

J.J. College of Arts and Science (Autonomous)
J.J. Nagar, Sivapuram Post, Pudukkottai

PG and Research Department of Microbiology



**3.3.2. Seminars/Conferences/Workshops/Guest Lectures-
Report of the Events**

**“Emerging Food Microbiome Research and Opportunities in
Food Biotechnology” – 20.11.2021**

On behalf of Jenner Club, The Department of Microbiology, J.J.College of Arts and Science (Autonomous), Pudukkottai conducted a Special Lecture Programme on “**Emerging Food Microbiome Research and Opportunities in Food Biotechnology**” on 20.11.2021 (Saturday). **Dr.K.Srinivasan, Adjunct Faculty, from National Institute of Food Technology, Entrepreneurship and Management (NIFTEM), Thanjavur** Introduced his topic on explaining the increased interest in the Microbiome application technologies and innovations for Maintenance of digestive health is witnessed today.

In his speech he gave an information about Intestinal microbiome changes may not only act as a diagnostic tool for potential gut disorders, but could also contribute to maintenance of digestive health and overall well – being. He highlighted probiotic tools contain beneficial live microbiota that may further alter one’s microbiome. The antibiotic use can have several negative effects on the gut microbiota, including reduced species diversity, altered metabolic activity and the selection of antibiotic resistant organizer, which in turn can lead to antibiotic-associated diarrhea.

He also explained about the functional Metagenome Predictions. Metagenomics can be defined as the techniques and procedures that are used for the culture independent analysis of the total genomic content of microorganisms living in a certain environment. It has many useful applications with very promising potential in both Medical and Environmental Microbiology.

He also spoke about Modern biotechnology also called as genetic engineering, genetic modification or transgenic technology. Nuclear DNA is modified through insertion of gene of interest. This modified DNA is called as recombinant DNA. When recombinant DNA expresses, it encodes desired product. This technology, when implemented to enhance food qualities or yield is called as food technology.

Finally, he motivated our students to pursue higher studies, to do research related to Food Biotechnology and to attend training programmes in food related industries and also he trained the students how to attend interview and he showed some of the questions asked in the interview.

U.G. & P.G. Students of Microbiology actively took part in the discussion. Earlier Dr.P.Jeevan, Head, Department of Microbiology welcomed the gathering and Dr.M.Poornima, Assistant Professor, Department of Microbiology, proposed vote of thanks.


Head of the Department

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Principal

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Webinar on Importance and Uses of Bio inoculants — 28.07.2021

On behalf of the Jenner's Club, the Dept of Microbiology, J.J College of Arts and Science (Autonomous), Pudukkottai conducted a virtual seminar on "Importance and Uses of Bio inoculants" on 28.07.2021. The speaker, Prof. M. Sundar from Dept. of Agricultural Microbiology, Anbil Dharmalingam Agricultural College & Research Institute, Trichy introduced his topic on explaining the sustainable agriculture farming and their roles on soil microbial ecology.

He added the information on relationship between organisms and their indigenous environment and the importance of bio fertilizer that helps plant growth by increasing the soil nutrients. Later, he supplemented with the information on preparation of living and latent cells of efficient strains that boosts the growth of importance crop plants by their interaction in the rhizosphere.

In addition, speaker detailed the importance of bio fertilizer on the yield of crops and its detailed applications. Further, he explained about the soil borne diseases and the impact of bio fertilizer on soil pathogens and the soil fertility. Finally, he showed the demonstrated project results using Bio inoculants on agricultural productivity and the social benefits.


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Webinar on India's Scientific Endeavours in the Polar Region with Special Emphasis on Microbial Ecology — 22.03.2021

On behalf of the Jenner's Club, the Dept of Microbiology, J.J. College of Arts and Science (Autonomous), Pudukkottai conducted a virtual seminar on "India's Scientific Endeavours in the polar region with special Emphasis on Microbial Ecology" on 22.03.2021. The speaker, Dr. S. Venkatachalam from Arctic Microbial Division, National centres for polar and ocean Research, Ministry of Earth Sciences, India introduced his topic on explaining the various expeditions to the Arctic Ocean for the exploration of hidden facts on microbial ecology.

He added the information on the inventory of microbes from various habitats of the Arctic, and evaluation of their population dynamics as biological indices of change in season, anthropogenic factors etc. He also added information about the Indian research base Ilimadri' at Ny-Alesund which was inaugurated on July 1, 2008 by -Indian Science and Technology and Earth Science Minister Shri Kapil Sibal. This was the India's first full-fledged research station in the Arctic region. Later, he supplemented with the information on bacterial community structure of the Midtre Lovenbreen glacier foreland ecosystem and the distribution of bacterial communities across different deglaciation stages and the influence of environmental parameters in shaping the community composition.

He also highlighted the significant differences in the bacterial diversity and community structure along the glacier foreland of Midtre Lovenbreen glacier and concluded that recent deglaciated samples exhibited less diverse comparatively more abundant taxa than those of the older stage samples. Finally, he showed the demonstrated the opportunities in NCOAR for student research projects including master and doctoral studies and prospects for the arctic expedition for young researchers.


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Webinar on Education Research and Job opportunities for life sciences - 31.07.2020


On behalf of the Jenner Club of the Department of Microbiology, J.J. College of Arts and Science (Autonomous), Pudukkottai, a Special International Webinar on "Education Research and Job opportunities for life sciences" was conducted on 31.07.2020 by Dr. K. Ramesh Kumar, Associate Professor and Head, Department of Biotechnology Raja Serfoji Government College, Thanjavur.

Speaker opened his talk explaining the scope of life sciences and briefing the importance of multiple fields in life sciences including biotechnology, ecology, genetic engineering and other emerging areas. Speaker also provided the detailed information on available opportunities in various field of sciences. He insisted the students, upon the completion of Graduation, Post-Graduation; they should do Diplomas for specialization in respective fields. He also pointed out the scholarship opportunities available for skilled students and a wide range of fields that include in-depth study and research of the subject


Speaker detailed the wide spectrum of organizations including healthcare, cosmetic and food-processing companies, NGOs, environment consultancy firms, and drug manufacturing companies who hire the specialists from life sciences. Further, he pointed the jobs available in areas such as management, administration, sales, legal support, writing and illustrating. For instance, candidate with graduation degree in life sciences is eligible for teaching in schools and can take a options for PSUs, even fight various government exams such as SSC, UPSC and state PSCs, banking sector can be also a good choice and many companies hire them for the post of assistant junior researchers. Other than assistant junior options, speaker also explained opting higher studies in the given field will open up more opportunities. Besides choosing the job, students are eligible to join CSIR Labs, ICMR Labs and IARI Labs for the project JRF or SRF and after successful completion of Ph.D, students can either settle for associate professor or continue to explore research in various research institutions.

Finally, he concluded with interdisciplinary opportunities, For example, combining with offers a new era and do models, whether of the visual art variety or mathematical/comp subjects, really, students will end up pursuing depends on their personal interests, career goals, and opportunities presented to them.

The Students of Microbiology and other department faculty, students are actively took part in discussion. Dr.P.Jeevan Assistant Professor and Head, welcomed the gathering and Dr.M.Poormima, Assistant Professor Department of Microbiology a proposed vote of thanks.


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