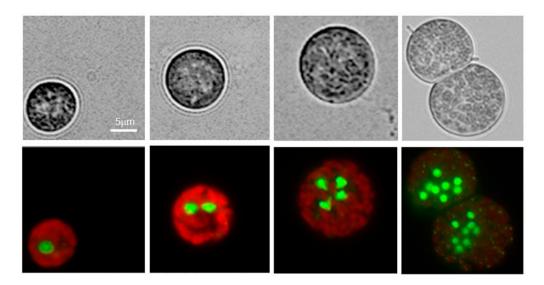


**Figure S1.** The arrangement of SYBR green stained nuclei in the center of PNCs along with autofluorescence of the chloroplasts. Chlorophyll auto-fluorescence (red) and SYBR fluorescence are imaged using excitation wavelength of 493 nm and emission of 517 nm. Upper panel, differential interference contrast; lower panel, fluorescence. Scale bar =  $5 \mu m$ .



**Figure S2.** The 8 and 16-PNC that disappear from the population at the end of the dark period (Fig. 4, d, 20-24h) may account for the increase in total cell number along the 24h cycle. \*The decrease in the number of 8 and 16 PNC in the last 4h of the dark period is considered as if they were developed into autospores-releasing autosporangia.