

Induction Programme cum Special Lecture by a professor from Alagappa University

Induction programme cum Special lecture was organised by **Wilmot Club of PG and Research Department of Biotechnology**, JJ College of Arts and Sciences (Autonomous), Pudukkottai on 25.11.2021. In this programme the Special Guest **Dr S Gowrishankar**, Assistant Professor, Department of Biotechnology, **Alagappa University**, Karaikudi inaugurated the club and made a special talk on **"Future of Biotechnologists"**. The programme, which was attended by nearly 89 students from the department, began with a warm welcome by the head of the department Dr G. Manigandan. He also pointed about the college life, rules and regulations of college, bridging the gap between the school education and college education.

Dr S Gowrishankar, chief guest initially started with importance of wilmot club. Sir Ian Wilmut, British developmental biologist who was **the Pioneer to use nuclear transfer of differentiated adult cells to generate a mammalian clone**, a Finn Dorset sheep named Dolly, born in 1996. He explained the opportunities and challenges in different branches of Biotechnology like Red Biotechnology, Green Biotechnology, Blue biotechnology, Gold biotechnology etc. He also described how the Biotechnology is contributed for human health, disease control and various types of industry. Like all technologies, it offers the potential of enormous benefit but also potential risks. Biotechnology could **help address many global issues**, such as climate change, food security, an aging society, energy security and infectious diseases.

He explained the opportunities and challenges in agriculture, food processing and environmental sciences and how students prepare themselves and cope with challenges in these fields through research studies. Biotechnology is a field which has various chemical properties from head to toe of human. If students prepare themselves in this field they will become Experts in Biotechnology in future. He also explained the job opportunities viz., Medical scientists, microbiologists, epidemiologists, R & D, Quality controller, Research and Academics.

Biotechnology is considered as very important field next to medical sciences. In order to establish in this field he encouraged the students to clear GATE, CSIR-NET, UGC-NET, SET and get benefit from scholarships provided by these agencies. He also emphasized the students to enroll them in research after post graduation by utilizing the various scholarship and also the communal scholarship announced recently by the Government of Tamilnadu

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J.J College and Biotechno solutions Training and Research Institution ink pact for mutual collaboration in scientific research

In a move to enable joint academic programmes, a Memorandum of Understanding (MoU) was signed between P.G. and Research Department of Biotechnology, J.J. College of Arts and Science, Pudukkottai and Bio Techno Solutions Training and Research Institute, Trichy. The exchange of MoU took place between Dr. K. Manjula, Bio Techno Solutions Training and Research Institute, Trichy and Dr. G. Manigandan, Head of the Biotechnology Department in the presence of the college Principal, Dr. Parasuraman on Saturday.

This MoU will further boost mutual collaboration and reciprocity of scientific ideas between the two institutions. The MoU mainly aimed at internships and trainings for students, faculty and staff, development and implementation of collaborative research projects on priority areas of both the institutions, scientific information and methodology leading to development of joint academic programmes.

The event was followed by a highly intellectually thought provoking talk by Dr. Manjula on "Natural Remedy for Periodontitis Disease Prevalence among the type two Diabetes Mellitus" organized by The Wilmot Club of Biotechnology under the aegis of the college's Biotechnology department to highlight the challenges posed by the disease and various natural remedial methods employed to contain the disease. The lecture programme was aimed at identifying the main challenges related to preventing and countering the disease. Dr. Manjula briefed the participants by highlighting the mechanism of the Periodontitis and stated that the smoking, alcohol drinking and drug abuse is the major causes of Periodontitis disease. It causes severe gum infection that can lead to tooth loss and other serious health complications. Periodontitis, also called gum disease, is a serious gum infection that damages the soft tissue and without treatment, can destroy the bone that supports the teeth. The spotlight of Dr. Manjula's talk was on the *Vitis vinifera* seed have the ability to treat Periodontitis disease as wells as diabetics. She also gave information on the risk-benefit analysis of many chemical drugs used for its treatment. She opined her view that the natural remedial methods are the only effective measures to contain this disease. Around 78 students and staff from the department and other departments of the college attended the lecture session which was followed by questionnaires by the enthusiastic participants.

Earlier, the lecture session was opened with the welcome address by Dr. G. Manigandan, Head of the department who emphasized that the programme holds significance as the need of the hour is to have a proper awareness among the public on this disease. Mrs. C. Sumathi, Assistant Professor greeted Dr. Manjula by honoring her with a shawl. The formal vote of thanks was given by Dr. V. Jayaramanathan, Assistant Professor from the department.

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Virtual conference on “Mutants of SARS-CoV 2 and the development of vaccines”

Special lecture was organised by Wilmot Club of PG and Research Department of Biotechnology, JJ College of Arts and Sciences (Autonomous), Pudukkottai on 28.06.2021. In this programme the Special Guest **Dr Sudhakar Sivasubramanian**, Professor, Department of Biotechnology, **Manonmaniam Sundaranar University** gave a special talk on “**Mutants of SARS-CoV 2 and the development of vaccines**”. The programme, which was attended by nearly 78 students from the department, began with a warm welcome by the head of the department Dr G. Manigandan. He also pointed about the Covid issues and how to overcome this.

Chief guest started with the significance of covid 19 and its variants. Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. Most people who fall sick with COVID-19 will experience mild to moderate symptoms and recover without special treatment. However, some will become seriously ill and require medical attention. The SARS-CoV-2 virus has mutated over time, resulting in genetic variation in the population of circulating viral strains over the course of the COVID-19 pandemic. Molecular, antigen, and serology tests are affected by viral mutations differently due to the inherent design differences of each test.

He listed out the vaccines all over the world. Zydus Cadila. ZyCoV, Moderna. mRNA-1273, Gamaleya, Sputnik, Janssen, Oxford/AstraZeneca. AZD1222, Serum Institute of India. Covishield (Oxford/AstraZeneca formulation... Bharat Biotech. Covaxin.

Bereavement, isolation, loss of income and fear are triggering mental health conditions or exacerbating existing ones. Many people may be facing increased levels of alcohol and drug use, insomnia, and anxiety. Meanwhile, COVID-19 itself can lead to neurological and mental complications, such as delirium, agitation, and stroke. People with pre-existing mental, neurological or substance use disorders are also more vulnerable to SARS-CoV-2 infection—they may stand a higher risk of severe outcomes and even death. At last the students interacted with the chief guest even though it was online mode. The formal vote of thanks were given Dr. V. Subramanian, Assistant Professor and the program ends.

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VIRTUAL CONFERENCE ON “Will the COVID – 19 Disruption Develop or Dismantle? Challenges and Therapeutic Strategies”

A one day virtual conference, “Will the COVID – 19 Disruption Develop or Dismantle? Challenges and Therapeutic Strategies” was inaugurated on Friday (19.06.2020) by The Wilmot Club of Biotechnology, J.J. College of Arts and Science, Pudukkottai under the aegis of the college’s Biotechnology department to highlight the challenges posed by the COVID-19 disease and various therapeutic methods employed to contain the pandemic. The conference was a literal converge of doctors, scientists and educationalists for a step forward in finding a solution to the issue.

The conference was aimed at identifying the main challenges and good practices related to preventing and countering the spread of the coronavirus and involved two highly intellectually provoking lectures by Dr. Chandrakumar Natarajan, Senior Consultant and Head, Dept. of Neonatology, Kanchi Kamakoti Childs Trust Hospital, Chennai and Dr. D. Sivaraman, Scientist and Head, Centre for Laboratory Animal Technology and Research, Sathyabama Institute of Science and Technology, Chennai. Dr. Chandrakumar briefed the participants by highlighting the mechanism of the coronavirus inside the body and on how it brings along the immune response from the host. He further stated that the pandemic has to be controlled by using various biotechnological strategies and other methods that could be used during the course of recovery. The spotlight of Dr. Sivaraman’s talk was on the different therapeutic strategies involved in the treatment of this disease with reference to the medical and social aspects of treatment associated with it. He also gave information on the risk-benefit analysis of many drugs like hydroxychloroquinone and other vaccines. He opined his view that the virus is gradually fading away due to the coordinated efforts of doctors, scientists, educationists and researchers who are working round the clock in tackling the virus. Many participants from various colleges and universities attended the conference. Both the lecture sessions were followed by questionnaires by the enthusiastic participants.

Earlier, the sessions were opened with the welcome address by Dr. G. Manigandan, Head of the department and Mrs. P. Priyadarshini, Assistant Professor, who emphasized that the conference holds significance as the need of the hour is to have a proper debate on this issue. They stressed on the importance of holding such scientific conferences emphasizing the need to



conserve and protect the world through various initiatives. The formal vote of thanks were given by Dr. V. Jayaramanathan, Assistant Professor and Dr. V. Subramanian, Assistant Professor from the department, respectively in each session.



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VIRTUAL CONFERENCE ON “Glimpses of Biotechnology”

Biotechnology is a fast growing frontier area of research with tremendous potential in terms of food security, medicine and health care and industrial applications. There is a need for students and faculties of biological sciences to keep abreast of the latest developments in biotechnology. With this objective, a two days international virtual conference, “Glimpses of Biotechnology” was inaugurated on Friday (31.07.2020) by The Wilmut Club of Biotechnology, J.J. College of Arts and Science, Pudukkottai under the aegis of the college’s Biotechnology department.

Eminent speakers in the form of experts, scientists, researchers from different parts of the globe sat together in the conference and discussed various avenues like genetics, livestock research and medicinal plant research. The conference was marked by lectures by Dr. Arun Meyyazhagan, Chief of Cytogenetics Department from EuroEspes Biomedical Research Center, Spain, Dr. B. Balamuralikrishnan, Assistant Professor, Sejong University, South Korea and Dr. Padmanaban Mohanan, Post-Doctoral Researcher from the Seoul National University, South Korea to come out with an aim of improvement in biotechnology.

Dr. Arun Meyyazhagan highlighted the importance of cytogenetics and said that the field plays a key role in the detection of chromosomal abnormalities associated with malignancies, as well as the characterization of new alterations that allow more research and increase knowledge about the genetic aspects of diseases. He further emphasized that cytogenetic and molecular techniques have a wide range of applications that increased the dimension of chromosome analysis in treating various kinds of cancers and in screening various congenital anomalies.

Dr. B. Balamuralikrishnan, told that there is a direct link between animal and human health. The food ingested by livestock has a massive impact on the quality of meat and by products produced. Feed additives are a safe, healthy way to invest in the wellbeing of livestock while enhancing their nutritional intake. He stated that conditions such as weight loss, natural abortions, infections, sickness, and disease can all be controlled and prevented by using the right feed additives.

Dr. Padmanaban Mohanan, in his talk said that the root of *Panax ginseng*, which is known as Korean or Asian ginseng, is a valuable and an important folk medicine in East Asian countries, including China, Korea, and Japan. He explained the importance of ginseng plant in



terms of the various varieties of the plant and many health benefits related to it. According to Dr. Padmanaban as many steps must be taken to standardize the usage of ginseng root through isolating the major bioactive components of the plant, ginsenosides, the formulated standardization of ginseng extract and ginsenoside isolation is clearly required to have constant results and desirable efficacy in animal and human experiments.

All the speakers emphasized that there is a need to develop the biotechnology infrastructure both in academia and industry to facilitate the aggravation of the sector in order to open up new employment ventures for the students of biotechnology. They motivated the students to look for the doors of higher studies in biotechnology and briefed about them on how to approach the universities for better career opportunities. About 100 enthusiastic participants including undergraduate, postgraduate students, researchers and scientists from different states of India participated in the seminar who showed great interest in the questionnaire in every lecture session.

Earlier, introductory addresses were given by Dr. L. Vivekanandan, Dr. V. Jayaramanathan, Assistant Professors and G. Manigandan, Head of the department and the formal vote of thanks were given by Ms. D. Vithya, Dr. G. Manigandan and Dr. V. Subramanian, respectively in each session.

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