

Effect of the Peptide Bioregulator Prostamax on Human Lymphocyte Heterochromatin *in situ*

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Received April 14, 2004

Abstract—Chromatin in human lymphocytes exhibits two denaturation steps, one at $T_d^{VII} = 94.4^\circ\text{C}$ and $Q_d^{VII} = 50.8$ J/g DNA and the other at $T_d^{VIII} = 105.1^\circ\text{C}$ and $Q_d^{VIII} = 44.9$ J/g DNA. The bioregulator Prostamax (H-Lys–Glu–Asp–Pro–OH) causes heat redistribution and a shift of both endotherms toward lower temperatures by 2.9 and 1.0°C, respectively. It was assumed that the heat redistribution between endotherms VIII and VII is related to partial relaxation of the 30-nm-thick fiber into the 10-nm-thick fiber. The fact that T_d^{VII} and T_d^{VIII} of lymphocytes treated with Prostamax are somewhat lower than those for nontreated cells is associated with small structural changes in the nucleosomal organization of the 10- and 30-nm-thick fibers.

Key words: human lymphocytes, chromatin denaturation, peptide bioregulators, Prostamax