



Compliments of Lakehead University's Paleo-DNA Laboratory

December 2010

Volume 1, Issue 1

The Paleo-DNA Laboratory is your ISO 17025 accredited lab for:

- **Forensic DNA**
- **Ancient DNA**
- **Paternity and Relationship Testing**
- **Ancestry DNA**

Important Dates:

2011 Ancient DNA Training Program dates: May 09-27

In this issue:

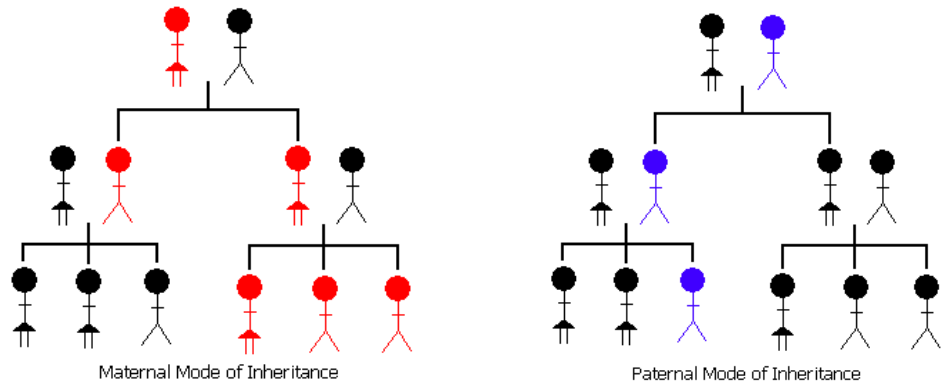
- Discover the Roots of Your Genetics **1**
- Ancient DNA Training Program **2**

The Paleo-DNA Laboratory does replication work for authentication of results.

Discover The Roots of Your Genetics

In the last couple of years, ancestry testing has become increasingly popular as individuals old and new want to discover where their ancestors came from. Information contained within one's DNA can reveal where their ancestors originated, how they lived, and where they migrated to. When

can be tested for their father's paternal (male) lineage. Each person's maternal/paternal DNA can be placed into a category or *haplogroup* based on information contained within that particular DNA. Each *haplogroup* has specific geographical origins throughout the world.



we mention ancestry, we're not talking about recent ancestry (a few generations ago), but deep ancestry hundreds of generations ago dating back 50-100K years. DNA is passed down through the maternal and paternal lineage relatively unchanged.

Both male and female individuals can be tested for their mother's maternal (female) lineage. Only male individuals

Each year the Paleo-DNA Laboratory offers ancestry testing at \$50 per test as part of Lakehead University Research and Innovation Week in late February. Participants submit a DNA sample in the form of a buccal (cheek) swab. A few weeks later they receive a report of their DNA results and some websites and keywords to help them do their own research on their ancestry.

*“Mitochondrial DNA
is in our blood.”*

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We value your feedback. If you would like to comment on this issue or would like to suggest ideas to discuss in a future newsletter, please visit the following link:

<http://lucas.lakeheadu.ca/customer-survey>

Ancient DNA Training Program

Since 1999, the Paleo-DNA Laboratory has been offering an intensive 3 week DNA training program at Lakehead University each Spring that has attracted international attention. Interested students bring their diverse backgrounds in Biology, Genetics, Archaeology, Anthropology, Osteology, Forensics, and Genetic Disease to Lakehead University in order to apply techniques learned in this program to their own interests. Participants in this program experience practical training in preparing a variety of samples for analysis; including multiple methods of DNA extraction, purification, amplification, sequencing, fragment analysis, gel and capillary electrophoresis, and data analysis. Over the last 11 years students have travelled from places as far as Australia, Greece, Portugal, France, Italy, Austria, Nigeria, Puerto Rico, Ireland, England, Israel, Germany, Denmark, Switzerland, and the United Arab Emirates as well as across Canada and the United States to take this unique program. The course is divided into a lecture and laboratory portion where they learn the theory behind what they are doing then physically apply it to their own samples.



One of the World's Few Training Programs in this Specialty

“The DNA Training course offered by the Lakehead University Paleo-DNA Lab was one of the most useful courses I have taken in my academic career. It gave me the hands on training combined with the relevant course material to be able to understand and conduct my own research in degraded DNA in my Masters program. Although very intense and fast paced, it is all based on techniques that anyone can use. You get the lab experience combined with informative lectures, guest speakers and close one on one training with very highly trained people because of the small group sizes. My personal favorite was successfully detecting disease in ancient bone samples which

sparked my interest in Paleopathology.”
Ryan Lehto, M.Sc. Biology

“My experience as a student of the Ancient DNA training program was very positive. The trained and experienced staff's enthusiasm towards DNA analysis made it an educational and comfortable learning environment. The amount of hands on skills learned in the training program was invaluable to my future research in genetics. The lecture portion taught by Dr. Carney Matheson was thorough and well communicated to the class. His knowledge in all aspects of DNA made him a valued asset to have both in the lecture and in the lab.”
Neal Esau, M.Sc. Biology