Chapter 4
Advisory Committees in Biomedical Research and Training

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ABSTRACT

Biomedical Research Training falls under the umbrella of Graduate Education at higher education institutions. The extent that advisory committees play in such training is not well documented, as these change from institution to institution. The National Institutes of Health (NIH), the guiding federal agency that provides the bulk of financial support to biomedical research institutions, provides input in training and workforce development based on the research of their internal advisory committees. Discussed is the background of advisory committees in guiding graduate education and the roles of advisory committees in biomedical research education and training. Discussed are the roles of advisory committees at various levels of biomedical research education and training, from funding agencies (NIH), to advisory committees guiding training programs and delivering trainee advice at individual institutions. Discussion of the challenges in establishing advisory committees to develop a productive biomedical research workforce will ensue, as we shift from educational training to workforce development.
ADVISORY COMMITTEES IN BIOMEDICAL RESEARCH EDUCATION

The fundamental goal of biomedical research training is to incite and encourage the discovery of solutions to key biomedical problems through the scientific, evidence-based approach of research investigation; a trial-and-error approach that requires collective and multidisciplinary support from various groups, departments, and institutions. To guide this principle, the use of advisory committees is fundamental to establish collaborations, improve communication, and establish a fast-failure environment conducive to the overall assessment and immediate feasibility of research projects. In biomedical research education, advisory committees are essential to the fundamental training component, and to the advancement of projects in various areas of investigation (basic research, preclinical research, clinical research, case and cohort/epidemiological studies, collaboration between labs, technique and skill acquisition, manuscript preparation and publication, student dissertation and thesis projects). Advisory committees are also instrumental in the development of knowledge and impact of diverse areas of biomedical interest (epidemic or pandemic current diseases, public health concerns, improvements in population health), as well as implementation and evolution of larger-scale health initiatives (Cancer Moonshot initiatives – Federal and Institutional). Advisory committees in biomedical research serve to align the principles, knowledge, interests, goals, and ideas within a number of individuals who hold a special interest in the improvements and advancements in a particular field of the biomedical enterprise. The biomedical enterprise is a diverse system consisting of bench, preclinical and clinical research discoveries that will improve patient care and public health. The aim is to align the most pressing needs in health issues and disparities with the current and developing innovation happening at different institutions across the nation. Furthermore, the biomedical enterprise requires a number of highly trained individuals capable of understanding the major points in a number of arenas; from carrying out the biomedical science in question, to the translation and communication of such science and its findings to the population. To advance the biomedical research enterprise, it is therefore necessary that an education provide interdisciplinary guidance, to which we argue, can best be provided with a combination of ideas, knowledge and interests from a number of related venues. Advisory committees then, are an

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