

Researchers: Allison L. Perry, Jeremy M. Davis Ph.D.

Building a Phylogenetic tree for *Diplolepis rosae*

Rose gall wasps *Diplolepis rosae* can induce roses (*Rosa canina* and other species) to create homes for their young called galls by injecting their eggs into stems adjacent to axillary buds.

These galls face predation from parasitoids such as *Torymous bedeguaris* and *Orthopelma brevicorne* and also by birds. Using the mitochondrial gene cytochrome c oxidase subunit I we identified local samples of wasps and parasitoids to species and used data sequences from other research studies as well as local samples to build a rough phylogenetic tree. The results have shown that local samples of *Diplolepis rosae* are most closely related to two different European clades. The local parasitoids were most closely related to a Canadian clade although an exact determination of origin cannot be made for these species because of lack of European sequences uploaded to Genbank.