

AMOÉBA PUBLISHES A NEW SCIENTIFIC PAPER IN THE JOURNAL MICROORGANISMS

Chassieu (France), November 16 2020 - AMOÉBA (FR0011051598 - ALMIB), producer of a biological biocide capable of eliminating the microbial risk in water and of a biocontrol product for plant protection, still in the testing phase, announces the publication of a new scientific publication (https://www.mdpi.com/2076-2607/8/11/1791/pdf). This work is the result of collaboration between the Institut Hospitalo-Universitaire (IHU) Méditerranée Infection (Marseille) and the company Amoéba (Chassieu). The paper was published in the microbial biotechnology section of "Microorganisms", an international peer-reviewed scientific journal.

In order to go even further in the scientific understanding of the behavior of the amoeba *Willaertia magna* C2c Maky, a comparative study of amoeba cultivation methods was carried out in the laboratory of Professor Bernard LA SCOLA at the IHU of Marseille. The proteomic¹ and lipidomic² profiles of the amoeba, cultivated by the Amoeba company in adhesion (on support) or in suspension (in bioreactor), were analyzed at the IHU. This work provided essential knowledge on the development and metabolism of the amoeba industrially produced by Amoéba. The objective was to understand how the amoeba manages to adapt to bioreactor culture and to draw lessons to optimize its large-scale production. Metabolic differences were observed, particularly in bioreactors where the lipid metabolic pathway is favored.

« This study improves our understanding of the biology and molecular processes of W. magna C2c Maky. It demonstrates the adaptability of microorganisms to environmental changes. The amoeba adapts by promoting specific metabolic pathways. Everything is already present in its genetic information and according to its needs, the amoeba will favor the synthesis of the most suitable molecules » declares Professor Bernard LA SCOLA, head of the team behind these results at IHU Méditerranée Infection.

« This paper, published as part of Dr. Issam Hasni's thesis, complements the previously published data on Willaertia magna C2c Maky and gives us an overview of the proteins and lipids present in the amoeba. The information gathered will allow us to work on the composition of the culture medium in order to make our production process even more efficient» says Sandrine DEMANECHE, scientific manager of Amoeba.

About AMOEBA:

Amoéba's ambition is to become a major player in the treatment of bacterial risk in the fields of water, healthcare and plant protection. Our biological solution is an alternative to chemical products widely used today. Amoéba is currently focusing on the market of industrial cooling towers estimated at €1.7Bn (1) on a global chemical biocide market for water treatment, evaluated at €21Bn (2) and on the biocontrol market for plant protection estimated globally at €1.6Bn (4). In the future, the Company is looking at developing new applications such as chronic wound care, estimated at €751 million (3) in the USA. Sales of associated products with healthcare, biocides and crop protection are subject to the Company being granted local

² The lipidome is all the lipids (fats) of an organism.



¹ The proteome is the set of proteins in an organism.



regulatory market authorizations. The Company is currently in a trial phase for biocidal and plant protection applications and does not market any products.

Created in 2010, based in Chassieu (Lyon, France) with a subsidiary in Canada and in the United States, Amoéba is quoted on Euronext Growth. The Company is a member of the BPIfrance Excellence network and is eligible for the PEA-PME SME equity savings plan setup. More information on www.amoeba-biocide.com.

- (1): Amoéba data combined from sources: DRIRE 2013, Eurostat, ARHIA 2013
- (2): Sources combined by Amoéba from water treaters, Freedonia, Eurostat et MarketsandMarkets
- (3): BCC Research, "Markets for Advanced Wound Management Technologies," Wellesley, MA, 2017
- (4): Biopesticides Worldwide Market 2013, CPL, Wallingford, UK

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