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Translational Potential of Luteolin in Ulcerative Colitis: A Systematic Review and Meta-Analysis of Preclinical Studies

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Data analysis.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 May 2025 and was last updated on 20 May 2025.

INTRODUCTION

Review question / Objective Can luteolin alleviate experimental colitis?

Condition being studied Ulcerative colitis is a chronic intestinal inflammation characterized by recurrent attacks. Intestinal mucosal destruction, persistent intestinal inflammation, and disturbances in intestinal flora are its important pathological features.

METHODS

Participant or population Experimental colitis animals, regardless of modeling scheme.

Intervention Use of luteolin, regardless of dose and administration method.

Comparator Vehicle or blank control.

Study designs to be included Randomized controlled animal study.

Eligibility criteria Experimental colitis intervention with luteolin, reporting the primary outcome measures.

Information sources Pubmed, Science Direct, Web of science, Embase.

Main outcome(s) Histological score, body weight change, colon length, disease activity index.

Quality assessment / Risk of bias analysis Two authors independently aused the Scale for the Assessment of Risk in Laboratory Animal Experiments. Any disagreements during the assessment process were resolved through consultation with the corresponding author.

Strategy of data synthesis A p-value 50%, the random-effects model was applied.

Subgroup analysis Subgroup analyses were performed based on animal species, modeling methods, dosage level, and treatment duration.

Sensitivity analysis Egger test was used to assess publication bias, and the trim-and-fill method was applied if bias was detected.

Country(ies) involved China.

Keywords Luteolin, Ulcerative Colitis, Systematic Review, Meta Analysis, Animal Model.

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