

# Chemical and Antiviral Study on Alkaloids from *Papaver pseudocanescens* M. Pop.

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The phytochemical investigation of the aerial parts of *Papaver pseudocanescens* M. Pop. of Mongolian origin resulted in the isolation and structural elucidation of 8 alkaloids of the isoquinoline and promorphinan type. 8,14-Dihydroamurine, 8,14-dihydroflavinantine, and flavinantine are promorphinanes. Alborine, mecambidine, and mecambidine methohydroxide are retroprotoberberines. Amurensinine is an isopavine alkaloid and *O*-methyarmepavine is a benzylisoquinoline alkaloid. *O*-Methyarmepavine is a new alkaloid for the genus *Papaver*. Promorphinan-type alkaloids have been found for the first time in the species. All structures were established by physical and spectral analysis. As a first attempt to describe some of the biological activities of these alkaloids, the antiviral effect was tested against the *in vitro* replication of several viruses which belong to different taxonomic groups and represent significant human pathogens. Based on the results, the conclusion could be drawn that particular alkaloids from *P. pseudocanescens* possess selective antiviral effects against the replication of poliovirus 1 and human rhinovirus 14, two viruses from the *Enterovirus* genus of the Picornaviridae family.

**Key words:** *Papaver pseudocanescens* M. Pop., Alkaloids, Antiviral Activity