

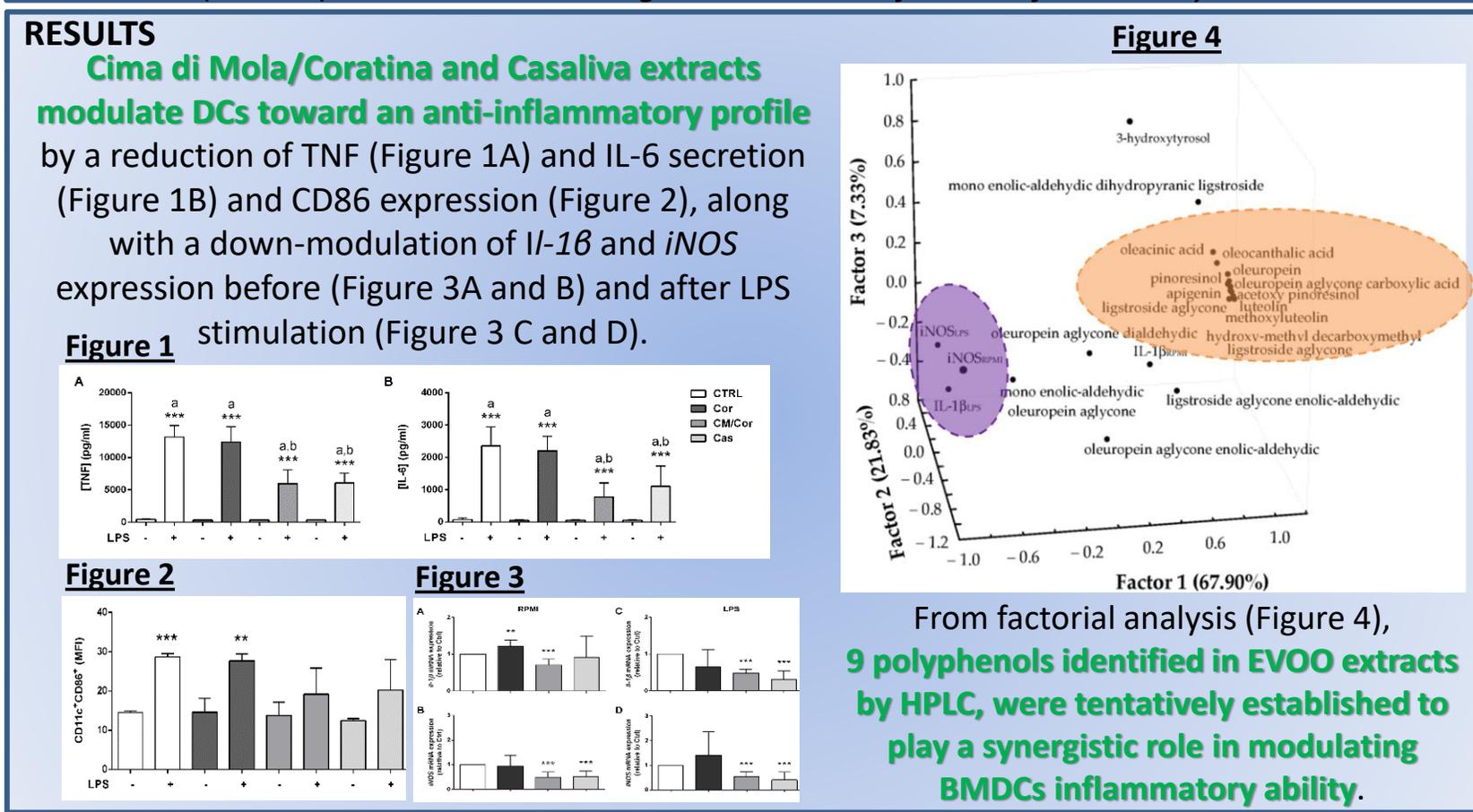
Extra virgin olive oil extracts modulate the inflammatory ability of murine dendritic cells based on their polyphenols pattern: correlation between chemical composition and biological function

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ABSTRACT: The anti-inflammatory activities of extra virgin olive oil (EVOO) in the context of chronic diseases are well investigated even if studies using dendritic cells (DCs), acting as a crosstalk between the innate and the adaptive immune response, are scanty. Thus, we studied the ability of three EVOO extracts (cv. Coratina, Cima di Mola/Coratina, and Casaliva), characterized by a different polyphenols pattern, to regulate murine bone marrow derived DCs (BMDCs) maturation in resting condition and after an inflammatory stimulus.



CONCLUSIONS

- A specific polyphenols pattern (including some **secoiridoids, lignans and flavonoids**) in EVOO extracts seemed to be **synergistically able to modulate the maturational process of BMDCs toward an anti-inflammatory profile** after LPS stimulation, thus potentially reducing the risk of chronic inflammation.
- **Polyphenols' chemical composition, along with their quantity, is crucial for the induction of the biological effect.**

