

Highlights

- Palmitoleic acid (POA) supplementation reduced serum insulin and improved insulin tolerance;
- Livers of POA-treated mice exhibited less steatosis and inflammation;
- POA lowered the liver M1 macrophages population and the expression of inflammation-related immune-cell markers and mediators;
- POA increased PPAR- γ , a transcription factor that regulates anti-inflammatory effects in macrophages;
- However, POA reduced liver inflammation even in mice that lack PPAR- γ expression in myeloid cells;
- We concluded that POA controls liver inflammation triggered by fat accumulation through induction of M2a macrophages independently of PPAR- γ in myeloid cells.