

# Biomedical Research – From Ideation to Publication

Sir,

Research is the intellectual process undertaken to become a scientist, and to discover, interpret, and revise the current knowledge of the different facets of the profession.<sup>[1-4]</sup> Broad-based information in the scientific methods of research and communication are necessary before an individual can pursue a distinct scientific career. In this context, I would like to introduce to the readers on the availability of a book titled “BIOMEDICAL RESEARCH – from ideation to publication,” edited by Jagadeesh *et al.* and published by Wolters Kluwer. This book explains with a clear and lucid exposition of the indispensable principles of biomedical research. The book has key contributions from 47 experts affiliated to academia, industry, and regulatory agencies, from around the globe. The book is divided into 10 main sections (Section A to J) with a total of 36 chapters. Readers are advised to read a recently published review on this book for more details.<sup>[5]</sup>

Section A begins with “*Getting Started in Research*” in which creative and critical thinking in biomedical research, and Focus, Objectives, Hypothesis and Research Question (FOHR), the four cornerstones of a research project, are discussed. Section B on “*Planning for Non-clinical Science Research*” reviews writing a research protocol, drug delivery research, nanomedicine technologies, pharmacogenomics, and importantly, an alternative approach to animal experimentation in research. Section C advances to the next stage, “*Planning for Clinical Research*,” regarding the principles of clinical research and writing a clinical trial protocol, with a discussion on bioavailability and bioequivalence studies. Section D introduces the readers to “*Study Design and Statistical Analysis*” by critically discussing the application of statistics in biomedical sciences. Section E on “*Exploring the Literature for Reaching Ideas*” addresses precisely how to review the existing literature. This is followed by Section F, which is on “*Scientific Communication*,” a backbone of the book having dealt with eight key chapters addressing the optimal ways of structuring Introduction, Materials and Methods, Results and Discussion (IMRaD), and appropriate writing style of abstracts, titles, and references (Vancouver system and Harvard system). The section also addresses the need of language and style in paper and thesis/dissertation writings. Successful bench

work should be translated into a scientific publication; this aspect is rightly addressed in Section G on “*Tools for Scholarly Publications*.” Section H on “*Seeking Research Support*” educates the reader how to write a successful grant proposal with funding opportunities in biomedical sciences. Section I on “*Innovation in Career*” gives an overview of how a researcher can have an innovative biomedical career. The final Section J eloquently discusses “*Research and Publication Integrity*,” an essential topic on bench and publication ethics.

All the chapters in the book are well organized and presented in a way that allows the easy synthesis of the concepts of scientific research and communication. This book is an important tool for budding biomedical researchers aiming to understand the determinants of scientific research and communication. Based on my longstanding experience in teaching and research, I strongly recommend this book to all aspiring and established biomedical researchers and teachers seeking to advance their knowledge in understanding the basic concepts of scientific research and communication.

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