"Human genomes are being intensively studied worldwide not only because of their importance in the fields of medicine and healthcare but also because a large number of personal genomes, which cover wide varieties of human races, have become available from international DNA databanks because of revolutionary advances in DNA sequencing technologies. By combining worldwide spatiotemporal studies on ultraviolet radiation with those on racial sequence diversity of a gene related with melanin production, researchers have clarified the geographically localized adaptive evolution among human races. This finding provides not only the fundamental knowledge of the adaptive evolution of human skin pigmentation but also valuable information for research in medicine and healthcare. The massive amount of sequence data can be utilized in any scientific field of research and is especially helpful for those involved in collaborative work on genomes and in developing new, promising, and interdisciplinary studies. This book introduces a pioneering study on this intendment."

Prof. Emeritus Toshimichi Ikemura
Nagahama Institute of Bio-Science and Technology, Japan

"This book by Dr. Anno is a compilation of cutting-edge research in bioinformatics and computational biology and is authored by leading scientists and researchers in the field. It contains numerous worked examples, discussion problems, and a wide range of exercises for education. Since current systems for reporting electrochemical nanofabrication studies make it hard to assess whether the observed interactions are reproducible, the book also gives suggestions for improvements in this area."

Prof. Ming-An Lee
National Taiwan Ocean University, Taiwan

Gene–environment (G × E) interaction analysis is a statistical method for clarifying G × E interactions applicable to a phenotype or a disease that is the result of interactions between genes and the environment. This book is the first to deal with the theme of G × E interaction analysis. It compiles and details cutting-edge research in bioinformatics and computational biology and will appeal to anyone involved in bioinformatics and computational biology.

Sumiko Anno is currently an associate professor at the Shibaura Institute of Technology. She investigates public health issues using genetic engineering, remote sensing, and geographic information systems technologies. Dr. Anno established gene–environment (G × E) interaction analysis, which is used in a variety of scientific applications. In recent decades, there has been a great deal of scientific interest in her work on combining micro- and macro-information obtained from molecular, biological, and ecological studies. Her achievements have been rated highly, and she has received several awards from institutes in Japan and abroad.

V506
ISBN 978-981-4669-63-4
9 789814 669634

PAN STANFORD PUBLISHING
www.panstanford.com