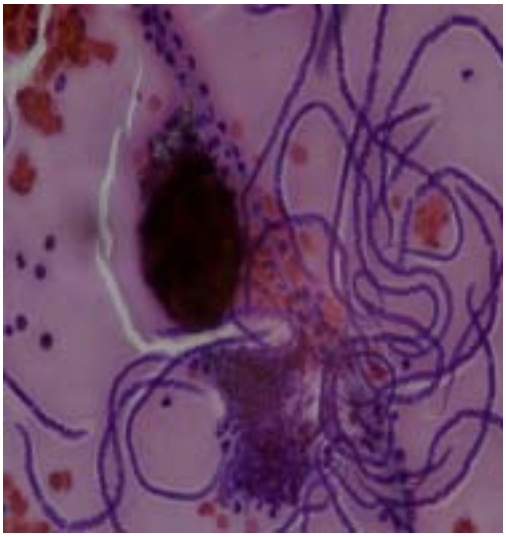
JASMN EDUCATION AND RESEARCH FOUNDATION



JASMN Education and Research Foundation

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JASMN FOUNDATION is a teaching and research facility created for teaching and training biology candidates to acquire skills and advanced biological, molecular and microbiological techniques to enable candidates to become employable. After 5 years to get a post graduate degree spending few lakhs of rupees, students get only a paper degree- not technical expertise required at places of employment. While all others produce unemployable candidates, we intend to make them employable.

ACTIVITIES

Technical Training

Technical training is offered to students and people who are interested in rapid career growth. Higher education in many places offers only theoretical knowledge. Practical training is woefully very little making the graduates unemployable. Employers in various biotechnological, biomedical fields require people with technical skill and competence. In JASMN foundation training is offered to build new skills and competence so that the candidates acquire confidence in taking responsibilities in technical and managerial positions. They will have the exposure to work methodologies and can put their hands on new opportunities in diverse field in pharma companies and hospitals etc.

PROJECTS

Facilities are available to carry out project work for Master of Science (M.Sc) in Microbiology, Biotechnology, etc and Master of Philosophy (M.Phil). Candidates can choose various Projects in Clinical Microbiology, Clinical Immunology, Serology, Bacteriology, Mycology, Parasitology, Food, water dairy microbiology, environmental microbiology, and others.

Eminent Scientists guide the candidates for their project work. Planning and execution of project work will be closely monitored and candidates will acquire technical expertise in the chosen field of work and also the confidence. The project work could be done as a summer project during vacation months, or regular project for a semester of 6 months or shorter version of 3 months

PRACTICAL TRAINING IN MICROBIOLOGY

Theoretical knowledge in Microbiology is not sufficient to practice Microbiology. One must be proficient in handling microbiological techniques. There is no use being good in performing tests with kits supplied by companies. One becomes “kittologist” rather than Microbiologist. By becoming a kittologist one becomes only a repeater-becomes a blind performer of steps. One can not device one’s own things and find solution to a problem

Plenty of problems arise in every microbiological situations where new microbes spring up surprises every now and then in human and animal health, industrial and other situations. Individuals must handle all types of microbes and identify them. Practical training is provided by eminent and experienced persons in the field with necessary background theory. Personal attention will be provided.

Students from Tamilnadu Universities can get the benefit.

JASMN EDUCATION AND RESEARCH FOUNDATION

One of the best training centers for Microbiology

SUMMER TRAINING

HANDS ON TRAINING:

MICROBIOOGY, BIOTECHNOLOGY, MOLECULARBIOLOGY

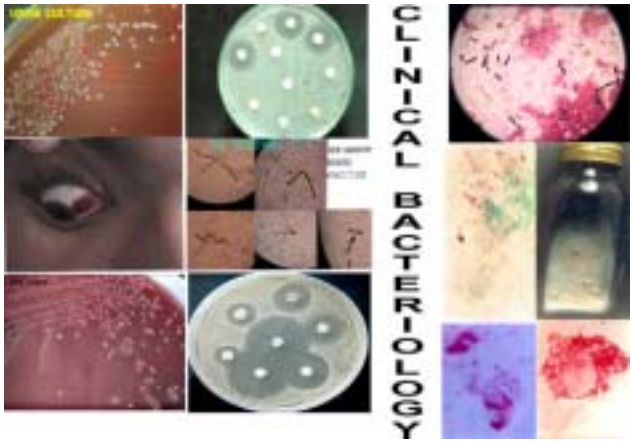
(TESTS WHICH WILL BE USEFUL IN FUTURE PROJECT WORK)

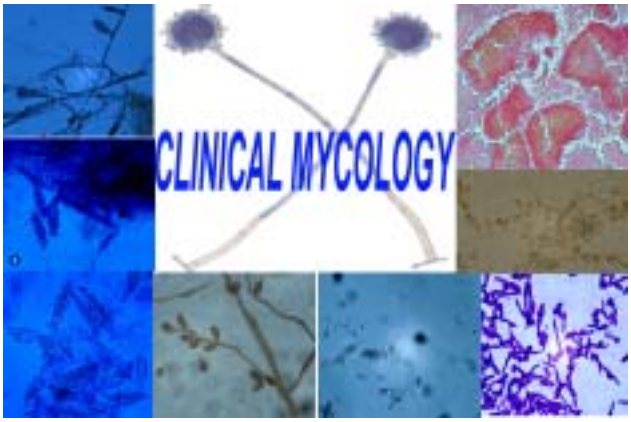
MODULE 1

GENERAL ASPECTS

1. STERILIZATION OF MATERIALS (with principle and procedures)
    1. Moist heat
    2. Dry heat
    3. Filtration
    4. Quality control
2. PREPARATION OF MEDIA (With principles and procedure
    1. Basal medium
    2. Enriched medium
    3. Selective medium
    4. Enrichment medium
3. BACTERIAL GROWTH- ISOLATION AND PLATING TECHNIQUES
    1. Various methods of streaking and isolation
4. DETERMINATION OF TOTAL VIABLE COUNT
    1. Pour plate technique
    2. Miles and Mishra's method
    3. Surface plating method
5. GROWTH KINETICS STUDIES
    1. Determination of optical density
6. BACTERIAL IDENTIFICATION – BIOCHEMICAL TESTS
7. DEMONSTRATION OF VARIOUS ENZYME ACTIVITIES
8. ANTIBIOTIC SUSCESPTIBILITY TESTING
9. MIC DETERMINATION
10. ESBL, METALO PROTEASES DETECTION
11. PLASMID ISOLATION
12. PLASMID DEMONSTRATION – GEL ELECTROPHORESIS

Techniques: 1-12, 4 weeks
Techniques: 1-5 10 days
Techniques : 1-5,8,9 15 days
Techniques: 8-12 15 days





MODULE 2
CLINICAL BACTERIOLOGY

1. Sterilization techniques
2. Preparation of media
3. Staining techniques
4. Antibiotic susceptibility testing – disc
5. MIC determination
6. ESBL DETECTION
7. PROCESSING OF URINE AND REPORTING
8. PROCESSING OF SPUTUM AND REPORTING
9. PROCESSING OF VAGINAL SWAB AND REPORTING
10. PROCESSING OF THROAT SWAB AND REPORTING
11. PROCESSING OF WOUND SWAB /PUS AND REPORTING
12. BLOOD CULTURE TECHNIQUES
13. PROCESSING OF BODY FLUIDS AND REPORTING
14. PROCESSING OF STOOL SAMPLE AND REPORTING

Techniques: 1-14: 8 weeks
Techniques: 1-8 :4 weeks
Techniques: 5-8 15 days

MODULE 3
MOLECULAR BIOLOGY TECHNIQUES

1. STERILIZATION OF MATERIALS
2. PREPARATIONOF MEDIA AND ISOLATION TECHNIQUES
3. VIABLE COUNT
4. GROWTH KINETICS
5. ISOLATION OF PLASMIDS
6. GELELECTROPHORESIS TECHNIQUES
7. DNA ISOLATION AND DEMONSTRATION
8. PCR TECHNIQUES

Techniques: 1-8, 4 weeks
Techniques: 5-8, 15 days
Techniques: 7-8, 10 days
Techniques : 1-4, 10 days

MODULE 4
IMMUNOLOGICAL TECHNIQUES-BASICS

1. Agglutination tests
    a. Haemagglutination test – blood grouping
    b. Bacterial slide agglutination test
2. Widal test
    a. Principle, test and interpretation
3. Brucella agglutination test
    a. Principle, test and interpretation
4. VDRL/RPR test
    a. Principle, test and interpretation
5. TPHA test
    a. Principle, test and interpretation
6. ELISA test
    a. Principle, test and interpretation

Techniques : 1-6, 15 days

MODULE 5

IMMUNOLOGICAL TECHNIQUES - ADVANCED
PREPARATION OF POLYCLONAL ANTIBODY

1. Preparation of an antigen for
2. Preparation of adjuvants
3. PREPARATION OF POLYCLONAL ANTIBODY
4. Testing of antibody production

Techniques: 1-4: 6 weeks 7500/-

MODULE 6

Mini Project for Biotechnology
PLACKETT-BURMAN DESIGN ANDTESTING
10-15 DAYS

MODULE 7

FOOD MICROBIOLOGY

1. 1.TOTAL PLATE COUNT(BACTERIA)
2. COUNTS OF YEAST AND MOLD
3. ENUMERATION, ISOLATION AND IDENTIFICATION OF E.coli
4. 4.ENUMERATION, ISOLATION AND IDENTIFICATION OF SALMONELLA
5. 5.ENUMERATION, ISOLATION AND IDENTIFICATION OF SHIGELLA
6. 6.ENUMERATION, ISOLATION AND IDENTIFICATION OF VIBRIO

MODULE 8

Routine clinical biochemistry training

The fee for training varies with different modules and components selected
For details contact: 9444117141
Training is available throughout the year

Techniques 1-6: 15 days

MODULE 1

GENERAL ASPECTS

13. STERILIZATION OF MATERIALS
14. PREPARATION OF MEDIA
15. BACTERIAL GROWTH- ISOLATION AND PLATING TECHNIQUES
16. DETERMINATION OF TOTAL VIABLE COUNT
17. GROWTH KINETICS STUDIES
18. BACTERIAL IDENTIFICATION – BIOCHEMICAL TESTS
19. DEMONSTRATION OF VARIOUS ENZYME ACTIVITIES
20. ANTIBIOTIC SUSCESPTIBILITY TESTING
21. MIC DETERMINATION
22. ESBL, METALO PROTEASES DETECTION
23. PLASMID ISOLATION
24. PLASMID DEMONSTRATION – GEL ELECTROPHORESIS

Techniques: 1-12, 4 weeks
Techniques: 1-5 10 days
Techniques: 1-5,8,9 15 days
Techniques: 8-12 15 days