



## Chemical Identification of *Cacumen Platycladi* by Molecular Networking and its Anti-colorectal Cancer Effects

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**SUMMARY.** *Cacumen Platycladi* (CP) has been utilized in China as a traditional medicine to prevent and treat haemorrhage diseases. However, the chemical profiling and anti-colorectal cancer effects of CP have not yet been fully decoded. In this study, the comprehensive profiling and characterizing of multi-components of CP were performed by applying an untargeted UHPLC-QTOF-MS-based multi-informative molecular networking strategy. 180 compounds were unambiguously or reasonably identified, including flavonoids, flavonoid glycosides, phenolic acids, phenolic glycosides, lignans, and so on. Some of them were previously unreported in CP. Simultaneously, the anti-colorectal cancer activity of various solvent extracts of CP was examined. The extracts of CP have better inhibition effects on the proliferation of HT-29, Caco-2 and SW620 human colon cancer cells. Collectively, our results can serve as references for targeted extracting potential active compounds of CP on colorectal cancer, and pave the way to clarify the material basis of efficacy.

**RESUMEN.** *Cacumen Platycladi* (CP) se ha utilizado en China como medicina tradicional para prevenir y tratar enfermedades hemorrágicas. Sin embargo, el perfil químico y los efectos anticancerígenos de la PC aún no se han decodificado por completo. En este estudio, se realizó el perfilado integral y la caracterización de múltiples componentes de CP mediante la aplicación de una estrategia de redes moleculares multiinformativa basada en UHPLC-QTOF-MS no dirigida. Se identificaron de manera inequívoca o razonable 180 compuestos, incluidos flavonoides, glucósidos de flavonoides, ácidos fenólicos, glucósidos fenólicos, lignanos, etc. Algunos de ellos no habían sido reportados previamente en CP. Al mismo tiempo, se examinó la actividad anticancerígena colorrectal de varios extractos solventes de CP. Los extractos de CP tienen mejores efectos de inhibición sobre la proliferación de células de cáncer de colon humano HT-29, Caco-2 y SW620. En conjunto, nuestros resultados pueden servir como referencia para la extracción dirigida de posibles compuestos activos de CP en el cáncer colorrectal y allanar el camino para aclarar la base material de la eficacia.

**KEY WORDS:** anti-colorectal cancer, *cacumen platycladi*, chemical profiles, molecular networking, UHPLC-QTOF-MS.

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