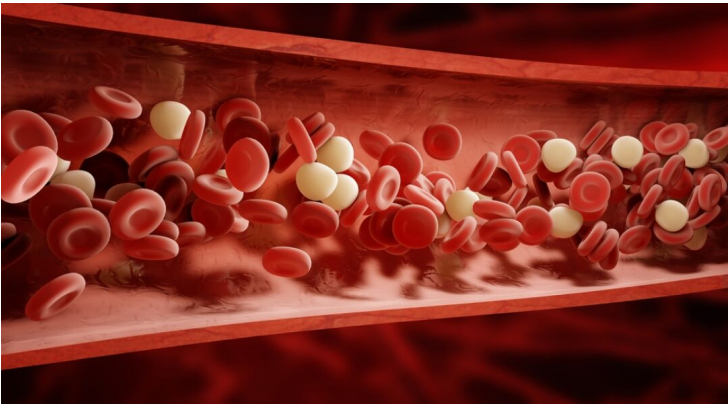


## Singapore develops anti-coagulant drugs from tick parasite

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### With high anti-clotting efficacy and minimal bleeding



A team of researchers from the National University of Singapore (NUS) has developed a series of thrombin inhibitors to be potent anti-coagulants based on sequences of inhibitors of blood coagulation enzyme thrombin found in the tropical bont tick *Amblyomma variegatum*.

The team searched tick saliva for novel anti-clotting proteins and then modified the amino acid sequences of these proteins to produce next-generation anti-coagulants with high anti-clotting efficacy but minimal bleeding in small and large animal models of blood vessel clotting.

Anti-coagulants are used in conditions where there is an increased propensity to form blood clots in our body depriving blood supplies to important tissues and organs, otherwise known as thrombosis. These medications are needed in many diseases caused by blood clots including heart attacks, strokes, deep vein thrombosis, pulmonary embolism and even some severe complications caused by SARSCoV-2 infection.

These next-generation anti-coagulants will now need to be tested in human trials to determine if they can effectively counteract clotting without the bleeding side effects of currently available anti-coagulants.