

The need for a training program in Biomedicine at AUTH

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THE NEED FOR A TRAINING PROGRAM IN BIOMEDICINE

The explosive progress in biomedical sciences imposes a need for a comprehensive integration of training in basic biomedical sciences and clinical medicine. Clinicians will be benefited by realizing and applying the enormous possibilities that are created by the incorporation of modern knowledge on the molecular basis of diseases in clinical practice. Professionals of basic biomedical sciences will comprehend the nature of pressing and difficult to tackle issues in clinical medicine. Furthermore, clinicians will be able to improve disease management by incorporating effectively and critically principles of personalized medicine in their practice. Finally, basic biomedical scientists will be able to reorganize and focus their research priorities towards major problems in clinical medicine. These goals can be achieved by the organization of joined theoretical and practical courses for clinicians and basic biomedical researchers. Principles of the program in biomedicine can be incorporated in undergraduate and graduate studies.

BASIC ORGANIZATION PRINCIPLES OF THE PROGRAM IN BIOMEDICINE

The suggested program duration will be four years. The first two years the program's courses will be jointly offered to biomedical and medical students. A set of mandatory courses including Internal Medicine, Anatomy, Physiology, Cell Biology, Biochemistry, Molecular Biology, Immunology, Microbiology, Genetics, Pharmacology, etc will be offered during the first three years.

Students will be able to elect additional courses in order to specialize in a certain area. During the fourth year the students will join a research group in order to carry out a senior thesis project. This will help them to comprehend the molecular basis of human diseases. They will also be trained to plan and perform experiments. In addition, they will develop analytical skills for experimental data evaluation and interpretation. Finally, they will learn how to present and write scientific reports. Biomedical students will focus their training on the study of human diseases. The graduates of the program in biomedicine will have the possibility of continuing their studies towards a Medical Doctor degree following appropriate evaluation or continuing with graduate studies towards a PhD degree. They also develop skills in order to work for a pharmaceutical company.

EXAMPLE

A very successful example is the program "Bachelor's in Biomedicine", offered at Faculty of Medicine, Dentistry and Health Sciences in the University of Melbourne. The biomedical students can elect among 13 majors. In 2013, 124 persons graduated with a Medical Doctor Degree and 68 with a Bachelor's in Biomedicine degree.

REFERENCES

<http://bbiomed.unimelb.edu.au/>
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