

# Knowledge on the theory of biological reference values in Latin America

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## INFO

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## LETTER

In the last years, during my teaching activities in Mexico, Colombia and Chile I have had the opportunity of carry out several small surveys about the knowledge of theory of biological reference values (1,2) using only a question about a very basic concept from this theory:

*“Generally, when a biological quantity is measured in a healthy person, what is the probability, expressed in per cent, that the value obtained be out of the corresponding biological reference interval?”*

The question, with a voluntary and anonymous answer, that always I repeated using different words and giving all kind of clarifications, has been asked to 146 university graduates directly related to clinical laboratory sciences (also known as laboratory medicine or clinical pathology) working in different cities of Mexico, Colombia and Chile. From the people surveyed, 41.1 % of the answers have been correct [probability = 5 %] and 58.9 % incorrect.

Under my point of view, as foreign lecturer and consultant in clinical laboratory sciences, these results, keeping in mind the simplicity of the survey question, deserve corrective educational actions. It should be taken into account that, although most of Latin

American clinical laboratories biological reference values are neither produced by the own laboratory nor adopted after their validation (as in most countries in the world), the clinical laboratory university graduates must be able to advise physicians and surgeons about the appropriate use of biological reference intervals, including the limitations of such intervals (3).

I hope that most university graduates related to clinical laboratory sciences in Latin America correctly answer the question asked in the survey. If not, the necessity to reinforce the education on biological reference values theory would be more evident.

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