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Inhibitory effect of Gardenblue blueberry (*Vaccinium ashei* Reade) anthocyanin extracts on lipopolysaccharide-stimulated inflammatory response in RAW 264.7 cells

Key words: Gardenblue Blueberry (*Vaccinium ashei* Reade) anthocyanin extracts (GBBAEs), anti-inflammatory, RAW 264.7, COX-2, NF-κBp65

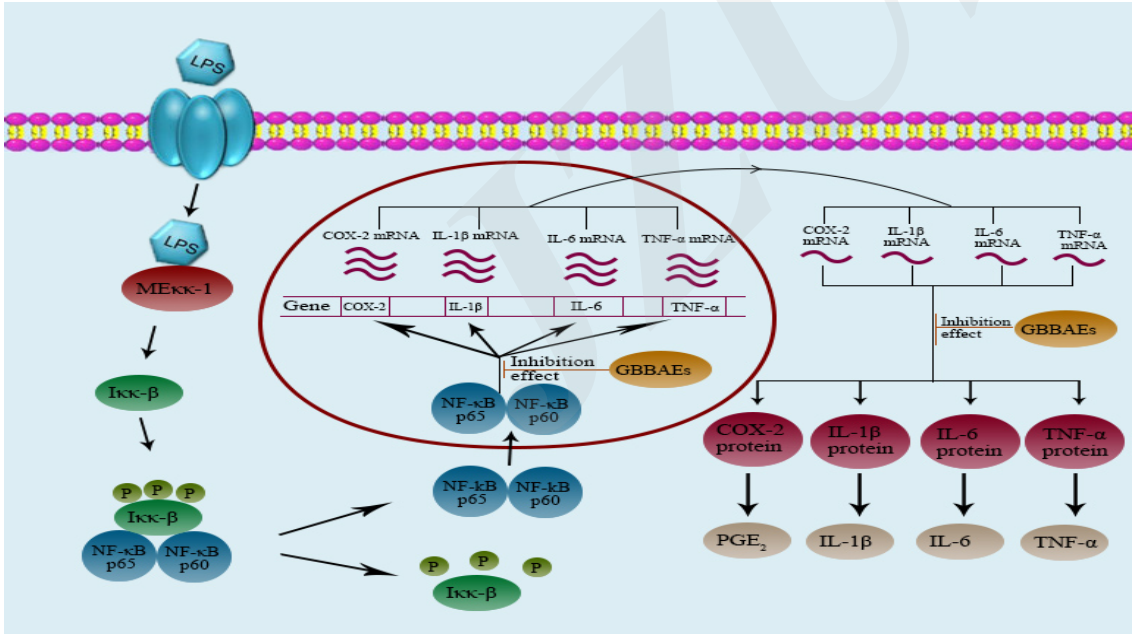
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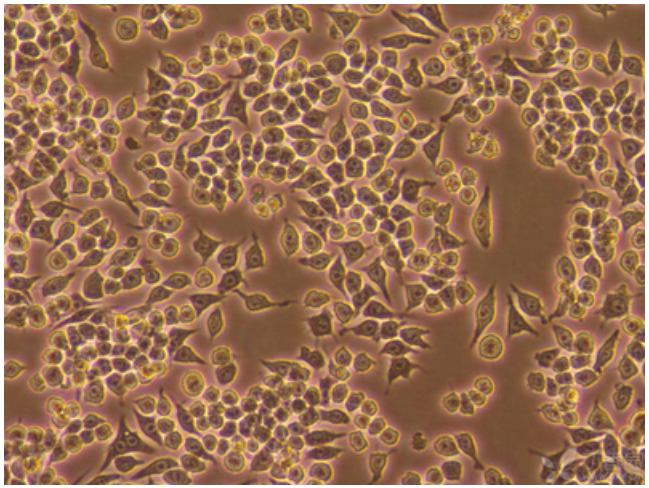
Research Summary

This study mainly concertrated on the anti-inflammatory capacity and mechanisms of Gardenblue Blueberry (*Vaccinium ashei* Reade) anthocyanin extracts in lipopolysaccharide-stimulated RAW 264.7 cells in vitro in the following aspects:

- **cell growth and cytotoxicity**
- **the production of different cytokines**
- **the mRNA expression levels**
- **the relative proteins expression levels**





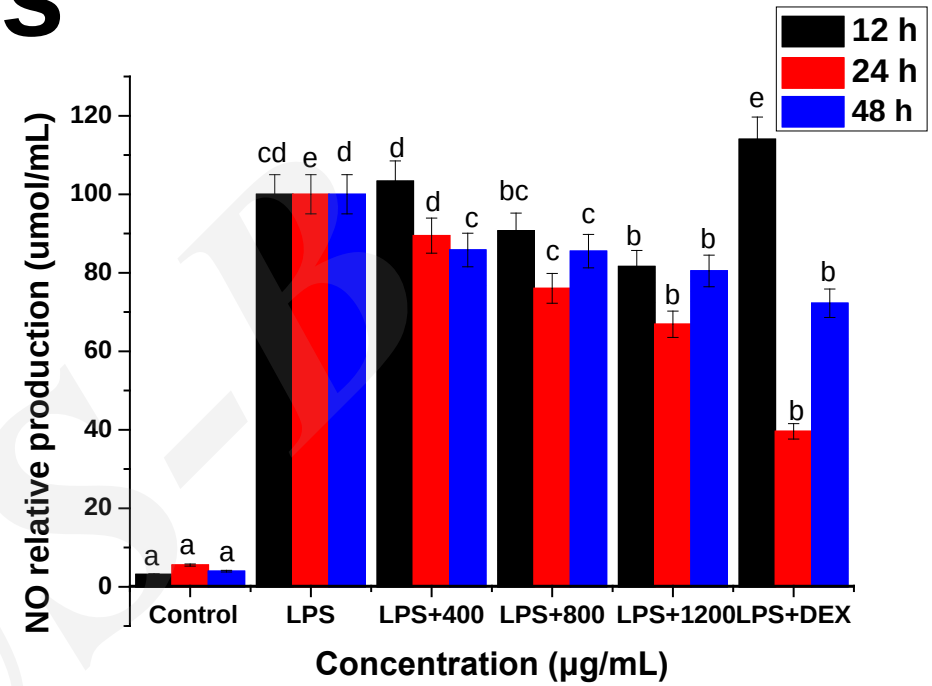


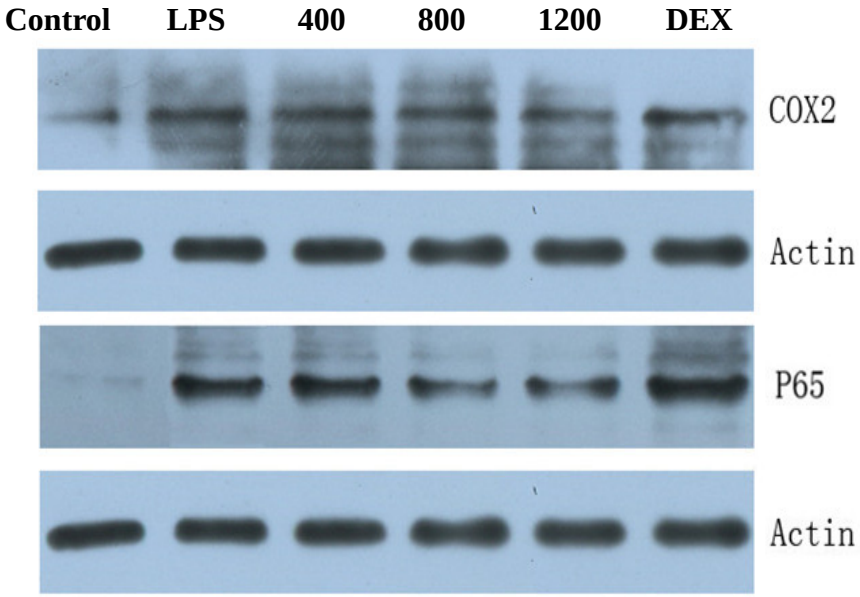
Innovation points

- **Introduction** of the potential and functional use of blueberries in the treatment of inflammatory diseases.

- **Summary** of the cytotoxicity , the production of different cytokines, mRNA and protein expression expression levels in LPS-stimulated murine RAW 264.7 cells.

- **Emphasis** of the mechanisms of anti-inflammatory through NF-κB pathways in Gradenblue Blueberry (*Vaccinium ashei* Reade) anthocyanin extracts for the first time.





Innovation points

A series of comprehensive figures were generated to explored the anti-inflammatory mechanisms and pathways of Gardenblue Blueberry (*Vaccinium ashei* Reade) anthocyanin extracts in RAW 264.7 cells in vitro.

Figure 1| Identification and analysis of major compounds in GBBAEs.

Figure 2| Effects of GBBAEs on cell viability of murine RAW 264.7cells.

Figure 3| Effects of GBBAEs on production of NO.

Figure 4| Effects of GBBAEs on secretion of different cytokines.

Figure 5| Effects of GBBAEs on mRNA and the protein expression expression levels.

Figure 6| The schematic diagram about the pathway of GBBAEs.

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