

Different responses to doxorubicin-induced chromosome aberrations in Brazilian deer species

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ABSTRACT. The tendency toward chromosome fragility is one of the theories that may explain chromosome variation in brocket deer species (genus *Mazama*). We tested doxorubicin as an inducer of chromosome aberrations in lymphocytes of three brocket deer species, *Mazama gouazoubira*, *M. americana* and *M. nana*, compared to the marsh deer, *Blastocerus dichotomus*. Doxorubicin, at a concentration of 0.25 µg/mL, induced chromosome aberrations and fragile sites in all four species; the highest frequencies were seen in *M. gouazoubira*; they were lowest in *B. dichotomus* and intermediate in *M. americana* and *M. nana*. These results were expected based on previous karyotypic studies, but they failed to explain the higher sensitivity seen in *M. gouazoubira*. This may be because not all the aberrations and fragile sites are related to chromosome evolution in brocket deer; other factors, such as environmental influences, may be involved in chromosome fragility.

Key words: *Blastocerus*; Cervidae; Chromosome evolution; Chromosome fragility; *Mazama*