

Lyme Disease Testing Media Release

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Laboratory testing for Lyme Disease is complex because of the range of tests available. In general, the only definitive test is a positive culture or Polymerase Chain Reaction test (PCR) reported by an appropriately accredited laboratory which participates in an independent quality assurance program. Typical associated clinical features, such as erythema chronicum migrans (ECM), should support a laboratory diagnosis. Such diagnoses should also be queried if the patient has not travelled to a region with veterinary documented animal and tick infestations with Lyme Borrelia spirochaetes. Australia is NOT a region with documented Lyme infestations.

Serology tests (EIA and Western Blot), which only identify exposure to Borrelia (rather than active disease), are prone to problems such as lack of sensitivity for local strains and/or cross-reactivity producing false-positive results. These tests should also only be reported by an appropriately accredited laboratory which participates in an independent quality assurance program.

Australian Laboratories have to be regularly inspected by an independent licencing authority (NATA) AND regularly participate in a Quality Assurance scheme, where blinded samples have to be analysed by every laboratory and results obtained that have a satisfactory correct result rate, supervised by a second independent body (the Royal College of Pathology of Australasia). Most other countries, including the USA, do not have such a stringent laboratory supervisory process (and hence would not qualify for reimbursement by Medicare for such tests).

Overseas, Lyme activists propagate misleading information about Lyme diagnostic testing. A number of overseas "specialist" Lyme Laboratories favoured by Lyme groups have conflicts of interests with these groups. The dangers of Lyme pseudoscience concepts and non-standard testing propagated by these groups have recently been outlined in a scholarly review (*Lancet Infect Dis* 2011;11: 713–19).

In conclusion, Australian citizens with concerns about possible Lyme Disease should only submit specimens to accredited specialist laboratories in Australia. Sending their samples overseas is not only prohibitively expensive, but the results are also unlikely to be reliable.