

Report of The lecture workshop on recent advances in life sciences

organized at Mar Athanasios College for Advanced Studies
Tiruvalla(MACFAST),Kerala on 11th and 12th April 2016

The lecture workshop on recent advances in life sciences was conducted on April 11th and 12th. A total of 262 participants, 160 students and 17 teachers from 12 nearby colleges, 70 students and 13 teachers from our college (MACFAST) attended the workshop. There was a brief inaugural ceremony on 11th April at 9.30am. The programme was presided by Rev.Fr.Pradeep Vazhatharamalayil, Principal MACFAST. Mr Biju Dharmapalan, the coordinator of the workshop welcomed the gathering. He explained various activities of Science Academy. Dr Satees C Raghvan ,Convener mentioned about the importance of lecture workshop and briefly introduced the resource persons.Prof Beena Cherian ,Dean ,School of Biosciences proposed vote of thanks.
The inaugural session was followed by technical sessions

The **first session** was taken by Dr.Sathees.C.Raghavan and his topic was 'how DNA breaks during chromosomal translocations in Cancer.' He started with the basics- DNA as the molecule of life,genes and nucleotides. He taught us the non B-DNA forms and focussed on the triplex form. He also showed his study on endosulphanin and that it affected the sterility of the male mice.

The **second session** was taken by Dr.Utpal Nath on the topic 'Organ growth and Shape'. He began his presentation by translating research in Sanskrit- GEVESHNA : which means searching for a lost cow. He said that only common sense is needed to become a researcher. He explained how a leaf grows. He talked about allometry, types of allometry. He also talked about GRF genes, and micro RNA and that miR396 possibly regulated growth polarity.

The **third session** was taken by taken by Dr.Annapoorni Rangarajan on the topic 'Cancer and stem cells: Part I'. She began her talk by saying that cancer means crab and it was coined by Hippocrates. She explained about the types of cancer and metastasis. She explained the causes of cancer, the clonal theory and tumor suppressor genes. She spoke about immortalization of cancer cells, telomerase (solution to end replication process) and tumorigenicity assays.

The **fourth session** was taken by Dr.Sathees.C.Raghavan on 'DNA Repair Inhibitors in Cancer therapy'. He spoke about the direct reversal of damage, excision of damaged region, double strand break repair and damage bypass. He talked about ligase inhibitors and that SCR7 could block tumor progression and can cause cytotoxicity of cancerous cells.

This was followed by an interactive session that lasted till 6pm.



