Systems Biology of Clostridium

Peter Durre

Systems Biology of Clostridium

Peter Durre

Systems Biology of Clostridium Peter Durre

Systems Biology of Clostridium provides a comprehensive overview of system biology approaches in clostridia, especially *Clostridium acetobutylicum*. Systems biology is a rapidly evolving scientific discipline that allows us to understand and predict the metabolism and its changes within the bacterium as a whole.

Clostridia represent one of the largest bacterial genera. This group contains organisms with metabolic properties that hold enormous potential for biotechnological processes. A model organism is *Clostridium acetobutylicum* that has been, and is still used in large-scale industrial production of the solvents acetone and butanol. Systems biology offers a new way to elucidate and understand the complex regulatory network controlling the different metabolic pathways and their interactions. All aspects from the development of appropriate experimental tools to mathematical modeling are covered, including a fascinating historical account on acetone-butanol fermentation in World War II.

Written by world-class experts in their fields, *Systems Biology of Clostridium* is an essential source of reference for all biologists, biochemists, chemists, and chemical engineers working on biotechnological fermentations or industrial applications, as well as biofuels.

Contents:

- Metabolic and Regulatory Networks in *Clostridium Acetobutylicum*
- Clostridial Gene Tools
- Supporting Systems Biology of *Clostridium Acetobutylicum* by Proteome Analysis
- Comparative Genomic Analysis of the General Stress Response in *Clostridium Acetobutylicum* ATCC 824 and *Clostridium Beijerinckii* NCIMB 8052
- Mathematical Modeling of the pH-Induced Metabolic Shift in *Clostridium Acetobutylicum*
- Mathematical Models for Clostridia: From Cultivation Description to Systems Biology
- Modeling Agr-Dependent Quorum Sensing in Gram-Positive Bacteria
- Comparative Genomic Analysis of the Central Metabolism of the Solventogenic Species *Clostridium acetobutylicum* ATCC 824 and *Clostridium Beijerinckii* NCIMB 8052
- The Strategic Importance of Biobutanol for Japan During WWII: A Case Study of the Butanol Fermentation Process in Taiwan and Japan

Readership: Biologists, chemists, biochemists and chemical engineers working on biotechnological fermentations or industrial applications in biofuels.

Download and Read Free Online Systems Biology of Clostridium Peter Durre

---

From reader reviews:

Anthony Hubbard:

Why don't make it to be your habit? Right now, try to prepare your time to do the important take action, like looking for your favorite publication and reading a reserve. Beside you can solve your problem; you can add your knowledge by the guide entitled Systems Biology of Clostridium. Try to the actual book Systems Biology of Clostridium as your buddy. It means that it can for being your friend when you truly feel alone and beside those of course make you smarter than ever before. Yeah, it is very fortuned to suit your needs. The book makes you more confidence because you can know every little thing by the book. So , we need to make new experience along with knowledge with this book.

Thomas Whitaker:

This book untitled Systems Biology of Clostridium to be one of several books this best seller in this year, here is because when you read this reserve you can get a lot of benefit upon it. You will easily to buy this specific book in the book store or you can order it through online. The publisher of this book sells the e-book too. It makes you quicker to read this book, since you can read this book in your Smartphone. So there is no reason for you to past this reserve from your list.

Walter Reeves:

Often the book Systems Biology of Clostridium will bring you to the new experience of reading some sort of book. The author style to spell out the idea is very unique. Should you try to find new book you just read, this book very suited to you. The book Systems Biology of Clostridium is much recommended to you you just read. You can also get the e-book from the official web site, so you can quicker to read the book.

Salina Rodriguez:

Reading can called imagination hangout, why? Because when you are reading a book especially book entitled Systems Biology of Clostridium your thoughts will drift away trough every dimension, wandering in every single aspect that maybe unfamiliar for but surely can become your mind friends. Imaging every word written in a publication then become one application form conclusion and explanation which maybe you never get ahead of. The Systems Biology of Clostridium giving you yet another experience more than blown away your head but also giving you useful info for your better life within this era. So now let us demonstrate the relaxing pattern the following is your body and mind will be pleased when you are finished reading it, like winning a sport. Do you want to try this extraordinary investing spare time activity?

Read Systems Biology of Clostridium by Peter Durre for online ebook

Systems Biology of Clostridium by Peter Durre Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Systems Biology of Clostridium by Peter Durre books to read online.

Online Systems Biology of Clostridium by Peter Durre ebook PDF download

Systems Biology of Clostridium by Peter Durre Doc

Systems Biology of Clostridium by Peter Durre Mobipocket

Systems Biology of Clostridium by Peter Durre EPub