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ABSTRACTS OF INVITED LECTURES,
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INDEXES

L. DI BELLA AND M.T. ROSSI

(Cattedra di Fisiologia Generale, Università di Modena, Italy)

Molecular aspects of platelet production and function

More platelets are generated *in vivo* in the presence of ATP and Melatonin (MLT), particularly in the presence of NAT (N-Acetyltransferase) inhibitors. Since human and rabbit platelets have a higher content in MLT than plasma, an active MLT synthesis by megacaryocytes and/or platelets cannot be rejected, even because megacaryocytes can generate a larger number of platelets, provided that NAT-inhibitors be present. In normally irradiated bone marrow the chemical mediators can probably modulate NAT- and Methyltransferase activity, the two enzymes bound to MLT synthesis from 5-HT. It is probably the net energetic balance of the chemical reactions that promotes the tonic contraction of megacaryocyte membrane filaments and induces the formation of platelets. MLT can probably bind at the same sites on the platelet surface which have become detached from megacaryocyte membranes and display an antiaggregative activity or a less intense adhesion of platelets to endothelial cells.