

# Research projects

## **Alchemy in the Making: From Ancient Babylonia via Graeco-Roman Egypt into the Byzantine, Syriac and Arabic Traditions (1500 BCE–1000 AD)**

*Matteo Martelli, University of Bologna*

‘Alchemy in the Making: From Ancient Babylonia via Graeco-Roman Egypt into the Byzantine, Syriac and Arabic Traditions (1500 BCE–1000 AD)’ (*AlchemEast*) is a new research initiative funded by the European Research Council (ERC) under the European Union’s Horizon 2020 research and innovation programme (Consolidator Grant 2017–2022, Grant Agreement 724914, PI Matteo Martelli) and based at the University of Bologna. The project casts its look to the East and back in time—on the two and a half millennia that precede the conventional Mediaeval origins of alchemy—in order to tell the unknown story of alchemy and its practice. To investigate this millennium-old tradition, *AlchemEast* explores Babylonian proto-alchemy, the origins of this discipline in Graeco-Roman Egypt, its dissemination in Byzantium, and the different forms of the Syriac and Arabic reception—with a focus on primary sources and their manuscript tradition.<sup>1</sup>



Fig. 1. AlchemEast project logo

With the combination of innovative textual investigation and experimental replications, *AlchemEast* wishes to change the pejorative paradigm and the negative stereotypes connected to alchemy as a pseudo-science. *AlchemEast* adopts new models for textual criticism in order to capture the fluidity of the transmission of the main sources, as to provide reliable editions that can in-

<sup>1</sup> For a complete presentation and regular updates, visit the project homepage at <https://alchemeast.eu/>.



Fig. 1. Experiment with orpiment and natron oil, Baltimore 2018, photo: Lucia Raggetti.

form the activity of replication in the laboratory. In exchange, the replications help philology to understand the chemical reality behind the texts.

*AlchemEast* also explores the intersections between alchemy and other related sciences that study nature from another perspective (medicine, philosophy, astrology).

At the moment, the *AlchemEast* team—that will acquire two more Doctoral Students and one researcher for the Babylonian materials in 2019—counts eight members and two associated Doctoral Students. They are:

— Luca Battistini (Associated Doctoral Student). Luca works on the relationship between astrological determinism and free will in the late antique astrological tradition, investigating the presence and the role of astrological elements in other related natural sciences (alchemy, medicine, magic).

— Miriam Blanco (Postdoc). Miriam's current project in *AlchemEast* focuses on the two (al)chemical papyri usually referred to as the Leiden and Stockholm papyri (third-fourth century CE) and their relation with the Hellenistic technical literature. She is also investigating their connection with the so-called Theban library and its intellectual environment.



Fig. 2. Extracting mercury from natron and cinnabar, Baltimore 2018, photo: Lucia Raggetti.

— Bojidar Dimitrov (Postdoc) is currently working on a critical edition, translation and commentary of Ġābir ibn Ḥayyān’s ‘Rectifications to Plato’ (*Kitāb muṣaḥḥaḥāt Aflāṭūn*).

— Lucia Maini (Chemist) and Massimo Gandolfi (Lab technician). Their research in *AlchemEast* deals with historically informed replications of ancient alchemical recipes. So far, they have been working on the ancient chemistry of mercury and related minerals, especially cinnabar.

— Matteo Martelli (Principal Investigator). In this phase of the project, his research focuses on the alchemical work of Zosimus of Panopolis and its reception in the Syriac tradition (critical edition of the Syriac books ascribed to Zosimus).

— Daniele Morrone (Doctoral Student) is building a database of medically and alchemically themed metaphors and analogies in Middle Platonic texts, with a focus on their argumentative contexts. The aim of his research is to give insight into the historical interrelations between medical and alchemical science and all the other philosophical and scientific ideas that animated Middle Platonic thought and writing practice.

— Giorgia Pausillo (Doctoral Student) is preparing a new comprehensive and updated catalogue of the Greek alchemical manuscripts in Italy, with a particular attention to the codicological and paleographical aspects. Part of the research focuses on the manuscripts produced in the Paleologan Age, investigating the historical and cultural context that favoured the circulation of the alchemical texts.

— Lucia Raggetti (Researcher) is working on those Arabic texts connected with the reception of the Greek tradition—both translations and original compositions—with a focus on the mechanisms of transmission and the construction of authorship. She is preparing the critical edition of Ps. Aristotle's *Book of Stones*, of Ps. Democritus' *On the Four Elements*, and the *Treatise of the Crown* by Mary the alchemist.

— Robert Sieben-Tait (Associate Doctoral Student, co-direction Paris IV – University of Bologna) is working on a critical edition, translation and study of the *Mufarriḥ an-nafs* ('The Soul-Cheerer')—a thirteenth-century medical text that is attributed to the Damascene physician Badr ad-Dīn al-Muẓaffar ibn Qāḍī Ba'albakk and represents an attempt to compile a comprehensive guide for physicians to the treatment of the soul in the context of the medieval hospital.