

REPORT ON GUEST LECTURE

Topic of the Event – The Exciting Field of DNA Editing Technology (CRISPR – CAS9)

Date & Time of Event – 14th September 2022, 11:30 am

Hosted by - Sarojini Naidu Vanita Pharmacy MahaVidyalaya, Tarnaka, Hyd.

Sarojini Naidu Vanita Pharmacy Maha Vidyalaya, College for Women, (Sponsored by The Exhibition Society) in association with Indian Pharmaceutical Association, TS branch has organized a guest lecture on the topic “**The Exciting Field of DNA Editing Technology (CRISPR – CAS9)**” on 14th September 2022, 11:30 am. The Guest Speaker for the guest lecture was Dr. Gangadhar Rao, Ph.D., PMP, Retd. Principal Scientist, CRIDA and the Chairperson for this guest lecture was Dr. Neeradi Dinesh M.S.Pharm., Ph.D, Research Scientist, CSIR-CCMB, Hyderabad.

For this guest lecture, the numbers of participants attended were about 280.

The program started at 11:30 am. Dr. Hyma started the program and invited all the dignitaries onto the dias. Dr. B. Prabha Shankar, President IPA, TS branch and Chairman, SNVPMV, delivered a welcome note and addressed the session by cordially welcoming the guest speaker, Dr. Gangadhar Rao, and the Chairperson of the guest lecture, Dr. Neeradi Dinesh. Later, the Chairperson of the guest lecture, Dr. Neeradi Dinesh introduced the guest speaker to the participants.

At 11.50 am Dr. Gangadhar Rao, started the session on the topic “The Exciting Field of DNA Editing Technology (CRISPR – CAS9)”. During the session, Dr. Gangadhar Rao Sir interacted with the students and gave a quick recap on the basic concepts of the cell that a human body is made up of 30-37 trillion cells and each and every cell carries all the genetic information. He also imbibed the knowledge of the DNA, genes, 20000 genes distributed in 23 pairs of chromosomes. The participants were enthusiastic and were listening with extreme intrigue as the session was informative and thought provoking.

With supreme knowledge and experience, Sir has explained on the genetic engineering technology by giving three examples which include 1) Insulin production in the past using pancreas of animals like pigs or cattle and at present using bacteria like *E.coli* which has saved the lives of many animals; 2) Introduction of Luciferase genes (fire fly genes) into Tobacco plant, which made tobacco plant to light and 3) Development of *Bacillus thuringiensis* (Bt)

cotton crop which has resistance against the boll worm infestation in the crop which otherwise destroys about 70% of crop yield.

Sir gave an insight on the CRISPR-CAS9 technology which means Cluster Regularly Interspaced Short Palindromic Repeats - Crispr associated protein 9. CRISPR technology allows us to selectively delete a gene and CRISPR-CAS9 technology is the latest technology to introduce a specific gene into the required DNA of the cell. This technology can be used in the treatment of many diseases like Thalessemia, Cancer, Sickle cell anaemia, Haemophilia, Cystic fibrosis etc. He proudly said that the first Thalessemia patient treated with CRISPR technology was on November 20, 2019 where the patient is totally cured from the disease.

Further, Dr. Gangadhar Rao Sir emphasized on the applications of the CRISPR technology in IVF, production of stem cells, retinal cells and also in the treatment of various hereditary disorders like diabetes. He finally explained the limitations of the technology and concluded the seminar by giving the future scope of the topic and encouraged all the students to find their future in a different and exciting area like DNA editing technology.

At the end of the session, Sir encouraged the students to put out all their queries regarding the topic. Students were very enthusiastic and asked various questions on the topic. Many doubts were also raised by the audience not only from the students but also from the faculty and members of Exhibition society and managing committee members, Exhibition society, Nampally Hyderabad. Most of the questions were patiently answered by sir, and left few to be answered by the Chairperson, of the session making the session, both informative and interactive. The Chairperson of the guest lecture, Dr. Neeradi Dinesh clarified all the other questions posed by the audience. It was overall, a very excited, novel and interesting session to all the attendees.

Finally, the Guest Speaker Dr. Gangadhar Rao, and the Chairperson of the guest lecture, Dr. Neeradi Dinesh were felicitated by Dr. B. Prabha Shankar, President, IPA, TS branch & Chairman, SNVPMV, and all other members of IPA, Telangana state branch, Members, Managing Committee, Exhibition society, Hyderabad and all the dignitaries on the dias.

The vote of thanks was delivered by Sri P. Sainath Dayakar Shastri garu, Honorary Secretary, SNVPMV, by expressing gratitude to the guest speaker, Dr. Gangadhar Rao, for his excellent speech on the topic and the Chair person of the guest lecture, Dr. Neeradi Dinesh and thanked all the participants for making the session successful. The session was followed by the lunch.



