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ABSTRACTS OF VOLUNTEER PAPERS

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## Nervous control of thrombocytopoiesis.

The electric stimulation (square waves, 50 Hz, 2-12 V, implanted electrodes) of epithalamic habenular nuclei induces a significant rise of blood platelets, after a lag time of 24-32 hours. The blood platelets elevation lasts no longer than 72 hours, and then declines to preceding values. No other district of rat brain, equally stimulated, promotes a similar elevation of blood platelets. Neither melatonin nor 5'-methionin-adenosine are able to mimic the effects of habenular stimulation. Several factors may be responsible of this effect diversity; the most important of them are: 1) the permeability of bone marrow to melatonin; 2) the reactivity of megacaryocytes to melatonin; 3) the sequestration of blood platelets and leucocytes in the pulmonary capillary bed.

In many human subjects, both in good health and affected by thrombocytopenia, melatonin by mouth may promote a temporary, but significant rise of blood platelets. It is probable that other central nervous or peripheral humoral mechanisms partecipate well to blood leucocytes multiple equilibrium reactions.