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Flavonoid Fraction of *Cajanus cajan* Prohibited The Mutagenic Properties of Cyclophosphamide in Mice *In Vivo*

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Highlights:

Cajanus cajan (L) is a member of the Fabaceae family, contains many bioactive components. Therefore, we studied the efficacy of Flavonoid fractions of *Cajanus cajan* (FFCC) to prohibit mutagenicity generated by cyclophosphamide (CP) in mice *in vivo* as follows:

- Seven extracted and identified flavonoid fractions were used.
- FFCC reduced cytotoxicity induced by CP remarkably.
- FFCC reduced chromosome aberrations induced by CP in mice somatic and germ cells.
- FFCC reduced CP-induced DNA damage in mouse bone marrow as assessed by a comet assay.

Abstract: *Cajanus cajan* (L.) is a Pigeon pea cultivated in tropical and subtropical areas. It contains many bioactive components. The present study aimed to assess the antimutagenic efficacy of a flavonoid fraction of *Cajanus cajan* (FFCC) to reduce cytotoxicity and genotoxicity induced by cyclophosphamide (CP). We assessed genotoxic and cytotoxic effects using chromosome aberration, in mouse bone-marrow cells and spermatocytes, cell viability and DNA