

Modern Systems on Internet at the Service of Interaction between Biochemistry and Pharmacology Fields

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Biochemistry is the study of the structure, composition, and chemical reactions of substances in living systems. Biochemistry emerged as a separate discipline when scientists combined biology with organic, inorganic, or physical chemistry and began to study such topics as how living things obtain energy from food, the chemical basis of heredity, and what fundamental changes occur in disease [1].

Pharmacology is the branch of medicine and biology concerned with the study of drug action. More specifically, it is the study of the interactions that occur between a living organism and chemicals that affect normal or abnormal biochemical function. The field encompasses drug composition and properties, interactions, toxicology, therapy, and medical applications and antipathogenic capabilities [2].

By these definitions seem to be two different scientific fields but despite these definitions, biochemistry spills over into pharmacology, physiology, microbiology, and clinical chemistry. In these areas, a biochemist may investigate the mechanism of a drug action; engage in viral research; conduct research pertaining to organ function; or use chemical concepts, procedures, and techniques to study the diagnosis and therapy of disease and the assessment of health. With the knowledge of cell biology and biochemistry increasing, the field of pharmacology has also changed substantially. It has become possible, through molecular analysis of receptors, to design chemicals that act on specific cellular signaling or metabolic pathways by affecting sites directly on cell-surface receptors (which modulate and mediate cellular signaling pathways controlling cellular function).

Real-world problems seldom come neatly packaged for one discipline to study. Today's problems need the interaction between different fields to work as a team, so interaction with others is an integral part of the job. Not long ago this interaction was breaking for lack of sufficient tools to facilitate communication between different scientists and this made that scientific fields remained isolated and without interaction. However, today, the use of the very easy and fast World Wide Web makes the communication between scientists of different countries and fields very fast and frequent, the network has become an essential tool for scientific work. In this sense, electronic publishing has become common in scientific publishing where it has been argued that peer-reviewed scientific journals are in the process of being replaced by electronic publishing. Electronic publishing (also referred to as e-publishing or digital publishing) includes the digital publication of e-books, EPUBs, and electronic articles, and the development of digital libraries and catalogues [3].

Another modern tool in the world of communication has been the open access. Open Access is a publication model that enables the dissemination of research articles to the global community without restriction usually through the internet. Thus, all articles published under Open Access can be accessed by anyone with internet connection. Open access is seen by some as a possible solution to the increasing price of serials and as a way for governmental funding agencies to receive a better return on investment. The growth of the open access movement is partially in response to the enormous costs of many scholarly journals. With traditional journal publication methods it is not uncommon for

an institution to have to pay for an article twice. First they pay scholars to produce the work and then the institution's library pays to purchase the work back from the journal publisher. However, with the advent of new technologies and software programs, it is becoming increasingly less expensive to compile and distribute scholarly information. By using different funding methods and electronic delivery of journals, the costs can be absorbed by alternative means to subscription fees. One of the great benefits to open access is that libraries in smaller institutions or in economically disadvantaged areas around the world can have greater access to these scholarly resources [4].

The OMICS group is committed to all these modern tools as open access, digital book and Social networking. I strongly believe that removing barriers to research published online will greatly aid to the progress in scientific and technical disciplines. In this sense, Biochemistry and Pharmacology: Open access gives barrier-free access to the literature for research. It increases convenience, reach, and retrieval power. Free online literature is available for software that facilitates full-text searching, indexing, mining, summarizing, translating, querying, linking, recommending, alerting, "mash-ups" and other forms of processing and analysis. Biochemistry and Pharmacology: Open access puts rich and poor on an equal footing for these key resources and eliminates the need for permissions to reproduce and distribute content. Now the first issue is ready and I hope that Biochemistry and Pharmacology: Open access will be a very useful free journal for scientific and scholarly community.

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