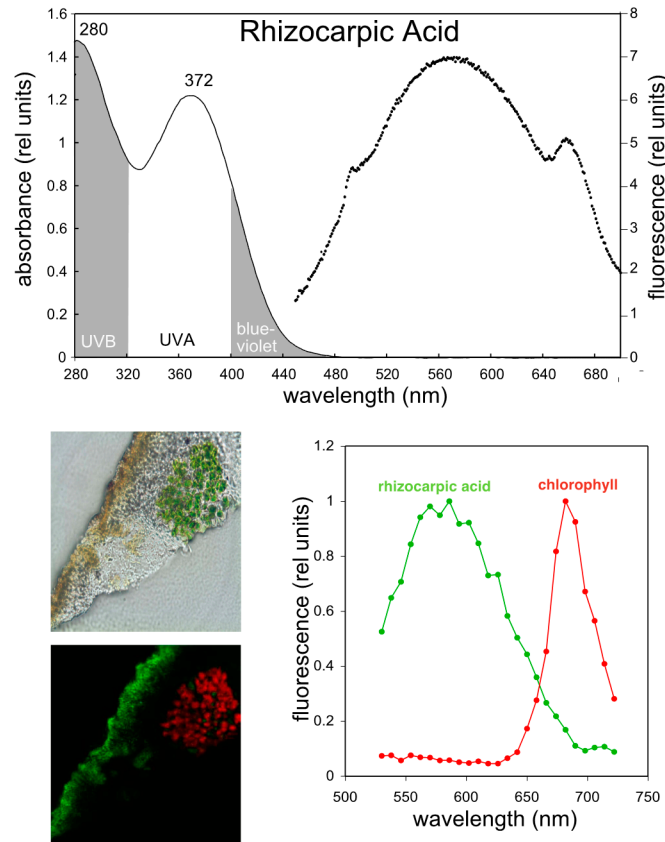
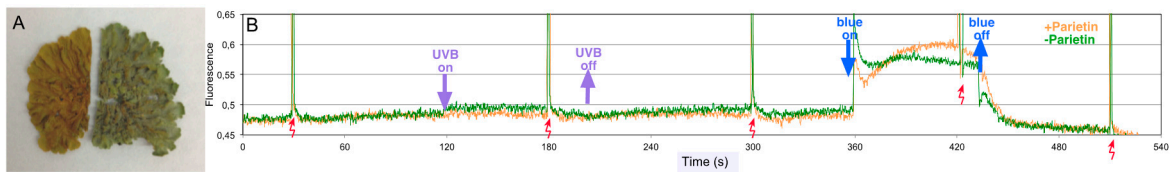


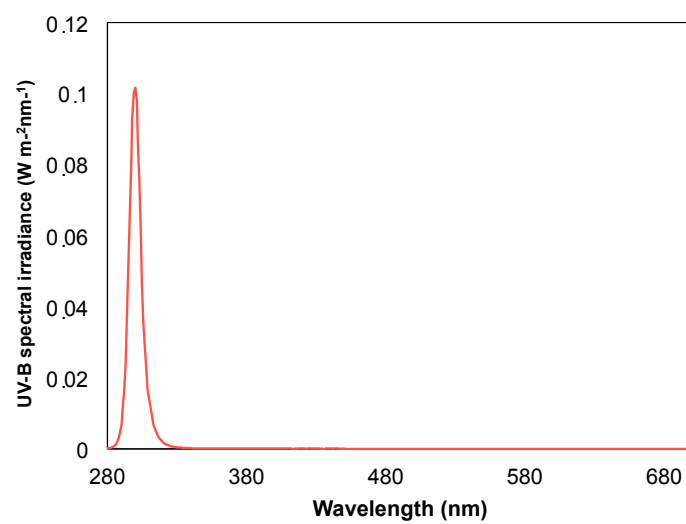
## Supplementary Materials



**Figure S1.** Top: Overlapped absorbance and fluorescence spectra of acetone extracts from sun-collected thalli of *Acarospora hiliaris* resuspended in pure ethanol. Excitation wavelength for fluorescence emission was 435 nm, the wavelength where the highest fluorescence yield was observed. Bottom left: Bright field and confocal images of a cross section of *A. hiliaris*. Arbitrary colours (red and green) identify distinct emission spectra from chlorophyll and rhizocarpic acid, respectively. Bottom right: fluorescence emission spectra of chlorophyll and parietin.



**Figure S2.** A. Effect of parietin removal from half a thallus. B. Example of a typical fluorescence kinetic assay. Thalli (with and without parietin) were kept in darkness prior to one minute of UVB illumination. After recovery in darkness, thalli were exposed blue light ( $200 \mu\text{mol photons m}^{-2} \text{s}^{-1}$ ). Saturating pulses (red arrows) were applied at the end of each illumination interval.



**Figure S3.** UVB-LED emission spectrum measured at the same distance as the samples.