

Alberta Precision Laboratories (APL) and the Health Sciences Association of Alberta (HSAA)

This classification specification identifies representative duties and responsibilities, and is intended to assist in the determination of the appropriate classification level within each discipline. Some duties and responsibilities may overlap between class levels. The classification specification is not intended to provide an exhaustive list of all duties performed.

Classification Title: **Clinical Genetics Technologist I**

Date Updated: **September 23, 2021**

Job Summary:

The Clinical Genetics Technologist I (Cytogenetics) is responsible for routine and specialized work in the processing and genetic analysis of specimens used in the diagnosis, treatment and research of genetic disorders.

Key Responsibilities and Typical Duties:

Core Duties

- Performs tissue culture preparation and maintenance on bone marrow, blood, amniotic fluid, tissue, chorionic villi (CVS) and solid tumor samples.
- Harvests cultured specimens and prepares slides for cytogenetic analysis.
- Captures images of metaphase spreads and karyotypes the specimens.
- Analyzes specimens and determines cytogenetic results which support a diagnosis.
- Conducts complex tests including additional banding techniques on patient specimens, fluorescence in-situ hybridization (FISH) and chromosome breakage studies.
- Generates reports of the cytogenetic results for the Cytogeneticist.

Other Related Duties

- Participates in research, development and implementation of new cytogenetic methodologies.
- Identifies, troubleshoots and refers issues relating to difficulties with technical procedures, equipment and materials.
- Checks work of other Clinical Genetics Technologist I's in a second review for quality assurance.
- Evaluates new products and equipment.

Leadership

- Provides technical education and training to laboratory assistants, students, residents and medical fellows.
- Participates in recruitment of Laboratory staff when requested.

Decision-Making

- Identifies unusual or abnormal results (chromosomal abnormalities) and attempts to resolve if possible, or refers to the appropriate individual(s).
- Selects which probe or technique to use.
- Determines which metaphase spreads to analyze.

Knowledge:

Education

- Diploma from an accredited Clinical Genetics program **plus** Bachelor of Science Degree.

Registration Requirements

- Certified by the Canadian Society for Medical Laboratory Science (CSMLS).
- Registered with Alberta College of Medical Laboratory Technologists (ACMLT) in Clinical Genetics.

Working Conditions:

Physical Demands

- Sits in awkward positions for prolonged periods.
- Prolonged visual attention/concentration required.
- Regularly performs repetitive movements.
- Extensive computer use.

Work Environment

- Exposure to bio-hazardous materials and chemical hazards.
- Requires personal protective equipment and/or clothing.