

## LUPUS ANTICOAGULANT

**Lupus Anticoagulants (LA)** were first described by Conley and Hartmann in 1952. These circulating antibodies were seen in patients with disseminated lupus erythematosus and were thought to be a possible cause of bleeding. Later these antibodies were found to be more associated with thrombosis than haemorrhage.

LA can be defined as phospholipid interfering antibodies closely related to anticardiolipin antibodies. They are antibodies directed against negatively charged complexes of phospholipids with either beta-2-glycoprotein 1 or clotting factors such as prothrombin. LA's occur on their own or in various clinical conditions including autoimmune diseases. They occur among patients with SLE, primary antiphospholipid syndrome, drug reactions, malignancies, lymphoproliferative disorders, infections and cardiovascular disease. LA have been seen in asymptomatic patients and in as much as 3.6% of healthy blood donors.

Paradoxically, while LA exhibits an anticoagulant effect in vitro, in vivo there is a strong association with thrombosis (both venous and arterial). It is a significant risk factor in patients with otherwise unexplained thrombosis and are often present in women who have recurrent foetal loss. This foetal loss can be attributed to thrombosis in the placenta. It is this strong association with thrombosis, which makes LA such an important clinical finding.

### TEST SYSTEM

We spent several months consulting with our colleagues as to the best test system to offer our doctors and patients in Jamaica. Finally we decided on reagents manufactured by an Australian company which has an outstanding reputation for producing high quality Dilute Russell Venom.

The LA test is a high complexity procedure, which requires careful pipeting and strict adherence to the manufacturer's protocol. Two of our technologists, assisted by tech support from the manufacturer, have gained suitable experience in performing this test. The adage that "*a test is as good as a sample*" is never truer than in the performance of the LA test. In this regard, our phlebotomists have been properly briefed on the importance of a clean venipuncture and proper handling and storage of samples.

Blood must be collected in 3.8% sodium citrate and promptly spun. Plasma must be stored at 2 –8° C and tested within 4 hours. If this is not possible, the plasma must be double spun to remove platelets (below 10 x 10<sup>9</sup>/l) and frozen at –20° for up to 10 days or at –70° up to 6 months. Plasma with platelet counts above the recommended level will have shortened coagulation times. Patients requiring LA test should contact the nearest Microlabs centre for instructions before presenting to the laboratory.

## **RESULTS**

Microlabs will routinely do the following as part of the LA test. **LA1 (screen), LA2 (confirm), LA1 LA2 ratio, PT, INR, APTT, APTT 1:1 NP and APTT 1:1 saline and approved low and high LA controls.**