



Bacterial Sensors: Synthetic Design and Application Principles (Paperback)

By van der Jan Roelof Meer

Morgan Claypool Publishers, United States, 2011. Paperback. Book Condition: New. 232 x 190 mm. Language: English . Brand New Book. Bacterial reporters are live, genetically engineered cells with promising application in bioanalytics. They contain genetic circuitry to produce a cellular sensing element, which detects the target compound and relays the detection to specific synthesis of so-called reporter proteins (the presence or activity of which is easy to quantify). Bioassays with bacterial reporters are a useful complement to chemical analytics because they measure biological responses rather than total chemical concentrations. Simple bacterial reporter assays may also replace more costly chemical methods as a first line sample analysis technique. Recent promising developments integrate bacterial reporter cells with microsystems to produce bacterial biosensors. This lecture presents an in-depth treatment of the synthetic biological design principles of bacterial reporters, the engineering of which started as simple recombinant DNA puzzles, but has now become a more rational approach of choosing and combining sensing, controlling and reporting DNA parts . Several examples of existing bacterial reporter designs and their genetic circuitry will be illustrated. Besides the design principles, the lecture also focuses on the application principles of bacterial reporter assays. A variety of assay formats will...



READ ONLINE
[7.34 MB]

Reviews

It is just one of my personal favorite book. I was able to comprehend every little thing out of this published e publication. It is extremely difficult to leave it before concluding, once you begin to read the book.

-- Isaac Olson

Absolutely essential go through publication. This can be for all who state there was not a worthy of looking at. Its been printed in an remarkably basic way and it is just right after i finished reading this book through which in fact altered me, modify the way i think.

-- Dr. Haskell Osinski