Disintegrins are a family of small proteins (45–84 amino acids in length) from viper venoms that function as potent inhibitors of both platelet aggregation and integrin-dependent cell adhesion.

Disintegrins work by countering the blood clotting steps, inhibiting the clumping of platelets. They interact with the beta-1 and -3 families of integrins receptors. Integrins are cell receptors involved in cell–cell and cell–extracellular matrix interactions, serving as the final common pathway leading to aggregation via formation of platelet–platelet bridges, which are essential in thrombosis and haemostasis. Disintegrins contain an RGD (Arg-Gly-Asp) or KGD (Lys-Gly-Asp) sequence motif that binds specifically to integrin IIb-IIIa receptors on the platelet surface, thereby blocking the binding of fibrinogen to the receptor–glycoprotein complex of activated platelets. Disintegrins act as receptor antagonists, inhibiting aggregation induced by ADP, thrombin, platelet-activating factor and collagen.

The role of disintegrin in preventing blood coagulation renders it of medical interest, particularly with regard to its use as an anti-coagulant.