

Preface

This book has been written at probably the most challenging and exciting time in the recent history of genetics. The last decade has seen the completion of one revolutionary project after another, such as the ENCODE and NIH Roadmap Epigenomics projects. Both of these required the rewriting of a large proportion of the text, and the recent developments in translational bioinformatics forced the addition of a new chapter. *Genetic Association Studies* brings together in one place the most relevant aspects of genetics, environmental and genetic epidemiology, and statistics. Laboratory aspects of genetic association studies are also included. Although genome-wide association studies have changed the way we think about genetic associations, candidate gene studies and more basic genotyping methods are included to make sure that the book is relevant to students and researchers with limited resources. I hope every reader interested in genetic associations will find something useful here, and especially that students will benefit from having a single source covering different features of genetic associations. The book does not claim to be a comprehensive monograph on genetic epidemiology, but rather demystifies key concepts for those who have not received formal training in epidemiology or statistics.

Writing this book has felt at times like chasing a moving target, and sometimes I wondered how it was going to be possible to finish. It wouldn't have been possible without the understanding, encouragement, and tenacity of the staff at Garland Science, especially Liz Owen and David Borrowdale. A book incorporating information from different disciplines and written as a solo effort is bound to have imperfections. Expert reviewers worked very hard to help to improve the quality of information contained in the text. I am very much grateful to all reviewers. Any remaining errors are my responsibility. I must also thank my students, who have seen many different versions of this book and provided a lot of feedback, both knowingly and unknowingly. In particular, I am most grateful to my former graduate students, Amy E. Kennedy and Sandeep K. Singh, for their tireless efforts. My wife Christina suffered more than her fair share while I was trying to finish the book and I thank her for never-ending support and her encouragement in bringing this project to successful completion. Finally, I must express my gratitude to everyone who has contributed to my development, especially my family, teachers, mentors, and colleagues.

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