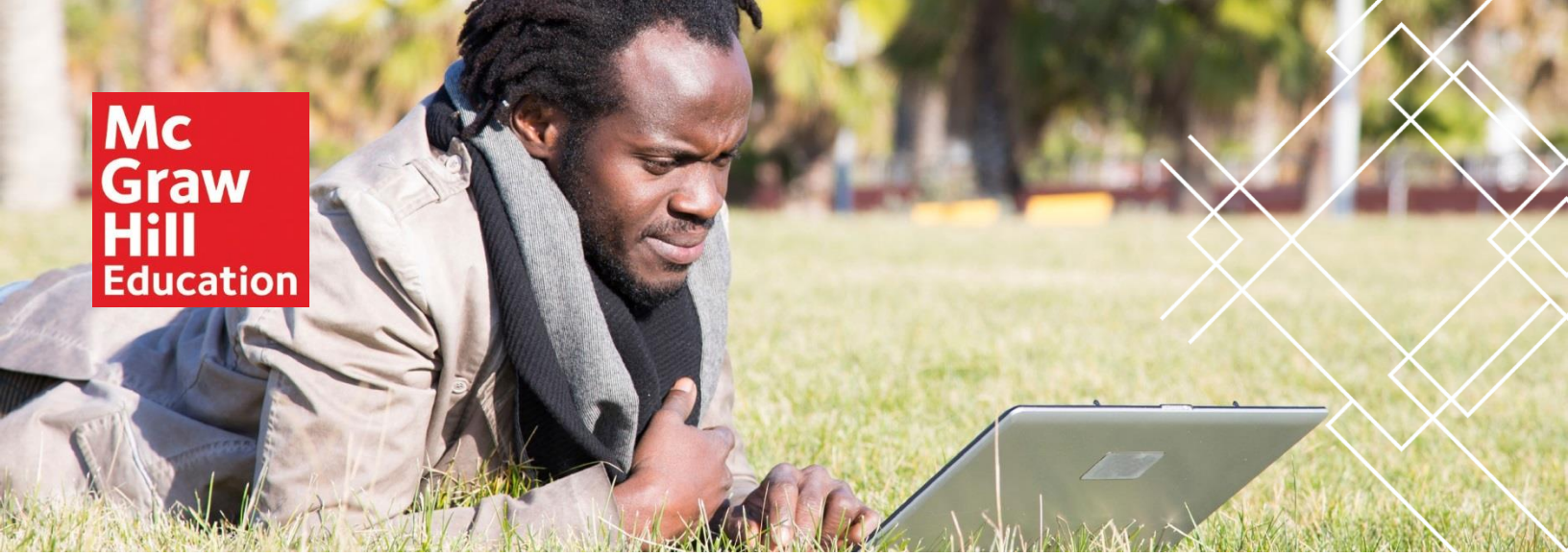

Lab Manual and Workbook in Microbiology: Applications to Patient Care, 12e

Josephine Morello and Paul Granato and Verna Morton

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Detailed List of New Features

All figures and colorplates have been carefully reviewed and changes made when necessary.

The special stains exercise has been replaced with a brief discussion of capsules, flagella, and endospores to orient the student to these bacterial structures.

Rather than having students prepare culture media, the media are prepared beforehand by the instructor. However, the students learn how to dispense them aseptically into Petri dishes or in tubes for sterilization.

The pour-plate technique has been deleted because it is seldom used in clinical practice.

Conditions of pressure, temperature, and time currently used for steam pressure sterilization in most hospitals have been updated.

A brief description of the problem of multidrug-resistant members of the Enterobacteriaceae has been added.

The information on nucleic acid assays now includes a discussion of Multiplex Syndrome Panel Testing Using PCR Assays. This separation from the discussion of antigen immunoassays allows emphasis to be placed on the differences between the technologies and the use of each in the clinical microbiology laboratory.

A new exercise discusses MALDITOF (Mass Spectrometry for the Rapid Identification of Bacteria and Fungi). This instrument has come into widespread use in the clinical laboratory. The exercise is accompanied by figures describing the instrument and workflow.

The use of PCR for the rapid identification of Streptococcus pyogenes in throat specimens is described.

The availability of effective vaccines for pneumococcal pneumonia has been added.

The advantage of molecular gene amplification methods in the detection of enteric pathogens is emphasized.

The importance of the meningococcal vaccine in reducing the incidence of disease has been added.

The importance of microarray assays for rapid identification of bacteria in blood cultures and the detection of antibiotic-resistance genes is described.

Includes a discussion of the availability of nucleic acid amplification tests for organisms in this exercise. A section on the recent Ebola virus and Zika virus outbreaks has been added.