

## Main Content

My lab studies the ecology and physiology of the trait vegetative desiccation tolerance (DT) in mosses. Desiccation tolerance (DT) is the ability of an organism or structure to survive drying in equilibration with dry air, and among plants is most well developed among the bryophytes. In my lab, various species of mosses are cultured and bred, with experiments on DT normally based on single clonal lines. We are interested in determining the intrinsic ecological strategy of DT employed by a species; this strategy resides along an inducibility gradient, from weakly inducible to nearly constitutive. Current experimental topics include the phenology of DT for both sporophytes and shoots, the linkage of DT to life phase, methods of drying plants for optimal induction of DT, and the influence of rate of rehydration on DT. In essence, my lab investigates how the four factors of desiccation tolerance, (i) the rate of drying, (ii) the equilibrating relative humidity experienced, (iii) the duration spent in the dried state, and (iv) the rate of rehydration, affect the capacity of a plant to tolerate desiccation and influence fitness.

Recent research highlights include the first demonstration that the model moss *Physcomitrella*

