

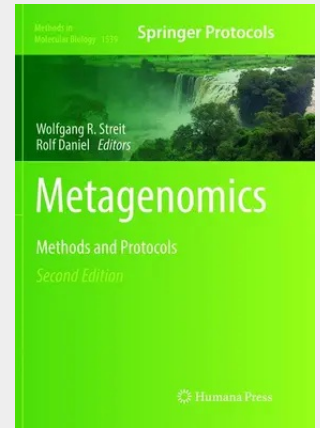
Metagenomics

Methods and Protocols

This second edition explores up-to-date tools in various function-based technologies currently used in metagenomics. The chapters in this book discuss all of the working steps involved in these technologies, such as: DNA isolation from soils and marine samples followed by the construction and screening of libraries for diverse enzymes and biomolecules; current methods used to isolate DNA and construct large- and small-insert libraries from terrestrial and marine habitats; methods for establishing metagenome libraries in none-E. coli hosts; new molecular tools used for function-driven mining of metagenomic DNA; and screening protocols for a wide array of different genes encoding enzymes with relevance to biotechnology and ecology. *Metagenomics: Methods and Protocols, Second Edition* also provides detailed screening protocols for phosphatases, poly-hydroxyalkanoate, metabolism-related enzymes, stereoselective hydrolases, and microbial signals for the discovery of secondary metabolites. Written in the highly successful *Methods in Molecular Biology* series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls.

Comprehensive and cutting-edge, *Metagenomics: Methods and Protocols, Second Edition* is a collection of up-to-date metagenome protocols and tools for the recovery of numerous major types of biocatalysts, and allows researchers to easily setup these screens in any microbiology laboratory.

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