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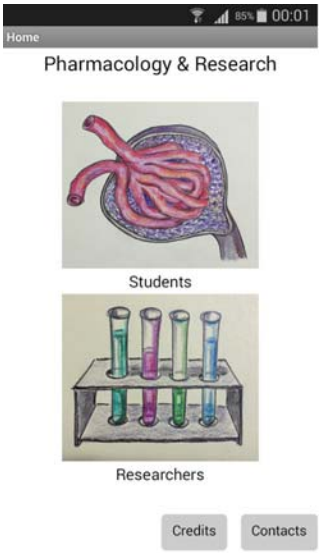
Development of an Android application for study and research in clinical pharmacology

Background and Aims: Mobile applications represent a novel instrument to spread education, reaching a large number of students of different nationalities. However, the contents of existent pharmacology applications are mostly limited to summaries of drug characteristics, do not offer explanations of crucial arguments like pharmacokinetics and pharmacodynamics and do not permit students to test their knowledge. Moreover, young pharmacologists have a great need of educational resources useful to increase their skills in basic and clinical research. The aim of this project is the development of a mobile application able to address these limits.

Summary of work: Thanks to the BPS Teaching Grant, we produced a mobile application for study and research in clinical pharmacology. We chose to develop the application for Android devices, Android being the mobile platform currently used by the majority of users. The application is organized in two main parts (Fig. 1). The first section helps undergraduate students to understand basic concepts of pharmacology, with the aid of visual representations and practical examples. The second section examines in depth competences and notions useful in research such as critical appraisal of a scientific article, evidence-based medicine, statistical analysis, tips for writing a grant and a scientific article.



The application will permit users to test their knowledge through multiple choice questions. The prototype of the application has been produced and development of the contents is in process. The application will be available for free in the Google Play Store in December 2015.

Outcomes: Debugging and development of the application on the basis of users' suggestions will continue after the publication of the prototype in the Google Play Store. Users will have the chance to suggest which topics and features they would like to be added to the application. Data will be analysed to decide which topics should be added and which features should be modified in order to increase the utility of this new educational instrument.

Discussion and conclusion: This project aims to take advantage of the chance to reach a great number of pharmacology students and researchers in different countries to develop an educational instrument able to increase comprehension of basic and clinical pharmacology. The application will be updated with new content every three months giving priority to topics and features suggested by users.