Meloxicam, a Cyclooxygenase-2 Inhibitor, Stimulates Myelopoiesis in Irradiated Mice Via Induction of G-CSF

M. Hofer\textsuperscript{a}, M. Pospěğl\textsuperscript{a}, V. Znojil\textsuperscript{b}, A. Vacek\textsuperscript{a}, J. Hol\textsuperscript{a} and D. Streitov\textsuperscript{a}

\textsuperscript{a}Inst. Biophys., Acad. Sci. Czech Rep., Královopolsk\u00e1 135, 61265 Brno, Czech Republic;
\textsuperscript{b}Inst. Pathophysiol., Fac. Med., Masaryk Univ., U kamenice 5, 62500 Brno, Czech Republic

hofer@ibp.cz

Meloxicam, a non-steroidal anti-inflammatory drug acting on the principle of cyclooxygenase-2 inhibition and having an improved side-effect profile in terms of the gastrointestinal toxicity, has been found to stimulate hematopoiesis in whole-body sub-lethally or mid-lethally gamma-irradiated mice. Studies on mechanisms of the hematopoiesis-stimulating action of meloxicam have revealed elevated serum levels of granulocyte colony-stimulating factor (G-CSF) within the interval of 24 hours after the administration of the drug. Induction of production of G-CSF may be, thus, supposed to be at least partially responsible for the observed beneficial effects of meloxicam in mice with radiation-induced myelosuppression. This work was supported by the Grant Agency of the Academy of Sciences of the Czech Republic (Grant No. 1QS500040507).