

<b>DATE:</b>	30 October 2023
<b>TO:</b>	AHS North, Edmonton, and Central Zones (sites that send testing to Edmonton) All Physicians, Nurses, Laboratory Staff
<b>FROM:</b>	University of Alberta Hospital, Special Chemistry Laboratory, Edmonton
<b>RE:</b>	<b>Implementation of Double Stranded DNA Antibody by <i>Crithidia</i> Indirect Immunofluorescence Assay</b>

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## PLEASE POST OR DISTRIBUTE AS WIDELY AS APPROPRIATE

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### Key Message

- Effective October 30, 2023, the *Double Stranded DNA Antibody by Crithidia indirect immunofluorescence assay (IFA)* will go live in the Special Chemistry Lab at the University of Alberta Hospital in Edmonton. Currently, there is no change to Anti-dsDNA testing performed at the Immunochemistry Lab in Calgary.

### Background

- On April 29, 2022, the Special Chemistry Lab in Edmonton switched the *Anti-dsDNA multiplex bead immunoassay (MBIA)* antigen preparation to a purified, commercial source. This version of the *Anti-dsDNA MBIA* is better at detecting lupus; but is less specific (more susceptible to false positive results).
- The *dsDNA antibody by Crithidia IFA* is a highly specific test that detects patient antibodies of immunoglobulin class IgG against native dsDNA to support the diagnosis of lupus.

### How this will impact you

- Indeterminate *Anti-dsDNA MBIA* results (120-230 MFU) will undergo clinical biochemist review. If required, the special chemistry lab will add *Double Stranded DNA Antibody by Crithidia IFA* to improve specificity of the *Anti-dsDNA MBIA* result. The *dsDNA antibody by Crithidia IFA* report comments are as follows:

dsDNA ab by Crithidia IFA	Interpretive Comment
Negative	Testing for dsDNA antibody by Crithidia IFA was negative. Unable to confirm positive result obtained by multiplex bead immunoassay.
Positive	Testing for dsDNA antibody by Crithidia IFA was positive. Confirmed positive result obtained by multiplex bead immunoassay.
Weak Positive	Testing for dsDNA antibody by Crithidia IFA was weakly positive. Indeterminate result.
Indeterminate	Indeterminate.

### Action Required

- For initial lupus investigations, order “*Extractable Nuclear Antigen Antibodies*” LAB 4622. To monitor known lupus patients, order “*Anti-Double Stranded DNA*” LAB 648. Refer to the APL test directory for more details.
- If a patient’s *Anti-dsDNA MBIA* result does not fit the clinical picture, page the on-call clinical biochemist to request add-on for *dsDNA antibody by Crithidia IFA*.



**Questions/Concerns**

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**Approved by**

- Dr. Allison Venner, Clinical Biochemistry, Associate Section Chief, APL
- Dr. Mathew Estey, Provincial Chemistry Director, DynaLIFE Medical Labs
- Dr. Michael Mengel, Medical Director, APL, North Sector

*Effective September 1, 2023, APL has become the sole provider of all public lab services in Alberta. As a result, community lab services formally provided by DynaLIFE Medical Labs will become the responsibility of Alberta Precision Labs (APL). This change impacts all zones.*