Metabolism and Bacterial Pathogenesis

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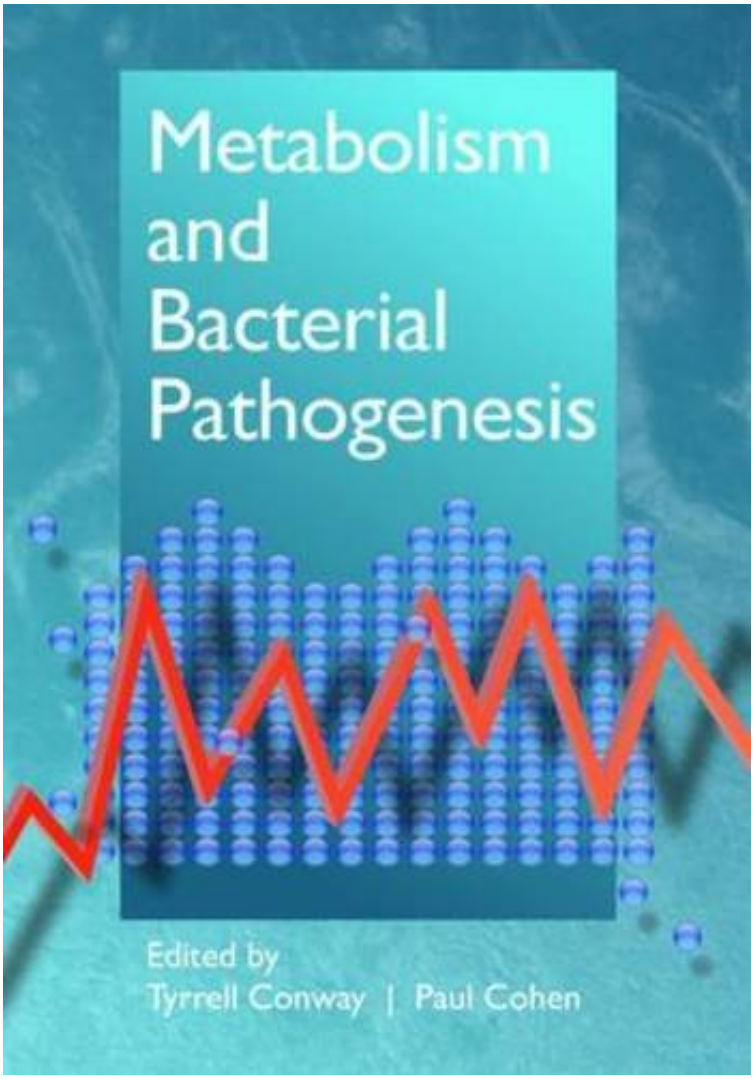

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From ASM Press : Metabolism and Bacterial Pathogenesis before purchasing it in order to gage whether or not it would be worth my time, and all praised Metabolism and Bacterial Pathogenesis:

Groundbreaking thinking on how bacterial metabolism is foundational to pathogenesis For too long, bacterial metabolism and bacterial pathogenesis have been studied as separate entities. However, the scientific community is beginning to realize that not only are bacterial nutrient acquisition and utilization essential for pathogenesis, but that interfering with the pathogen-specific metabolic pathways used during infection can regulate virulence factor

expression and might lead to effective breakthroughs in a variety of treatments. Editors Paul Cohen and Tyrrell Conway, who pioneered the use of metabolic mutants in competitive colonization assays, an approach now widely used to investigate the nutrition of pathogens in vivo, are uniquely qualified to advance our knowledge of this integrative field of research. They convened a group of contributors who are breaking new ground in understanding how bacterial metabolism is foundational to pathogenesis to share their expert perspectives and outlook for the future. Beginning with overviews, Metabolism and Bacterial Pathogenesis covers a wide range of diseases and both Gram-positive and -negative bacteria that serve as model systems for in vitro and in vivo investigations intracellular, respiratory, and enteric pathogens pathogen-specific nutrient acquisition in hosts mechanisms of host-driven metabolic adaptation by pathogens metabolic regulation of virulence gene expression Useful for specialists in bacterial pathogenesis and specialists in metabolism as well as molecular biologists, physicians, veterinarians, dentists, graduate and undergraduate students, and laboratory technicians, Metabolism and Bacterial Pathogenesis is also essential reading for scientists studying the microbiome.

Within these pages, leading experts in the field summarize research on a timely topic that connects research on the pathogenesis of infectious diseases to bacterial physiology. Metabolism and Bacterial Pathogenesis is great addition for bacteriologists from both medical schools and colleges of biological sciences. -- Andreas Bumler, Professor and Vice Chair of Research, Department of Medical Microbiology and Immunology, UC Davis School of MedicineAbout the AuthorTyrrell was born in Bartlesville, Oklahoma, and is married for 29 years to Sharri Conway, an elementary school teacher. They have two children. Tyrrell graduated from Oklahoma State University with a doctorate in Microbiology. He held faculty appointments at the University of Florida, University of Nebraska, Ohio State University, the University of Oklahoma, and currently is Professor and Head of Department of Microbiology and Molecular Genetics at Oklahoma State University. Amongst several scientific discoveries Tyrrell is the co-inventor of U.S. Patent number 5,000,000 for genetically engineering E. coli to make biofuels and published the first DNA microarray paper on E. coli. He and Paul Cohen were the first scientists to systematically determine what carbon sources are used by E. coli to colonize the animal intestine. Tyrrell is a member of the American Academy of Microbiology. If he had time, he would read more novels and go fishing more often.Paul Cohen was born in Boston, Massachusetts and earned his A.B. in General Science at Brandeis University in Waltham, MA in 1960 and his A.M. in Biology in 1962 and his Ph.D. in Biology in 1964 at Boston University in Boston, MA. He did his Post-Doctoral work at St. Jude Childrens Research Hospital in Memphis, TN from 1964-1966. In 1966 he joined the Department of Bacteriology (now the Department of Cell and Molecular Biology) at the University of Rhode Island and retired this year. From 1964-1978 he studied regulation of RNA and protein synthesis in bacteriophage T4 infected E. coli, from 1978-1983 he studied regulation of RNA and protein synthesis in Vesicular Stomatitis Virus infected Chinese Hamster Ovary cells, and from 1983-present, hes studied how E. coli colonizes the large intestines of mice. Hes served on the editorial boards of Antimicrobial Agents and Chemotherapy, The European Journal of Clinical Microbiology, and Infection and Immunity. He spent Sabbaticals at MIT, at Ciba-Geigy in Basel, Switzerland, at The University of Goteborg in Goteborg, Sweden, and at The Danish Technical University in Lyngby, Denmark. Hes consulted for Bayer Corp., Wuppertal, Germany, Hoffmann-LaRoche, Inc., Nutley, NJ, Ciba-Geigy Ltd,, Basel, Switzerland, and Intervet International, Boxmeer, The Netherlands. He is married to Catherine Trebino, a Research Associate at Brown University and has three children. Recently (2005), he co-edited a book entitled Colonization of Mucosal Surfaces (ASM Press), with James Nataro, Harry Mobley, and Jeffrey Weiser