distribution, and activity of polyphenol oxidase enzyme as well as phenolics accumulation in plants.[6] Moreover, it has been shown that a group of phenolics, flavonoids, play an important role in development of plants due to regulation of auxin transport.[53]

CONCLUSION

The objective of this study was to evaluate the correlation between polyphenol oxidase activity and phenolics content in different physiologic stages of saffron corm. Despite the importance of polyphenol oxidase enzyme in plants, there have been limited studies on saffron corm. As described above, polyphenol oxidase has been purified using DEAE-Sephadex A_{25} column and kinetic characteristics of enzyme were determined. Also, two distinct isoforms of enzyme have been identified in both dormant and waking corms with molecular masses of 70 and 54 kDa. The findings presented here show an inverse correlation between polyphenol oxidase enzyme activity and phenolics content in dormancy and waking stages of *C. sativus* corms. The higher amount of phenols in waking stage suggests the importance of phenolics in germination. In addition, the lower content of phenolics in dormancy can be due to oxidation by polyphenol oxidase enzyme, which showed higher activity and catalytic efficiency during dormancy.

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Conflicts of interest

There are no conflicts of interest

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