



## Parthenolide Attenuates Atherosclerosis Progression via Autophagy Induction through Caspase-1 Inhibition

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**SUMMARY.** Medium- and large-size arteries are affected by atherosclerosis, a chronic inflammatory and immune disorder that first thickens the artery wall because of the accumulation of inflammatory cells, and formation of fatty streaks that form fibrous capsules with macrophages at the area of damage. The pathophysiology of CVD is mostly influenced by atherosclerosis. Atherosclerosis is fundamentally influenced by autophagy, which opens up new avenues for its therapy. The present study evaluates the effect of Parthenolide in retarding progression of atherosclerosis. The results find that parthenolide significantly reduce oxidative stress (plasma f2-isopostane), tissue p62, caspase-1 mRNA expression and significant reduction in lesion severity degree (initial). These finding suggest that parthenolide retarding progression of atherosclerosis.

**RESUMEN.** Las arterias de tamaño mediano y grande se ven afectadas por la aterosclerosis, un trastorno inflamatorio e inmunitario crónico que primero engrosa la pared de la arteria debido a la acumulación de células inflamatorias y la formación de estrías grasas que forman cápsulas fibrosas con macrófagos en el área dañada. La fisiopatología de la ECV está influenciada principalmente por la aterosclerosis. La aterosclerosis está influenciada fundamentalmente por la autofagia, lo que abre nuevas vías para su terapia. El presente estudio evalúa el efecto de parthenolide en el retraso de la progresión de la aterosclerosis. Los resultados encuentran que parthenolide reduce significativamente el estrés oxidativo (plasma f2-isopostano), p62 tisular, expresión de ARNm de caspasa-1 y una reducción significativa en el grado de gravedad de la lesión (inicial). Estos hallazgos sugieren que la partenolida retarda la progresión de la aterosclerosis.

**KEY WORDS:** atherosclerosis, autophagy, caspase-1, oxidative stress. Parthenolide.

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