

# TEACHING IN PHARMACOLOGY

## **CO-01 PBL EXPERIENCE IN PHARMACOLOGY TEACHING IN LARGE AND REDUCED STUDENTS CLASSROOMS**

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Our main objective was to implement problem-based-learning (PBL) as (i) a learning model for reviewing learning objectives from Pharmacology theoretical classes or (ii) whole course learning method. The experience was performed in three subjects: "Pharmacology and Metabolic Alterations" (Human Nutrition and Dietetics Degree), "Pharmacovigilance" and "Pathways in Drugs Administration" (Nursing Degree), during the 2008-2009 academic year.

In the "Pharmacology and Metabolic Alterations" subject, with about 80 students, PBL method was applied in practical classes (20-25 students) to reinforce learning objectives (3 out of 5 sessions) and to introduce new concepts (2 out of 5 sessions). In the subjects "Pharmacovigilance" and "Pathways in Drugs Administration" (5-8 students), the small number of students allowed to apply PBL as single learning model for the whole subject. When the number of students was enough to allow statistical treatment of data, evaluation was accomplished with an anonymous survey between the students.

All the students answered that their knowledge had increased with the practical sessions and 96.9% found them interesting. Students marked these sessions with a  $7.9$  (out of  $10$ )  $\pm 1.0$  vs  $6.2 \pm 1.3$  for traditional master classes. About a 79.7% answered that these sessions help students to acquire and retain more knowledge, although 18.8% preferred a combination of the two methods and a 1.6% did not support this model. For the other two subjects, without possibility of statistical analysis, students freely expressed their good attitude toward this learning method.

Our evaluation was very satisfactory for the two non numerous groups. In this case, sessions were conducted in the General Library of the University, what afforded students to work freely with plenty of resources, library's bibliography and internet. With a higher number of students, although experience was satisfactory, we found some aspects to improve, mainly related to logistic aspects (classrooms, table's disposition, bibliography resources, etc).