

Virus Project Updates

The virus research projects at Washington State University (WSU) are being subsidized again this year by the Scheetz-Chuey Foundation. The field research consists of three separate parts. The first part includes Free Testing for vendors. It encourages suppliers to test and upgrade their stock. A large number of tests are being offered free of charge. Additional testing will be available at the \$10 per sample, if the allotted testing is exceeded.

The second part of the program is Subsidized Tests for ADS Societies. Societies have been offered half price testing of 30 varieties for \$150 to encourage propagation and dissemination of clean plants in the Societies. It is anticipated that these plants will command a premium price and increase revenue for the Societies as well. They should also help to increase the availability and the awareness of virus free stock.

The final part of the program is the open testing program that supports submission of 30 or more samples at \$10 per sample that allows participants to develop virus information on their plants. Information for submission of samples is found on the ADS web site (dahlia.org) along with information to support virus free dahlia growing.

There are also a number of laboratory research activities underway. Dr. Moyo has initiated a greenhouse study looking at the transfer of viruses from stock with virus to clean stock through contaminated tools. The study is being done under laboratory controlled conditions and on several different virus combinations.

Professor Pappu is working with other virus experts in Germany on his Humboldt Research Award. The honor reflects well on the recognition of his expertise in plant viruses. He will be returning to WSU at the end of the summer. Dr. Lindani Moyo continues his work as Director of the Dahlia Resource Center at WSU. He is working on several projects including the analysis of virus segments in the genomes of the species dahlias gathered by Professor Walbot and her group at Stanford.

Dr. Moyo is also making progress on the requirements for successfully growing dahlia tissue cultures. This effort could lead to a system for cleaning up dahlias with virus. We were disappointed to learn that, as a result of the conditions of his Fulbright Scholarship at WSU, he will need to return home for one year starting in October. Another member of Professor Pappu's team will be taking over Lindani's activities. Dr. Ying Zhai had the responsibility for virus testing of our dahlia leaves before Lindani took over and will be handling that work again.

Another member of Professor Pappu's team, Dr. Romana Iftikhar, is working in cooperation with Dr. Moyo, to develop a rapid molecular test for DNA viruses of dahlia (Dahlia mosaic virus and Dahlia common mosaic virus).

A PhD student in Prof. Pappu's team, Ms. Hira Kamal, is involved in a long-term project to take advantage of Artificial Intelligence to identify the specific plant proteins that could be subject to virus attack. Ms. Kamal succeeded in identifying the protein that makes cotton susceptible to cotton leaf curl disease. Identification of those proteins could provide an approach for improving virus resistance.