

**Project Title** : Investigations on The Control of Chestnut Blight *Cryphonectria Parasitica* (Murr.) Barr. by Hypovirulent Strains

**Start /End Date** : 1996-2000

**Supporting Body** : GDAR

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**Summary** : In this study, 324 isolates collected from Aegean, Marmara and Black Sea Regions were used.

When the isolates were classified for their phenotypes; 310 isolates of them were virulent and 14 isolates were thought as hypovirulent strains.

Studies of vegetative-compatibility (v-c) was done among the virulent strains and 2 v-c groups were found in the chestnut groves. 96 % of all the isolates were belong to EU-1 group and % 4 were EU-12 group. EU-1 group was found in all the chestnut groves but EU-12 group was found only in one of them.

The hipovirulent isolates (14) were able to convert all the virulent isolates belong to v-c 1 group. DsRNA isolations were made for 7 of 14 isolates by Dr. Ursula Heiniger\* and found as hipovirulent. This result have showed us that biological control could successfully be applied in Turkey.

The hypovirulence in Turkish isolates of *C. parasitica* is the first record for Turkey.

Virulence study was done on chestnut seedlings by using the 7 hipovirulent strains. After inoculation the hipovirulent strains caused small lesions but then they started to heal because of callus tissue formation.

The seedlings inoculated by virulent strain died in 4-8 weeks. On the seedlings which inoculated by hypovirulent strains a very clearly callus tissue occured and lesions started to heal. When seedlings were inoculated by both of virulent and hypovirulent strains, growing of lesion stopped but occurrence of callus tissue was not very clearly.

These results have showed that hypovirulent strains could be used for the control of the chestnut blight which is an important problem in chestnut growing areas in Turkey.