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Student Session

Enterococcus faecalis extracts FK-23 modulates Propionibacterium acnes-induced lipogenesis in human sebocytes SZ-95 cells

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It is generally accepted that *Propionibacterium acnes* (P. Acne) is involved in the development of acne, while the mechanisms of sebaceous lipogenesis and its control is unclear. *Enterococcus faecalis* FK-23 had shown to promote an anti-inflammatory action in several animal models. In the current study, we examined whether FK-23 modulate lipogenesis in sebocytes. FK-23 stimulated lipogenesis, while inhibited them in the presence of P. Acne. FK-23 acutely inhibited acetyl-CoA carboxylase (ACC) phosphorylation levels, while stimulated them with P. Acne. FK-23 stimulated PPAR γ expression and activity, while inhibited them with P. Acne as pioglitazone did. These combined evidences demonstrated that the dual action by FK-23 on lipogenesis should reflect differentiation machinery prior to PPAR γ , leading to producing adequate levels of sebum.