

**ABSTRACT BOOK**



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## **PT139 Implementation of MicroMundo@UPorto: a Pedagogical Project of Service-Learning for Education in Microbiology and Antimicrobial Resistance Awareness**

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**Background:** Small World Initiative (originally from the USA) is a successful experimental educational project based on Service-Learning implemented in Spain since 2016/2017, which intends to contribute for solving the societal challenge of Antimicrobial Resistance (AMR) across clinical-food-environmental areas ("One Health").

**Objectives:** To adapt and implement this project in Portugal under MicroMundo@UPorto designation, within two Curricular Units-UCs (Bacteriology-Pharmacy Faculty, and Microbiology-Nutrition and Food Science Faculty) of Porto University, and to estimate its impact in the improvement of university students' academic performance, acquisition of social/soft skills and AMR awareness.

**Methods:** University-students, coached by university professors/researchers, organize 4 weekly sessions (2h/each) and teach Basic/Secondary school-students, aiming to discover microorganisms producing new antibiotics while exploring microbial diversity of Portuguese soils. After MicroMundo@UPorto announcement, 45 university-students volunteered to participate in 8 teams (5-6 university-students+1-2 supervisors), and to be responsible for one class (20-25 school-students) from one of the three involved Porto schools. After theoretical and laboratory classes, students are expected to work as a team and meet with their supervisor for schools sessions' preparation (S1-S4). At the end of the project, survey-based evaluations will be applied to university-students.

**Results:** School sessions (February-March 2019) comprise: S1-concepts (AMR+ biodiversity) and experimental design, including for soil collection (total-n $\geq$ 80); S2-soils processing; S3-antibiosis assays on selected colonies (total-n $\geq$ 1600); S4-results interpretation and discussion. Besides AMR awareness, we expect to improve university-students' perception on the effects of Microbiology-UCs on professional practice and an enrichment in autonomy, responsibility/commitment, planning, public communication, teamwork, improvisation and empathy, essential skills for better prepared future health professionals.