



# ***CHOLESTEROL REFERENCE METHOD LABORATORY NETWORK (CRMLN)***

## **Member Certification Status from January 2020 challenge and forward**

**Date Updated: November 2024**

The Cholesterol Reference Method Laboratory Network (CRMLN) is a network of highly specialized laboratories that work directly with manufacturers and laboratories to assess analytical accuracy and precision of blood lipid assays. CRMLN members operate reference measurement procedures (RMPs) for total cholesterol (TC), high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C), and/or total glycerides (TG). Each table shows the certification status of the CRMLN member since January 2020. Members who did not participate or enroll in the certification survey for a specific analyte will be reflected as (--). CRMLN RMPs are evaluated twice a year. To be certified, each method shows traceability to the CDC Lipids Reference Laboratory based on the performance criteria listed below.

### **Analytical Performance Criteria for Reference Measurement Procedures (RMPs)**

TC: Mean Bias  $\pm 1.0\%$ , Mean CV  $\leq 1.0\%$

TG: Maximum Sample Bias  $\pm 2.55\%$ , Maximum Survey Bias  $\pm 2.00\%$ , Range of Individual Sample Bias  $\leq 3.95\%$ , Range of Individual Measurement Bias  $\leq 6.96\%$

HDL-C: Mean Bias  $\pm 1.0$  mg/dL, Mean SD  $\leq 1.00$  mg/dL

LDL-C: Mean Bias  $\pm 2.0\%$ , Mean CV  $\leq 1.5\%$

Visit [https://www.cdc.gov/labstandards/crmln\\_members.html](https://www.cdc.gov/labstandards/crmln_members.html) for the complete list of CRMLN laboratories and services.

Participants meeting analytical performance requirements for two consecutive initial challenges are certified and considered to be official CRMLN members. Certified status is maintained unless there are two consecutive failures thereafter for each analyte. Successful participation in TC-AK is required to be certified for HDL-C and LDL-C.

**Erasmus MC**  
University Medical Center  
Rotterdam, The Netherlands

| Survey       | HDL Cholesterol by Designated Comparison Method | HDL Cholesterol by Ultracentrifugation | LDL Cholesterol by Abell-Kendall | Total Cholesterol by Abell-Kendall | Total Cholesterol by IDMS | Total Glycerides by IDMS | Total Glycerides (non-reference) |
|--------------|---|--|----------------------------------|------------------------------------|---------------------------|--------------------------|----------------------------------|
| January 2020 | Not Certified                                   | Not Certified                          | <b>Certified</b>                 | Not Certified                      | --                        | --                       | --                               |
| July 2020    | <b>Certified</b>                                | <b>Certified</b>                       | <b>Certified</b>                 | <b>Certified</b>                   | --                        | --                       | --                               |
| January 2021 | <b>Certified</b>                                | <b>Certified</b>                       | Not Certified                    | <b>Certified</b>                   | --                        | --                       | --                               |
| July 2021    | <b>Certified</b>                                | <b>Certified</b>                       | <b>Certified</b>                 | <b>Certified</b>                   | --                        | --                       | --                               |
| January 2022 | Not Certified                                   | <b>Certified</b>                       | Not Certified                    | <b>Certified</b>                   | --                        | --                       | --                               |
| July 2022    | <b>Certified</b>                                | <b>Certified</b>                       | <b>Certified</b>                 | <b>Certified</b>                   | --                        | --                       | --                               |
| January 2023 | Not Certified                                   | <b>Certified</b>                       | <b>Certified</b>                 | <b>Certified</b>                   | --                        | --                       | --                               |
| July 2023    | <b>Certified</b>                                | <b>Certified</b>                       | <b>Certified</b>                 | <b>Certified</b>                   | --                        | --                       | --                               |
| January 2024 | <b>Certified</b>                                | <b>Certified</b>                       | Not Certified                    | Not Certified                      | --                        | --                       | --                               |
| July 2024    | Not Certified                                   | <b>Certified</b>                       | <b>Certified</b>                 | <b>Certified</b>                   | --                        | --                       | --                               |

**National Cerebral and Cardiovascular Center**  
Department of Research Promotion Lipid Reference Laboratory  
Suita Osaka, Japan

| Survey       | HDL Cholesterol by Designated Comparison Method | HDL Cholesterol by Ultracentrifugation | LDL Cholesterol by Abell-Kendall | Total Cholesterol by Abell-Kendall | Total Cholesterol by IDMS | Total Glycerides by IDMS | Total Glycerides (non-reference) |
|--------------|---|--|----------------------------------|------------------------------------|---------------------------|--------------------------|----------------------------------|
| January 2020 | <b>Certified</b>                                | <b>Certified</b>                       | <b>Certified</b>                 | <b>Certified</b>                   | <b>Certified</b>          | <b>Certified</b>         | --                               |
| July 2020    | <b>Certified</b>                                | <b>Certified</b>                       | Not Certified                    | <b>Certified</b>                   | <b>Certified</b>          | <b>Certified</b>         | --                               |
| January 2021 | <b>Certified</b>                                | <b>Certified</b>                       | Not Certified                    | <b>Certified</b>                   | <b>Certified</b>          | Not Certified            | --                               |
| July 2021    | <b>Certified</b>                                | <b>Certified</b>                       | <b>Certified</b>                 | <b>Certified</b>                   | <b>Certified</b>          | <b>Certified</b>         | --                               |
| January 2022 | <b>Certified</b>                                | <b>Certified</b>                       | Not Certified                    | <b>Certified</b>                   | <b>Certified</b>          | Not Certified            | --                               |
| July 2022    | Not Certified                                   | <b>Certified</b>                       | Not Certified                    | <b>Certified</b>                   | Not Certified             | Not Certified            | --                               |
| October 2022 | --  | --                                     | <b>Certified</b>                 | --                                 | --                        | --                       | --                               |
| January 2023 | <b>Certified</b>                                | <b>Certified</b>                       | <b>Certified</b>                 | <b>Certified</b>                   | <b>Certified</b>          | Not Certified            | --                               |
| July 2023    | Not Certified                                   | <b>Certified</b>                       | <b>Certified</b>                 | <b>Certified</b>                   | <b>Certified</b>          | <b>Certified</b>         | --                               |
| January 2024 | <b>Certified</b>                                | Not Certified                          | Not Certified                    | <b>Certified</b>                   | <b>Certified</b>          | Not Certified            | --                               |
| July 2024    | <b>Certified</b>                                | Not Certified                          | Not Certified                    | <b>Certified</b>                   | <b>Certified</b>          | Not Certified            | --                               |
| October 2024 | --  | --                                     | <b>Certified</b>                 | --                                 | --                        | --                       | --                               |

| Survey       | HDL Cholesterol by Designated Comparison Method | HDL Cholesterol by Ultracentrifugation | LDL Cholesterol by Abell-Kendall | Total Cholesterol by Abell-Kendall | Total Cholesterol by IDMS | Total Glycerides by IDMS | Total Glycerides (non-reference) |
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| January 2020 | Certified                                       | Certified                              | Certified                        | Certified                          | --                        | --                       | Certified                        |
| July 2020    | Certified                                       | Certified                              | Certified                        | Certified                          | --                        | --                       | Certified                        |
| January 2021 | Certified                                       | Certified                              | Certified                        | Certified                          | --                        | --                       | Certified                        |
| July 2021    | Certified                                       | Certified                              | Certified                        | Certified                          | --                        | --                       | Certified                        |
| January 2022 | Not Certified                                   | Certified                              | Not Certified                    | Certified                          | --                        | --                       | Not Certified                    |
| July 2022    | Certified                                       | Certified                              | Certified                        | Certified                          | --                        | --                       | --                               |
| January 2023 | Certified                                       | Certified                              | Not Certified                    | Certified                          | --                        | --                       | Not Certified                    |
| July 2023    | Not Certified                                   | Certified                              | Certified                        | Certified                          | --                        | --                       | Not Certified                    |
| January 2024 | Not Certified                                   | Certified                              | Not Certified                    | Certified                          | --                        | --                       | Not Certified                    |
| June 2024    | Certified                                       | --                                     | --                               | --                                 | --                        | --                       | --                               |
| July 2024    | Certified                                       | Certified                              | Certified                        | Certified                          | --                        | --                       | Not Certified                    |

**Fundacion Bioquimica Argentina**  
Laboratorio de Referencia y Estandarizacion en Bioquimica Clinica (LARES BIC)  
La Plata, Argentina

| Survey       | HDL Cholesterol by Designated Comparison Method | HDL Cholesterol by Ultracentrifugation | LDL Cholesterol by Abell-Kendall | Total Cholesterol by Abell-Kendall | Total Cholesterol by IDMS | Total Glycerides by IDMS | Total Glycerides (non-reference) |
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| January 2020 | Not Certified                                   | --                                     | --                               | Not Certified                      | --                        | --                       | --                               |
| July 2020    | Not Certified                                   | --                                     | --                               | Certified                          | --                        | --                       | --                               |
| January 2021 | Not Certified                                   | --                                     | --                               | Certified                          | --                        | --                       | --                               |
| July 2021    | Not Certified                                   | --                                     | --                               | Certified                          | --                        | --                       | --                               |
| January 2022 | Not Certified                                   | --                                     | --                               | Not Certified                      | --                        | --                       | --                               |
| July 2022    | Not Certified                                   | --                                     | --                               | Not Certified                      | --                        | --                       | --                               |
| January 2023 | Not Certified                                   | --                                     | --                               | Not Certified                      | --                        | --                       | --                               |
| July 2023    | Certified                                       | --                                     | --                               | Certified                          | --                        | --                       | --                               |
| January 2024 | --  | --                                     | --                               | Not Certified                      | --                        | --                       | --                               |
| July 2024    | Not Certified                                   | --                                     | --                               | Not Certified                      | --                        | --                       | --                               |

**Beijing Institute of Geriatrics**  
Beijing Hospital  
Beijing, China

| Survey       | HDL Cholesterol by Designated Comparison Method | HDL Cholesterol by Ultracentrifugation | LDL Cholesterol by Abell-Kendall | Total Cholesterol by Abell-Kendall | Total Cholesterol by IDMS | Total Glycerides by IDMS | Total Glycerides (non-reference) |
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| July 2020    | Certified                                       | Certified                              | Certified                        | Certified                          | Not Certified             | Not Certified            | --                               |
| January 2021 | Certified                                       | Not Certified                          | Certified                        | Certified                          | Certified                 | Certified                | --                               |
| July 2021    | Certified                                       | Certified                              | Certified                        | Certified                          | Not Certified             | Certified                | --                               |
| January 2022 | Not Certified                                   | Certified                              | Certified                        | Certified                          | Certified                 | Not Certified            | --                               |
| July 2022    | Certified                                       | Certified                              | Certified                        | Certified                          | Certified                 | Certified                | --                               |
| January 2023 | Certified                                       | Not Certified                          | Not Certified                    | Certified                          | Certified                 | Certified                | --                               |
| July 2023    | Certified                                       | Certified                              | Certified                        | Certified                          | Certified                 | Not Certified            | --                               |
| January 2024 | Certified                                       | Certified                              | Certified                        | Certified                          | Certified                 | Certified                | --                               |
| July 2024    | Certified                                       | Certified                              | Certified                        | Certified                          | Certified                 | Not Certified            | --                               |

**Korea Disease Control and Prevention Agency (KDCA)**

National Medical Reference Laboratory  
Cheongju-si, Republic of Korea (South)

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| July 2021    | --  | Certified                              | Certified                        | Certified                          | Certified                 | Certified                | --                               |
| January 2022 | --  | Not Certified                          | Not Certified                    | Certified                          | Certified                 | Certified                | --                               |
| July 2022    | Certified                                       | Certified                              | Certified                        | Certified                          | Not Certified             | Certified                | --                               |
| January 2023 | Not Certified                                   | Certified                              | Not Certified                    | Certified                          | Certified                 | Certified                | --                               |
| July 2023    | Certified                                       | Certified                              | Not Certified                    | Not Certified                      | Certified                 | Not Certified            | --                               |
| January 2024 | Certified                                       | Certified                              | Certified                        | Certified                          | Certified                 | Certified                | --                               |
| July 2024    | Certified                                       | Not Certified                          | Certified                        | Certified                          | Certified                 | Certified                | --                               |

**Laboratoire national de metrologie et d'essais (LNE)**

Chemistry and Biology Division  
Paris, France

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| July 2020    | --  | --                                     | --                               | --                                 | Certified                 | --                       | --                               |
| January 2021 | --  | --                                     | --                               | --                                 | Certified                 | --                       | --                               |

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| January 2022 | --  | --                                     | --                               | --                                 | Certified                 | --                       | --                               |
| July 2022    | --  | --                                     | --                               | --                                 | Certified                 | --                       | --                               |
| January 2023 | --  | --                                     | --                               | --                                 | Certified                 | --                       | --                               |
| July 2023    | --  | --                                     | --                               | --                                 | Certified                 | --                       | --                               |
| January 2024 | --  | --                                     | --                               | --                                 | Certified                 | --                       | --                               |
| July 2024    | --  | --                                     | --                               | --                                 | Certified                 | --                       | --                               |

**Medpace Reference Laboratories**  
Cincinnati, USA

| Survey       | HDL Cholesterol by Designated Comparison Method | HDL Cholesterol by Ultracentrifugation | LDL Cholesterol by Abell-Kendall | Total Cholesterol by Abell-Kendall | Total Cholesterol by IDMS | Total Glycerides by IDMS | Total Glycerides (non-reference) |
|--------------|---|--|----------------------------------|------------------------------------|---------------------------|--------------------------|----------------------------------|
| July 2021    | Certified                                       | Certified                              | Certified                        | Certified                          | --                        | --                       | --                               |
| January 2022 | Not Certified                                   | Certified                              | Certified                        | Certified                          | --                        | --                       | --                               |
| July 2022    | Certified                                       | Not Certified                          | Certified                        | Certified                          | --                        | --                       | --                               |
| January 2023 | Certified                                       | Not Certified                          | Certified                        | Certified                          | --                        | --                       | --                               |
| July 2023    | Not Certified                                   | Certified                              | Not Certified                    | Not Certified                      | --                        | --                       | --                               |
| January 2024 | Not Certified                                   | Certified                              | Certified                        | Certified                          | --                        | --                       | --                               |
| July 2024    | Not Certified                                   | Certified                              | Certified                        | Certified                          | --                        | --                       | --                               |