



**PRESS RELEASE**

**AMOÉBA announces that its active substance has an eliciting action on the vine and a direct action on the germination of grape downy mildew.**

**Lyon (France), March 7<sup>th</sup>, 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, announces that its active substance, *Willaertia magna C2c Maky* in lysed form, has an eliciting action on the vine and a direct action by total inhibition of the germination of the grape downy mildew (*Plasmopara viticola*).

When a plant is attacked by a pathogen, receptors recognize the signals (molecules) emitted by the pathogen, triggering a cascade of intracellular events leading to the activation of the plant's defense systems, including the production of hormones and antimicrobial compounds (proteins).

These signals are called elicitors. The supply of substances with eliciting activity or SDP (Plant Protection Stimulators) is currently used in bio-control as a means to protect crops.

Nevertheless, this strategy has varying effectiveness depending on environmental conditions (stress of the plant, aggressor genetic, etc.). Biocontrol products are therefore generally associated with plant protection products that have a direct effect on the pathogenic fungus.

In order to evaluate the eliciting nature of its active substance, Amoéba, in collaboration with Vegepolys Innovation, has carried out standardized tests in qPFD® (a molecular biology technique quantifying the expression of 28 plant defence genes by assaying transcribed RNAs). The results show an eliciting effect as high as the reference product (COS-OGA) on PR proteins (Pathogenesis Related proteins) that are produced by the plant to combat fungi.

At the same time, in order to verify the presence of a direct action on grape downy mildew (*Plasmopara viticola*), Amoéba has carried out laboratory tests with Staphyt. The results obtained by a reference method demonstrate a direct effect on the pathogen with total inhibition of spore germination by contact with the active substance.

To the Company's current knowledge, no bio-control natural substance agent marketed to date has both an eliciting function on the vine and a direct action to inhibit the germination of grape downy mildew.

As a reminder, the Company is currently in the trial phase for the biocontrol application on plant protection and does not market any products. The marketing of a plant protection product is subject to prior marketing authorization (refer to 12 February 2019 Press Release for the main regulatory approval steps in Europe).



*"Combining a strong eliciting action on the plant and a direct action on the pathogen with the same product is one way to finally offer the plant protection market a bio-control agent whose efficacy in the field could be as high as pesticides. It is an alternative that would significantly reduce the use of conventional pesticides while protecting the farmer's yield. " explains Fabrice Plasson, Chairman 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 <sup>(1)</sup> on a global chemical biocide market for water treatment, evaluated at €21Bn <sup>(2)</sup> and on the biocontrol market for plant protection estimated globally at €1.6Bn <sup>(4)</sup>. In the future, the Company is looking at developing new applications such as chronic wound care, estimated at € 751 million <sup>(3)</sup> 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](http://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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This press release contains certain forward-looking statements concerning AMOEBA which are based on its own assumptions and hypothesis and on information that are available to us. However, AMOEBA gives no assurance that the estimates contained in such forward-looking statements will be verified, which estimates are subject to numerous risks including the risks set forth in the reference document of AMOEBA filed with the French Financial Markets Authority (*Autorité des Marchés Financiers*) on April 27, 2018 (a copy of which is available on [www.amoeba-biocide.com](http://www.amoeba-biocide.com)). The forward-looking statements contained in this press release are also subject to risks not yet known to AMOEBA or not currently considered material by AMOEBA. The occurrence of all or part of such risks could cause actual results, financial conditions, performance or achievements of AMOEBA to be materially different from such forward-looking statements.