

Anticlastogenic potential of pigeonpea (*Cajanus cajan* (L.) Millsp.) in white mice (*Mus musculus* L.)

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Abstract

This study investigated the anticlastogenic potential of International Crop Research Institute for Semi-Arid Tropics (ICRISAT) bred pigeonpea utilizing the micronucleus test using white mice models to determine the number of micronucleated polychromatic erythrocytes (MPCEs) in treated and non-treated white mice at the Pampanga State Agricultural University (PSAU), Magalang, Pampanga, Philippines. Furthermore, the study disclose if pigeonpea has detrimental effects on the vital signs and some vital organs such as lungs, heart, liver, kidney and intestine. Based on the study, pigeonpea ICPL 87051 leaves decoction have anticlastogenic effects. This might be attributed to the presence of flavonoids, tannins and stilbenes in pigeonpea leaves that has the ability to lower MPCEs in treated and non-treated white mice. In terms of its effects on the vital signs namely heart rate, respiratory rate and temperature, results showed that pigeonpea did not cause heart palpitation, tachycardia, hyperpnea and hypothermia. Treatments T+ (Positive control, TCN) and T2 (Pigeonpea leaves extract of 0.5 per 20 kg body weight + TCN) have normal heart, liver, kidney, lungs and intestines.

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