FUNDAMENTALS OF CENTRIFUGE SAFETY

AN ONLINE LEARNING COURSE

AVAILABLE ON WWW.CDC.TRAIN.ORG

Sponsored by the
Division of Laboratory Systems,
Center for Surveillance, Epidemiology and Laboratory Services,
Centers for Disease Control and Prevention

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

DESCRIPTION

Centrifuges are instruments used to separate mixtures, based on particle size and density, by spinning the mixtures at high speeds. These instruments are essential tools in all types of laboratories. Serious injuries or potential exposures can occur if centrifuges are improperly used or maintained.

This basic-level eLearning course provides information on the safe use of centrifuges. Topics covered include major parts of a centrifuge, types of centrifuges, potential hazards, how to work safely with a centrifuge, and what to do if there is an emergency.

AUDIENCE

This online course is designed for public health and clinical laboratory staff, safety professionals and persons interested in safe use of centrifuges.

SPECIAL NEEDS

Course content is closed captioned, where applicable, and optimized for a screen reader.

FREE REGISTRATION

- Locate the course online at www.cdc.gov/labtraining
- Follow the link to register for the course in TRAIN
- If you have difficulty with the online registration process, please email labtraining@cdc.gov

OBJECTIVES

At the conclusion of this course, the participant will be able to:

- Identify common types of centrifuges used in laboratories
- Describe the potential hazards associated with centrifuge use
- Identify control measures to minimize exposure to centrifuge hazards
- Identify safe work practices for centrifuge use
- Describe what to do in the event of an emergency

CONTINUING EDUCATION

The Centers for Disease Control and Prevention Division of Laboratory Systems is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program. This course is approved for 0.5 contact hours. P.A.C.E.® course number: 288-004-18

For a complete list of courses, visit www.cdc.gov/labtraining.

BASIC MOLECULAR BIOLOGY MODULE 4: PCR AND REAL-TIME PCR

AN ONLINE LEARNING COURSE
AVAILABLE ON WWW.CDC.TRAIN.ORG

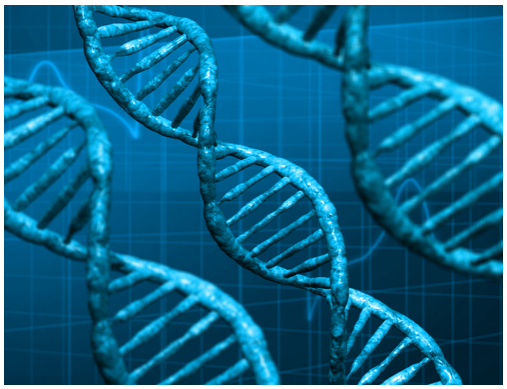
Sponsored by the
Division of Laboratory Systems,
Center for Surveillance, Epidemiology and Laboratory Services,
Centers for Disease Control and Prevention

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

DESCRIPTION

Molecular techniques have been widely used in clinical diagnosis, e.g., diagnosing disease, predicting disease course, and identifying infectious agents. This basic Molecular Biology course series will introduce the scientific background for molecular diagnosis, the principles of laboratory settings, and common methods.

This basic-level eLearning course, Module 4, provides information on the principle of PCR and real-time PCR. Topics covered include PCR steps, PCR product analysis, real-time PCR characteristics, real-time PCR quantification, and roles of PCR controls.



AUDIENCE

This online course is designed for public health and clinical laboratory staff, and persons interested in PCR and real-time PCR techniques.

SPECIAL NEEDS

Course content is closed captioned, where applicable, and optimized for a screen reader.

FREE REGISTRATION

- Locate the course online at www.cdc.gov/labtraining
- Follow the link to register for the course in TRAIN
- If you have difficulty with the online registration process, please email labtraining@cdc.gov

OBJECTIVES

At the conclusion of this course, the participant will be able to:

- Explain the basic steps involved in PCR
- Identify the components of PCR, reverse transcription PCR, and PCR product analysis
- Recognize the characteristics of real-time PCR
- Identify the techniques used to detect products in real-time PCR
- Differentiate the nucleic acid quantification processes used in real-time PCR
- Explain the roles of PCR controls

CONTINUING EDUCATION

The Centers for Disease Control and Prevention, Division of Laboratory Systems is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program. This course is approved for 1.0 contact hours. P.A.C.E.® course number: 288-004-19

For a complete list of courses, visit www.cdc.gov/labtraining.

MICROBIOLOGY CURRICULUM ROUTINE MICROSCOPY PROCEDURES

AN ONLINE LEARNING COURSE

AVAILABLE ON WWW.CDC.TRAIN.ORG

Sponsored by the
Division of Laboratory Systems,
Center for Surveillance, Epidemiology and Laboratory Services,
Centers for Disease Control and Prevention

CENTERS FOR DISEASE CONTROL AND PREVENTION

DESCRIPTION

Laboratory professionals should have basic knowledge and understanding of routine microscopy procedures and techniques. This course is designed to explore the processes, procedures, and techniques necessary for completing routine microscopic examinations of laboratory specimens.

This e–Learning course will introduce laboratory professionals to microscopy procedures for smear preparation, as well as preparing and interpreting the results of a Gram stain, wet mount, potassium hydroxide (KOH), and India Ink procedures.

AUDIENCE

This basic level course is designed for new or existing public health and clinical laboratory professionals, individuals with a science background who are entering or reentering the microbiology field, or individuals needing training on basic microscopy procedures.

SPECIAL NEEDS

Course content is closed captioned, where applicable; and optimized for a screen reader.

FREE REGISTRATION

- Locate the course online at www.cdc.gov/labtraining
- Follow the link to register for the course in TRAIN
- If you have difficulty with the online registration process, please email labtraining@cdc.gov

OBJECTIVES

At the conclusion of this course, the participant will be able to:

- Outline the steps of preparing a smear.
- Express the purpose of the Gram stain procedure.
- Identify the types of reagents used in the Gram stain procedure.
- Sequence the steps in the Gram stain procedure.
- Interpret the results seen in the bacterial cells, with the effects of the various reagents during the Gram stain procedure.
- Outline the steps of preparing a wet mount and interpret results.
- Describe the potassium hydroxide (KOH) procedure and its uses.
- Identify the steps and results obtained in the India Ink procedure.
- Identify and resolve commonly encountered problems during routine microscopy procedures.

CONTINUING EDUCATION

The Centers for Disease Control and Prevention, Division of Laboratory Systems is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program. This course is approved for 1.5 contact hours. P.A.C.E.® 288-004-20.

For a complete list of courses, visit www.cdc.gov/labtraining.

FUNDAMENTALS OF CHEMICAL FUME HOOD SAFETY

AN ONLINE LEARNING COURSE
AVAILABLE AT WWW.CDC.TRAIN.ORG

Sponsored by the
Division of Laboratory Systems
Center for Surveillance, Epidemiology, and Laboratory Services
Centers for Disease Control and Prevention

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

DESCRIPTION

A chemical fume hood is the main piece of laboratory equipment that protects laboratory staff working with hazardous chemicals. When properly used, fume hoods protect staff from inhaling chemical gases, vapors, and aerosols. They serve as a physical barrier between staff and the hazardous materials inside the hood, and provide some splash protection.

This basic-level eLearning course provides an essential understanding of the major components of a chemical fume hood and proper practices for its safe and effective operation. Topics covered include the major components and types of fume hoods and their monitors, maintaining proper airflow, daily use protocols and good fume hood work practices, and what to do if there is an emergency.

AUDIENCE

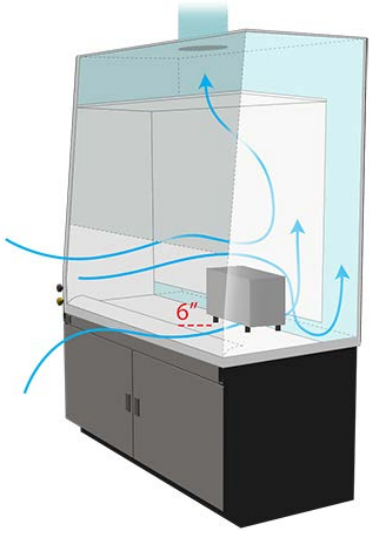
This online course is designed for public health and clinical laboratory staff, safety professionals, and persons interested in the safe use of chemical fume hoods as determined by your laboratory-specific risk assessment.

SPECIAL NEEDS

Course content is closed-captioned, where applicable, and optimized for a screen reader.

FREE REGISTRATION

- Locate the course online at www.cdc.gov/labtraining
- Follow the link to register for the course in TRAIN
- If you have difficulty with the online registration process, please email labtraining@cdc.gov.



OBJECTIVES

At the conclusion of this course, the participant will be able to:

- Identify general facts about fume hoods
- List factors that affect the proper fume hood airflow
- Describe startup procedures prior to working in a fume hood
- Describe proper practices for working in a fume hood
- Describe finish procedures for completion of work in a fume hood
- Describe the procedures to follow during an emergency

CONTINUING EDUCATION

The Centers for Disease Control and Prevention, Division of Laboratory Systems, is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program.

This course is approved for 1.0 contact hours. P.A.C.E.® course number: 288-005-18.

For a complete list of courses, visit www.cdc.gov/labtraining.

INTRODUCTION TO LABORATORY INFORMATICS: LIFE OF A SPECIMEN

AN ONLINE LEARNING COURSE
AVAILABLE ON WWW.CDC.TRAIN.ORG

Sponsored by the
Division of Laboratory Systems,
Center for Surveillance, Epidemiology and Laboratory Services,
Centers for Disease Control and Prevention

This project was supported by Cooperative Agreement #NU60OE000103 funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC or the Department of Health and Human Services.

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

APHL ASSOCIATION OF PUBLIC HEALTH LABORATORIES

DESCRIPTION

Laboratory informatics is the specialized application of information technology to enable and enhance scientific processes and the delivery of laboratory information. It is a critical part of today's laboratory operations, helping to ensure high quality and reliable data and results.

This basic-level eLearning course is the first of a two-part introductory module on laboratory informatics. The course provides information on the role and processes of laboratory informatics through exploration of the "life of a specimen" as a specimen moves through the laboratory. Topics covered include the roles of various personnel in the laboratory informatics enterprise, data relationships, data quality and standards, and the generation and flow of information as a specimen progresses through the pre-analytic, analytic, and post-analytic phases.

AUDIENCE

This online course is designed for public health and clinical laboratory staff (including managers and leaders) and persons interested in the role and importance of informatics to the operation and mission of the laboratory.

Learners who complete this course can then take the second course in the two-part module– *Introduction to Laboratory Informatics: Life of a Result.*

SPECIAL NEEDS

Course content is closed captioned, where applicable, and optimized for a screen reader.

FREE REGISTRATION

- Locate the course online at www.cdc.gov/labtraining
- Follow the link to register for the course in TRAIN
- If you have difficulty with the online registration process, please email labtraining@cdc.gov

OBJECTIVES

At the conclusion of this course, the participant will be able to:

- Recognize what laboratory informatics is and how it directly supports patient care and public health goals
- Identify who plays a role in laboratory informatics and explain the purpose of each role
- Identify the sequence of data and information flow within the laboratory from specimen collection/receipt to specimen storage/disposal
- Recognize the importance of data quality and the factors that impact data quality
- Identify the different types of data standards and the importance of using those standards
- Define what a LIMS and LIS are, their capabilities, and how they differ from other systems used in the laboratory

CONTINUING EDUCATION

The Centers for Disease Control and Prevention Division of Laboratory Systems is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program. This course is approved for 2 contact hours. P.A.C.E.® course number: 288-006-18.

For a complete list of courses, visit www.cdc.gov/labtraining.

INTRODUCTION TO LABORATORY INFORMATICS: LIFE OF A RESULT

AN ONLINE LEARNING COURSE
AVAILABLE ON WWW.CDC.TRAIN.ORG

Sponsored by the
Division of Laboratory Systems,
Center for Surveillance, Epidemiology and Laboratory Services,
Centers for Disease Control and Prevention

This project was supported by Cooperative Agreement #NU60OE000103 funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC or the Department of Health and Human Services.

CENTERS FOR DISEASE CONTROL AND PREVENTION

APHL ASSOCIATION OF PUBLIC HEALTH LABORATORIES

DESCRIPTION

Laboratory informatics is the specialized application of information technology to enable and enhance scientific processes and the delivery of laboratory information. It is a critical part of today's laboratory operations, helping to ensure high quality and reliable data and results.

This basic-level eLearning course is the second of a two-part introductory module on laboratory informatics. The course provides information on the role and processes of laboratory informatics through exploration of the "life of a result" as data and results move through the laboratory and outside the laboratory. Topics covered include characterization of the recipients of laboratory data, data and results storage, and the communication of data and results (especially electronically) to various stakeholders.

AUDIENCE

This online course is designed for public health and clinical laboratory staff (including managers and leaders) and persons interested in the role and importance of informatics to the operation and mission of the laboratory.

This course is intended for learners who have taken the first course in the two-part module– *Introduction to Laboratory Informatics: Life of a Specimen*.

SPECIAL NEEDS

Course content is closed captioned, where applicable, and optimized for a screen reader.

FREE REGISTRATION

- Locate the course online at www.cdc.gov/labtraining
- Follow the link to register for the course in TRAIN
- If you have difficulty with the online registration process, please email labtraining@cdc.gov

OBJECTIVES

At the conclusion of this course, the participant will be able to:

- Identify where and how data and results are stored inside the laboratory
- Recognize how data and results are transmitted inside and outside the laboratory to stakeholders
- Identify two paths that data and results can follow to impact the health of individual patients and the public
- Recognize how the proper recording, coding, storage, and transmission of data and results can impact patient care and public health
- Identify what data standards are used, their purpose, and components involved
- Explain what Electronic Test Orders and Results (ETOR), Electronic Laboratory Reporting (ELR) and Electronic Health Record (EHR) are and how they differ

CONTINUING EDUCATION

The Centers for Disease Control and Prevention Division of Laboratory Systems is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program. This course is approved for 2 contact hours. P.A.C.E.® course number: 288-007-18.

For a complete list of courses, visit www.cdc.gov/labtraining.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

APHL ASSOCIATION OF PUBLIC HEALTH LABORATORIES

Good Laboratory Practice Recommendations for Biochemical Genetic Testing: Preanalytic Phase

CENTERS FOR DISEASE CONTROL AND PREVENTION

This online training will provide an overview of the quality practices in the preanalytic phase of biochemical genetic testing, specifically quality assurance for test requisitions, specimen collection and submission; communications between the laboratory, clinicians and other stakeholders; and preanalytic quality assessment.

THIS ONLINE TRAINING WAS SUPPORTED BY COOPERATIVE AGREEMENT # U60HM000803 FUNDED BY THE CENTERS FOR DISEASE CONTROL AND PREVENTION. ITS CONTENTS ARE SOLELY THE RESPONSIBILITY OF THE AUTHORS AND DO NOT NECESSARILY REPRESENT THE OFFICIAL VIEWS OF CDC OR THE DEPARTMENT OF HEALTH AND HUMAN SERVICES.

FREE ONLINE TRAINING MODULE

- Locate the course online at www.cdc.gov/labtraining.
- Follow the link to register for the course in TRAIN.
- If you have difficulty with the online registration process, please email labtraining@cdc.gov.

CEUs:

The Centers for Disease Control and Prevention, Laboratory Training Branch, is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program.

This webinar is approved for 1.5 hour of P.A.C.E.® credit, and has been approved for 1.5 contact hours in the Supervision/Administration, Quality Control/Quality Assurance and Safety category for Florida Laboratory Licensees.

P.A.C.E.® Course#: 288-008-17 FL Course#

Objectives

At the conclusion of this program, the participant will be able to:

- **Recognize the role each stakeholder group plays in the pre-analytic procedures and processes**
- **Choose the preanalytic procedures and processes for biochemical genetic tests that are consistent with regulatory requirements and good laboratory practices**
- **Select indicators to evaluate the quality of the pre-analytical phase of biochemical genetic testing**
- **Explain the communication needs of each stakeholder group**

Audience

This basic to intermediate online training module is appropriate for laboratory professionals working in biochemical genetic testing or reference laboratories, and healthcare professionals who order biochemical genetic tests.

Special Needs

Course content is closed captioned where applicable and optimized for a screen reader.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

APHL ASSOCIATION OF PUBLIC HEALTH LABORATORIES

Basic Culture Media

Basic Microbiology Curriculum

Online Course

Sponsored by the Centers for Disease Control and Prevention, Division of Laboratory Systems

DESCRIPTION

This eLearning course is designed to familiarize laboratorians with basic culture media used in the microbiology laboratory. Laboratorians will review and contrast the various culture medias, describe the process of streaking a plate, identify types of colonial morphology and explain commonly encountered problems that occur with culture media.

AUDIENCE

New or existing public health laboratorians, who have a science background, are entering or reentering the microbiology field and who need training in routine basic culture media essential for performing job requirements.

OBJECTIVES

At the conclusion of this program, the participant will be able to:

- Distinguish enrichment, differential, and selective media.
- Review the principles of the most commonly used media.
- Contrast various culture media.
- Describe the steps of streaking a plate.
- Interpret results on various culture media.
- Recognize the different types of colonial morphology.
- Identify commonly encountered problems with basic culture media.

REGISTRATION

FREE REGISTRATION

- Register online at www.cdc.gov/labtraining
- If you have difficulty with the online registration process, please email labtraining@cdc.gov

CONTINUING EDUCATION

The Centers for Disease Control and Prevention, Division of Laboratory Systems is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program. This course is approved for **1.0** contact hours.

SPECIAL NEEDS

Course content is closed captioned where applicable and optimized for a screen reader.

P.A.C.E. Course Number: 288-008-18

DIAGNOSTIC PARASITOLOGY II: BLOODBORNE & TISSUE PARASITES

DIVISION OF PARASITIC DISEASES AND MALARIA
AND
DIVISION OF FOODBORNE, WATERBORNE, AND ENVIRONMENTAL DISEASES

CENTERS FOR DISEASE CONTROL AND PREVENTION

OCT. 28-31, 2019 • ATLANTA, GA

Sponsored by:

The Division of Parasitic Diseases and Malaria (DPDM), Center for Global Health, Centers for Disease Control and Prevention

The Division of Foodborne, Waterborne, and Environmental Diseases, National Center for Emerging and Zoonotic Infectious Diseases, Centers for Disease Control and Prevention

The Training and Workforce Development Branch, Division of Laboratory Systems, Center for Surveillance, Epidemiology, and Laboratory Services, Centers for Disease Control and Prevention

Location

Centers for Disease Control and Prevention, Atlanta, GA

Audience

This intermediate-level, hands-on workshop is intended for laboratory professionals who work in public health or clinical microbiology laboratories, are proficient using a microscope, and have experience identifying blood and tissue parasites.

Faculty

Parasitic Diseases Branch, Division of Parasitic Diseases and Malaria, Center for Global Health, CDC, Atlanta, GA

- **Henry Bishop,** Microbiologist
- **MacKevin Ndubuisi**, **MT (ASCP), Ph.D.,** Biologist
- **Sarah Sapp, Ph.D.**, ORISE Postdoctoral Fellow
- **Mark Fox, MS**, ORISE Fellow

Course Organizers

Division of Laboratory Systems, Center for Surveillance, Epidemiology, and Laboratory Services, CDC, GA

- **Rebecca Bandea, MS***,* Health Scientist, e-mail: rbandea@cdc.gov
- **Karen Ching, Ph.D.**, Health Scientist, e-mail: kching@cdc.gov

Course Objectives

At the conclusion of this program, participants will be able to:

- Explain how to prepare and stain thick and thin blood smears.
- Describe morphologic characteristics of *Plasmodium* spp., *Babesia* spp., microfilariae, *Leishmania* spp., and *Trypanosoma* spp.
- Detect and identify *Plasmodium* spp., *Babesia* spp., microfilariae, *Leishmania* spp., and *Trypanosoma* spp. in clinical specimens.
- Discuss diagnostic testing available for *Plasmodium* spp., *Babesia* spp., *Leishmania* spp., and *Trypanosoma* spp.

Description

Blood and tissue parasitic infections remain an ongoing potential public health threat. The nation's blood supply is at risk as it has been documented that *Plasmodium* spp., *Babesia* spp., *Trypanosoma cruzi*, and *Leishmania* spp. can be acquired through contaminated blood products in addition to other well-known transmission modes. Conditions associated with human filariasis have a substantial impact on the physical health, economic well-being, and quality of life of infected persons. During this four-day, hands-on workshop, faculty from the Centers for Disease Control and Prevention will instruct participants on how to detect and identify blood and tissue parasites. Lectures and hands-on laboratory exercises will target *Plasmodium* spp., *Babesia* spp., microfilariae, *Leishmania* spp., and *Trypanosoma* spp.

APPLICATION & REGISTRATION

*** FREE REGISTRATION**

Application Deadline: July 30, 2019

NEW TWO-PART APPLICATION PROCESS

Both parts must be submitted by **July 30, 2019** to be considered.

1. Complete the application form online by **July 30, 2019.**
2. Submit a brief CV or resume highlighting your experience in the area of laboratory testing relevant to this course by **July 30, 2019**. Email CV or resume to kching@cdc.gov. Type "288-009-19 Diagnostic Parasitology II: Bloodborne & Tissue Parasites" in the subject line of the email.

   If you are unable to complete the application online, notify Karen Ching at 404-498-6403 or e-mail kching@cdc.gov.

- Click this link for an example of a brief CV.
- Selection of participants will be based on their job description, experience, and responsibilities.
- Notification of acceptance status will be sent via e-mail on **Aug. 8, 2019.**

Security Clearance Requirements

NON-US CITIZENS — This workshop will be held at the training laboratory on the CDC Roybal campus. Because of CDC security clearance requirements, all non-US citizens will be asked to provide information needed to obtain clearance. Detailed instructions will be provided upon acceptance into the course. Please do not make any nonrefundable travel plans until you have received confirmation of acceptance into the workshop and security clearance approval. The information you provide will be used only for the purpose of attending this course.

US CITIZENS - If you are a US citizen, there is no extra clearance process required.

Continuing Education Units (CEU)

The Centers for Disease Control and Prevention, Division of Laboratory Systems is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program. This course is approved for 24 contact hours.

P.A.C.E.® course number: 288-009-19

Disclosure

CDC, our planners, and our presenters wish to disclose they have no financial interests or other relationships with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters. Presentations will not include any discussion of the unlabeled use of a product or a product under investigational use.

Use of trade names and commercial sources is for identification only and does not imply endorsement by the Division of Laboratory Systems, Center for Surveillance, Epidemiology, and Laboratory Services, Centers for Disease Control and Prevention, or the U.S. Department of Health and Human Services.

Special Needs

In compliance with the Americans with Disabilities Act (ADA), individuals seeking special accommodations should submit their request in writing to rbandea@cdc.gov or phone 404-639-4554 at least three weeks before the program. Please allow sufficient time for CDC to make arrangements, which is typically at least three weeks before the start date of course.

QUESTIONS

Please contact Karen Ching at 404-498-6403 or e-mail kching@cdc.gov.

AGENDA

DAY 1—Monday, Oct. 28, 2019

TIME	TYPE	ITEM	SPEAKER
8:00 am	Lecture	Introduction	Karen Ching
8:15 am	Lecture	Safety Briefing	Becky Bandea
8:30 am	Lecture	Pre-Test	Henry Bishop
9:30 am		Break	
9:45 am	Lecture	Lecture: *Plasmodium* spp. - General	Henry Bishop
10:45 am	Lab	Smear Preparation	DPDM Staff
11:30 am		Lunch	
12:30 pm	Lecture	*Plasmodium falciparum*	Henry Bishop
1:00 pm	Lecture	*Plasmodium vivax*	Henry Bishop
1:30 pm	Lecture	*Plasmodium ovale*	MacKevin Ndubuisi
2:00 pm	Lecture	*Plasmodium malariae*	MacKevin Ndubuisi
2:15 pm		Break	
2:30 pm	Lab	*Plasmodium* spp (smears)	DPDM Staff
4:30 pm		Adjourn	

DAY 2— Tuesday, Oct. 29, 2019

TIME	TYPE	ITEM	SPEAKER
8:00 am	Lecture	*Babesia*	Henry Bishop
8:30 am	Lab	*Babesia* Smears)	DPDM Staff
10:00 am		Break	
10:15 am	Lecture	Microfilaria	Sarah Sapp
11:30 am	Lunch		
12:30 pm	Lab	Microfilaria (Smears)	DPDM Staff
2:45 pm		Break	
3:00 pm	Lab	Organisms To Date, Questions and Answers	DPDM Staff
4:30 pm		Adjourn	

DAY 3— Wednesday, Oct. 30, 2019			
TIME	**TYPE**	**ITEM**	**SPEAKER**
8:00 am	Lecture	Leishmaniasis and Trypanosomes	Henry Bishop
9:15 am		Break	
9:30 am	Lab	Leishmaniasis and Trypanosomes (smears)	DPDM Staff
11:30 am		Lunch	
12:30 pm	Lecture	Telediagnosis	Mark Fox
1:15 pm	Lab	Organisms, To Date	DPDM Staff
2:15 pm		Break	
2:30 pm	Lab	Organisms To Date, Q&A	DPDM Staff
4:30 pm		Adjourn	

DAY 4— Thursday, Oct. 31, 2019			
TIME	**TYPE**	**ITEM**	**SPEAKER**
8:30 am	Lecture	Rapid Diagnostic Tests (RDTs) for malaria	MacKevin Ndubuisi
9:00 am	Lecture	Tissue Parasites	Sarah Sapp/Mark Fox
10:00 am		Break	
10:15 am	Lab	Review of all Organisms, Q&A	Bishop/Ndubuisi
11:30 pm		Lunch	
12:30 pm	Lab	Post-Test	Henry Bishop
1:45 pm		Break	
2:00 pm		Evaluation	Karen Ching
2:30 pm		Adjourn	

eLearning

Packaging and Shipping Division 6.2 Materials: What the Laboratorian Should Know 2016

Sponsored by the Centers for Disease Control and Prevention
National Laboratory Training Network

Description

In order to be certified (or recertified) to ship laboratory materials you must complete training on the hazardous materials regulations as well as some facility specific training.
This on-line course uses a problem solving approach to provide training on infectious materials (Division 6.2 Materials) as specified in the Department of Transportation (DOT) regulations. The content includes some general security training as well as some guidance on facility specific training.

Access to resource documents and a number of job aids will not only enhance your learning experience but also provide useful resources for your laboratory.

Audience

This intermedieate level course is designed specifically for those who participate in any phase of shipping laboratory specimens within the United States.

Objectives

At the conclusion of this program, the participant will be able to:

- Summarize the source of regulatory oversight for packing and shipping hazardous laboratory materials.
- Discuss training and certification requirements for hazardous materials with your employer.
- Categorize hazardous materials prior to shipping.
- Label hazardous materials in accordance with DOT, IATA and USPS regulations.
- Demonstrate the ability to properly document the shipment of laboratory related hazardous materials.
- Recognize security threats associated with shipping laboratory specimens.

Registration - Free Registration

- Locate the course online at www.cdc.gov/labtraining
- Follow the link to register for the course in TRAIN
- If you have difficulty with the online registration process, please email labtraining@cdc.gov
- For additional program information, email labtraining@cdc.gov or call (404) 498-6022

eLearning

Continuing Education

This online course is currently under construction and will not offer PACE credits during the 2018 calendar year. Once completed, the new online course will resume with PACE credits.

Special Needs

Course content is closed captioned where applicable and optimized for a screen reader.

For a complete list of courses, visit www.cdc.gov/labtraining

BASIC MOLECULAR BIOLOGY MODULE 1: BASIC SCIENCE

AN ONLINE LEARNING COURSE

AVAILABLE ON WWW.CDC.TRAIN.ORG

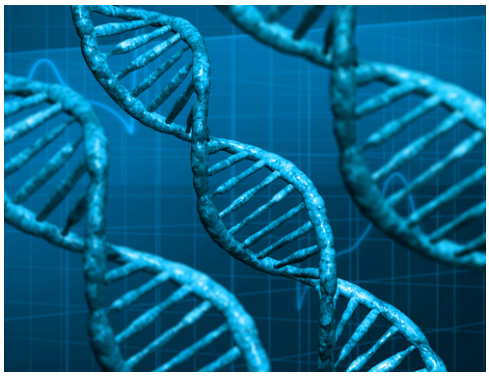
Sponsored by the
Division of Laboratory Systems,
Center for Surveillance, Epidemiology and Laboratory Services,
Centers for Disease Control and Prevention

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

DESCRIPTION

Molecular techniques have been widely used in clinical diagnosis, e.g., diagnosing disease, predicting disease course, and identifying infectious agents. This basic Molecular Biology course series will introduce the scientific background for molecular diagnosis, the principles of laboratory settings, and common methods.

This basic-level eLearning course, Module 1, provides information on the fundamental characteristics of DNA and RNA, nucleotide base-pairing rules, and the basic techniques and workflow applied in molecular diagnostics.



AUDIENCE

This online course is designed for public health and clinical laboratory staff, and persons interested in the basic science of molecular biology.

SPECIAL NEEDS

Course content is closed captioned, where applicable, and optimized for a screen reader.

FREE REGISTRATION

- Locate the course online at www.cdc.gov/labtraining
- Follow the link to register for the course in TRAIN
- If you have difficulty with the online registration process, please email labtraining@cdc.gov

OBJECTIVES

At the conclusion of this course, the participant will be able to:

- Identify techniques in molecular diagnostics
- Identify the workflow of molecular diagnostics
- Predict the DNA sequences based on base-pairing rules
- Differentiate the characteristics of DNA and RNA
- Identify the process of DNA replication and RNA transcription

CONTINUING EDUCATION

The Centers for Disease Control and Prevention, Division of Laboratory Systems is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program. This course is approved for 1.0 contact hours. P.A.C.E.® course number: 288-001-19

For a complete list of courses, visit www.cdc.gov/labtraining.

BASIC MOLECULAR BIOLOGY MODULE 2: LABORATORY PRACTICE

AN ONLINE LEARNING COURSE
AVAILABLE ON WWW.CDC.TRAIN.ORG

Sponsored by the
Division of Laboratory Systems,
Center for Surveillance, Epidemiology and Laboratory Services,
Centers for Disease Control and Prevention

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

DESCRIPTION

Molecular techniques have been widely used in clinical diagnosis, e.g., diagnosing disease, predicting disease course, and identifying infectious agents. This basic Molecular Biology course series will introduce the scientific background for molecular diagnosis, the principles of laboratory settings, and common methods.

This basic-level eLearning course, Module 2, provides information on general laboratory practices. Topics covered include biosafety practices, laboratory area flow, and practices to minimize contamination.

AUDIENCE

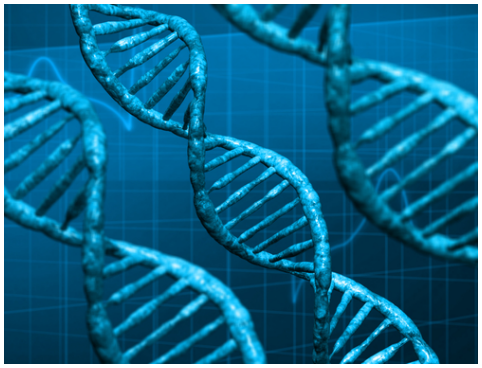
This online course is designed for public health and clinical laboratory staff, and persons interested in molecular biology laboratory practice.

SPECIAL NEEDS

Course content is closed captioned, where applicable, and optimized for a screen reader.

FREE REGISTRATION

- Locate the course online at www.cdc.gov/labtraining
- Follow the link to register for the course in TRAIN
- If you have difficulty with the online registration process, please email labtraining@cdc.gov



OBJECTIVES

At the conclusion of this course, the participant will be able to:

- Identify the general practices and biohazards associated with performing molecular biology procedures in BSL-2 and BSL-3 laboratories
- Explain the differences of the working areas needed to perform procedures in molecular biology
- Outline the unidirectional workflow used to minimize contamination in the laboratory
- Identify general decontamination practices in the molecular biology laboratory

CONTINUING EDUCATION

The Centers for Disease Control and Prevention, Division of Laboratory Systems is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program. This course is approved for 1.0 contact hours. P.A.C.E.® course number: 288-002-19

For a complete list of courses, visit www.cdc.gov/labtraining.

BASIC MOLECULAR BIOLOGY MODULE 3: NUCLEIC ACID EXTRACTION

AN ONLINE LEARNING COURSE
AVAILABLE ON WWW.CDC.TRAIN.ORG

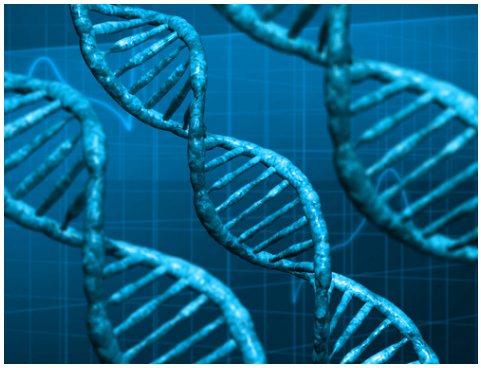
Sponsored by the
Division of Laboratory Systems,
Center for Surveillance, Epidemiology and Laboratory Services,
Centers for Disease Control and Prevention

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

DESCRIPTION

Molecular techniques have been widely used in clinical diagnosis, e.g., diagnosing disease, predicting disease course, and identifying infectious agents. This basic Molecular Biology course series will introduce the scientific background for molecular diagnosis, the principles of laboratory settings, and common methods.

This basic-level eLearning course, Module 3, provides information on nucleic acid extraction. Topics covered include extraction method selection, basic extraction steps, and nucleic acid analysis.



AUDIENCE

This online course is designed for public health and clinical laboratory staff, and persons interested in nucleic acid extraction.

SPECIAL NEEDS

Course content is closed captioned, where applicable, and optimized for a screen reader.

FREE REGISTRATION

- Locate the course online at www.cdc.gov/labtraining
- Follow the link to register for the course in TRAIN
- If you have difficulty with the online registration process, please email labtraining@cdc.gov

OBJECTIVES

At the conclusion of this course, the participant will be able to:

- Identify the four major factors used in selection of the nucleic acid extraction method
- Outline the three basic steps in nucleic acid extraction
- Explain how to analyze nucleic acid quantity and purity by spectrophotometry and gel electrophoresis
- Identify common problems in nucleic acid extraction

CONTINUING EDUCATION

The Centers for Disease Control and Prevention, Division of Laboratory Systems is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program. This course is approved for 1.5 contact hours. P.A.C.E.® course number: 288-003-19

For a complete list of courses, visit www.cdc.gov/labtraining.