2008 - 2009
Vavilov Frankel Fellows

Research by the Vavilov-Frankel fellows has covered a wide range of topics, from new conservation technologies to the socio-economic, human and policy aspects of plant genetic resources conservation and use.

Danilo Eduardo Mejía Moreta from Ecuador will screen accessions of rice conserved at the International Center for Tropical Agriculture (CIAT) for the possession of genes to inhibit nitrification, a process that results in substantial losses to soils as a result of nitrate leaching and the emission of nitrous oxide (also a potent greenhouse gas). If the ability to inhibit nitrification were more widespread it could help reduce the use of nitrogen fertilizers, which can damage the environment and human health. Mejía's 2009 fellowship will be carried out at CIAT and is partly supported by Pioneer Hi-Bred International, Inc, a DuPont company in collaboration with Bioversity International.

Esmaeil Ebrahimie from Iran is looking for genes in the wild relatives of Australia´s soybeans that will help confer traits such as drought, heat and salinity resistance to cultivated soybeans. Although soybeans are widely cultivated, they have a narrow genetic base and are susceptible to stresses such as drought and salinity. Australia´s native wild relatives of soybeans have to cope with those stresses and so are expected to have useful traits that could be transferred to cultivated soybeans. The work will establish Australia´s first native soybean gene databank, and all information will be made publicly available. Ebrahimie´s 2009 fellowship will be carried out at the University of Adelaide in Australia and is supported by the Grains Research and Development Corporation (GRDC), Australia.

Enoch G. Achigan-Dako from Benin is using molecular tools to characterize various species of watermelon (Citrullus lanatus) collected in West Africa, Nigeria, Namibia, Kenya, the US and Germany. The data will be used to build a clearer tree of family relationships among the various groups of watermelon species. Achigan –Dako's 2008 fellowship is being carried out at the Institute of Genetics and Crop Plant Research (IPK), Gatersleben, Germany and is supported by Pioneer Hi-Bred International Inc, a DuPont company.

Dorin Gupta from India is mining the genome of barrel medic (Medicago truncatula) in search of markers that can be used in lentil breeding. Gupta believes that molecular markers will improve the efficiency of lentil breeding by enabling her and all breeders to target genes of interest. The work is being carried out at the University of Melbourne, Victoria, Australia. Gupta's 2008 fellowship is supported by the Grains Research and Development Corporation (GRDC), Australia.