

Researcher Uses DNA Testing to Unlock Secrets of Medieval Manuscripts

January 12 2009

(PhysOrg.com) -- Thousands of painstakingly handwritten books produced in medieval Europe still exist today, but scholars have long struggled with questions about when and where the majority of these works originated. Now a researcher from North Carolina State University is using modern advances in genetics to develop techniques that will shed light on the origins of these important cultural artifacts.

Many medieval manuscripts were written on parchment made from animal skin, and NC State Assistant Professor of English Timothy Stinson is working to perfect techniques for extracting and analyzing the DNA contained in these skins with the long-term goal of creating a genetic database that can be used to determine when and where a manuscript was written. "Dating and localizing manuscripts have historically presented persistent problems," Stinson says, "because they have largely been based on the handwriting and dialect of the scribes who created the manuscripts - techniques that have proven unreliable for a number of reasons."

Stinson says genetic testing could resolve these issues by creating a baseline using the DNA of parchment found in the relatively small number of manuscripts that can be reliably dated and localized. Each manuscript can provide a wealth of genetic data, Stinson explains, because a typical medieval parchment book includes the skins of more than 100 animals.

Once Stinson has created a baseline of DNA markers with known dates

and localities, he can take samples from manuscripts of unknown origin. Stinson can then determine what degree of relationship there is between the animals whose skins were used in manuscripts of unknown origin and those used in the baseline manuscripts. Stinson hopes this DNA comparison will enable him to identify genetic similarities that would indicate the general time and locale where a book was written.

On a larger scale, Stinson says, this research "will also allow us to trace the trade route of parchments" throughout the medieval world - a scholarly achievement that would provide a wealth of data on the evolution of the book industry during the Middle Ages.

Stinson will be presenting the findings of his early research in this area at the annual meeting of the Bibliographical Society of America in New York City on Jan. 23. Stinson is one of three researchers asked to participate in the society's New Scholars Program for 2009. The work that Stinson will be presenting was funded by grants from the Digital Research and Curation Center at Johns Hopkins University and the Council on Library and Information Resources.

Source: North Carolina State University

Citation: Researcher Uses DNA Testing to Unlock Secrets of Medieval Manuscripts (2009, January 12) retrieved 20 March 2024 from <https://phys.org/news/2009-01-dna-secrets-medieval-manuscripts.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
