

Antibacterial activity of a 18-residue peptide on *Pseudomonas syringae* pv. *syringae* with potential use for bacterial leaf spot control

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Nowadays the diseases caused by plant pathogenic bacteria such as *Pseudomonas syringae* pv. *syringae* especially Cherry, Kiwi and Peach generate a significant impact on the production, harvesting and export of products. Currently, there are no effective methods to control bacterial blight caused by this plant pathogen, of which there are only preventative treatments using pesticides copper derivatives, causing damage to the environment, operators and consumers because of the cupric toxic waste and antibiotics remaining in the product. For this reason, we seek to implement alternative friendlier to the environment and can be effective against this pathology. On this basis, we use a peptide isolated from *Acanthoscurria gomesiana*, that it has eighteen amino acid residues with antimicrobial activity is raised. Was measured various effects in extracellular and intracellular milieu such as Minimal Inhibitory Concentration (MIC) and Minimum Concentration bactericidal (MBC) under dependence of time and dose, which showed effects at low concentrations of the peptide parameters were evaluated also cytotoxic capacity was observed through ATP quantification generating significant decreases of 87% of ATP, likewise, reducing metabolic and enzymatic capacity of succinate dehydrogenase (SDH) dose-dependent manner in with ED_{50%} of 2.25µM. The membrane integrity test assessed by fluorometric indicators (Propidium Iodide and Calcein AM) and measured by flow cytometry. The results shown their membranes are permeabilized reducing effect of about 40% of the population and the intracellular esterases activity it is reduced. The results indicate that the peptide under study has a bactericidal activity continue allowing further analysis on a larger scale, being able to give this peptide a potential use as a commercial product of agronomic interest for *Pseudomonas syringae* pv. *syringae* control

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