

**Fred Hutchinson Cancer Research Center Summer Undergraduate Research Program:** Fred Hutch hosts a 9-week [Summer Undergraduate Research Program](#) (SURP) that is designed to provide research experience and mentorship for undergraduate students of rising senior status. The 2017 SURP will run from Monday, June 12 – Friday, August 11. Students must be U.S. citizens or permanent residents; entering the summer before the final year of undergraduate studies, and have a strong background in the sciences. Participants will receive a stipend for participation, as well as coverage of round trip travel.

**An online application for the 2017 SURP will be available via the SURP website in mid-November 2016. The application deadline is midnight Pacific Standard Time (PST) on Friday, January 13, 2017. Letters of recommendation for up to two references are due by midnight Pacific Standard Time (PST) on Friday, January 20, 2017.**

For more info, see attached flyer

**Biomedical Research Internships Catalog:** Fred Hutchinson has developed a [catalog](#) of biomedical research internships offered nationwide for high school, undergraduate, post-baccalaureate, graduate, and first-year medical students.

**Mindfulness and Diversity Conference: Mind-Body Approaches for Enhancing Awareness and Well-Being:** Mindfulness and Diversity is an inaugural, interdisciplinary conference focused on: improving awareness and understanding of mindfulness-based practices among diverse communities, featuring cutting edge research on mindfulness and minority health, providing a forum for faculty, students and community members to connect and learn about mind-body interventions for addressing health inequalities and disparities. Registration is free and includes complementary breakfast and lunch.

**Must register no later than October 23, 2016**

More information and registration can be found at [www.stonybrookmedicine.edu/mindfulnessconference](http://www.stonybrookmedicine.edu/mindfulnessconference) or on attached flyer

**Kaplan Resources:**

What's next on your journey to an advanced degree?: We'll ask you 5 simple questions and quickly tell you where you are on the path. You'll receive custom tools and information regarding your preparation plus invites to future free practice tests and events.

Take the quiz here - [ktp.events/sbuquiz](#)

**MCAT Prepathon - Sunday 10/30:** Kaplan is excited to announce that on Sunday, October 30th, from 12-8pm ET, we will be hosting our first ever MCAT Prepathon! MCAT Prepathon will offer students the chance to engage with our MCAT Channel Faculty for up to 8 hours of live, interactive instruction for free. Students can choose to attend as many sessions as they would like.

There is no pre-registration required for this unique opportunity, although students can sign up for a reminder email on the [MCAT Prepathon page](#). The entire schedule for MCAT Prepathon is available there as well!

**Winter Intensive Program (WIP) - Starts 12/18:** For the first time ever, Kaplan is bringing the benefits of our highest-rated MCAT Summer Intensive Program to student homes this winter. This elite program is an exclusive opportunity to commit to the most concentrated MCAT prep available, including the most live instruction of any January MCAT prep option, unparalleled support and service, and weekly one-on-one coaching. The [Winter Intensive Program](#) curriculum incorporates MCAT strategy, content review, and a personalized approach—delivered exclusively live online by our highest-rated MCAT faculty from across the country.

Details about the program can be found on our [Winter Intensive Program](#) website, and students that enroll by October 31 can take advantage of our \$500 off introductory sale!

**MCAT Practice Test:** Throughout the Fall, Kaplan continues to provide a wide variety of [free events](#) for pre-medical students. One of the best starting points is for students to take a [free practice test](#), and we have many opportunities for students to take advantage of over the next few months.

**Center for Biophysics and Quantitative Biology at the University of Illinois at Urbana-Champaign:**

Currently recruiting graduate students for the next academic year. This interdisciplinary program brings faculty and students together not only from the traditional biology and physics backgrounds, but from biochemistry, bioengineering, chemical and biomolecular engineering, chemistry, comparative biosciences, and computer science disciplines as well.

For more in-depth information regarding our faculty research interests, admissions and program requirements, and other resources, please visit our website at [biophysics.illinois.edu](http://biophysics.illinois.edu).

**Archaeotek's Bioarchaeology Projects:** Offers human osteology and bioarchaeology research workshops and field school opportunities for undergraduate students. They are designed to offer intensive, practical,

hands on experience with preserved human osteological remains, focusing primarily on research skill acquisition. The programs offer a skill set to anyone pursuing a career in physical anthropology, bioarchaeology, forensics or medicine:

**[Medieval Cemetery Funerary Excavation: Dying on the European Frontier - Lost Churches Project](#)**

**Location:** Valeni, Harghita County (Central Transylvania), Romania

**Period:** Late Migration – Medieval

**Excavation dates:** **Session 1:** June 4 - June 30, 2017; **Session 2:** July 2 - July 29, 2017

**More information:** <http://www.archaeotek-archaeology.org/copy-of-medieval-cemetery-funerary->

**Contact e-mail:** [archaeology@archaeotek.org](mailto:archaeology@archaeotek.org)

**Project Director:** Dr. Katie Zejdlik-Passalacqua (Department of Anthropology, Western Carolina University)

**Academic Credits:** 6 undergraduate credits available through WCU

**[Adult Osteology Research Workshop: Late Medieval "Crisis" Populations – The Remaking of the European Frontier](#)**

**Location:** Odorheiu Secuiesc, Transylvania, Romania

**Dates:** June 4 – July 1, 2017

**More information:** <http://www.archaeotek-archaeology.org/osteology>

**Contact e-mail:** [archaeology@archaeotek.org](mailto:archaeology@archaeotek.org)

**Project Director:** Dr. Jonathan Bethard (Department of Anthropology, University of Southern Florida)

**Requirements:** experience with basic human anatomy and morphology preferred but not required

**[Juvenile Osteology Research Workshop: Victims of Change – Bioarchaeology of Children](#)**

**Location:** Odorheiu Secuiesc, Transylvania, Romania

**Dates:** July 2 – July 29, 2017

**More information:** <http://www.archaeotek-archaeology.org/bioarchaeology>

**Contact e-mail:** [archaeology@archaeotek.org](mailto:archaeology@archaeotek.org)

**Project Director:** Dr. Jonathan Bethard (Department of Anthropology, University of Southern Florida)

**Requirements:** the Adult Osteology Workshop (or equivalent) is recommended but not required

**Please see attached flyers for more info on all of these workshops**

“Thank you so much for the opportunity to be a part of the summer internship. I learned so much about writing a personal statement and resume, creating and presenting a poster, and networking. I also gained valuable insight into different avenues of science like public health. I greatly appreciate all the time and effort that faculty and staff put into this program — it was an amazing experience.”

— SURP Intern



2012 summer interns hike Mount Rainier. From left to right: Silvana Francescutti, Rini Kasinathan, Lori Mendelsohn, Nancy Liu, Julissa Chavez, Anna Kahkoska. Photo credit: Julian Simon.

## HOUSING, MEALS, AND TRANSPORTATION

Interns are responsible for their housing, meals, and local transportation. Housing is available at the University of Washington for approximately \$2,000 for the duration of the program. Interns are eligible to purchase a subsidized transportation pass for \$45. There is a free shuttle between the Fred Hutch and University of Washington campus that departs every 15 minutes.

## HOW TO APPLY

Students interested in participating in the Summer Undergraduate Research Program may submit an application at: [www.fredhutch.org/surp](http://www.fredhutch.org/surp). The application deadline is **Friday, January 13, 2017**. Letters of recommendation for up to two references are due by **Friday, January 20, 2017**. Notification of acceptance will occur in mid- to late-February.

2011 intern, Lindsay Dale, presents her research at the competitive poster session. Photo credit: Clayton Hilbert



## CONTACT US

If you have any additional questions about the Summer Undergraduate Research Program that are not addressed in the Frequently Asked Questions section of the SURP website, please send an email to: [SURP@fredhutch.org](mailto:SURP@fredhutch.org).

## ABOUT THE FRED HUTCH

The Fred Hutchinson Cancer Research Center is a world-renowned nonprofit research institution working to improve the prevention, detection, and treatment of cancer, HIV, and many other diseases. To learn more about the Fred Hutch, visit: [www.fredhutch.org/en/about.html](http://www.fredhutch.org/en/about.html).

## BIOMEDICAL RESEARCH INTERNSHIPS

A catalog of internships for high school, undergraduate, post-baccalaureate, graduate, and first-year medical students offered nationwide can be accessed at: [www.fredhutch.org/content/dam/public/education/surp/internships.pdf](http://www.fredhutch.org/content/dam/public/education/surp/internships.pdf).

The Summer Undergraduate Research Program is supported in parts by the Cancer Center Support Grant [CCSG] CURE Supplement: 3 P30 CA015704-41S1, U54 CA132381 [Fred Hutch] and U54 CA132383 [NMSU].

Cover photo, 2010 intern, Meighan Parker and her mentor, Elizabeth Kwan. Photo credit: Dean Forbes.

# SUMMER UNDERGRADUATE RESEARCH PROGRAM

Biomedical Research Opportunities Start Here!



[www.fredhutch.org/surp](http://www.fredhutch.org/surp)



**FRED HUTCH**  
CURES START HERE™

# About the Summer Undergraduate Research Program

The Summer Undergraduate Research Program at the Fred Hutchinson Cancer Research Center [Fred Hutch] is an intensive, nine-week internship designed to provide research experience and mentorship for undergraduate students who are interested in biomedical research. Under the guidance of a faculty mentor, students will complete an independent research project and present their findings at a competitive poster session.

The program runs from **Monday, June 12** through **Friday, August 11, 2017**. Students must be able to commit to this entire period in order to participate.

## AREAS OF RESEARCH

Interns will be paired with a faculty mentor after selecting one of the following areas of interest:

**Basic Science:** Conducts fundamental research in structural, genetic, molecular, cellular, developmental and evolutionary biology;

**Human Biology:** Interdisciplinary research; conducts lab-based and computational research at the interface of basic, clinical, and population sciences;

**Public Health:** Uses large populations as a “laboratory” to look for links between cancer and its possible triggers, from diet and lifestyle to environmental and genetic factors. Conducts statistical, epidemiological, and prevention studies around the world;

**Clinical Research:** Works to develop and analyze new treatments for cancers and other diseases; and

**Vaccine and Infectious Disease:** Integrates computational, laboratory and clinical research methods to advance the understanding of microbial pathogenesis and infectious disease processes.

To learn more about the specific research interests of Fred Hutch faculty, please visit [www.fredhutch.org/en/labs.html](http://www.fredhutch.org/en/labs.html).



2012 intern, Seth Bensussen, and his mentor, Bicheng Han.  
Photo credit: Dean Forbes



2016 SURP intern, Cora Amundson, receives feedback to her personal statement from 2012 SURP alumna, Rini Kasinathan. Photo credit: Stephanie Louie

## PROGRAM COMPONENTS

In addition to completing a mentored research project, interns will participate in professional development workshops designed to facilitate the preparation of competitive applications for graduate or medical school. Workshops include:

- ▶ Preparing a personal statement, resume, and abstract;
- ▶ How to successfully apply to graduate or medical school; and
- ▶ Preparing and presenting a scientific poster.

Interns will also attend weekly research seminars regarding a broad array of scientific topics. The program culminates with a competitive poster session.

The program also sponsors a number of social activities to foster interaction among interns and their mentors. Activities may include:

- ▶ Attending a Seattle Mariners MLB game OR Seattle Sounders FC match;
- ▶ Riding the Seattle Great Wheel OR touring the Theo Chocolate Factory;
- ▶ Taking a ferry to scenic Bainbridge Island; and/or
- ▶ Hiking the trails on Mount Rainier

## ELIGIBILITY REQUIREMENTS

- ▶ U.S. citizen or permanent resident;
- ▶ Entering the summer BEFORE the final year (or semester or quarter) of undergraduate studies; and
- ▶ Strong background in the sciences or related area of interest.

## COMPENSATION

Interns will receive \$4,794 [minus taxes] for their participation in the Summer Undergraduate Research Program.

## TRAVEL

Round trip travel costs (up to \$450) are provided. Travel arrangements will be coordinated by program staff unless otherwise requested.

*“This was my first laboratory experience outside of classes, so it was great to see how research labs operate and to have a project of my own. I’m very grateful for all the support, information, and encouragement I got as a ‘first-timer’ from everyone in the lab to the wonderful program staff.”*

— SURP Intern

Stony Brook University Neurosciences Institute Mind-Body Clinical Research Center  
and Department of Sociology at Stony Brook University

PRESENT

# Mindfulness and Diversity:

Mind-Body Approaches for  
Enhancing Awareness and Well-Being

Friday, October 28 • 9 to 5 pm

## KEYNOTE SPEAKERS:



Herbert Benson, MD  
Director, Emeritus,  
Benson-Henry Institute  
for Mind-Body Medicine;  
Professor of Medicine,  
Harvard Medical School



Cheryl Woods Giscombe,  
PhD, RN, PMHNP  
Assistant Professor of  
Nursing, University of  
North Carolina at Chapel  
Hill; Robert Wood Johnson  
Foundation  
Nurse Faculty Scholar

This conference is open to all, and will provide you with the opportunity to:

- Improve your awareness and understanding of mindfulness-based practices among diverse communities
- Learn about cutting-edge research on mindfulness and minority health
- Connect with faculty, students and community members to learn about mind-body interventions for addressing health inequalities and disparities

**Register online by October 23**

**[stonybrookmedicine.edu/mindfulnessconference](https://stonybrookmedicine.edu/mindfulnessconference)**

Sponsored by the Presidential Mini-Grant for the Departmental Diversity Initiative



Stony Brook  
University



## MEDIEVAL “CRISIS” POPULATIONS ADULT OSTEOLOGY WORKSHOP

**TRANSYLVANIA, ROMANIA**  
**June 4 - July 1, 2017**

As the 15<sup>th</sup> century ends, the battle for Europe begins! The heroes (and their legend) that held back the Ottoman East have died: Vlad Dracula the Impaler in 1476; Holy Stephan the Great in 1504; Skanderberg in 1468. The fall of Constantinople in 1453 and the European defeat at the Battle of Mohacs in 1526 opened the way for the Ottoman expansion into Europe. By 1529, Suleiman the Magnificent has conquered southeastern Europe, and the Ottoman troops were battering the walls of Vienna.

The aim of this project is to evaluate how major global political events physically impact local populations. For that purpose, we will analyze the human remains from four different cemeteries from central Transylvania, around the city of Odorheiu Secuiesc, dating from the 16-17<sup>th</sup> centuries, in relative geographic proximity to one another but from different settled environments.

The collection we will study is housed at the “Haaz Rezso” Museum in Odorheiu Secuiesc, in the heart of Transylvania. This summer’s workshop is designed to conduct an exhaustive osteological survey as well as to select bones to be brought back for stable isotope analysis.

Participants will receive intensive daily lectures on theory and method in osteology before conducting direct research on the bones. The aim of the workshop is for the participants to acquire the necessary skills to conduct a full osteological research project, culminating in podium presentations in the *2017 Fifth International Student Osteology and Bioarchaeology Colloquium* in Odorheiu Secuiesc.



**Duration: 4 weeks (mandatory)**

**Team size: 15-20 (introductory/intermediary level)**

**Costs: US\$2395 for 4 weeks. It includes:**

- museum registration, taxes, fees and most lab gear
- security clearance and access to the study collection
- housing in a hotel near the “Haaz Rezso” Museum
- breakfast and dinner, Monday to Friday
- lectures and labs

**TO APPLY: [www.archaeotek-archaeology.org](http://www.archaeotek-archaeology.org)**

**CONTACT US: [archaeology@archaeotek.org](mailto:archaeology@archaeotek.org)**

# MEDIEVAL CRISIS POPULATIONS ADULT OSTEOLOGY RESEARCH WORKSHOP

TRANSYLVANIA, ROMANIA  
JUNE 4 – JULY 1, 2017

## MORE INFORMATION AND APPLICATION PROCEDURE:

[www.archaeotek-archaeology.org](http://www.archaeotek-archaeology.org)  
[archaeology@archaeotek.org](mailto:archaeology@archaeotek.org)



## Historical Background

As the 15<sup>th</sup> century ends, the southeastern European frontier collapses in front of the Ottoman Turks. The heroes (and their legend) that held back the Eastern invaders have died: Vlad Dracula the Impaler, prince of Wallachia in 1476; Holy Stephan the Great, prince of Moldavia in 1504; Skanderberg (Iskender Bey), lord of Albania in 1468. The fall of Constantinople in 1453 and the united European defeat at the great Battle of Mohacs in 1526 opened the way for the Ottoman expansion into Europe. By 1529, Suleiman the Magnificent has conquered southeastern Europe, the Kingdom of Hungary collapsed and the Ottoman troops were battering the walls of Vienna. The Ottoman expansions was finally checked in 1683, when the arrival of King Jan III Sobieski of Poland's heavy cavalry charge under the walls of besieged Vienna broke the Ottoman army and won a crucial victory.

Transylvania was never invaded by the Turkish armies. The Saxon fortresses and the Szekely armies held the Ottomans armies at bay successfully. With the collapse of the Kingdom of Hungary in 1526, its Transylvanian territories became a political battlefield between European and the Ottoman backed princes until the Principality of Transylvania was born as an autonomous political entity in 1570. In 1600, Michael the Brave, with the support of the Transylvanian Szekely armies, beat the Ottoman and their supporters and realized the first union of the three Romania principalities into one kingdom.

## Archaeological Contexts

**Bögöz (RO: Mugeni)** is among the largest and oldest villages along the Küküllő (RO: Târnava Mare). It sits in the wide Bögöz Basin, found at the middle of the river's central section, which due to its features is suitable for agriculture, and the surrounding hills for animal husbandry and orchards. It sits at a mere 11 kilometers from Udvarhely (RO: Odorheiu Secuiesc). Its first written account dates back to 1333. Its Catholic inhabitants convert to the Reformed faith following the Reformation.

Archaeological excavations around the church in 2009 and later in 2012 have shown that the monument itself must have been erected some time during the 12<sup>th</sup> century and was significantly modified in the late 15<sup>th</sup> and early 16<sup>th</sup> century. The cemetery (223 excavated graves) surrounding the church was used until the end of the 19<sup>th</sup> century, first by Catholics and then, from the 16<sup>th</sup> century by members of the Reformed Church.

**Kányád (RO: Ulies)** is one of the villages found in the small valleys between the hills stretching along the Küküllő River. The village was established in a small depression. The first written reference to Kányád dates back to 1333, but the archaeological excavations conducted at its church suggest that the first church was built some time during the 12<sup>th</sup> century. Its inhabitants deal mostly with animal husbandry (cattle and sheep) and agriculture.

The settlement's first church, built during the course of the 12<sup>th</sup> century, suffered numerous modifications and was finally demolished in 1791. The archaeological excavations of 2006-2007 yielded 61 graves.

**Máréfalva (RO: Satu Mare)** lies in the valley of Fenyéd Creek, at the foot of the Cekend Plateau, being a typical mountain foot village. Its name is first mentioned in 1566, but according to the evidence uncovered by archaeological excavations conducted at its church, the first church was built during the Romanesque period (13<sup>th</sup> century). Its inhabitants constantly remained with the Catholic faith. The village's surrounding area is highly unfavorable for agriculture and so the inhabitant's main activities are animal husbandry and logging. The archaeological excavations were conducted in 2007-2008, inside the medieval church's sanctuary area, and yielded 32 graves.



**Telekfalva (RO: Teleac):** The first written source dates its foundation back to 1566. However, according to archaeological evidence, it seemed to have occurred much earlier, probably in the 13<sup>th</sup> century. The village is crossed by two creeks, Nyír and Bedő, which flow from the area around Nyír and respectively Telek and Szeged. It sits in a small closed valley. Today, its inhabitants live off livestock (cattle and sheep), agriculture (corn and cereals) and fruit cultivation (plums and apples), and following the Reformation, they chose to switch from Catholicism to the Reformed faith.

In Telekfalva (RO: Teleac) we do not know of any medieval church. Its Reformed church was built during the period of the Principality, sometime after 1613. The entire interior of the church revealed 70 graves containing the remains of one adult and 69 children. One of the skeletons, a woman, had her hand severed at the wrist. The excavated segment of the cemetery was used only for a few decades, as shown by the coins found in these graves.

**Patakfalva (RO: Valeni):** The lost church of Patakfalva, our current excavation site, is the sister church of the one in Telekfalva. Our excavation has demonstrated that it is significantly older, built around the 10-11<sup>th</sup> c. AD, on top of a migration period tumulus. Our ongoing excavation has yielded the well preserved skeletal remains of over 200 individuals, ranging from pre-natal to advanced elderly. It also served the Telekfalva community until they built their own church around 16-17<sup>th</sup> c.

## Workshop Description

The aim of this project is to evaluate how major political events physically impact local populations. For that purpose, we will analyze the human remains from the four different cemeteries from central Transylvania (Romania), dating from the 16-17<sup>th</sup> centuries. The four communities that were chosen for this purpose are in relative geographic proximity to one another but vary in their settled environment from low valley flood plain to hill top occupation.

The research itself has three distinct stages. The first one will address the four communities individually in order to assess the internal specific characteristics of each population. The second stage will evaluate the degree to which these discrete populations are integrated into a larger Transylvanian-Szekely population. And finally, we will evaluate how the political changes that impacted Transylvania during the 16-17<sup>th</sup> centuries have physically affected these populations, and to what degree and why there were differential changes within and between the four discrete populations during those events.



The osteology workshop will address these research questions and train our participants to conduct extensive osteological surveys. The goal is to achieve a better understanding of these populations and the changes that affected them by examining who they were, how they lived, and their adaptive strategies to outside stresses.

It is also designed to train our participants to conduct proper research under field conditions. This entails the intensive acquisition of the skills and knowledge required to fulfill the expectations of a genuine research project. As students become more familiar with the questions that the osteological collection allows to address, they will choose a research topic they will address in small groups. The last day of the workshop, each group will present their results in a formal way at the **Third International Student Colloquium on Osteology and Bioarchaeology**, in Odorheiu Secuiesc.

The collection that we will study is housed at the “Haaz Rezso” Museum in Odorheiu Secuiesc, Harghita County, in the heart of Transylvania. This summer’s workshop is designed to implement an exhaustive osteological survey as well as to select bones to be brought back for stable isotope analysis. Participants will receive an intensive 2h lecture daily on theory and method in osteology prior to working on the bones. They will be taught how to clean and reconstruct bones, determine age, sex, stature, identify pathologies, trauma and take standard measurements. They will be introduced as well to various osteological conservation problems aiming at properly evaluate bone quality for further analysis. This survey of bioarchaeological theory and method, coupled with hands on data gathering, is aimed at providing the students the analytical tools needed for the interpretation of the data they collect.

Although a basic knowledge of human anatomy and morphology is preferred, this laboratory workshop session is intended for both inexperienced and more advanced students. The workshop comprises daily intensive lectures on human anatomy (including determination of sex, age, stature and ancestry), biomechanics pathology, group discussions, laboratory work, bone restoration and analysis, leading to individual and group research projects and presentations. Daily mandatory readings will accompany the specifics of each lab day.



## Project Objectives

### *Paleodemography*

1. To create a comparative base line for late medieval populations in order to evaluate changes through time and adaptive responses to socio-political and economic historical events.
2. To establish the skeletal biology of individuals and populations from medieval Transylvania:

#### *Estimation of:*

- a. Sex
- b. Age
- c. Stature
- d. Ancestry

#### *Identification of discrete and idiosyncratic traits:*

- a. Dental nonmetric variation
- b. Cranial nonmetric variation
- c. Postcranial nonmetric variation

3. To establish the skeletal health of individuals and populations from medieval Transylvania:

#### *Paleopathology:*

- a. Congenital disease
- b. Dental disease
- c. Joint disease  
bone
- d. Infectious disease
- e. Metabolic and endocrine disease
- f. Neoplastic disease
- g. Trauma

#### *Paleonutrition:*

- a. Isotopic reconstruction of diet
- b. Malnutrition related disease
- c. Nutritional deficiency related alterations

### *Taphonomy*

4. Identification of post-mortem alterations on bones
  - a. Identification of funeral practices: post-mortem treatment of bodies
  - b. Identification of burial practices: primary, secondary and tertiary burials
  - c. Identification of animal and/or vegetal alterations
5. Evaluation of conservation state and bone quality for analysis

MZ

## Student Involvement

One of our goals in teaching an intensive research workshop is to provide our participants with the opportunity to formally submit an original and valid contribution to science. At the end of each workshop, all students and participants will present their research results at the **2017 Fifth International Student Colloquium on Osteology and Bioarchaeology** hosted by the Haáz Rezső Múzeum. Our participants are further encouraged to take their research to the next level and bring their contributions to the podium at the **American Association of Physical Anthropologists**, **American Association of Forensic Sciences**, **Society for American Archaeology**, **Canadian Association of Physical Anthropologists** and **Paleoanthropology Society** meetings and conferences, getting well deserved recognition as co-authors of the various papers. Check out our participants' past contributions on: <http://www.archaeotek-archaeology.org/scientific-contributions>



## Research Team

1. Project Director: Dr. Jonathan Bethard (University of Southern Florida)
2. Project Coordinator: Prof. Andre Gonciar (Director, Archaeological Techniques and Research Center, ArchaeoTek – Canada)
3. Research team: Dr. Zsolt Nyaradi (Expert Archaeologist – Haaz Rezso Museum of History and Ethnography, Odorheiu Secuiesc, Central Transylvania, Romania)

## Bibliography

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# “VICTIMS OF CHANGE” BIOARCHAEOLOGY OF CHILDREN JUVENILE OSTEOLOGY WORKSHOP

**TRANSYLVANIA, ROMANIA**

**July 2 – July 29, 2017**

During the 17<sup>th</sup> century, Europe redefined itself spiritually, culturally and politically. The Early Modern period was born out of one of the greatest crises of the old world as European identity was reshaped at all levels. During our 2013 season, we uncovered a very unique phenomenon: the inside of the 17th century churches in the region of Odorheiu Secuiesc, in the heart of Transylvania, was suddenly dedicated almost exclusively to infant burials. Our initial study of the church in Teleac/Telekfakva showed one adult, 69 exceptionally well preserved juveniles out of which 48 were of preterm or fetal age. This context created the perfect environment to expand our project to an exclusively children perspective.

Recent contributions to bioarchaeological scholarship have devoted considerable treatment to the analysis of children’s skeletons from both archaeological and contemporary (i.e., forensic) contexts. The aim of this workshop is to provide participants with an intensive review of juvenile osteology and an overview of the ways in which this kind of unique information is interpreted by bioarchaeologists. During the workshop, participants will have the chance to study the growth and development of the human skeleton across various juvenile age cohorts, ranging from prenatal to preadult.

In addition to hands-on laboratory instruction, participants will also contribute to numerous seminar discussions and hear lectures on topics related to the bioarchaeology of children, respectively: growth and development, weaning and dietary stress, juvenile trauma and pathology, as well as reconstruction and interpretation of infant mortality. Moreover, seminars and lectures will introduce how novel technological applications (i.e., histology, CT imaging) have been utilized by bioarchaeologists who study juvenile remains.

**Duration: 4 weeks (mandatory)**

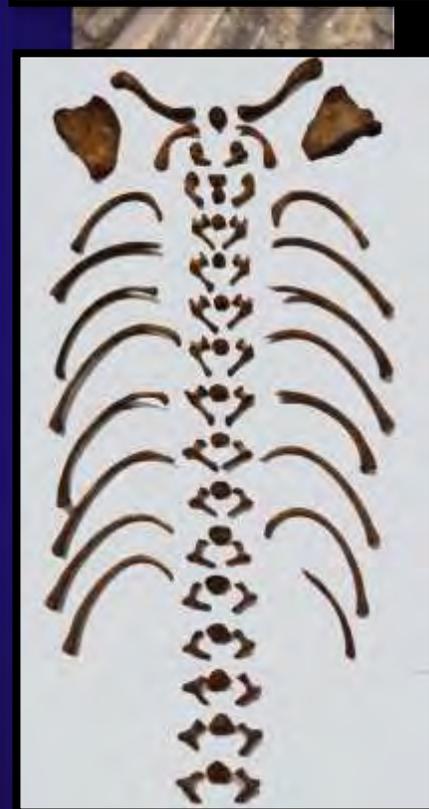
**Team size: 15-20 participants**

**Program Fee: US\$2395 for 4 weeks. It includes:**

- museum registration, local taxes, fees and most lab gear
- security clearance and access to the study collection
- housing in a hotel near the “Haaz Rezso” Museum
- breakfast and dinner, Monday to Friday
- lectures and labs

**TO APPLY: [www.archaeotek-archaeology.org](http://www.archaeotek-archaeology.org)**

**CONTACT US: [archaeology@archaeotek.org](mailto:archaeology@archaeotek.org)**



# BIOARCHAEOLOGY OF CHILDREN

## VICTIMS OF CHANGE – LOST CHURCHES PROJECT

### JUVENILE OSTEOLOGY RESEARCH WORKSHOP

TRANSYLVANIA, ROMANIA  
JULY 2 – JULY 29, 2017

#### MORE INFORMATION AND APPLICATION PROCEDURE:

[www.archaeotek-archaeology.org](http://www.archaeotek-archaeology.org)  
[archaeology@archaeotek.org](mailto:archaeology@archaeotek.org)

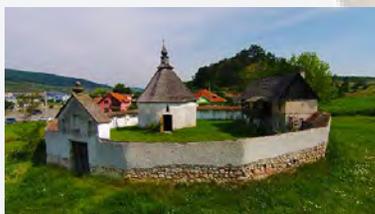


Recent contributions to bioarchaeological scholarship have devoted considerable treatment to the analysis of children's skeletons from both archaeological and contemporary (i.e., forensic) contexts. The aim of this workshop is to provide participants with an intensive review of juvenile osteology and an overview of the ways in which this kind of unique information is interpreted by bioarchaeologists. During the workshop, participants will have the chance to study the growth and development of the human skeleton across various juvenile age cohorts. Most importantly, participants will have the opportunity to gain experience with the analysis of juvenile skeletal remains.

In addition to intensive hands-on laboratory instruction and research, participants will also contribute to numerous seminar discussions and hear lectures on topics related to the bioarchaeology of children. Topical areas to be included involve the following: an overview of the bioarchaeology of children, growth and development, weaning and dietary stress, juvenile trauma and pathology, as well as reconstruction and interpretation of infant mortality. Moreover, seminars and lectures will introduce how novel technological applications (i.e., histology, CT imaging) have been utilized by bioarchaeologists who study juvenile remains.

The exceptionally well preserved skeletal remains that will be investigated during this workshop are excavated from five archaeological sites located in the heart of Transylvania. The juvenile remains that we will study are housed at the Haaz Rezso Museum in Odorheiu Secuiesc, Harghita County. Odorheiu is a very beautiful and lively Szekely city, with a plethora of cultural, gastronomical and social venues. Historical trips to places such as Sighisoara (Dracula's birthplace and an UNESCO heritage site) or Brasov and nearby Bran Castle, and nature hikes through dramatic landscapes of the Eastern Carpathians with all their thermal, mineral and volcanic springs are just a bus or train ride away.

Although previous osteological experience is not required as such, previous hands-on experience of human skeletal remains analysis is highly recommended. To this end, we strongly encourage our participants to attend our Adult Osteology Workshop.



## Archaeological Contexts



**Bögöz (RO: Mugeni)** is among the largest and oldest villages along the Küküllő (RO: Târnava Mare). It sits in the wide Bögöz Basin, found at the middle of the river's central section, which due to its features is suitable for agriculture, and the surrounding hills for animal husbandry and orchards. It sits at a mere 11 kilometers from Udvarhely (RO: Odorheiu Secuiesc). Its first written account dates back to 1333. Its Catholic inhabitants convert to the Reformed faith following the Reformation.

Archaeological excavations around the church in 2009 and later in 2012 have shown that the monument itself must have been erected some time during the 12<sup>th</sup> century and was significantly modified in the late 15<sup>th</sup> and early 16<sup>th</sup> century. The cemetery (223 excavated graves) surrounding the church was used until the end of the 19<sup>th</sup> century, first by Catholics and then, from the 16<sup>th</sup> century by members of the Reformed Church.

**Kányád (RO: Ulies)** is one of the villages found in the small valleys between the hills stretching along the Küküllő River. The village was established in a small depression. The first written reference to Kányád dates back to 1333, but the archaeological excavations conducted at its church suggest that the first church was built some time during the 12<sup>th</sup> century. Its inhabitants deal mostly with animal husbandry (cattle and sheep) and agriculture.

The settlement's first church, built during the course of the 12<sup>th</sup> century, suffered numerous modifications and was finally demolished in 1791. The archaeological excavations of 2006-2007 yielded 61 graves.

**Máréfalva (RO: Satu Mare)** lies in the valley of Fenyéd Creek, at the foot of the Cekend Plateau, being a typical mountain foot village. Its name is first mentioned in 1566, but according to the evidence uncovered by archaeological excavations conducted at its church, the first church was built during the Romanesque period (13<sup>th</sup> century). Its inhabitants constantly remained with the Catholic faith. The village's surrounding area is highly unfavorable for agriculture and so the inhabitant's main activities are animal husbandry and logging. The archaeological excavations were conducted in 2007-2008, inside the medieval church's sanctuary area, and yielded 32 graves.



**Telekfalva (RO: Teleac):** The first written source dates its foundation back to 1566. However, according to archaeological evidence, it seemed to have occurred much earlier, probably in the 13<sup>th</sup> century. The village is crossed by two creeks, Nyír and Bedő, which flow from the area around Nyír and respectively Telek and Szeged. It sits in a small closed valley. Today, its inhabitants live off livestock (cattle and sheep), agriculture (corn and cereals) and fruit cultivation (plums and apples), and following the Reformation, they chose to switch from Catholicism to the Reformed faith.

In Telekfalva (RO: Teleac) we do not know of any medieval church. Its Reformed church was built during the period of the Principality, sometime after 1613. The entire interior of the church revealed 70 graves containing the remains of one adult and 69 children. One of the skeletons, a woman, had her hand severed at the wrist. The excavated segment of the cemetery was used only for a few decades, as shown by the coins found in these graves.

**Patakfalva (RO: Valeni):** The lost church of Patakfalva, our current excavation site, is the sister church of the one in Telekfalva. Our excavation has demonstrated that it is significantly older, built around the 10-11<sup>th</sup> c. AD, on top of a migration period tumulus. Our ongoing excavation has yielded the well preserved skeletal remains of over 200 individuals, ranging from pre-natal to advanced elderly. It also served the Telekfalva community until they built their own church around 16-17<sup>th</sup> c.



## Workshop Description

The drastic change during the late 16<sup>th</sup> early-17<sup>th</sup> century both in mortuary treatment/practices and apparent death rate/profile, generating large concentrations of infant burials inside churches that were abandoned shortly after that, seems to indicate that the condition of *infants* (fetal, perinatal, neonatal) as well as *children* has undergone a transformation not only in terms of health but also socially, culturally and spiritually.

The aims of this project are twofold. First, we are interested in investigating the above phenomenon, i.e. local expression of the crisis that was redefining from its foundations European identity, and establish the role *children* played in this transition. Second, considering the remarkable state of preservation of the remains and their abundance, we will be testing various 2D and 3D methods, both metric and non-metric, in order - potentially - to validate, improve and/or refine sexing (notoriously difficult for these age cohorts) and aging techniques on complete as well as fragmentary skeletons.

## Project Objectives

### *Paleodemography*

1. To create an inventory of all juvenile remains curated in the collections of the Haaz Rezzo Museum
2. To generate age-at-death estimates for each juvenile individual utilizing a combination of available dental and skeletal indicators.
  - a. Dental methods include documenting observations of crown and root mineralization and patterns of tooth eruption (after Al-Qahtani et al. 2010)
  - b. Skeletal methods include documenting patterns of long bone growth and development and/or appearance and growth of secondary ossification centers (after Baker et al. 2005; Scheuer and Black 2000, 2004; Schaefer et al. 2009)
3. To differentiate between non-adult age cohorts and utilize these age categories to investigate specific bioarchaeological questions (after Baker et al. 2005:10).
  - a. Fetal (any individual less than full term) – maternal health, pregnancy stress, mortuary treatment and practices
  - b. Perinatal (time just before and after death) – maternal health, pregnancy stress, mortuary treatment and practices
  - c. Neonatal (newborn in its first month of life) – rates of birth survival, mortuary treatment and practices
  - d. Child (individual over 12 months old and up to puberty) – weaning stress, mortuary treatment and practices
  - e. Adolescence (extends throughout the period of skeletal maturation) – growth and development, maturation, mortuary treatment and practices
4. To understand limitations of macroscopic sex estimation methods when working with juvenile remains

### *Taphonomy*

5. To understand the role of the burial environment on skeletal preservation and recovery of juvenile remains (after Pokines and Symes 2013)
6. Identification of post-mortem alterations on bones
  - a. Identification of funeral practices: post-mortem treatment
  - b. Identification of burial practices: primary vs. secondary burials
  - c. Identification of animal and/or vegetal alterations

### *Pathology*

7. To record observable skeletal and dental pathologies (see Lewis 2007)

## Student Involvement

One of our goals in teaching an intensive research workshop is to provide our participants with the opportunity to formally submit an original and valid contribution to science. At the end of each workshop, all students and participants will present their research results at the **2017 Fifth International Student Colloquium on Osteology and Bioarchaeology** hosted by the Haáz Rezső Múzeum. Our participants are further encouraged to take their research to the next level and bring their contributions to the podium at the **American Association of Physical Anthropologists, American Association of Forensic Sciences, Society for American Archaeology, Canadian Association of Physical Anthropologists** and **Paleoanthropology Society** meetings and conferences, getting well deserved recognition as co-authors of the various papers. Check out our participants' past contributions on: <http://www.archaeotek-archaeology.org/scientific-contributions>



## Research Team

1. Project Director: Dr. Jonathan Bethard (University of Southern Florida)
2. Project Coordinator: Prof. Andre Gonciar (Director, Archaeological Techniques and Research Center, ArchaeoTek – Canada)
3. Research team: Dr. Zsolt Nyaradi (Expert Archaeologist – Haaz Rezso Museum of History and Ethnography, Odorheiu Secuiesc, Central Transylvania, Romania)



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# MEDIEVAL CEMETERY FUNERARY EXCAVATION DYING ON THE EUROPEAN FRONTIER: LOST CHURCHES PROJECT



**TRANSYLVANIA, ROMANIA**  
**JUNE 4 - JUNE 30/JULY 2 - JULY 28, 2017**



As the 15<sup>th</sup> century ends, the battle for Europe begins! The southeastern European frontier collapses in front of the Ottoman Turks. The heroes (and their legend) that held back the East have died: Vlad Dracula the Impaler, prince of Wallachia in 1476; Holy Stephan the Great, prince of Moldavia in 1504; Skanderberg (Iskender Bey), lord of Albania in 1468. The fall of Constantinople in 1453 and the united European defeat at the great Battle of Mohacs in 1526 opened the way for the Ottoman expansion into Europe.

**DURATION:** 4 week sessions

**Field Program Fee (non-credit):** US\$2195 per session

**Full tuition (NC resident):** US\$5234 (6 undergraduate credits)

**Full tuition (non-NC resident):** US\$7832 (6 undergraduate credits)

**IT INCLUDES:** Field Program Fee, most gear, museum clearance; housing in double/triple occupancy rooms in a newly renovated hotel; breakfast and dinner, Monday-Friday

**DEADLINE (WCU):** January 15, 2017 (rolling deadline for non-credit participants)

As Europe redefines itself in the wake of the Ottoman invasion, the Transylvania frontier still holds fast against the Eastern invaders. However, during the 17th century, a series of churches in the region around Odorheiu Secuiesc cease to be used. In the aftermath of the crisis that shook the foundation of European identity, these churches disappear from collective memory.

The aim of this project is to explore how major political events physically impacted local populations. We are interested in the evolution of the population throughout the Middle Ages in the region, the changes in church architecture and burial patterns, and the variations of burial ritual during social, political and economic stress. The further study of the human remains in our osteology laboratory will provide a more detailed view of the human aspects of these transitions.

**FOR MORE INFORMATION:** [www.archaeotek-archaeology.org](http://www.archaeotek-archaeology.org)

**CONTACT US:** [archaeology@archaeotek.org](mailto:archaeology@archaeotek.org)

**To apply for credit, contact Dr. Katie Zejdlik:** [katzejdlik@gmail.com](mailto:katzejdlik@gmail.com)

# CREATION OF A EUROPEAN FRONTIER: LOST CHURCHES PROJECT MEDIIEVAL FUNERARY EXCAVATION

TRANSYLVANIA, ROMANIA  
JUNE 4-JUNE 30 / JULY 2-JULY 28, 2017

**MORE INFORMATION AND APPLICATION PROCEDURE:**

[www.archaeotek-archaeology.org](http://www.archaeotek-archaeology.org)  
[archaeology@archaeotek.org](mailto:archaeology@archaeotek.org)

## PROJECT CONTEXT

As the 15<sup>th</sup> century ends, the battle for Europe begins! The southeastern European frontier collapses in front of the Ottoman Turks. The heroes (and their legend) that held back the East have died: Vlad Dracula the Impaler, prince of Wallachia in 1476; Holy Stephan the Great, prince of Moldavia in 1504; Skanderberg (Iskender Bey), lord of Albania in 1468. The fall of Constantinople in 1453 and the united European defeat at the great Battle of Mohacs in 1526 opened the way for the Ottoman expansion into Europe. By 1529, Suleiman the Magnificent has conquered southeastern Europe, the Kingdom of Hungary collapsed and the Ottoman troops were battering the walls of Vienna. The Ottoman expansions was finally checked in 1683, when the arrival of King Jan III Sobieski of Poland's heavy cavalry charge under the walls of besieged Vienna broke the Ottoman army and won a crucial victory.

However, Transylvania was never invaded by the Turkish armies. The Saxon fortresses and the Szekely armies held the Ottomans at bay successfully. With the collapse of the Kingdom of Hungary in 1526, its Transylvanian territories became a political battlefield between European and the Ottoman backed princes until the Principality of Transylvania was born as an autonomous political entity in 1570. In 1600, Michael the Brave, with the support of the Transylvanian Szekely armies, beat the Ottoman and their supporters and realized the first union of the three Romania principalities into one kingdom.





As Europe redefines itself in the wake of the Ottoman invasion, the Carpathian frontier still holds fast against the Eastern invaders. Although Transylvanian suzerainty has passed from the Hungarian Kingdom, to the Ottomans, to the Habsburgs from the 15-17<sup>th</sup> century, its territory has never been invaded by the Turkish troops. However, the local populations lived under constant social, political, economic and religious stress. Since the Neolithic, Transylvania has been at the crossroads of European identity. During the late Middle Ages, this region goes not only through major political changes, but also through a spirituality crisis, under the pressure of Islam from the East and Protestantism from the West.

## **HISTORICAL AND ARCHAEOLOGICAL CONTEXT**

During the 17<sup>th</sup> century, a series of churches in the region around Odorheiu Secuiesc cease to be used. According to our archeological excavations, most of these churches existed as far back as the 12<sup>th</sup> century. In the aftermath of the crisis that shook the foundation of European identity, these churches disappear from collective memory. At the same time, the use of these temples changes in a fundamental way during the last decades for their use. The church at Teleac/Telekfalva revealed that during the 17<sup>th</sup> century, the church was almost exclusively used to inter children, mostly preterm: the funerary ensemble showed one adult, 69 juveniles out of which 48 were of preterm or fetal age. Our 2013 excavation at the lost churches of Bradesti/Fenyed and Lueta has yielded a series of surprises, ranging from a highly complex ossuary, to a “Romeo and Juliette” grave, to a series of twins. The material culture associated with the various graves was exceptionally well preserved, allowing a very interesting glimpse into 17<sup>th</sup> century rural life and mortuary aesthetics. And finally, our on-going excavation of the lost church of Valeni has shown that it was built on top of a pre-Christian tumulus that contained at least 3 individuals and a horse!!!





## PROJECT OBJECTIVES

The aim of this project is to continue to explore how major political events physically impacted local populations. We are interested in the evolution of the population throughout the Middle Ages in the region, the changes in the very local type of church architecture and burial patterns through time, and the variations on the Christian burial ritual during social, political and economic stress. At the same time, we will explore the way local communities "lived" the transition from Catholicism to Protestantism.

The results of our 2013-2015 laboratory analysis of the human remains from the interior of the "lost churches" we excavated have shown a very interesting demographic profile – composed overwhelmingly of infants – and pathologies. During our 2016 field season, we will continue the extraordinarily well preserved "lost church" of Valeni, sister church of Teleac. We will focus on the interior and immediate exterior of the church in question in order to establish if the specific locale was already devoted to deceased children prior to the construction of the church itself and to locate the adults of the population of these specific parishes in the hopes that we can elucidate the extraordinary high concentrations – both in space and time – of preterm and/or fetal remains.

At the same time we will investigate the building phases of this ecclesiastic building and its relationship to the deceased. The unexpected discovery in during our 2014 season of a pre-Christian/migration period burial complex, including several individuals and a horse, adds another level of perception to the evolution of the landscape. These results could also shed light on the relation between this church and its community. Through a more thorough study of the cemetery and its occupants, we will also explore the different processes that led to the penetration of Protestantism in the village and then its subsequent return to Catholicism and/or its final disappearance. The further study of the human remains in our osteology laboratory will provide a more detailed view of the human aspects of these transitions

## OBJECTIVES

- Determining the architectural building phases of the central cemetery church and their chronology
- Mapping the different phases of the cemetery inhumations and their relationship to broader social, political, religious, military and economic events
- Proper retrieval of the human remains for further anthropological analysis
- Establishment of late medieval funerary behavior and its evolution
- Identification of idiosyncratic ritual changes and their relationship to historical stresses
- Local and regional patterns of interaction, mobility and association among various groups of individual
- Ethnic historical evolution of the local and regional landscape



## SPECIALIZED SKILLS TAUGHT

Lectures will be offered to our volunteers, ranging from local history and archaeology to material culture typologies and architecture, to various subjects related to mortuary archaeology. Students will be taught the proper use of various field tools. Explanations will be provided for every step of the excavation, on stratigraphy, field finds and archaeological complexes. We expect our volunteers to be intellectually involved in the archaeological process and thus interacting with the research staff.

Skill sets taught during the project:

- **Excavation:** proper use of excavation tools, strategic excavation of human bone material and associated grave goods, mapping, drawing, soil description, feature and site notation, interpretation, and removal of skeletal remains
- **Laboratory:** osteological processing and basic analysis



## ARCHAEOOTEK 2017 EVENING LECTURE SERIES

\*PDFs of readings not available online will be provided

### Cultural history of Transylvania and the Szekely people

The lost churches are located in the Transylvanian region of Romania. This area has a complicated and unique history that affects current understanding of the people students daily interact with as well as interpretation of context of the human and material remains students will encounter during the course. This lecture provides information about the history of the Transylvanian region including an overview of the many, many cultural groups that have moved through or occupied this area. It will focus on the how the Szekely people interacted with these various groups and how they still maintain their presence on the landscape. The lecture ends with a discussion of the Ceaușescu's dictatorial rule of Romania and a brief Hungarian language lesson.

### Read:

Gündisch (1998) *Transylvania and the Transylvania Saxons*. [http://sibiweb.de/geschi/history\\_of\\_transylvania\\_and\\_the\\_transylvanian\\_saxons.php](http://sibiweb.de/geschi/history_of_transylvania_and_the_transylvanian_saxons.php)

*The Székelys in Transylvania* <http://mek.oszk.hu/03400/03407/html/71.html>

### Watch:

“Ceaușescu: Behind the Myth” <https://www.youtube.com/watch?v=cvlfRKBIGok>

### Interacting with the dead: A global and temporal tour

The variety of mortuary treatment humans have applied to their dead is only limited by the number of deceased individuals. While there are overarching institutions such as religion and politics that heavily influence burial practices, the detail of mortuary treatment is often specific to the deceased individual and to the mourners. Michael Parker Pearson (1999) coined the oft-used phrase, “the dead do not bury themselves.” It is often found that the wills and desires of the deceased are trumped by the agendas of the living be those agendas personal, political, religious, medical, or economic. This lecture examines the range of mortuary treatments around the world through time highlighting the endless ways human interact with their dead and the reasons behind those interactions. It also discusses how mortuary treatment affects the preservation of human remains.

**Read:**

Cannon, Aubrey. 1989. "The Historical Dimension in Mortuary Expressions of Status and Sentiment". *Current Anthropology* 30(4):437-458.

Naji, Stephan. 2005. "Death and Remembrance in Medieval France: A Case Study from the Augustinian Monastery of Saint-Jean-des-Vignes, Soissons". In *Interacting with the Dead: Perspectives on Mortuary Archaeology for the New Millennium*, Gordon F.M, Rakita, Jane E. Buikstra, Lane A. Beck, and Sloan R. Williams, eds. Pp171-189. Gainsville: University of Florida Press.

**Watch:**

"Kelly Swazey: Life that doesn't end with death" [https://www.youtube.com/watch?v=ZCRC5\\_0kfiw](https://www.youtube.com/watch?v=ZCRC5_0kfiw)

**Bioarchaeological Interpretation**

Analysis and interpretation of human remains is a complicated endeavor. This lecture builds off of the previous lecture where students learn about a variety of mortuary treatments to more deeply investigate the theoretical perspectives researchers use to understand the person or people whose remains they are studying. Using the Aztalan site in southeast Wisconsin, we will examine how a single assemblage of human skeletal remains has resulted in numerous, plausible interpretations of the life and death of these individuals.

**Read:**

Zejdlik, Katie. 2015. "Opportunity Knocks: Nonritual Use of Human Bone at the Aztalan Site, Jefferson County, Wisconsin". In *Transforming the Dead: Culturally Modified Bone in the Prehistoric Midwest*, Eve A. Hargrave, Shirley J. Schermer, Kristin M. Hedman, and Robin M. Lillie, eds. Pp 141-151. Tuscaloosa: University of Alabama Press.

**Watch:**

*Blood of the Gods- Ritual Sacrifice at Cahokia*: <https://www.youtube.com/watch?v=GCTAbUDV4to>

*In Wisconsin, Evidence of Human Sacrifice*: <https://www.youtube.com/watch?v=-16f6DgIQPo>

**Careers and Education Roundtable:** Participation in the Lost Churches Project provides students with access to professionals who have experience in multiple aspects of skeletal analysis including bioarchaeology, anatomy, forensic anthropology, and paleoanthropology. All students participating in the Medieval Funerary Excavation, Adult Osteology Workshop, and Juvenile Osteology Workshop are invited to this roundtable where the program instructors answer any and all questions students have about careers and education associated with different osteological interests.

## RESEARCH TEAM

1. Scientific Director: Dr. Katie Zejdlik (Western Carolina University)
2. Field Director: Dr. Zsolt Nyaradi (Expert Archaeologist – Haaz Rezso Museum of History and Ethnography, Odorheiu Secuiesc, Harghita County, Central Transylvania, Romania)
3. Project Coordinator: Prof. Andre Gonciar (Director, Archeological Techniques and Research Center, ArchaeoTek – Canada)

For more information on the staff, please visit:

<http://www.archaeotek-archaeology.org/staff>



## TO APPLY:

**Non-Credit Participants/Volunteers:** fill out the [application form](#) on the ArchaeoTek website

**Field Program Fee:** US\$ 2195

**Deadline:** applications accepted until all positions are filled

**Credit Participants:**

**Full Tuition – North Carolina Resident:** US\$ 5233.55 (includes Field Program Fee and six academic credits)

**Full Tuition – Non-North Carolina Resident (includes foreign students):** US\$ 7831.55 (includes Field Program Fee and six academic credits)

**Deadlines:**

- Application due to WCU: **January 15, 2017**. Please note that you need to first be accepted into the ArchaeoTek program before applying for WCU credits.
- \$500 non-refundable deposit due **February 1, 2017**
- Full tuition and program costs (non-refundable) due **March 15, 2017**.

**For more information regarding Western Carolina University application process, please contact Dr. Katie Zejdlik at [katzejdlik@gmail.com](mailto:katzejdlik@gmail.com)**

Please note that we have only 10 volunteer and 10 student spots available for each field session. Our programs are usually full by the end of January.

## GENERAL BIBLIOGRAPHY

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Duday, H., 2009. *The Archaeology of the Dead: Lectures in Archaeoethanatology*. Oxbow Books, Oxbow.

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