Accredited Body: Centrum kardiovaskulární a transplantační chirurgie Brno

**CAB Name**: Genetics Laboratory

CAB Number: 8257

Certificate of Accreditation No.: 66/2025

Field of Accreditation: Medical Laboratory - ČSN EN ISO 15189 ed. 3:2023

**Updated**: 14. 2. 2025

#### **Examinations:**

| Ordinal<br>Number | Analyte/<br>parameter/diagnostics               | Principle of examination | Identification of method<br>procedure/ equipment   | Examined material   | Degrees<br>of<br>freedom <sup>1</sup> |
|-------------------|---|--------------------------|--|---|---------------------------------------|
|                   | 802 – Medical Microbiology                      |                          |  |   |                                       |
| 1.                | Detection of nucleic acids of infectious agents | Real-Time PCR            | SOPA-GL-01, version 06;<br>SOPP-GL-18, version 07;<br>SOPP-GL-56, version 05;<br>SOPP-GL-58, version 07;<br>SOPP-GL-59, version 07;<br>SOPP-GL-60, version 07;<br>GeneXpert II | Plasma, blood,<br>bone marrow,<br>cerebrospinal fluid,<br>urine | A, B, C,<br>D                         |

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|-------------------|---|--------------------------|--|---|---------------------------------------|---------|
|                   |   | 816 – Medica             | l Genetics Laboratory                            |   |                                       |         |
| germline          | Examination of                          | rmline genome sequencing | SOPA-GL-02, version 05;                          | Blood, bone<br>marrow, paraffin<br>block, smear from<br>buccal mucosa | A, B, C,<br>D                         |         |
|                   | germline genome variants                |                          | SOPP-GL-01, version 05;                          |   |                                       |         |
|                   | variants                                |                          | SOPP-GL-02, version 06;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-04, version 05;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-05, version 05;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-06, version 05;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-28, version 06;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-32, version 04;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-33, version 04;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-36, version 05;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-37, version 05;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-39, version 05;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-41, version 05;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-43, version 05;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-44, version 05;                          |   |                                       |         |
|                   |   | SOPP-GL-49, version 05;  |  |   |                                       |         |
|                   |   |                          | SOPP-GL-56, version 05;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-57, version 03;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-61, version 04;                          |   |                                       |         |
|                   |   |                          | ABI 3130   |   |                                       |         |
| 2.                | Examination of apolipoprotein B-100     | Examination of ARMS;     | ARMS;  | SOPA-GL-03, version 05;   | Blood                                 | A, B, D |
|                   |   | polipoprotein B-100 ACRS | SOPP-GL-28, version 06;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-29, version 05;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-30, version 05                           |   |                                       |         |
| 3.                | Examination of apolipoprotein E         | PCR and                  | SOPA-GL-04, version 05;                          | Blood   | A, B, D                               |         |
| J.                |   | restriction<br>analysis  | SOPP-GL-04, version 05;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-28, version 06;                          |   |                                       |         |
|                   |   |                          | SOPP-GL-31, version 05                           |   |                                       |         |
| 4.                | Examination of germline genome variants | line genome              | SOPA-GL-05, version 05;                          | Blood, smear from buccal mucosa                                       | A, B, C,<br>D                         |         |
| т.                |   |                          | SOPP-GL-49, version 05;                          |   |                                       |         |
|                   |   | variants                 | nts  | SOPP-GL-53, version 04;   |                                       |         |

| Ordinal<br>Number | Analyte/<br>parameter/diagnostics       | Principle of examination | Identification of method<br>procedure/ equipment   | Examined material  | Degrees<br>of<br>freedom <sup>1</sup> |
|-------------------|---|--------------------------|--|--|---------------------------------------|
|                   |   |                          | SOPP-GL-56, version 05   |  |                                       |
| 5.                | Examination of germline genome variants | NGS-MPS                  | SOPA-GL-06, version 06;<br>SOPP-GL-28, version 06;<br>SOPP-GL-33, version 04;<br>SOPP-GL-49, version 05;<br>SOPP-GL-56, version 05;<br>SOPP-GL-61, version 04;<br>SOPP-GL-65, version 02;<br>SOPP-GL-66, version 04;<br>SOPP-GL-67, version 06;<br>SOPP-GL-68, version 05;<br>SOPP-GL-69, version 06;<br>SOPP-GL-70, version 05;<br>NextSeq (Illumina);<br>MiSeq (Illumina);<br>DNBSEQ-G99 (MGI) | Blood, bone marrow, paraffin block, smear from buccal mucosa | A, B, C,<br>D                         |

### **Specification of the scope of accreditation:**

| Field Nr. /<br>Ordinal<br>Number | Detailed information on activities within the scope of accreditation  |  |  |  |
|----------------------------------|---|--|--|--|
| 802/1                            | DNA HBV (Hepatitis B virus); DNA CMV (Cytomegalovirus); DNA EBV (Epstein-Barr virus); DNA BKV (BK virus); RNA HCV (Hepatitis C virus) |  |  |  |
| 816/1                            | X-linked hyper IgM syndrome (X-HIGM; CD40LG)  |  |  |  |
|                                  | X-linked severe combined immunodeficiency (X-SCID; <i>IL2RG</i> )   |  |  |  |
|                                  | X-linked agammaglobulinemia (XLA; BTK)  |  |  |  |
|                                  | AR - severe combined immunodeficiency (AR-SCID; RAG1, RAG2)   |  |  |  |
|                                  | Omenn's syndrome (OMENN; RAG1, RAG2)  |  |  |  |
|                                  | Wiskott-Aldrich syndrome (WAS; WAS)   |  |  |  |
|                                  | Chronic granulomatous disease (CGD; CYBB)   |  |  |  |
|                                  | X-linked lymphoproliferative syndrome (XLP; SH2D1A, XIAP)   |  |  |  |
|                                  | Autoimmune lymphoproliferative syndrome type V (ALPS V; CTLA4)  |  |  |  |
|                                  | Dysbetalipoproteinaemia (HLP III; APOE)   |  |  |  |

| 816/2 | Variant p.Arg3527Gln   |
|-------|--|
| 816/3 | Alleles E2, E3, E4   |
| 816/4 | Factor V (G1691A-Leiden); Prothrombin (G20210A)]   |
| 816/5 | Panel IEI: ADA, AICDA, AIRE, AK2, AP3B1, ATM, BLM, BTK, CASP8, CASP10, CD19, CD27, CD8A, CD3D, CD3E, CD3G, CD40, CD59, CD247, CD40LG, CECR1, CIITA, CR2, CYBA, CYBB, DCLRE1C, DKC1, DNMT3B, DOCK8, ELANE, FERMT3, FOXP3, G6PC3, GATA2, HAX1, IFNGR1, IFNGR2, IGHM, IGLL1, IL12RB1, IL2RA, IL2RG, IL7R, ITGB2, ITK, JAK3, LCK, LIG1, LIG4, LYST, MASP2, MEFV, MVK, NBN, NBS1, NCF2, NFKB1, NFKB2, NFKB1A, NHEJ1, NLRP3, NOD2, ORAI1, PIK3CD, PIK3R1, PLG, PNP, PRF1, PRKDC, PTPRC, RAB27A, RAG1, RAG2, RFX5, RFXANK, RFXAP, RMRP, SBDS, SERPING1, SH2D1A, SLC37A4, SMARCAL1, STAT1, STAT3, STIM1, TAP1, TAP2, TAPBP, TBX1, TNFRSF13B, TNFRSF1A, TNFSF5, TREX1, TYK2, WAS, XIAP, ZAP70  Panel FH: ABCG5, ABCG8, APOB, APOE, LDLR, LDLRAP1, LIPA, PCSK9 |

#### **Explanatory notes:**

- Established degrees of freedom according to MPA 00-09-..:
  - A Flexibility concerning the documented examination/ sample collection procedure
  - B Flexibility concerning the technique
  - C Flexibility concerning the analytes / parameters
  - D Flexibility concerning the examined material

If no degree of freedom is specified, the laboratory cannot apply a flexible approach to the scope of accreditation for this examination.

ARMS Amplification Refractory Mutation System ACRS Amplification Created Restriction Site

FH Familial hypercholesterolemia IEI Inborn errors of immunity

NGS-MPS Next Generation Sequencing – Massively Parallel Sequencing

PCR Polymerase Chain Reaction

Real-Time PCR Polymerase Chain Reaction in real time