

Malcolm H. Wiener Laboratory for Archaeological Science



AMERICAN SCHOOL OF
CLASSICAL STUDIES AT ATHENS

FOUNDED 1881



About the Lab

The **Malcolm H. Wiener Laboratory for Archaeological Science** is an active research center dedicated to the study of the Greek world from deep prehistory to the present day. The Lab provides state-of-the-art facilities and equipment, extensive comparative collections, and funding for independent scientific research while simultaneously helping members of the American School's academic community better understand how scientific methods can provide new context to their own archaeological, historical and philological research.

Founded in 1992, the Wiener Lab is located on the campus of the American School of Classical Studies at Athens. In 2016, the Lab moved to its new freestanding, three-level building that encompasses more than 1,000 square meters (10,760 square feet) and features designated spaces for study, library research and consultation. The new facility includes state-of-the-art laboratories and cutting-edge analytical equipment for sampling and analyzing organic and inorganic materials. It is one of the very few labs in Greece that can undertake large-scale projects in the various fields of archaeological science and can provide the necessary infrastructure for the completion of these projects, including storage, strewing, working, and office space.

Research

The Wiener Lab's main, long-term research interests are in studies of bone, plant, sediment and soil, lithics, ceramics, and mortar/cement. Our financially supported research projects are carefully selected in order to promote transdisciplinary and interdisciplinary approaches and methodologies. The geographical range of our research extends across the entire ancient Greek world and much of the Mediterranean.

The Lab's main research focus areas are the following:

- Human Skeletal Studies
- Faunal Studies
- Archaeobotanical Studies
- Geoarchaeological Studies
- Materials Science Studies

By using elaborate and sophisticated scientific methods, often beyond visual capacities, the Lab's researchers are investigating the many diverse aspects of human activity in the ancient world, including technology, trade, economy, diet, health, and everyday life. The relationship of ancient peoples to their environment and responses to climatic changes are key parts of the Lab's research agenda. A variety of complementary analytical techniques are applied to studies in each research area. The Lab has extensive experience in and the knowledge of processing all types of samples and is fully equipped for conducting various types of analysis with the aid of our extensive analytical equipment and collections.

Education

The Wiener Lab, in collaboration with the American School's Corinth and Athenian Agora Excavations, operates a Field School that teaches archaeological stratigraphy and site formation processes. The Lab also offers "Archaeological Soil and Sediment Micromorphology," an intensive week-long course in archaeological micromorphology.

Fellowships and Grants

Since its inception, the Wiener Lab has facilitated the independent research of over 200 scholars representing more than a dozen





countries. The Lab also provides a variety of fellowships and resources for independent research in most fields of archaeological science, including fellowship funding for pre- and postdoctoral and research associate positions.

Collaboration

The Wiener Lab participates in a strong collaborative network of international laboratories such as the Fitch Laboratory at the British School at Athens, the Institute for Archaeological Sciences of the University of Tübingen, the Kimmel Center for Archaeological Science of the Weizmann Institute in Israel, the Max Planck-Harvard Research Center for the Archaeoscience of the Ancient Mediterranean (MHAAM), Arizona State University, and the University of Arizona, among numerous other international and intra-Greece institutions.

Resources

Equipment. The Wiener Lab has recently acquired the following equipment: a low vacuum Scanning Electron Microscope (**SEM**; JEOL, JSM-IT300LV); an Energy Dispersive X-Ray Microanalytical system (**EDX**; Oxford Aztec STD X-act); a handheld X-Ray Fluorescence analyzer (**pXRF**; Bruker TRACER III SD); a Fourier Transform Infrared Spectrometer (**FTIR**; Thermo Scientific Nicolet iS5); and an X-ray Diffractometer (**XRD**; Bruker D2 Phaser). In addition, the Lab has various research grade microscopes (stereoscopes, incident and transmitted polarizing and metallographic microscopes) and other scientific equipment such as a coating apparatus, freeze dryer (lyophiliser), incubator, portable pH-conductivity-dissolved oxygen meter, X-ray inspection unit with shielding, trim saw, low-speed saw, strip grinder, vacuum impregnation unit, lapping and polishing system, vacuum drying chamber, several furnaces and drying ovens, centrifuges and

balances, to name the most useful for the work of the Lab. Recently, an Ancient DNA (**aDNA**) preparation room has been installed for in-house sampling of osteological material in collaboration with the MHAAM.

Comparative Collections. The Lab provides modern storage for its permanent comparative collections and temporary storage units for materials to be analyzed. A number of comparative collections have already been developed and are constantly being added to, while new collections to support emerging areas of research are being planned. These include collections of human skeletal, modern faunal (mollusk, fish, bird, and mammalian taxa), and botanical materials (seeds and plants, charred wood, and phytoliths), as well as rocks and minerals, ceramics and soils, pigments, and experimentally produced stone tools. A small experimental garden has been developed in which archaeologically important plant taxa are being cultivated with the scope of both enriching our collections and understanding the ecological dynamics of these crops.

Bibliographical Resources. The Lab's extensive specialist library holdings offer access to journals not available elsewhere in Greece, as well as maps and other resources.

Contact Us

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The **American School of Classical Studies at Athens** is the leading U.S. research and teaching institution in Greece, dedicated to the advanced study of all aspects of Greek culture, from antiquity to the present. Founded in 1881, the School provides students and scholars from over 190 affiliated North American colleges and universities with the opportunity to explore the full range of scholarly resources in Greece. It was the first American overseas research center, and today it is the largest of the 18 foreign institutes in Athens—and the only one that provides a regular program of instruction to students. It conducts long-standing excavations in the Athenian Agora and Ancient Corinth, houses two distinguished libraries, in addition to its archaeological science laboratory, and supports a prolific publishing program. The School remains, as its founders envisioned, a privately funded, nonprofit educational and cultural institution.



MALCOLM H. WIENER LABORATORY FOR ARCHAEOLOGICAL SCIENCE AT THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

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