

EFFECTS OF SUB-FRACTION 3 FROM HEXANIC FRACTION OF *Pterodon pubescens* SEEDS OIL (PpO) ON HUMAN LEUKEMIC CELL K562

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*Pterodon pubescens* (Sucupira Branca) is a Brazilian plant known by the anti-arthritic properties of its seeds extracts. The PpO, its hexanic fraction (HF) and the HF sub-fraction 3 (SF3) have inhibited *in vitro* lymphocyte proliferation. This effect may be related to the control of exacerbated immune response on arthritic patients. In this work, we evaluated the effects of SF3 on the proliferation of a human leukemic cell (K562). The HF, obtained by liquid-liquid partition from PpO (extracted with ethanol 100%) in hexane, was further sub-fractionated by flash chromatography on silica column (four sub-fractions). The growth curve, cell cycle and apoptosis (cell size and membrane permeability) were evaluated. Cells were treated with propidium iodide and RNase for cell cycle analysis by flow cytometry. We observed a concentration and time-dependent inhibition of K562 proliferation by SF3 which induced at 30µg/ml significant proliferation inhibition (83±19%) since 24h of culture, reduction of cells relative number in S (60%) and G2/M (66%) phases, and increase (100%) in G0-G1/S ratio suggesting increase of cells in G1 phase of cell cycle (36h). We also observed reduction of 55% on absolute number of viable cells, probably due to apoptosis. In summary, SF3 seems to inhibit K562 proliferation impairing the cell cycle progression between G1 and S phases and inducing apoptosis. Supported by CAPES, FAPERJ