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In vivo antioxidant activity of rabbiteye blueberry (*Vaccinium ashei* cv. 'Brightwell') anthocyanin extracts

Key words: **Blueberry anthocyanins; In vivo antioxidant activity; SOD; GSH-PX; MDA**

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Research Summary

This research article mainly focused on the antioxidant activity of blueberry anthocyanin extracts *in vivo*, and the antioxidant activities of different tissues from mice are investigated with the following aspects:

- **Total antioxidant capacity (T-AOC)**
- **The antioxidant enzymes (SOD and GSH-PX)**
- **Malondialdehyde levels (MDA)**
- **Effects of BAE concentrations**
- **Effects of BAE administration time**



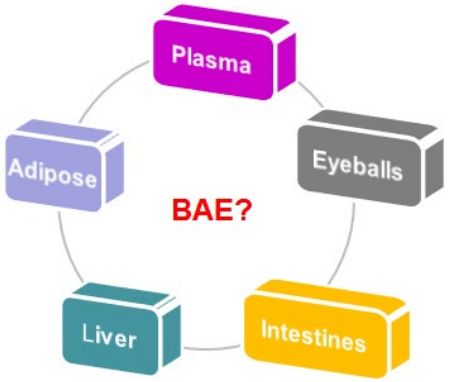
Vaccinium ashei cv. Brightwell



blueberry anthocyanin extract (BAE)



C57BL/6J male mice



Innovation points

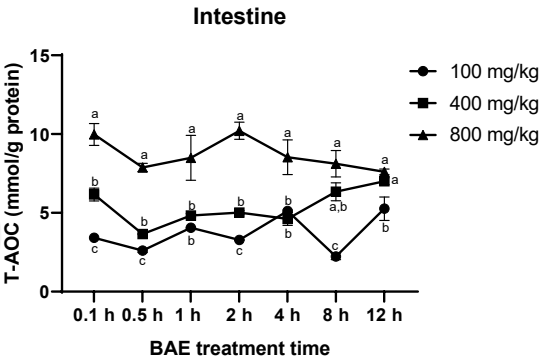
- **Investigation** of five different mouse tissues' *in vivo* antioxidant activity of blueberry anthocyanin extracts.

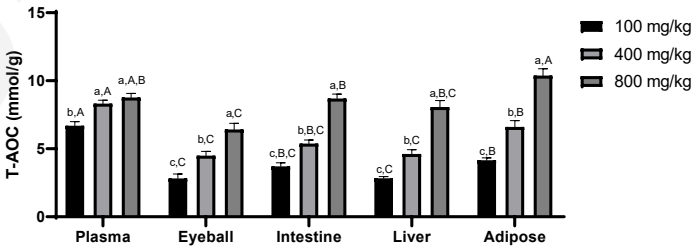
- **Summary** of dose-dependent antioxidant activity of BAE and its mechanism of increasing T-AOC by the activation of SOD and GSH-PX.

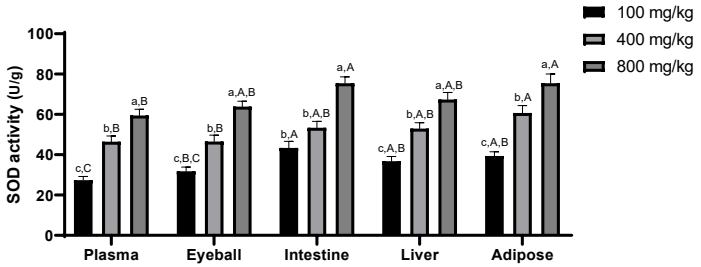
- **Emphasis** of potential blueberry anthocyanins' potential in the development of functional foods or nutraceuticals.

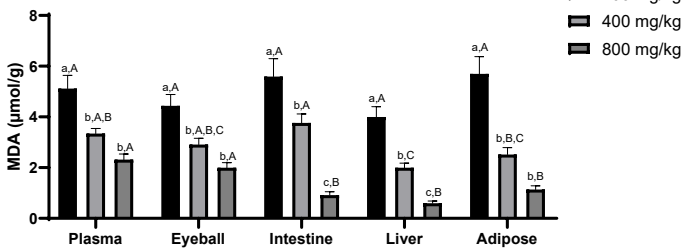
In Vivo Antioxidant Activity

✓ T-AOC ↑
✓ SOD ↑
✓ GSH-PX ↑
✓ MDA ↓









Innovation points

A series of comprehensive figures were generated to summarize the antioxidant activity of blueberry anthocyanin extracts *in vivo*.

Figure 1 | Changes in T-AOC of different tissues.

Figure 2 | Changes in SOD and GSH-PX of different tissues.

Figure 3 | Changes in MDA of different tissues.

Figure 4 | Changes in Cu,Zn-SOD, Mn-SOD, and GPX mRNA of different tissues.

Figure 5 | Effects of different concentrations of BAE.

Figure 6 | Effects of different treatment time of BAE.

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