

AMOÉBA publishes in Scientific Reports, a journal of the Nature Publishing group, the complete genomic analysis of the *Willaertia magna* C2c Maky amoeba.

Results that help to demonstrate the absence of pathogenicity of the amoeba

Lyon (France), December 05, 2019 - AMOÉBA (FR0011051598 - AMEBA), producer of a biological biocide, capable of eliminating bacterial risk in water and human wounds, and a biocontrol product for plant protection, still in the testing phase, announces a major scientific publication. As the result of a collaboration with the Institut Hospitalo-Universitaire de Méditerranée Infection in Marseille, the article reports the complete sequencing and genome analysis of the *Willaertia magna* C2c Maky amoeba. It is available at the following address: www.nature.com/articles/s41598-019-54580-6

"Knowledge of non-pathogenic amoebas is limited, so sequencing the genome of Willaertia magna C2c Maky is a major step forward in decoding its capabilities. The study shows that this amoeba has a genome containing 36.5 million nucleotide bases. It potentially codes for 18519 proteins, half of which could be assigned to known functions. " explains Professor Bernard LA SCOLA of the IHU de Méditerranée Infection.

This study is all the more essential as it strengthens the evidence of the *Willaertia magna* C2c Maky amoeba safety. Indeed, 15 genes present in this amoeba and showing similarity to virulence genes of the pathogenic amoeba *Naegleria fowleri* have already been observed in the non-pathogenic amoeba *Naegleria gruberi*, confirming that their presence is not a sign of pathogenicity.

To consolidate this result, a cytotoxicity study on human endothelial cells was performed. The results show that *Willaertia magna* C2c Maky has no effect on these human cells while the pathogenic amoeba *Balamuthia mandrillaris*, used as a control, has a toxic effect on them.

These results are in agreement with the absence of any case, human or animal, of *Willaertia magna* C2c Maky infection and confirm the results of the toxicity and pathogenicity studies conducted by Amoéba with this amoeba. Demonstrating the absence of pathogenicity is a priority for the company, which goes well beyond the regulatory studies required and carried out for the registration dossiers of the biocidal active substance in Europe and the USA.

*"We have extensively collaborated with renowned external laboratories without ever publishing our results to date. Our scientific communication strategy is now to illustrate our scientific expertise and that of our partners by publishing all our research. This scientific article is, as such, the first in a series of upcoming publications. "*says Sandrine DEMANECHÉ, Scientific Director of Amoéba.



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 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 the compartment C of Euronext Paris. 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, Freedomia, 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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