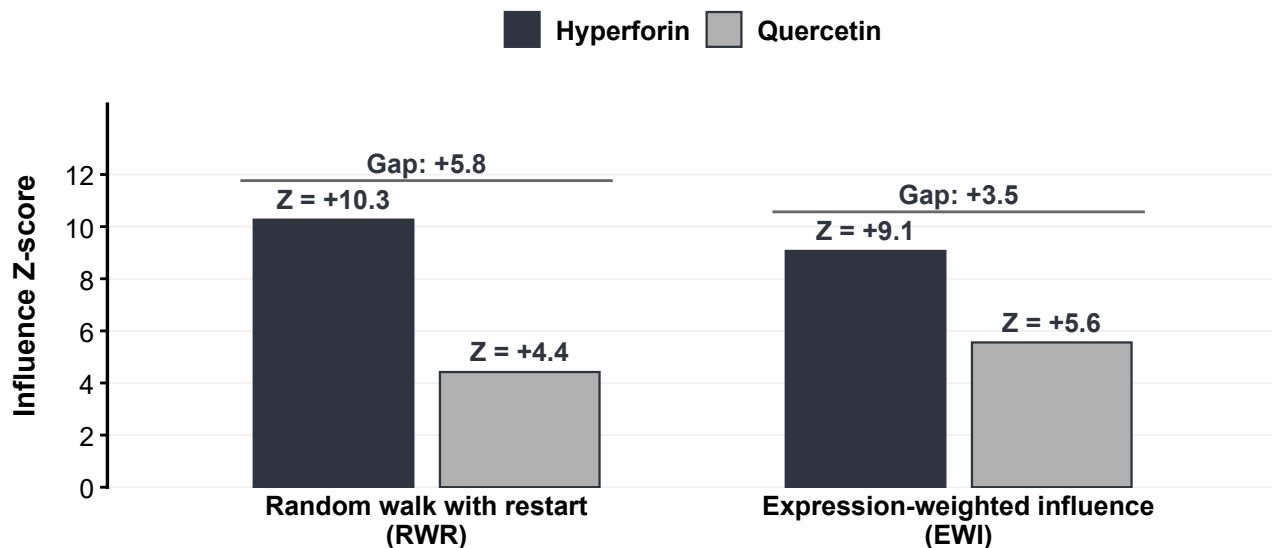


# Hyperforin's advantage persists under expression weighting

The gap narrows but Hyperforin still leads in both methods



[BIOLOGICAL VALIDATION] Expression-weighted influence (EWI) tests whether Hyperforin's advantage reflects liver-specific biology or network topology alone. GTEx v8 liver expression (TPM  $\geq 1$ ) weights edge transitions, channeling signal preferentially through liver-expressed neighbors. The gap narrows from +5.8 (RWR) to +3.5 (EWI) as Quercetin's high-expression targets (e.g., CFB at 1115 TPM) improve its signal propagation—yet Hyperforin's lead persists. Data: STRING v12.0 ( $\geq 900$ ),  $n = 1,000$  degree-matched permutations per method.