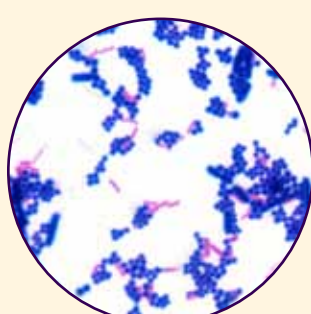
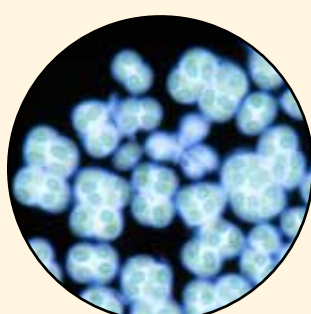


streak plate



Gram stain



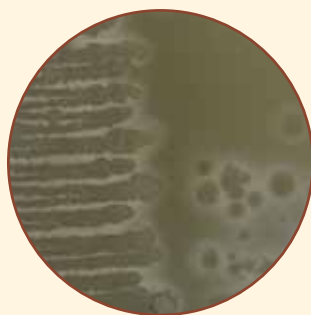
Gloeocapsa



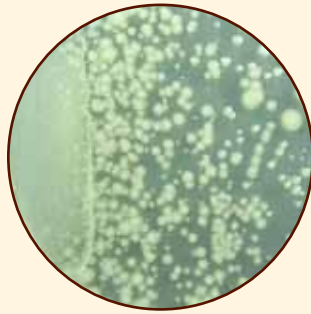
Dictyostelium



saltern/Halobacterium  
Bonaire, Caribbean



peptidoglycan hydrolysis



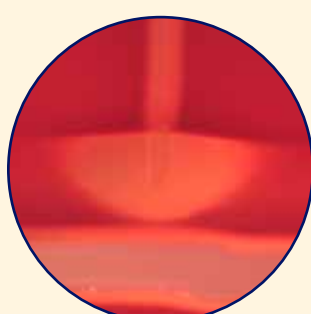
gradient plate



antibiosis



French morels



CAMP enhanced hemolysis

# Interactive Laboratory Microbiology

## Basic, Applied & Health Sciences

[I Pure Culture Techniques](#), [II Staining Techniques](#), [III Microscopy](#), [IV Eukaryote Microbes](#),  
[IV Microbial Physiology](#), [VI Microbial Biochemistry](#), [VII Bacterial Genetics](#),  
[VIII Microbial Ecology](#), [IX Food & Water Microbiology](#), [X Clinical Microbiology](#)

### I Pure Culture Techniques 1–7

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- 1 Microbiology Safety
- 2 Preparing Culture Media
- 3 Operating an Autoclave
- 4 Sterilization by Membrane Filtration
- 5 Subculturing
- 6 Streak Plate
- 7 Swab, Spread & Pour Plate

- 193 interactive pdf pages
- 300 illustrations, 75 images of microbes
- \* 39 techniques animations
- \* 84 techniques videos
- ✓ 95 best practice animations
- 6 Quick Quizzes, 10 Best Practice Quick Quizzes
- 9 Question Bank questions, 42 images, 4 videos
- ❖ 5 scenic microbiology, 30 images, 2 videos

### II Staining Techniques 1–11

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- 1 Preparing a Smear
- 2 Negative Staining
- 3 Simple Staining
- 4 Gram Stain
- 5 Acid-Fast Stain
- 6 Cell Walls
- 7 Flagella
- 8 Capsules & Slime Layers
- 9 Endospores
- 10 Metachromatic Granules
- 11 Conidia, Cysts, Heterocysts & Akinetes

- 194 interactive pdf pages
- 304 illustrations, 226 images of microbes
- \* 40 techniques animations
- \* 43 techniques videos
- ✓ 64 best practice animations
- \* 6 cell structure, cell division, staining animations
- † 10 motility videos
- 12 Quick Quizzes, 11 Best Practice Quick Quizzes
- 38 Question Bank questions, 108 images, 7 videos
- ❖ 9 scenic microbiology, 23 images

### III Microscopy 1–9

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- 1 Microscope Theory 1
- 2 Microscope Theory 2
- 3 The Compound Microscope
- 4 Brightfield Microscopy
- 5 Phase-Contrast Microscopy
- 6 Wet Mount
- 7 Total Cell Count
- 8 Cell Dimensions
- 9 Colony Morphology

- 192 interactive pdf pages
- 306 illustrations, 198 images of microbes
- \* 16 techniques animations
- \* 54 techniques videos
- ✓ 27 best practice animations
- † 26 motility videos
- 11 Quick Quizzes, 15 Best Practice Quick Quizzes
- 35 Question Bank questions, 98 images, 8 videos

### IV Eukaryote Microbes 1–7

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- 1 Algae
- 2 Lichens
- 3 Fungi
- 4 Fleshy Fungi
- 5 Protozoa
- 6 Slime Molds
- 7 Water Molds

- 204 interactive pdf pages
- 574 illustrations, 431 images of microbes
- \* 15 techniques animations
- \* 21 techniques videos
- ✓ 27 best practice animations
- \* 1 cell structure animation
- † 26 motility videos
- 8 Quick Quizzes, 5 Best Practice Quick Quizzes
- 65 Question Bank questions, 270 images, 22 videos
- ❖ 45 scenic microbiology, 270 images, 22 videos

### V Microbial Physiology 1–8

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- 1 Oxygen Requirements of Microbes
- 2 Candle Jar
- 3 Anaerobe Jar
- 4 Temperature
- 5 pH
- 6 Osmotic Pressure
- 7 The Growth Curve
- 8 Bacteriophage

- 171 interactive pdf pages
- 267 illustrations, 94 images of microbes
- \* 33 techniques animations
- \* 26 techniques videos
- ✓ 46 best practice animations
- \* 2 cell structure animations
- 8 Quick Quizzes, 8 Best Practice Quick Quizzes
- 41 Question Bank questions, 157 images, 4 videos
- ❖ 35 scenic microbiology, 117 images, 4 videos

### VI Microbial Biochemistry 1–11

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- 1 Fermentation
- 2 Catalase
- 3 Oxidase
- 4 Triple-Sugar-Iron Agar (TSI)
- 5 Sulfide-Indole-Motility (SIM)
- 6 Indole-Methyl Red-Voges Proskauer-Citrate (IMViC)
- 7 Extracellular Enzymes
- 8 API Staph
- 9 API 20 Strep
- 10 API 20E
- 11 Enteropluri

- 189 interactive pdf pages
- 188 illustrations, 65 images of microbes
- \* 36 techniques animations
- \* 38 techniques videos
- ✓ 82 best practice animations
- 11 Quick Quizzes, 11 Best Practice Quick Quizzes
- 44 Question Bank questions, 86 images, 1 video
- ❖ 12 scenic microbiology, 45 images

### VII Bacterial Genetics 1–7

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- 1 Phenotype & Genotype
- 2 Gradient Plate
- 3 Transformation
- 4 Conjugation
- 5 Restriction Enzymes
- 6 Polymerase Chain Reaction (PCR)
- 7 The Ames Test

- 130 interactive pdf pages
- 148 illustrations, 50 images of microbes
- \* 26 techniques animations
- \* 35 techniques videos
- ✓ 44 best practice animations
- 11 Quick Quizzes, 11 Best Practice Quick Quizzes
- 44 Question Bank questions, 86 images, 1 video
- ❖ 2 scenic microbiology, 3 images

### VIII Microbial Ecology 1–7

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- 1 Carbon Cycle
- 2 Winogradsky Column
- 3 Nitrogen Cycle
- 4 Symbiotic Nitrogen-Fixing Bacteria
- 5 Free-Living Nitrogen-Fixing Bacteria
- 6 Nitrification
- 7 Antibiosis

- 177 interactive pdf pages
- 423 illustrations, 144 images of microbes
- \* 23 techniques animations
- \* 12 techniques videos
- ✓ 39 best practice animations
- † 4 motility videos
- 8 Quick Quizzes, 5 Best Practice Quick Quizzes
- 44 Question Bank questions, 86 images, 1 video
- ❖ 66 scenic microbiology, 277 images, 30 videos

### IX Food & Water Microbiology 1–5

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- 1 Edible Mushrooms
- 2 Standard Plate Count
- 3 Methylene Blue Reductase Test
- 4 Coliform Tests
- 5 Coliform Counts

- 113 interactive pdf pages
- 282 illustrations, 161 images of microbes
- \* 14 techniques animations
- ✓ 24 best practice animations
- 5 Quick Quizzes, 4 Best Practice Quick Quizzes
- 41 Question Bank questions, 164 images, 12 video
- ❖ 37 scenic microbiology, 222 images, 15 videos

### X Clinical Microbiology 1–25

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- 1 Biosafety
- 2 Selective & Differential Media
- 3 Hemolysis
- 4 *Staphylococcus*
- 5 Beta-hemolytic *Streptococcus*
- 6 *Streptococcus pneumoniae*
- 7 Group D *Enterococcus* & *Streptococcus*
- 8 Skin & Nose Swab
- 9 Throat Swab
- 10 Vagina Flora
- 11 Antiseptics & Disinfectants
- 12 Minimum Inhibitory Concentration (MIC)
- 13 Kirby-Bauer Disk Diffusion Assay
- 14 Dermatophytes
- 15 Yeast Infections
- 16 Systemic Mycoses
- 17 Intestinal & Urogenital Protozoa
- 18 Tapeworms & Flukes
- 19 Tapeworms & Flukes
- 20 Roundworms
- 21 Arthropods
- 22 Leukocytes
- 23 Blood Typing
- 24 *Streptococcus* Serology

- 425 interactive pdf pages
- 585 illustrations, 340 images of microbes
- \* 54 techniques animations
- \* 67 techniques videos
- ✓ 128 best practice animations
- † 1 motility video
- \* 3 cell structure animations
- 24 Quick Quizzes, 19 Best Practice Quick Quizzes
- 101 Question Bank questions, 247 images, 12 videos
- ❖ 44 scenic microbiology, 117 images, 9 videos