

## Variation in *Chondrostereum purpureum*, a Potential Mycoherbicide for Forest Weeds

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To assess the risk of widespread dissemination, cultures of *Chondrostereum purpureum* from different hosts across Canada and from western Europe and New Zealand were compared with respect to virulence, protein patterns and DNA. Virulence was compared on rooted *Populus balsamifera* ssp. *trichocarpa* and *P. balsamifera* x *deltooides* cuttings and varied as much within regions or localities as between regions. An average linkage cluster analysis of protein patterns of 18 Canadian isolates showed that while isolates could be grouped, there is no apparent association of this grouping with geographic origin. Proteins from mycelial extracts were electrophoretically tested for the activity of 13 isozyme systems and 8 of the systems produced positive activities. The relative migrations of the bands were generally similar among isolates for a given enzyme system, suggesting monomorphic loci. However, they varied noticeably in intensity. Using Polymerase Chain Reaction on nucleic acid extracts, common restriction sites were found among Canadian and European isolates but not the New Zealand isolate, indicating little genetic variability within the species.

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