Synthesis of novel cinnamic acid derivatives as possible anti-Alzheimer agents

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Cinnamic acid and its derivatives display a broad spectrum of biological activities and they have been studied as anti-AD agents due to their anti-neuroinflammatory properties and their ability to inhibit Aβ aggregation by scavenging oxidants. [1] Considering the poor drugability of carboxylic acids and the limited ability of cinnamic acids to cross the blood-brain barrier, we intended to replace the carboxyl group with other structures. Therefore, the synthesis of cinnamic acid derivatives containing sulfone and thiazole portion was devised. Additionally, Ugi 4-component adducts using cinnamic acids were elaborated (Figure 1).

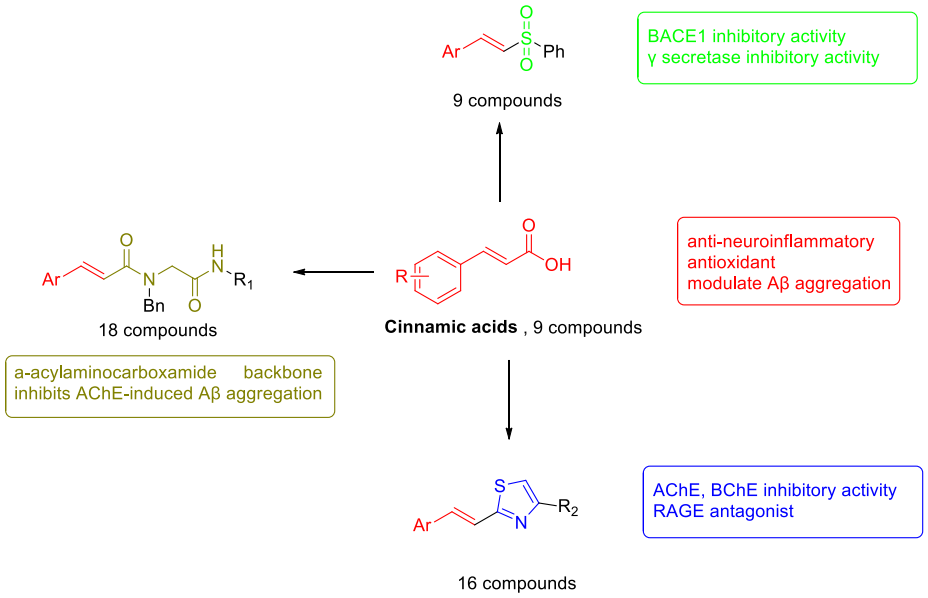

Fig. 1: Schematic representation of the cinnamic acid derivatives.

References:

1. N. Ruwizhi and B. A. Aderibigbe , Cinnamic Acid Derivatives and Their Biological Efficacy, *Int. J. Mol. Sci*. **2020**, *21*, 5712-5746