



AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

LABORATORY FOR ARCHAEOLOGICAL SCIENCE

NEWSLETTER



Laboratory's Fundraising Campaign Reaches Key Milestone

Lab is more than halfway toward its \$1 million goal thanks to a generous matching grant

The **Laboratory for Archaeological Science** at the American School of Classical Studies at Athens is in the midst of a **\$1 million campaign to support the Lab's exemplary staff and acquire an industrial high-resolution computed tomography (CT) scanner (microtomograph)**. To date, \$660,000 has been raised through a 1:1 matching grant earmarked to support salary at the Lab. We hope that you will consider joining us to fund this remarkable Lab and its instrumentation so that we can continue to make strides in advancing archaeological science. **Your tax-deductible gift will be matched dollar for dollar, up to \$500,000.** All funds raised above the \$1 million goal will be used to endow a fund for ongoing instrument maintenance.



The Lab is one of the very few in Greece that can undertake large-scale projects in the various fields of archaeological science



The SKYSCAN 1273 is the next generation benchtop 3D X-ray microscope by Bruker

Equipment Needed

Although industrial CT scanners operate under the same principles as medical CT scanners, they can attain much higher X-ray intensity and spatial resolutions. High-resolution, industrial CT scanners are mainly used in materials sciences and for investigating engineering products but recently have been increasingly used to analyze archaeological objects. This new direction has enormous implications for the future of archaeological research. The equipment provides a powerful means to study the external and internal structure of a series of archaeological materials in a non-destructive way, including human osteological specimens, animal bone, metal and ceramic archaeological objects, wooden objects, as well as plaster, frescoes, and soil and rock samples.

Phaleron Bioarchaeological Project

One of the primary research projects that the high-resolution CT analysis will support is the **Phaleron Bioarchaeological Project**. The Phaleron cemetery, which includes more than 1,900 skeletons, is one of the largest and arguably the most spectacular ancient burial assemblage that has ever been unearthed in the Greek mainland. The analysis will focus on a series of infant pot burials that will be almost impossible to excavate without destroying some of the original information. Thus, a CT scanner would become an invaluable asset due to its ability to reveal exact burial positions and internal bone structure and histology without damaging the objects. In addition, histological, paleopathological, taphonomic,

and diagenetic analyses will be conducted on the rest of the bones of the cemetery.

Scientific Research and Resources

The Lab's facilities and equipment support the widest possible range of basic science research consistent with the academic interests at the School. Located on the American School's main campus in Athens, the Lab is a free-standing, three-level building encompassing more than 1,000 square meters (10,760 square feet). With expertise in human skeletal studies, faunal analyses, environmental archaeology, and soil micromorphology, the Lab offers cutting-edge analytical equipment for sampling and analyzing organic and inorganic materials, as well as designated spaces for study, library research, and consultation.

The Lab facilitates the independent research of international scholars who study bioarchaeology, geoarchaeology, archaeobotany, zooarchaeology, and materials science. It also provides a variety of fellowships as well as resources for independent research. In addition, Lab staff help American School scholars better understand how scientific methods can provide new context to their own philological, classical, and historical research.

International Reach

The Lab participates in a collaborative network of research facilities, including the Max Planck – Harvard Research Center for

the Archaeoscience of the Ancient Mediterranean, Arizona State University, the Fitch Laboratory at the British School at Athens, the University of Arizona, the University of Groningen, the Institute for Archaeological Sciences of the University of Tübingen, and the Kimmel Center for Archaeological Science of the Weizmann Institute in Israel, among others.

Leadership

Dr. Panagiotis Karkanas is Director of the Laboratory. He is an internationally prominent geoarchaeologist conducting research in Greece, the wider Mediterranean, the Balkans, northern Europe, Africa, and China. For more than 20 years, Dr. Karkanas served as a senior geologist in the Ephorate of Palaeoanthropology-Speleology in the Antiquities Service of Greece. He holds bachelor's and doctorate degrees in geology from the University of Athens. He served as an associate editor for the *Journal of Human Evolution* and is currently an associate editor for *Geoarchaeology*. Dr. Karkanas was elected to the American Academy of Arts and Sciences' 237th class in April 2017. He was one of 40 Foreign Honorary Members to be selected that year. In May 2018, he was also elected to the U.S. National Academy of Sciences (NAS), a prestigious organization that recognizes distinguished and continuing achievements in original research. NAS membership is a widely accepted mark of excellence in science and is considered one of the highest honors a scientist can receive. While scientists of Greek heritage and nationality have been elected before (for work based in the U.S.), Dr. Karkanas is the first Greek—along with

economist Anastasios Xepapadeas of Athens University—to be inducted as a foreign associate living and working in Greece.

About the Lab

The Lab is a research center dedicated to the study of the Greek world from deep prehistory to the present day. Researchers investigate diverse aspects of human culture in the ancient world, including technology, trade, economic development, responses to climate change, diet, and health. The Lab provides state-of-the-art facilities and equipment, extensive comparative collections, and support for independent scientific research.

To learn more about the Lab, please watch the ***Science of Archaeology*** short film at ascsa.edu.gr/about/short-films/the-science-of-archaeology-video.

Support

The Lab depends on the philanthropic support of visionary donors to further its mission of fostering collaborative research partnerships that use the natural sciences to enlighten human history. **To make a tax-deductible gift (which will be matched up to \$500,000), please visit ascsa.org/give or contact Nancy Savaides, Director of Stewardship and Engagement, at nsavaides@ascsa.org or 609-454-6810.** To learn more about the School, please watch the ***Discover the American School*** short film at ascsa.edu.gr/about/short-films/discover-the-american-school-video.



The Phaleron cemetery sheds light on life and death at the ancient Attic port (image used with the kind permission of the Ephoreia of Piraeus, Western Attica, and the Islands, Ministry of Culture, Greece)



The Lab's main long-term research interests are in studies of bone, plant, sediment and soil, lithics, ceramics, and mortar/cement



The **American School of Classical Studies at Athens** is one of the preeminent centers for the study of the Greek world. Founded in 1881, the School is the oldest U.S. overseas research and teaching institution. Today, it is the largest of the 18 foreign institutes in Athens and the only one that offers a regular program of instruction to students. A consortium of more than 195 affiliated North American colleges and universities, the School provides graduate students and scholars a base for the advanced study of all aspects of Greek culture, from antiquity to the present day. It also offers students and scholars from around the world the opportunity to explore the full range of scholarly resources in Greece. With its administrative headquarters in Princeton, New Jersey, and its main campus in Athens, Greece, the School operates renowned excavations in the Athenian Agora and Ancient Corinth, two distinguished libraries, a world-class archaeological laboratory, a comprehensive archives department, and a prolific publications department. The School remains, as its founders envisioned, a private, nonprofit educational and cultural institution.



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