

GTH 2026: Connected Science – Advanced Solutions

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Research into the molecular mechanisms of hereditary haemostatic disorders has provided significant insights into the fundamental mechanisms of the haemostatic system. Examples of such disorders include haemophilia A and von Willebrand disease. Meanwhile, findings from basic science research have enabled the development of new therapeutic approaches. One such approach is gene therapy for haemophilia.

In his review of the current state of gene therapy, **Miesbach**¹ summarises the approaches that have now been established for the routine treatment of this rare monogenic disease. It is particularly impressive that individual gene therapy protocols can achieve the required long-term reduction in bleeding risk. This paper also demonstrates that experience gained in haemophilia gene therapy can be crucial in developing treatments for other hereditary diseases.

The development of neutralising antibodies remains a significant side effect of haemophilia A therapy, impairing the quality of treatment. Drawing on the current understanding of immune tolerance development, **Abdelmageed et al.**² describe the molecular reactions underlying inhibitor formation, while also identifying potential new therapeutic approaches.

In her contribution to the structural analysis of von Willebrand factor, **Brehm**³ reveals how elucidating molecular structures can transform our understanding of complex biomolecules' functions in ways that seemed unimaginable just a few years ago. As von Willebrand factor is a molecule whose biological functions are affected by physicochemical forces, the findings of modern structural biology are of particular interest in this context.

The haemostasis system and its reactions are linked to many other biological systems. In her contribution on the role of von Willebrand factor in inflammatory reactions, **Yadegari**⁴ highlights the bidirectional interactions between the haemostasis system and the inflammatory system.

Platelets are another component of the haemostatic system whose biological reactions influence a wide range of cellular processes. Under the heading 'Role of platelets beyond haemostasis', **Reusswig and Deppermann**⁵ summarise platelet reactions that extend beyond haemostasis. Using aortic aneurysms as an example, **Feige et al.**⁶ demonstrate the impact that platelet-induced tissue degeneration can have on vascular wall homeostasis.

Thrombin formation is a crucial biological process in the activation and regulation of the haemostatic system. In their article, **Pezeskpoor et al.**⁷ discuss the potential advantages of this diagnostic method based on a thorough methodological description of the thrombosis generation assay. However, he also addresses the limitations that have prevented its widespread use as a diagnostic tool to date.

In their article 'The management of splanchnic venous thrombosis: an update', **Rühl and Reda**⁸ discuss a clinically relevant issue. Unlike secondary prophylaxis for deep vein thrombosis, there is limited data on long-term anticoagulation management for this condition. In this context, the article provides a comprehensive summary of the available data and offers valuable guidance for all healthcare professionals caring for patients with thrombophilia.

Finally, we would like to express our sincere thanks to all the authors for their contributions.

Conflict of Interest

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References

- 1 Miesbach W. Gene Therapy: Current Status and Future Directions. *Hamostaseologie* 2026;46:10–16
- 2 Abdelmageed A, Lisowski C, Becker-Gotot J. Immune Response Mechanisms in Haemophilia A. *Hamostaseologie* 2026;46:17–23
- 3 Brehm M. Structural Analysis of von Willebrand Factor. *Hamostaseologie* 2026;46:24–33
- 4 Yadegari H. Von Willebrand Factor at the Crossroads of Hemostasis and Inflammation. *Hamostaseologie* 2026;46:34–43
- 5 Reusswig F, Deppermann C. The Role of Platelets Beyond hemostasis. *Hamostaseologie* 2026;46:44–52
- 6 Feige T, Bosbach A, Krott K, Elvers M. Role of platelets in abdominal aortic aneurysm formation and progression: New aspects from experimental and clinical approaches. *Hamostaseologie* 2026;46:53–64
- 7 Pezeshkpoor B, Oldenburg J, Müller J. Thrombin Generation Assays: Possibilities and Limitations. *Hamostaseologie* 2026;46:65–70
- 8 Rühl H, Reda S. Management of Splanchnic Venous Thrombosis: An Update. *Hamostaseologie* 2026;46:71–77

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