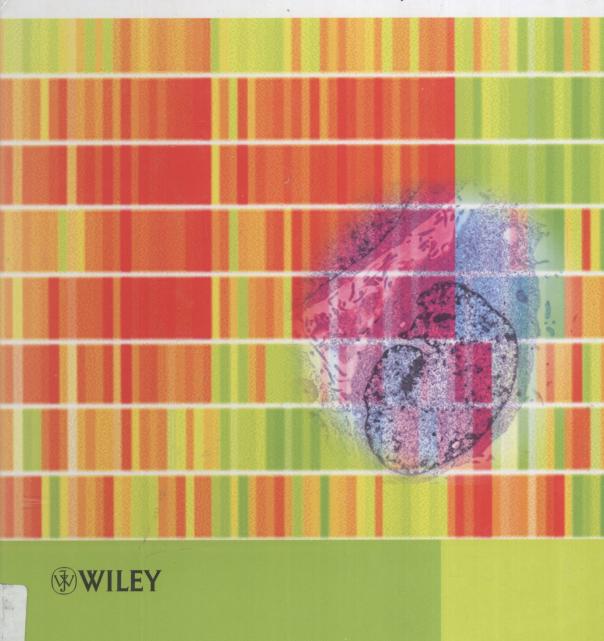
# Toxicogenomics

A Powerful Tool For Toxicity Assessment



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## **Toxicogenomics**

### A Powerful Tool for Toxicity Assessment

#### **Editor**

SAURA C. SAHU

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## **Toxicogenomics**

#### **Dedicated to**

My parents, Gopinath and Inchhamani, for their gift of life, love, and living examples

My wife, Jarana, for her life-long companionship, love, care, and support for following my dreams

My children, Megha, Sudhir and Subir, for their love and care

#### **Preface**

Toxicogenomics is the integration of genomics to toxicology. This technology is a powerful tool for collecting information from a large number of biological samples simultaneously; thus, it is very useful for large-scale screening of potential toxicants. This book provides up-to-date state-of-the-art information presented by the recognized experts and, therefore, it is an authoritative source of current knowledge in this field of research. The potential link between toxicology, genetics, and human diseases makes this book very useful to investigators in many and varied disciplines of science and toxicology.

The book is designed primarily for the research scientists currently engaged in toxicogenomics. However, it should be of interest to wide disciplines of science, including toxicology, genetics, medicine, and pharmacology, as well as in drug and food sciences. Also, it should be of interest to federal regulators and risk assessors of drug, food, environmental, and agricultural products. The tools used in the field of toxicogenomics can be used in humans as well as in human surrogate models, providing data that scientists and regulators would have more confidence in for making extrapolations from surrogates to humans.

Toxicogenomics is a rapidly developing field of science. There is a risk of being out of date in the not too distant future. However, neither the fundamental concepts and ideas, nor the experimental data are going to change. Therefore, for years to come, this book will be useful to the students and investigators in toxicogenomics, as well as in many disciplines of science to guide them in their future work.

Saura C. Sahu

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## **Section 1**

## Design, Analysis and Interpretation of Toxicogenomics