**Figure S1.** Growth and heterocyst differentiation. **A** The growth of *A. variabilis* WT and *cphA1* mutant filaments spotted on solid AA/4 medium (NO3–) and medium lacking a combined nitrogen source (N2) after 7 days of incubation. **B** Light micrographs of WT and mutant *cphA1* showing the heterocyst differentiation after 72 h of nitrogen step-down. Right panels show the magnified view of heterocyst, indicated by square. Red arrow indicates the cyanophycin polar nodule. Bars, 10 µm.