

COMPUTER AIDED LEARNING IN BIOPHARMACY

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Introducción y Objetivos

El desarrollo de nuevas tecnologías en las últimas décadas ha producido un gran cambio en todos los aspectos cotidianos, incluido el proceso de enseñanza. Las metodologías docentes pueden aprovechar las ventajas que aportan herramientas como el ordenador, los programas multimedia e internet. La enseñanza asistida por ordenador además de cumplir su función docente familiariza al estudiante con las tecnologías a las que deberá enfrentarse en su ejercicio profesional. El CD-ROM (Compact Disc Read Only Memory) es un tipo de soporte de documentación informatizada multimedia que integra texto, datos, imagen fija y vídeo. El objetivo de este trabajo es presentar y analizar las características de una nueva herramienta educativa en formato CD-ROM para la enseñanza de Biofarmacia. Para evaluar el diseño de un software educativo se debe tener en cuenta si facilita la motivación y proporciona nuevos estímulos además de información, ayuda a recordar el aprendizaje anterior, activa la respuesta de los estudiantes, establece una secuencia de aprendizaje, genera efectos visuales y auditivos y es cómo damente interactivo.¹

Concepción y enfoque didáctico.

El CD se encuentra en su versión 4.0 disponible en lengua Inglesa: *Modern Biopharmaceutics*² y en breve en lengua Española: *Biofarmacia Actual*

Introduction and objectives

The development of new technologies in recent years has led to a great change in research and education methods. In the education environment, computers, multimedia programs and the Internet are now widely used. The use of these new methodologies allows the students to become familiar with tools that they will need in their professional positions. The CD-ROM (Compact Disc Read Only Memory) is a kind of multimedia tool that include texts, data, pictures and movies. The aim of this work is to introduce and to analyze the characteristics of a new tool for education in biopharmaceutics. To evaluate educational software, it is necessary to point out whether the software motivates the student to look for new information, if it helps in retention of

previous learning, and to acquire new knowledge and skills, its interactivity and if it established a clear learning sequence.¹

Software Characteristics.

The CD program version 4.0 is available in the English language: *Modern Biopharmaceutics*² and will be soon available in the Spanish language: *Biofarmacia Actual*. It is currently divided into four modules: the fundamentals in biopharmaceutics and pharmacokinetics, an exhaustive description of the gastrointestinal tract, controlled release dosage forms and the prediction of the oral fraction absorbed. This structure allows the user to select the theme to be studied. In every module the user has a description of the goals and the objectives to be achieved. Thus the student can check his own progress in the knowledge of each area.

The CD includes an evaluation section where there are different questions and problems to resolve. The test can be performed step-by-step or mixing questions of different parts. At the end you obtain the total score.

The program includes a selection of papers from the Capsugel Series about bioequivalence, intestinal permeability, oral absorption and gastrointestinal physiology.

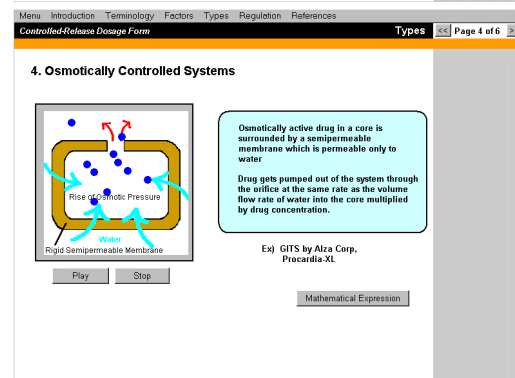
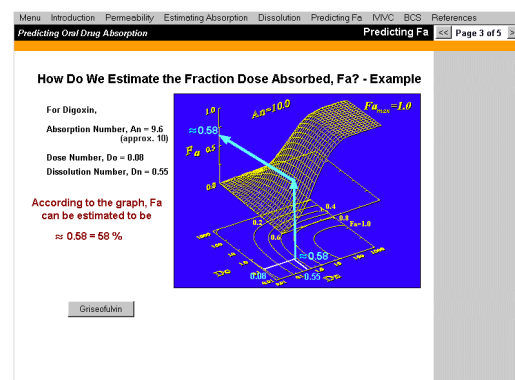
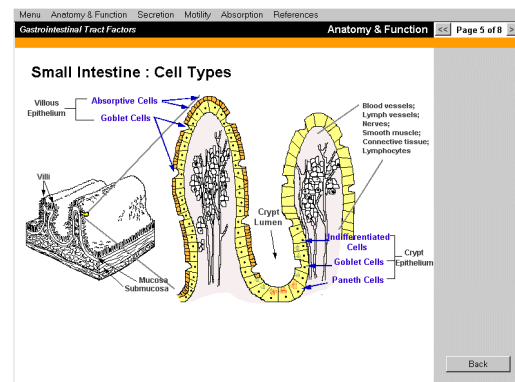
The program advantages to point out:

Easy Installation: When you insert the CD the program begins automatically.
Utility in different environments: individual self-training and/or audiovisual support for a master class. The program includes a big reference file and cross-references with links to Web pages. This **stimulates the students** to look for new information. There is a **clear sequence** established in every part and the CD contains **more than 30 movies and animations**. In the Figure some of the screens from the software can be seen. To explain some concepts the CD permits the **interactivity** between the student and the computer. In conclusion, this program has a good number of the characteristics to regard it as a good quality program.

Utility

We think that this tool can be very useful for professors, students and scientists

working on biopharmaceutics area. It can be used as a resource in classes, self-learning, to prepare exams, and for the continuing education of researchers in this field.



Bibliografía:

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(2) Título: Modern Biopharmaceutics V4.0 Autores: Gordon L. Amidon, Sally Y. Choe

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<http://www.tsrlinc.com/mbindex.htm>