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Nota di bibliografia	Includes bibliographical references (p. 251-258) and index.
Nota di contenuto	Contents; Preface; 1 Preliminaries; 1.1 Using the R Computing Environment; 1.1.1 Installing smida; 1.1.2 Loading smida; 1.2 Data Sets from Biological Experiments; 1.2.1 Arabidopsis experiment: Anna Amtmann; 1.2.2 Skin cancer experiment: Nighean Barr; 1.2.3 Breast cancer experiment: John Bartlett; 1.2.4 Mammary gland experiment: Gusterson group; 1.2.5 Tuberculosis experiment: BG@S group; I: Getting Good Data; 2 Set-up of a Microarray Experiment; 2.1 Nucleic Acids: DNA and RNA; 2.2 Simple cDNA Spotted Microarray Experiment; 3 Statistical Design of Microarrays; 3.1 Sources of Variation 3.2 Replication3.3 Design Principles; 3.4 Single-channel Microarray Design; 3.5 Two-channel Microarray Designs; 4 Normalization; 4.1 Image Analysis; 4.2 Introduction to Normalization; 4.3 Normalization for Dual-channel Arrays; 4.4 Normalization of Single-channel Arrays; 5 Quality Assessment; 5.1 Using MIAME in Quality Assessment; 5.2 Comparing Multivariate Data; 5.3 Detecting Data Problems; 5.4 Consequences of Quality Assessment Checks; 6 Microarray Myths: Data; 6.1 Design; 6.2 Normalization; II: Getting Good Answers; 7 Microarray Discoveries; 7.1 Discovering Sample Classes 7.2 Exploratory Supervised Learning7.3 Discovering Gene Clusters; 8 Differential Expression; 8.1 Introduction; 8.2 Classical Hypothesis Testing; 8.3 Bayesian Hypothesis Testing; 9 Predicting Outcomes with

	Gene Expression Profiles; 9.1 Introduction; 9.2 Curse of Dimensionality: Gene Filtering; 9.3 Predicting Class Memberships; 9.4 Predicting Continuous Responses; 10 Microarray Myths: Inference; 10.1 Differential Expression; 10.2 Prediction and Learning; Bibliography; Index; A; B; C; D; E; F; G; H; I; K; L; M; N; O; P; Q; R; S; T; U; V; W
Sommario/riassunto	Interest in microarrays has increased considerably in the last ten years. This increase in the use of microarray technology has led to the need for good standards of microarray experimental notation, data representation, and the introduction of standard experimental controls, as well as standard data normalization and analysis techniques. Statistics for Microarrays: Design, Analysis and Inference is the first book that presents a coherent and systematic overview of statistical methods in all stages in the process of analysing microarray data - from getting good data to obtaining meaning