grants funded by the World Health Organization (WHO) Regional Office for the Eastern Mediterranean (EMRO), the Special Programme for Research and Training in Tropical Diseases (TDR), and other funding agencies over the past decade. The UST has undertaken many collaborative projects with local and

international institutions. Such research projects address several public health problems in the country, including malaria, dengue, onchocerciasis, schistosomiasis and tuberculosis. The outcomes of many projects have already been published in high-quality, indexed journals and communicated with policymakers and stakeholders inside and outside the country to maximize their potential impact in solving major public health problems in underserved communities of the country. Moreover, the UST has led joint projects about issues of global interest in collaboration with international organizations and institutions. One of these fruitful collaborations was a systematic review and meta-analysis about a multisectoral approach to the combat of chikungunya outbreaks driven by human mobility, whose findings were published in the Journal of Infectious Diseases, published by Oxford University Press.[5] This success story needs to be sustained and replicated by the UST and other academic and research institutions in the country.

In summary, it is necessary to diversify research funding sources and intensify institutional funding allocations for research projects on a competitive basis. There is a need to foster a culture of excellence in research by raising funds for collaborative and interdisciplinary research initiatives. To promote research funding and facilitate the transparent management of competitive calls for research projects, it would be beneficial to establish research councils within academic institutions. By establishing these councils, institutions can improve their research capabilities, encourage interdisciplinary collaborations and provide strategic guidance and support to researchers. This step can enhance the academic reputation of institutions and drive research innovation and advancement.

Ethical approval and consent

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Conflict of Interest

The author declares no conflict of interest associated with this article.

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