

## COURSE RATIONALE

2008 – 2009

**MECHANISMS OF HUMAN DISEASE COURSE** is a learning experience for second year medical students that integrates concepts and factual information from various medical disciplines. The science of pathology forms the core of the course but it is offered in conjunction with other relevant topics in psychopathology, microbiology and virology, and clinical medicine. The overall purpose of the course is to establish a basic science foundation for the practice of medicine. A secondary purpose of the course is to create an environment that fosters active, independent learning and enables the students to acquire problem-solving skills.

**PATHOLOGY**, in the broadest sense, is the study of disease. It is “that” branch of the biological sciences which is concerned with the nature of disease and the effects of those diseases on structure and function of the body organs and tissues.”<sup>1</sup>

As the foundation of clinical medicine, **PATHOLOGY** bridges the gap between the basic sciences and the practice of medicine. “Pathology occupies a pivotal position in the medical curriculum. Anatomy, biochemistry, physiology and bacteriology are prerequisites. Clinical medicine and surgery follow it. In pathology the student must learn to apply the facts and theories of anatomy, biochemistry, physiology, and bacteriology to an elucidation of the course, processes, and effects of disease. He/she must learn to study the causes of disease with a view to prevention and control. Finally, the students must gain a clear understanding of the alterations in form and disturbances in function that take place in disease, so as to be ready for the next step in his/her medical education – the so called ‘clinical years’.”<sup>2</sup>

In other words, if you are to become a competent physician, capable of making the correct diagnosis and prescribing the correct therapy, you must understand the nature of disease. “Pathology should form the basis of every physician’s thinking about his/her patients.”<sup>3</sup>

With this aim in mind, the **MECHANISMS OF HUMAN DISEASE** course attempts to help the student understand the pathogenesis of disease and learn the structural and functional changes which occur in cells and organs as a result of disease. A firm grasp of the concepts and facts of **PATHOLOGY** will allow you to proceed successfully through the next phase of your medical education, the clinical clerkships.

The **MECHANISMS OF HUMAN DISEASE** course also exposes the student to basic concepts and applied principles in microbiology, virology and the medical subspecialty of infectious diseases. As a practitioner, you will see many patients with diseases caused by infectious agents.

The **MECHANISMS OF HUMAN DISEASE** course features presentation of selected clinical topics by primary care and specialty physicians. Although basic science knowledge is the foundation of medical practice, these concepts are more meaningful when they are presented in the context of clinical problems.

**REFERENCES:**

<sup>1</sup>Pathology, "The Oxford Companion To Medicine, 1988. Vol. 2, p. 1012

<sup>2</sup>Robert Alan Moore, A Textbook of Pathology (Philadelphia and New York: W.B. Saunders Company, 1951), p. vii.

<sup>3</sup>W.A.D. Anderson Pathology (St. Louis: The C.V. Mosby Company, 1971), p.x.

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