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Nota di contenuto	1. How to Set Up, Staff, and Fund Your Laboratory: The First 3 Years -- 2. Choosing a Good Scientific Mentor and Being a Good Mentee -- 3. Effective Time Management Strategies for Conducting Laboratory Research -- 4. Tips on Maintaining an Effective Lab Notebook & Data Integrity -- 5. Statistics for Bench Research -- 6. Ethics in Laboratory Research -- 7. Modern Techniques for DNA, RNA and Protein Assessment -- 8. Considerations for Immunohistochemistry -- 9. Utilizing Flow Cytometry Effectively -- 10. Effective Tissue and Cell Culture -- 11. Gene Editing Techniques -- 12. Stem cells and tissue engineering -- 13. Animal Models in Surgical Research (Genetic & Surgical Models) -- 14. Microbiome: Current status and future applications -- 15. Systems Biology: Generating and Understanding Big Data.
Sommario/riassunto	This updated volume provides the foundation for starting a basic science research career as an academic surgeon. Taking a practical approach, the book covers the suggested timeline for the initial academic appointment, including how to setup and fund the laboratory and identifying appropriate scientific mentors and lab personnel. It also describes the application of basic and advanced research techniques, including animal models, flow cytometry, gene editing, tissue

engineering, and microbiome analysis. Success in Academic Surgery: Basic Science aims to give guidance on the application of basic and advanced techniques in surgical research. This book is relevant to senior residents and fellows approaching their first academic appointment, as well as more senior investigators interested in expanding their research horizons.