**MOLECULAR PHYLOGENY OF CIRCADIAN CLOCK GENES IN MYCOBIONT GENOMES**

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Endogenous circadian rhythms regulate widespread biological processes, and the circadian clock genes that generate these rhythms are highly conserved across various lineages and present in all domains of life. In fungi, the circadian clock mechanism has been studied in depth in *Neurospora crassa* and is involved in regulating a variety of mechanisms ranging from asexual reproduction to growth and metabolism. The functional value of the circadian clock has been investigated in animal and plant models, and previous evidence has shown for plants and several animal species that latitudinal clines in circadian clock gene polymorphisms regulate biological rhythms. Recent evidence also suggests that variation in circadian clock systems may have important consequences for fungal fitness in environments with variable light conditions, such as above and below tree bark. It remains unclear, however, whether there is variation in fungal circadian genes across species distribution gradients, and information is still generally lacking on the circadian clock of lichenized fungi. The circadian clock’s effects on holobiont circadian rhythms have also not been previously investigated. Here we explore the circadian clock of *Umbilicaria pustulata* and several other species of lichenized fungi, opening the door for further explorations of variation in the circadian clock of lichen mycobionts and of the interplay between the circadian systems of myco- and photobionts in lichens.