



Science Academies' Refresher Course on 'Modern Trends in Biology'

at

Department of Botany, Periyar University, Salem 636 011
5–20 April 2022

sponsored by

Indian Academy of Sciences, Bengaluru
Indian National Science Academy, New Delhi
The National Academy of Sciences, India, Prayagraj

Refresher course on 'Modern Trends in Biology' will be held at Department of Botany, Periyar University, Salem, Tamil Nadu for two weeks from 5 to 20 April 2022 may be highly useful and the experiments may be included in Universities, autonomous Colleges and advanced science institutions involved in education. Besides, it can be taken forward by R&D institutions. It may be noted that UGC regulations include Refresher Courses in API scores for career advancement. The purpose of conducting this refresher course is to cater to the needs of budding faculty members and motivate them towards research. Organizing this type of refresher course with eminent speakers in this area will enhance the interest of budding faculty members to pursue research in biology. Modern biological tools still relatively expensive, and it may take years to fully develop a product, and even longer to put this product to practical use. The practical module of the course will be started with isolation, microscopic observation and other experimentation on mitosis and meiosis. This will be followed by effect of CO₂ concentration on the rate of photosynthesis, plasmolysis and water relation in plants, effect of light intensity on the rate of photosynthesis by employing aquatic pH and antibody titration–bacterial agglutination, antibody titration–passive agglutination, serum antiprotease assay, serum alternate complement assay and enzyme linked immuno sorbent assay (ELISA). Experimental approaches where participants will gain experience in various biotechnology tools for conservation, genetic resource and biodiversity. Gene transfer in bacteria by transformation, PCR and restriction digestion can also be handled. The hands-on experiments would be accompanied by special lectures by eminent scientists in these fields. On the first day of the course, for each participant a laboratory manual will be provided which has been prepared specifically for the refresher course. Applications are invited from teachers with experience in teaching postgraduate courses in life sciences.

Applications from highly motivated Research Scholars will also be considered. Maximum 35 applications will be considered. Teachers who wish to participate in the refresher course may apply through proper channel with the following details: name, date of birth, gender, e-mail, official and residential addresses, telephone numbers, academic qualifications, courses taught, affiliation, positions held and tenure. It is also essential to submit a brief statement (between 250 and 500 words) as to why they think the Course will help to improve their classroom teaching of life science. There will be NO application fee/registration fee.

Applications should be submitted ONLINE by clicking the following link:
<https://web-japps.ias.ac.in:8443/Refreshcourse/MRXV.jsp>

The UGC has notified (F-3/1-2009) that teachers in Universities and Colleges attending two-week Refresher Courses are entitled to be considered for promotion.

A print copy of the application must also be sent by speed post forwarded by the head of the institution. It should reach **Dr S. Lalitha**, Course Coordinator, Science Academies' Refresher Course, Assistant Professor, Department of Botany, School of Life Sciences, Periyar University, Salem 636 011, on or before **22 March 2022**. Outstation candidates will be provided local hospitality and round trip bus/train (three-tier AC) fare by the shortest route.

Course Director: Prof. T. J. Pandian, FASc, FNA, FTWAS, Former National Professor, School of Biology, Madurai Kamaraj University, Madurai 625 021.

Course Coordinator: Dr S. Lalitha, Assistant Professor, Department of Botany, School of Life Sciences, Periyar University, Salem 636 011. e-mail: sundaramlalitha2022@gmail.com; Mobile: 98429 85127.

Last date for receipt of applications: **22 March 2022**

Selected participants will be informed by: **27 March 2022**