

Ancient DNA Training Program

Since 1999, we have offered an intensive training program in extraction, amplification, sequencing and analysis of ancient nucleic acids (aDNA).

Students and professionals from many disciplines (forensics, anthropology, chemistry, biology, and clinical laboratories) from Canada and around the world have completed this program.

The program is offered every year.

Research and the Paleo-DNA Laboratory

The Paleo-DNA Laboratory is committed to research and teaching. We develop and provide leading-edge molecular techniques for genetic analyses of all biological materials, with speciality in ancient and degraded samples.

Our research projects cover many topics from all over the world, including the study of disease in ancient populations, wildlife classifications, and human, animal, and plant DNA characterization and profiling for modern and ancient material.

Call our experts to discuss:

- DNA Sequencing
- Fragment Analysis
- Real-Time PCR
- Genomic and mtDNA Heritage Analysis
- Archeological DNA Testing
- Ancient DNA Internship



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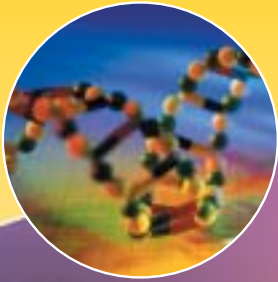
ISO/IEC 17025 Accredited



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Our laboratory provides a variety of fast, affordable, and reliable molecular services.

The Paleo-DNA Laboratory also performs custom services as required.



Molecular Services

Established in 1996, the Paleo-DNA Laboratory has been a pioneer in the application of modern molecular genetic technologies to the study of archaeological and degraded DNA.

We also offer Standards Council of Canada CAN-P-1578 accredited services to researchers and the public in our ISO 17025 accredited laboratory including:

DNA Sequencing (ABI 3100 Sequencer)

- Single- and double-stranded DNA
- PCR-derived DNA templates using dye terminator chemistry

Fragment Analysis Service (Genescan)

- Separation and detection of PCR product
- Ideal for multiplex PCR, fluorescent-labeled PCR and STR profiling

Real-Time PCR (ABI 7000)

- Detect and quantify fluorescent-labeled molecules
- Analysis includes molecular beacons, fluorescent stains and quantification probes and primers
- For gene expression, allelic discrimination, absolute quantification (DNA and RNA), relative quantification (DNA and RNA), dissociation analysis, and kinetic analysis

Archaeological DNA Services

We conduct routine genetic analyses of ancient or degraded biological samples, including: bone, teeth, hair, mummified tissue, archival insects, plant material, biological samples on textile, etc.

Our methods have been specifically designed and optimized to handle the presence of inhibitors and highly degraded and fragmented DNA. Our staff has undergone extensive training for the challenges faced by analysing ancient or highly degraded DNA.

Genetic analyses on all types of material can be conducted. Including:

- **mtDNA:** Population genetics, animal species identification
- **Nuclear DNA:** Heritable genetic traits, Sex identification, STRs, Y-STRs, SNP, LINEs, SINEs and VNTRs
- **Pathogenic DNA:** Tuberculosis, Plague, Malaria, Hepatitis B, Leprosy and Trypanosomiasis
- **Chloroplast DNA:** Plant remains

Genomic and mtDNA Genetic Testing Services

- Forensic Analysis
- Genetic Heritage/Paternity Testing
- Biological Sample Identification