



# INTERNSHIP IN CHEMISTRY – 2018

MAY 2 – 22, 2018

## MODULE - I : INVESTIGATION INTO THERAPEUTIC POTENTIAL OF PLANT EXTRACT AND PHYTOCHEMICAL ANALYSIS

### PHYTOCHEMICAL METHODS:

Preparation of plant extracts, Analysis of physicochemical parameters of plant extract, Preliminary Phytochemical analysis, Quantitative analysis of phytochemicals in plant Extract, Isolation of active principles from plant extracts, TLC, Column Chromatography, HPTLC analysis of plant extract and phytochemicals, Adsorption of Drugs, nanodrug carriers and nanodrug formulation

### MICROBIOLOGICAL TECHNIQUES:

Isolation of bacteria from soil/ marine/ sewage -serial dilution method, Identification of bacteria - staining methods, hanging drop method, Culture and maintenance of bacterial cultures - solid and liquid medium, Short term and long - term culture storage methods, Sterilization methods - dry and wet, Anti-microbial activity of the phytochemical using agar well diffusion / disc diffusion method.

### BIO-ASSAYS USING THE MICROPLATE READER:

Measure of bacterial growth kinetics in the absence and presence of phytochemical, Evaluation of antimicrobial activity of phytochemical at different concentrations, Qualitative and quantitative analysis of phytochemicals - proteins, carbohydrates, lipids, phenols, etc. Anti - oxidant activity of the phytochemical, Nitric oxide scavenging activity, hydroxyl radical scavenging activity, etc.

## MODULE - II : PREPARATION AND STUDY OF ENVIRONMENTALLY BENIGN COMPOUNDS AND MATERIALS & FORENSIC CHEMISTRY

- Preparation and study of Rayon Thread from Waste Paper and fine fibers of banana stem.
- Preparation and Activity study some bio Pesticides.
- Preparation and Study of novel energy and antioxidant drinks from herbs and trees.
- The analysis of hair and fingernails for caffeine and/or cannabinoids using LC-MS.
- Investigation into transfer and persistence of petrol on clothing and footwear, analysing using GC-MS.
- Comparison of Vacuum Metal Deposition, cyanoacrylate fuming and powder suspensions for fingerprint development on a range of substrates.
- Fingerprint projects - experience with routine and specialised fingerprint development equipment. Experience with image enhancement and assessment of fingerprint.

**LAST DATE FOR REGISTRATION: 16.04.2018**

## LOYOLA

Institute of Frontier  
Energy

### Eligibility

Students entering into their final year M.Sc., programme, Students who have completed B.Sc., courses on Chemistry & Life Science

### Mode of Selection

Applications are available at LIFE website.

10 Participants will be selected for each module based on the first come first served basis.

### Mode of Payment

Students who are selected they can register their names by paying Demand Draft of Rs. 5000/- in favour of **Director, LIFE Loyola College Chennai – 34.**

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