

Object: PhD scholarship in analytical chemistry and physical chemistry in the context of the evolution of organic matter on the primitive Earth at the Origins Institute (PIIM laboratory) of the University of Aix-Marseille, funded by the PEPR Origins.

A PhD scholarship opportunity is open at the ASTRO' team of the PIIM laboratory at Aix-Marseille University, Institut Origines, Marseille, France. The successful candidate will work on simulating the aqueous environments of the early Earth in order to better understand the physical and chemical evolution of extraterrestrial organic matter. Specifically, he or she will develop experiments to investigate how molecular diversity observed in some meteorites might evolve once delivered to the surface of the early Earth. The experiments will simulate the so-called 'primordial soup' in aqueous environments that allow organic interactions with minerals and UV photons. The goal is to test the hypothesis of an exogenous supply of organic matter via interplanetary bodies to terrestrial planets, and its potential role in the emergence of prebiotic chemical systems. The experiments will be carried out using microfluidic systems developed in collaboration with Philippe Nghe of ESPCI, Paris, France. The candidate will be responsible for sample analysis using various analytical techniques, such as high resolution mass spectrometry coupled with gas or liquid chromatography. The PhD position will be supervised by G. Danger in collaboration with Philippe Nghe from ESPCI, Paris. The candidate will work in the interdisciplinary environment of the Institut Origines, which will provide opportunities for expanding their knowledge. This project is part of the Workpackage "The emergence of life - Lab. experiments and bioanalyses of early-Earth/Mars samples" of a French nation-wide interdisciplinary initiative called PEPR Origins, for the study of the origins of life on Earth and characterization of exoplanets.

The funding is available for a period of three years. The start date would be September to December 2023, depending on the availability of the applicant. Applicants must hold a Master's degree in chemistry, physical chemistry, or analytical chemistry at the time of appointment. Applicants should submit a letter of motivation, a CV, a list of publications and a statement (maximum one page) explaining their research interests and qualifications, and request a letter of recommendation. Review of applications will begin upon receipt until the position is filled. All applications received by the deadline will be given full consideration.

Application Deadline: May 15th, 2023
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