

## EXTRACELLULAR PROTEOME OF *Rhizobium etli* IN EXPONENTIAL AND STATIONARY GROWTH PHASE

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Studies of extracellular proteome have not been reported in *Rhizobium etli*. This studies could discern many unknown questions about the extracellular proteins functions, as well as the way they use to be exported; so our proposal was to define the *R. etli*'s secretome and the role of the proteins that constitute it in the cellular bacterium function. The proteins were identified by liquid chromatography matched to the mass spectrometry. The proteins were grouped by COG (Cluster Orthologous Groups) according to NCBI (National Center for Biotechnology Information). In the exponential growth phase, 193 proteins were identified. It is interesting that we found out, the related ribosomal proteins but we did not know the role they could play when they are secreted. In the stationary growth phase, 191 proteins were identified; we found that the largest amount of identified proteins for this growth phase, do not have an associated function and they represent 28.7% from the total of the identified proteins. We also analyzed the presence of a peptide signal in the identified proteins, this allows us to suggest which of them might have been secreting the by the secretion Type II. We demonstrate the presence of vesicles of external membrane in *R. etli*. In the vesicles proteins and other molecules are exported.

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