



## Mechanisms of Platelet Thrombus Formation

Guest Editor:

### **Prof. Dr. Denise Jackson**

Discipline Leader and Program  
Leader of Laboratory Medicine,  
BP147 Program Co-ordinator,  
Head of Thrombosis and  
Vascular Diseases Laboratory,  
School of Health and Biomedical  
Sciences, RMIT University, PO  
Box 71, Bundoora, Victoria 3083,  
Australia

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### **Message from the Guest Editor**

Dear Colleagues,

Platelets are normally free flowing in a blood vessel. However, in the event of vessel injury or disease such as atherosclerotic plaques, platelets will initially tether, via exposed extracellular matrix ligands with respective platelet receptors, then adhesive events occur, followed by activation through signaling events. These inside out signaling events lead to the conversion of the major platelet integrin  $\alpha\text{IIb}\beta\text{3}$  from a resting to an activated state, where it will bind its natural ligands, including fibrinogen, to create stable platelet aggregates. The numerous steps involved in platelet thrombus formation are regulated by different receptors, ligands, signaling molecules, rheological biomechanical forces, and soluble agonist dependent mechanisms. These events regulate not only thrombus growth and stability but also the propagation of blood clots formed.

Prof. Dr. Denise Jackson

*Guest Editor*





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### Prof. Dr. Maurizio Battino

Department of  
Odontostomatologic and  
Specialized Clinical Sciences,  
Sez-Biochimica, Faculty of  
Medicine, Università Politecnica  
delle Marche, Via Ranieri 65,  
60100 Ancona, Italy

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*International Journal of Molecular  
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MDPI, Grosspeteranlage 5  
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