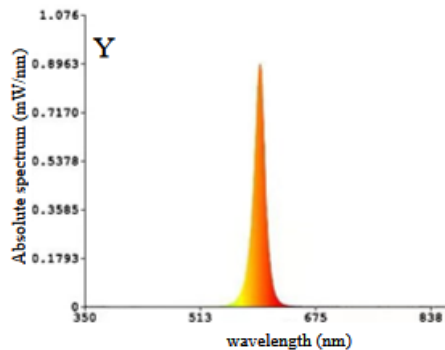
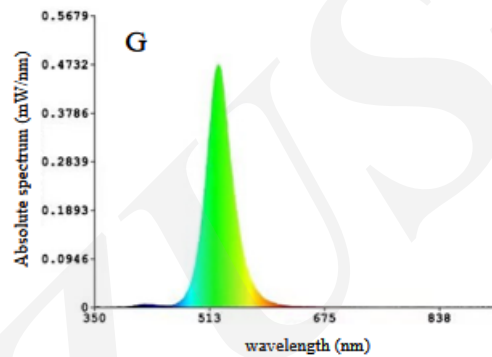
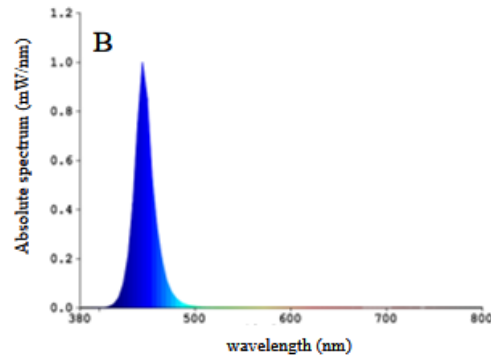
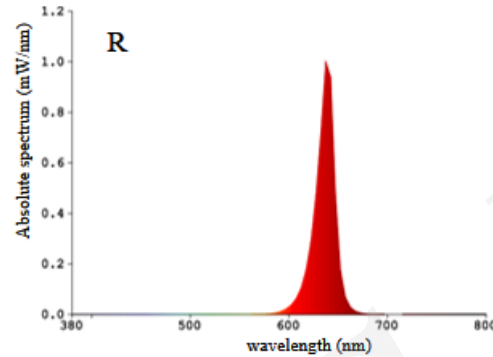
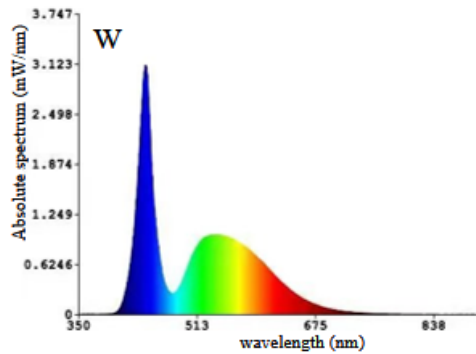


Cite this as: Jianwei CHANG, Chong XIE, Pei WANG, Zhenxin GU, Yongbin HAN, Runqiang YANG. Red light enhances folate accumulation in wheat seedlings[J]. Journal of Zhejiang University Science B, 2021, 22(11): 906-916.
<http://doi.org/10.1631/jzus.B2100266>

Red light enhances folate accumulation in wheat seedlings

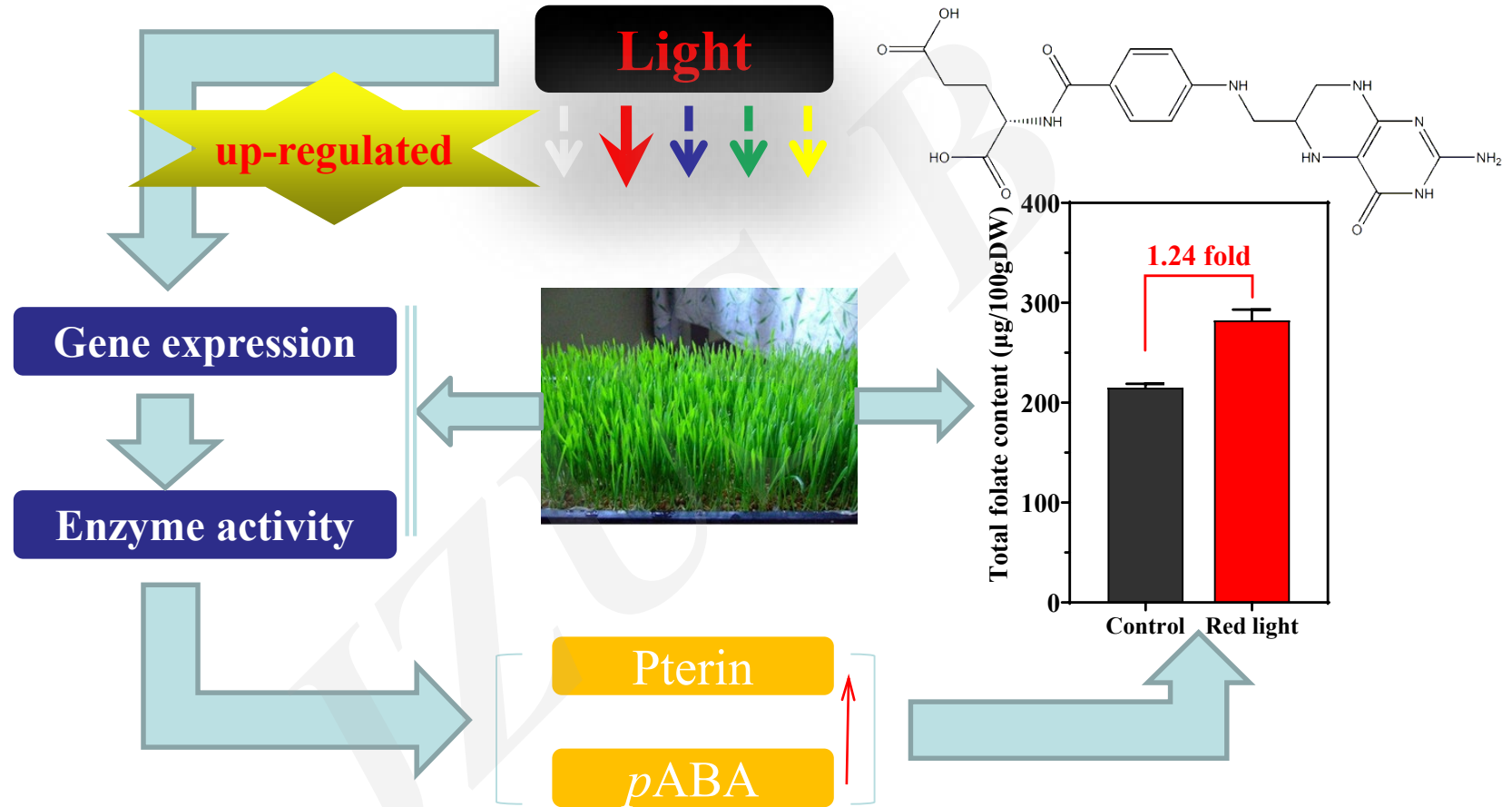
Key words: Wheat; Red light; Light intensity; Folate accumulation

Research Summary



The main aim of this experiment was to find the best light spectrum and intensity for stimulating folate synthesis, and reveal the mechanism by which light regulates folate accumulation in wheat seedlings.

Research Summary



Innovation points

- **Studying** the effect of light spectrums and intensity on folate accumulation in wheat seedlings
- **Finding** the best light spectrum and intensity for stimulating folate synthesis
- **Exploring** the distribution of folate in wheat seedlings under red light irradiation
- **Revealing** the mechanism by which light regulates folate accumulation in wheat seedlings

Conclusions

Red light enhances folate accumulation in wheat seedlings

- 1 | Germination and light irradiation increased folate accumulation in wheat.**
- 2 | $30 \mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ red light irradiation had the most positive effect on folate accumulation.**
- 3 | The accumulation of folate in wheat seedlings promoted by red light irradiation was mainly in the leaves, especially the increase of 5-CH₃-THF.**
- 4 | Gene expression related to the biosynthesis of folate was up-regulated, resulting in an increase in the activity of key enzymes and precursors of folate synthesis.**