

DNA goes to School

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Abstract. Education has a strong influence on students' future decisions about the professional field they wish to pursue [1]. As science is the engine of development of societies, it is essential to disseminate scientific knowledge in order to engage new generations in the world of science. The popularization of scientific concepts is also imperative, to make them clearer to non-expert citizens, in order to conquer the curiosity for science [2].

The core of science communication and education implies a bidirectional contact between science and society [3]. In this relationship citizens can understand and discuss scientific advances that impact their daily lives, and scientists also learn useful information from the public. The greater the involvement of citizens, and the amount of experimental activities, the more successful this relationship will be.

To encourage a closer connection between science contents and non-specialist school population, the STOL–Science Through Our Lives team launched the project "O DNA vai à Escola" (DNA goes to School), which was funded by *Agência Nacional para a Cultura Científica e Tecnológica*. Although current programs of secondary education include general concepts of molecular biology, which should be exemplified with practical activities,

schools still lack several resources to implement such experiments. In addition, teachers also reveal some training gaps at this level, weakening the whole process of teaching and learning. Thus, collaboration between these teachers and researchers/professors of higher education, sharing resources and expertise, could represent a strong strategy to reverse some of these gaps, both by equipping schools with technical and scientific resources and by motivating students to scientific research.

"O DNA vai à Escola" was performed at the Escola Secundária de Paredes (ESP) between February and July 2013. In this partnership, students of the last year of the degree in Biologia Aplicada (BA) and professors from Departamento de Biologia of the Universidade do Minho organized several workshops and lectures addressed to the students of 12th grade, and to their biology teachers, at ESP. One of the most successful activities was the set of three hands-on sessions named "O DNA chegou à ESP", which was supported by eight students of BA and presented to 50 students of ESP. The impact of these practical sessions was assessed through questionnaires filled by the student community, the students-supervisors, and the teachers of ESP.

This presentation will show the main results of this project, highlighting the relevance of this kind of activities, namely those related with the promotion of science education and scientific literacy. The data collected allowed concluding that, among other aspects, the interaction with students of higher education was one of the most appreciated novelties of these hands-on activities.

Keywords. Hands-on, Molecular Biology, Secondary School & Higher Education, Student-learner & Student-supervisor.

References (and Notes) (optional)

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