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## Preface

Human beings encounter scenarios where they develop severe symptoms of a disease. The discovery of antibiotics was thought to relieve human beings of their miseries caused by microbial infections. However, microbes have been evolving rapidly to become resistant to antibiotics. It has been realized that bacteria have a unique system of multiplying silently through the phenomenon termed Quorum Sensing (QS). QS operates through signal molecules, which enable bacteria to sense their population density. At high cell density, bacteria activate their arsenal of virulence factors. QS mediated biofilms formed by pathogenic bacteria allow them to with stand high doses of antibiotics. This provoked scientist to look for novel alternatives to antibiotics. It led to the discovery of QS inhibitors, both natural and synthetic. Recent studies have indicated that QSIs may meet the same fate as antibiotics. Although a lot of scientific literature is being published rapidly since the last few years, it is limited largely to scientific research journals. A compilation of these important findings is not available to students at graduate and post-graduate levels. The best thing about this book is that the various chapters have been written by experts in the respective areas. As it demands tremendous and dedicated effort, we are extremely thankful to all the authors for their prompt responses and their contributions. I was inspired by my parents (Mr. R.B. Kalia and Mrs. Kanta Kalia), wife (Amita), Sunita (Sister), Ravi and Satyendra (Brothers), children (Daksh and Bhriгу), teachers, and Rup and Hemant (friends) to write this book. Throughout the preparation of this work, I was supported by Mr. Prasun Kumar, my Ph.D. student.

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