BOOK REVIEWS

mutagenesis, which is used to investigate the genetic regulation of toxin production.

This book would be most appreciated by researchers interested in the molecular mechanisms of bacterial toxins or their use as tools to define eukaryotic cell processes. Although it includes a brief description of pathogenesis for each toxin, it is not a reference for clinical application. Many different sections express the common theme that recombinant toxins can be used as therapeutic agents, however. For example, the final chapter describes the construction and use of hybrid toxins composed of the enzymatic portions of diphtheria toxin and Pseudomonas aeruginosa exotoxin A fused to interleukins, melanocyte-stimulating hormone, and CD4 to kill malignant or viralinfected cells. The purpose of these molecular chimeras may not always be to kill target cells, but to alter cell physiology and affect a desired change. As is suggested in the concluding remarks of the chapter on clostridial neurotoxins, botulinum and tetanus toxins may someday be engineered to treat disorders of the central nervous system.

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