

## Determination of mitragynine bound opioid receptors.

### ABSTRACT

Mitragyna Speciosa Korth from Rubiaceae family is a tropical plant indigenous to Southeast Asia particularly in Thailand, Peninsular of Malaysia and Indonesia. The leaves have been used by natives for their opium-like effect and cocaine-like stimulant ability to combat fatigue and enhance tolerance to hard work. This study is designed to examine the binding affinity and selectivity of mitragynine towards opioid receptors namely  $\mu$ -,  $\delta$ -, and  $\kappa$ -receptors and the density of those opioid receptors in brain tissues, spinal cord, duodenum, ileum and vas deferens. Our results suggest that mitragynine has a high affinity to the  $\mu$ -opioid receptors and brain has the highest density of opioid receptors.

**Keyword:** Mitragyna speciosa; Mitragynine; Opioid; Receptors; binding affinity.