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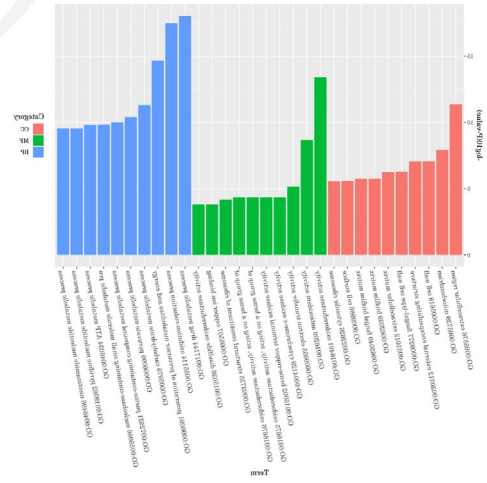
Abscisic acid-mediated cytosolic Ca^{2+} modulates triterpenoid accumulation of *Ganoderma lucidum*

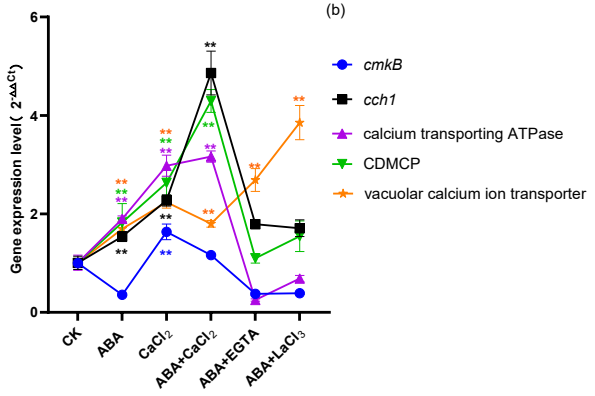
Key words: Ganoderic triterpenoids, Abscisic acid, Cytosolic Ca^{2+}, Antioxidant defense abilities

Research Summary

This paper mainly focused on the effects of abscisic acid-mediated cytosolic Ca^{2+} on accumulation of triterpenoids of *G. lucidum*, and summarized the key roles they played in the following aspects:

- **Abscisic acid-mediated cytosolic Ca^{2+} treatment**
- **Regulation of triterpenoid accumulation and related gene expression of *G. lucidum***
- **Cytosolic Ca^{2+} concentration and related gene expression of Ca^{2+} signaling**
- **Antioxidant defense abilities**





Innovation points

- **ABA treatment activated cytosolic Ca^{2+} channels.**
- **Under ABA mediation, exogenous Ca^{2+} donor and inhibitors directly affected the cytosolic Ca^{2+} concentration and related gene expression in Ca^{2+} signaling.**
- **ABA-mediated cytosolic Ca^{2+} played a crucial regulatory role in triterpenoid biosynthesis of *G. lucidum*.**
- **ABA-mediated cytosolic Ca^{2+} also affected the antioxidant defense abilities of mycelium.**